



# RFID

Архангельск (8182)63-90-72  
Астана (7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06

Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16

Россия (495)268-04-70

Пермь (342)205-81-47  
Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13

Казахстан (772)734-952-31

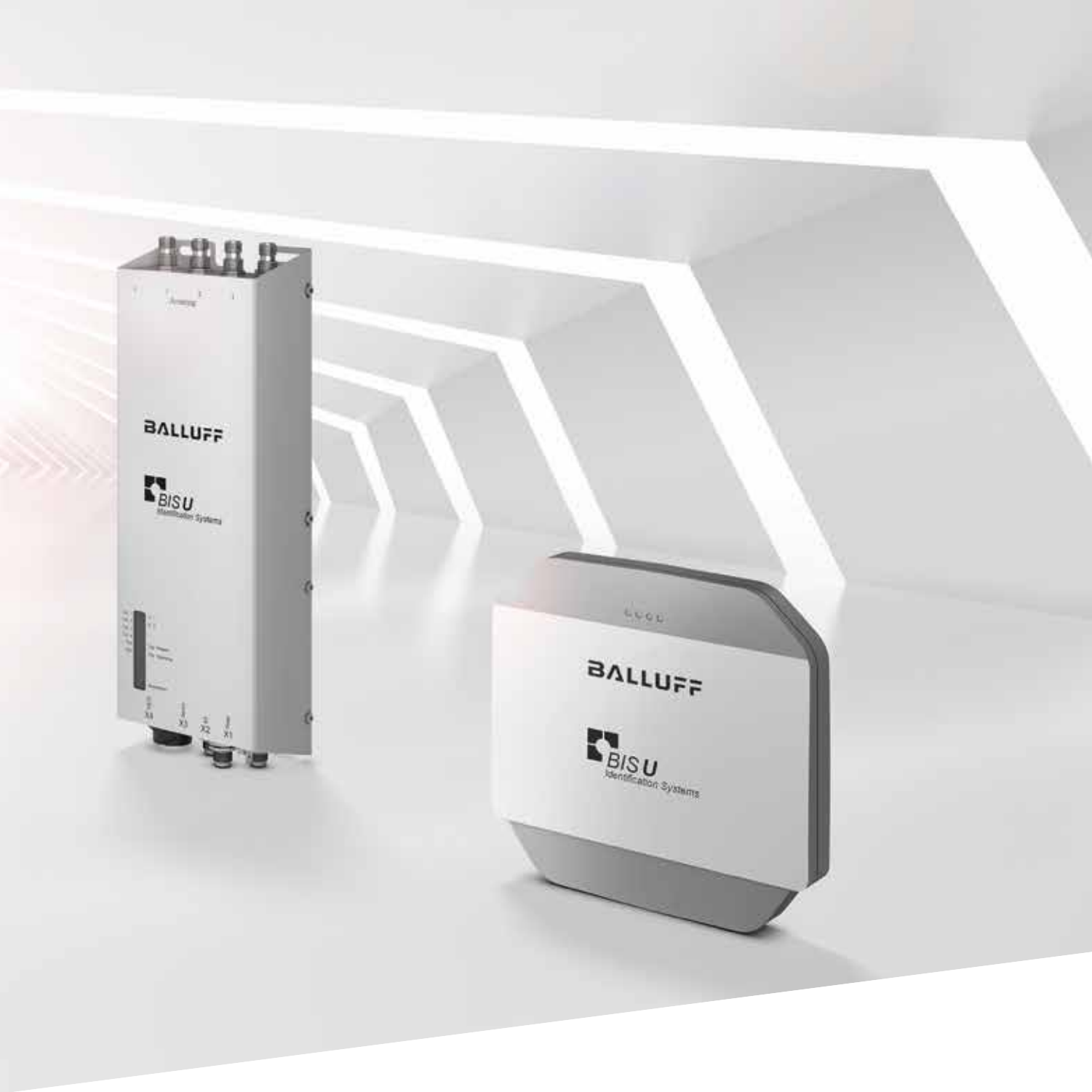
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Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

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Continuous transmission security  
and data transparency

# RFID SYSTEM UHF (860/960 MHz) BIS U



The BIS U UHF systems from Balluff ensure data transparency and traceability of your automation processes. UHF is a standard technology for identification solutions covering all processes. They help to achieve fast detection of tag information and continuous transmission security. By querying decentrally stored product- and process-data, UHF is a central component of traceability applications. Our UHF BIS U systems provide permanent data transparency in your entire delivery chain.

#### Features

- Problem-free integration in applications via globally used standard interfaces
- Corresponds to the global standard ISO 18000-6C and EPC Gen2 Class1
- Flexible use due to a wide range of different combinations of data carriers and antennas
- Ranges up to 6 m and more
- Bulk capture for simultaneous scanning of many data carriers (tags)
- Suitable for attachment to traditional control systems via bus interfaces and higher level IT systems
- Complete tailored system solutions realizable
- Many accessories for integration into a variety of applications



Europe: 865-868 MHz		<b>BISO13P</b> BIS U-142-06/CA-M8-GY		
America/Asia: 902-928 MHz	<b>BISO178</b> BIS U-142-A0/C1M-GY		<b>BISO13R</b> BIS U-142-07/CA-M8-GY	
Worldwide: 860-960 MHz				
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	902...928 MHz	865...868 MHz	902...928 MHz	
Dimension	Ø 17.2 x 14 mm	Ø 22 x 26 mm	Ø 22 x 26 mm	
Memory type	EEPROM	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	96 Bit	
TID memory, read-only	64 Bit	96 Bit	96 Bit	
Antenna type	Dipole	Dipole	Dipole	
Installation	on metal	on metal	on metal	
Storage temperature	-25...95 °C	-25...95 °C	-25...95 °C	
Storage temperature temporary	—	—	—	
Ambient temperature	-25...85 °C	-25...85 °C	-25...85 °C	
Housing material	PA 12, GF30	Steel, Data carrier: PA 12-GF30 gray, coated	Steel, Data carrier: PA 12-GF30 gray, coated	
IP rating	IP68	IP68	IP68	
Approval/Conformity	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	
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	<b>BIS00NL</b> BIS U-100-01/CA		<b>BIS00RC</b> BIS U-100-02/CA		
	<b>BIS00WH</b> BIS U-101-04/CA			<b>BIS0174</b> BIS U-103-M2/CAM	<b>BIS0172</b> BIS U-108-M2/CAM
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	860...960 MHz	840...960 MHz	840...960 MHz	860...940 MHz	860...940 MHz
	51.5 x 6.4 x 51.5 mm	37.2 x 7 x 127 mm	37.2 x 7 x 127 mm	25 x 12.85 x 110 mm	15 x 12.5 x 80 mm
	EEPROM	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	512 Bit	512 Bit	512 Bit	512 Bit
	240 Bit	96 Bit	96 Bit	128 Bit	128 Bit
	64 Bit	96 Bit	96 Bit	96 Bit	96 Bit
	Dipole	Dipole	Dipole	Dipole	Dipole
	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)	on metal	on metal
	-40...85 °C	-40...85 °C	-40...85 °C	-40...85 °C	-40...85 °C
	—	—	—	—	—
	-20...85 °C	-40...85 °C	-40...85 °C	-40...85 °C	-40...85 °C
	ABS	PA 12, GF30	PA 12, GF30	ABS	ABS
	IP68	IP67	IP67	IP68	IP68
	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	CE, RoHS, EAC, WEEE	CE, RoHS, EAC, WEEE
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Sensors

RFID

Machine Vision and  
Optical Identification

Human Machine  
Interfaces

Safety

Industrial Networking

Software and  
System Solutions

Power Supply

Connectivity

Accessories



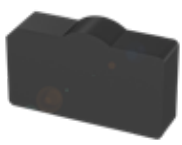
Europe: 865-868 MHz				
America/Asia: 902-928 MHz				
Worldwide: 860-960 MHz	<b>BIS0173</b> BIS U-109-M2/CAM	<b>BIS018F</b> BIS U-112-M4/CAA	<b>BIS018H</b> BIS U-113-M4/CAA	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	860...930 MHz	860...960 MHz	860...960 MHz	
Dimension	48 x 12.6 x 51 mm	29.3 x 19.2 x 66.2 mm	38.1 x 19 x 51.3 mm	
Memory type	EEPROM	EEPROM	EEPROM	
User data, read/write	512 Bit	0 Bit	0 Bit	
EPC memory, read/write	128 Bit	96 Bit	96 Bit	
TID memory, read-only	96 Bit	48 Bit	48 Bit	
Antenna type	Dipole	Dipole	Dipole	
Installation	on metal	metal-free (clear zone)	metal-free (clear zone)	
Storage temperature	-40...85 °C	-40...85 °C	-40...85 °C	
Storage temperature temporary	—	—	—	
Ambient temperature	-40...85 °C	-40...85 °C	-40...85 °C	
Housing material	ABS	PVDF	PVDF	
IP rating	IP68	IP67	IP67	
Approval/Conformity	CE, RoHS, EAC, WEEE	CE, WEEE	CE, WEEE	
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		<b>BISO1CJ</b> BIS U-180-A0/COM-HT			
			<b>BISO1CK</b> BIS U-180-A0/C1M-HT		
	<b>BISO16M</b> BIS U-111-M2/CAA			<b>BISO0WF</b> BIS U-101-04/CA-HT	<b>BISO0WC</b> BIS U-102-05/CA-HT
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	860...960 MHz	866...868 MHz	902...928 MHz	860...960 MHz	860...960 MHz
	54 x 0.84 x 85.7 mm	5.95 x 1.3 x 57.1 mm	5.95 x 1.3 x 57.1 mm	51.5 x 6.4 x 51.5 mm	52 x 11.5 x 128 mm
	EEPROM	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	512 Bit	512 Bit	512 Bit	512 Bit
	128 Bit	96 Bit	96 Bit	240 Bit	240 Bit
	96 Bit	96 Bit	96 Bit	64 Bit	64 Bit
	Dipole	Dipole	Dipole	Dipole	Dipole
	metal-free (clear zone)	on metal	on metal	metal-free (clear zone)	metal-free (clear zone)
	-25...50 °C	—	—	-40...85 °C	-40...85 °C
	—	-20...225 °C 1x12 h	-20...225 °C 1x12 h	220 °C 1x1000 h, 1500x30 min	220 °C 1x1000 h, 1500x30 min
	-25...50 °C	-20...85 °C	-20...85 °C	-40...85 °C	-40...85 °C
	PVC	Epoxy-resin/fiberglass, Flame-retarding	Epoxy-resin/fiberglass, Flame-retarding	PPS	PPS
	IP68	IP68	IP68	IP68	IP68
	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC
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Europe: 865-868 MHz	<b>BIS01CF</b> BIS U-104-A0/COM-HT		<b>BIS01CH</b> BIS U-105-A0/COM-HT	
America/Asia: 902-928 MHz		<b>BIS01CM</b> BIS U-104-A0/C1M-HT		
Worldwide: 860-960 MHz				
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	866...868 MHz	902...928 MHz	866...868 MHz	
Dimension	7.8 x 2.7 x 6.8 mm	7.8 x 2.7 x 6.8 mm	7.8 x 3.1 x 13.1 mm	
Memory type	EEPROM	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	96 Bit	
TID memory, read-only	96 Bit	96 Bit	96 Bit	
Antenna type	Dipole	Dipole	Dipole	
Installation	on metal	on metal	on metal	
Storage temperature	—	—	—	
Storage temperature temporary	-20...235 °C 1x700 h	-20...235 °C 1x700 h	-20...235 °C 1x700 h	
Ambient temperature	-20...85 °C	-20...85 °C	-20...85 °C	
Housing material	Ceramic	Ceramic	Ceramic	
IP rating	IP68	IP68	IP68	
Approval/Conformity	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	
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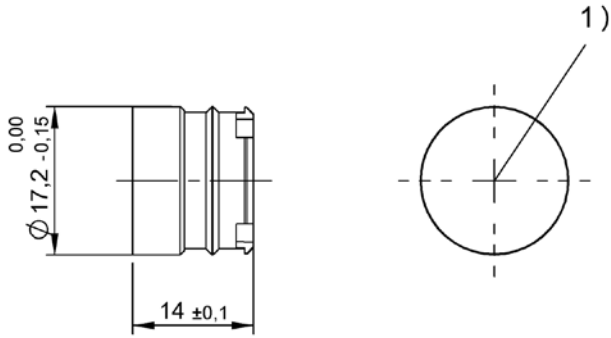
			<b>BIS01AU</b> BIS U-157-N9/C0M		
	<b>BIS01CN</b> BIS U-105-A0/C1M-HT			<b>BIS01AT</b> BIS U-157-N9/C1M	
		<b>BIS0163</b> BIS U-150-N4/CAA			<b>BIS0166</b> BIS U-153-M0/CAA
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	902...928 MHz	860...960 MHz	865...868 MHz	902...928 MHz	860...960 MHz
	7.8 x 3.1 x 13.1 mm	20 x 44.45 mm	22.5 x 1.65 x 50 mm	22.5 x 1.65 x 50 mm	9 x 113 mm
	EEPROM	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	0 Bit	1024 Bit	1024 Bit	32 Bit
	96 Bit	128 Bit	448 Bit	448 Bit	128 Bit
	96 Bit	64 Bit	96 Bit	96 Bit	96 Bit
	Dipole	Dipole	Dipole	Dipole	Dipole
	on metal	metal-free (clear zone)	on metal	on metal	metal-free (clear zone)
	—	-20...80 °C	-30...85 °C	-30...85 °C	-20...80 °C
	-20...235 °C 1x700 h	—	—	—	—
	-20...85 °C	-20...80 °C	-30...85 °C	-30...85 °C	-20...80 °C
	Ceramic	Paper	PET	PET	Paper
	IP68	—	—	—	—
	CE, WEEE, EAC	CE, WEEE, EAC	CE, REACH regulation (EU), RoHS	CE, REACH regulation (EU), RoHS	CE, WEEE, EAC
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Europe: 865-868 MHz				
America/Asia: 902-928 MHz				
Worldwide: 860-960 MHz	<b>BIS0167</b> BIS U-154-M0/CAA	<b>BIS0169</b> BIS U-156-M0/CAA	<b>BIS0164</b> BIS U-151-M2/CAA	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	860...960 MHz	860...960 MHz	860...960 MHz	
Dimension	15 × 97 mm	53 × 53 mm	54 × 34 mm	
Memory type	EEPROM	EEPROM	EEPROM	
User data, read/write	32 Bit	32 Bit	512 Bit	
EPC memory, read/write	128 Bit	128 Bit	128 Bit	
TID memory, read-only	96 Bit	96 Bit	96 Bit	
Antenna type	Dipole	Dipole	Dipole	
Installation	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)	
Storage temperature	-40...85 °C	-40...85 °C	-40...85 °C	
Storage temperature temporary	—	—	—	
Ambient temperature	-40...85 °C	-40...85 °C	-40...85 °C	
Housing material	Paper	Paper	Paper	
IP rating	—	—	—	
Approval/Conformity	CE, WEEE, EAC	CE, WEEE, EAC	CE, WEEE, EAC	
Productview	Page 24	Page 24	Page 24	

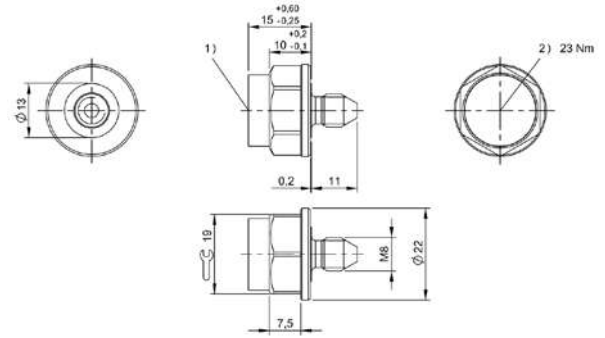


	<b>BIS016E</b> BIS U-158-A0/COM-HT		<b>BIS016F</b> BIS U-158-A0/C1M-HT		
	<b>BIS0168</b> BIS U-155-M2/CAA			<b>BIS016H</b> BIS U-159-M2/CAA	
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
	860...960 MHz	865...868 MHz	902...928 MHz	850...960 MHz	
	27 x 97 mm	25 x 1.65 x 88 mm	25 x 1.65 x 88 mm	23 x 1 x 100 mm	
	EEPROM	EEPROM	EEPROM	EEPROM	
	512 Bit	512 Bit	512 Bit	512 Bit	
	128 Bit	96 Bit	96 Bit	128 Bit	
	96 Bit	96 Bit	96 Bit	96 Bit	
	Dipole	Dipole	Dipole	Dipole	
	metal-free (clear zone)	on metal	on metal	metal-free (clear zone)	
	-40...85 °C	-25...95 °C	-25...95 °C	-40...85 °C	
	—	160 °C 3x30 min	160 °C 3x30 min	—	
	-40...85 °C	-30...70 °C	-30...70 °C	-25...70 °C	
	Paper	PEN	PEN	PET	
	—	IP67	IP67	IP68	
	CE, WEEE, EAC	CE, REACH regulation (EU), RoHS, WEEE	CE, REACH regulation (EU), RoHS, WEEE	CE, REACH regulation (EU), RoHS, WEEE	
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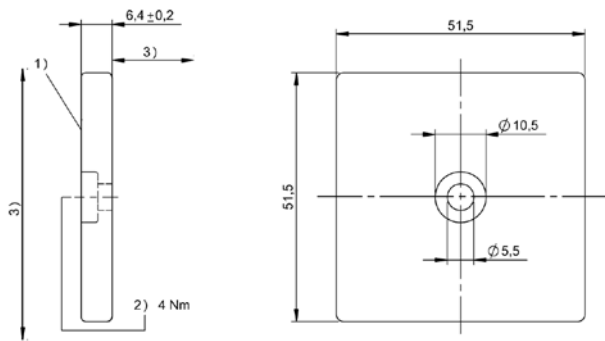
1) Sensing surface

**BISO178**



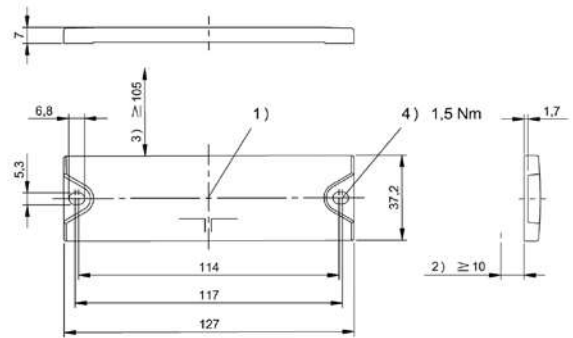
1) Sensing surface, 2) Tightening torque

**BISO13P, BISO13R**



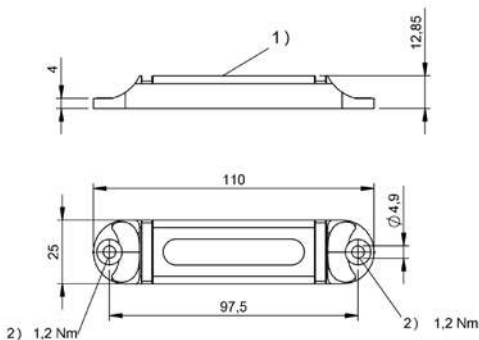
1) Sensing surface, 2) Tightening torque, 3) see R/W head table

**BISO0WH, BISO0WF**



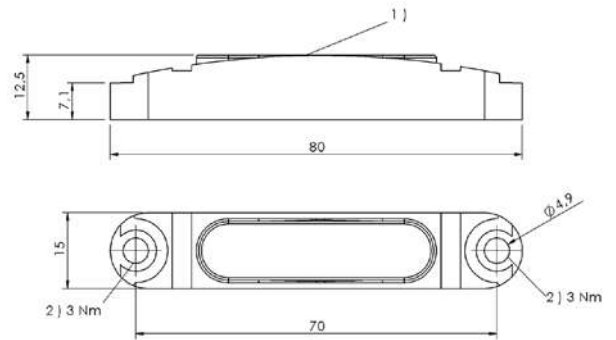
1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding, 4) Tightening torque

**BISO0NL, BISO0RC**



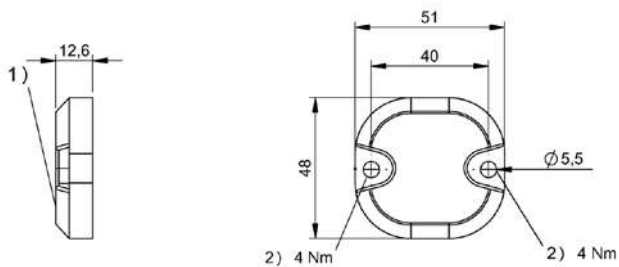
1) Sensing surface, 2) Tightening torque

**BISO174**



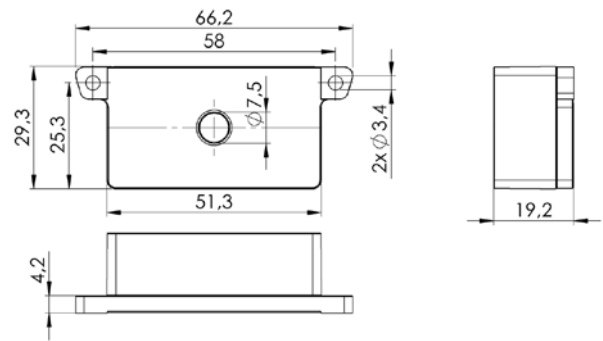
1) Sensing surface, 2) Tightening torque

**BISO172**



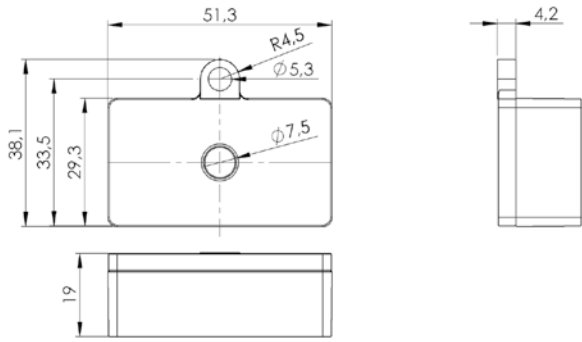
1) Sensing surface, 2) Tightening torque

**BISO173**

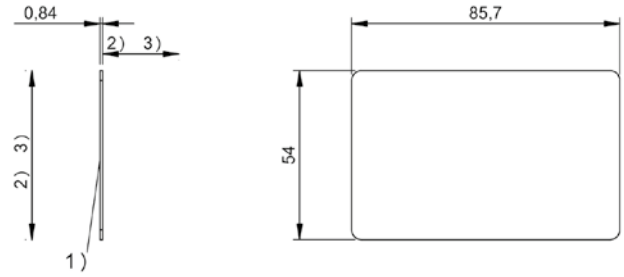


**BISO18F**



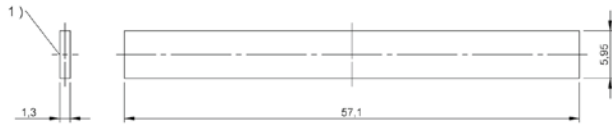


**BISO18H**



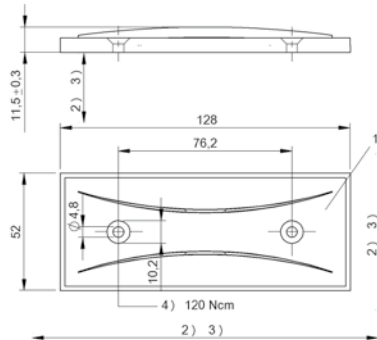
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO16M**



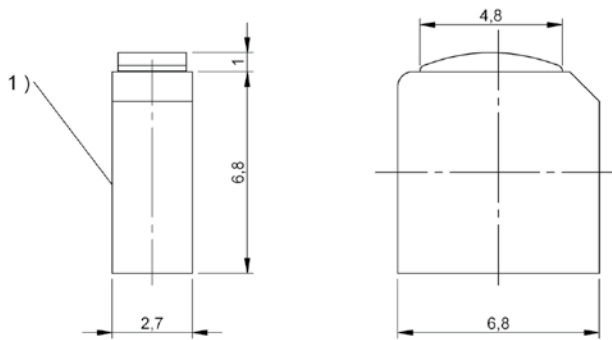
1) Sensing surface

**BISO1CJ, BISO1CK**



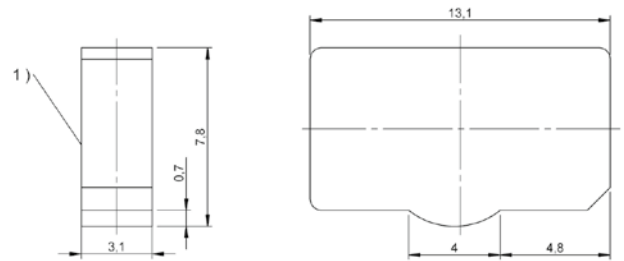
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

**BISO0WC**



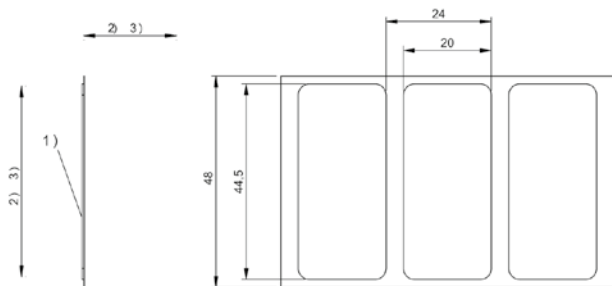
1) Sensing surface

**BISO1CF, BISO1CM**



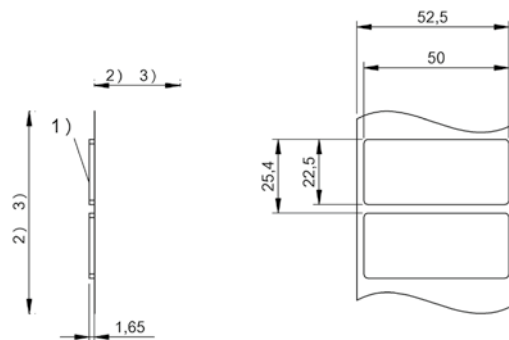
1) Sensing surface

**BISO1CH, BISO1CN**



1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

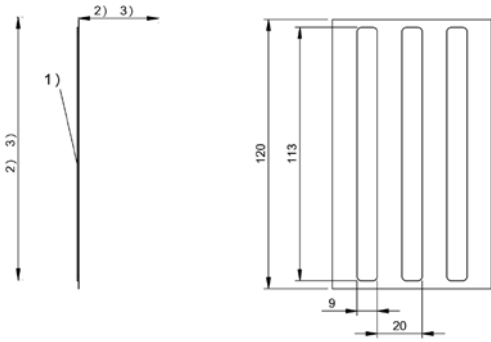
**BISO163**



1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

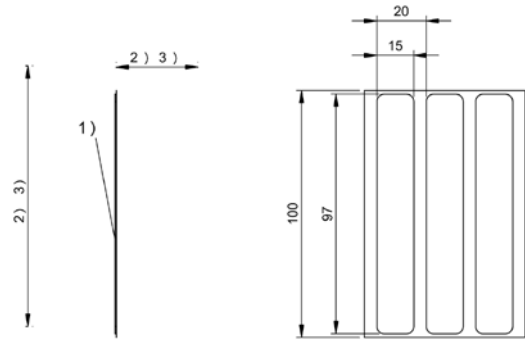
**BISO1AU, BISO1AT**

24 | RFID | UHF (860/960 MHz)



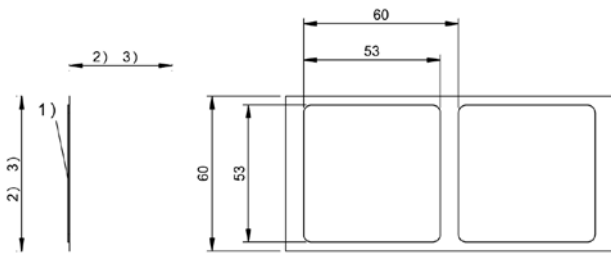
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO166**



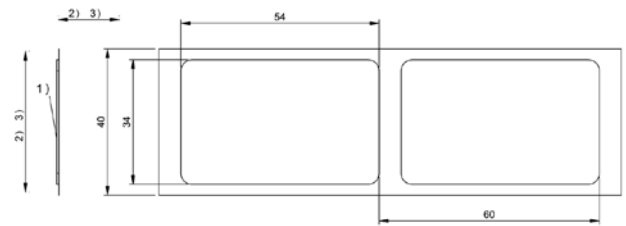
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO167**



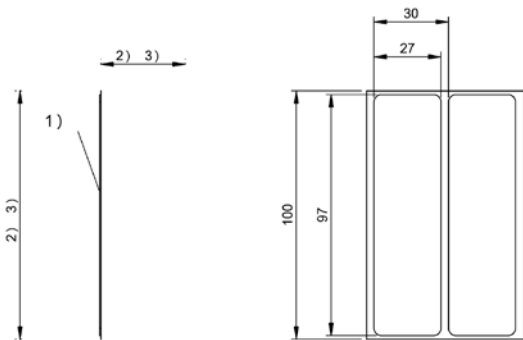
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO169**



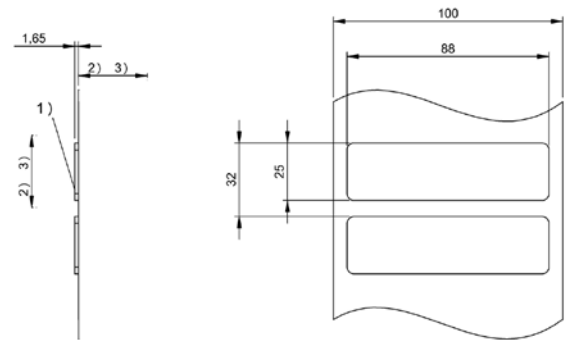
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO164**



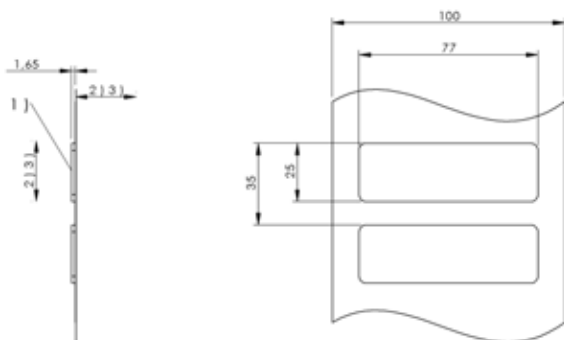
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO168**



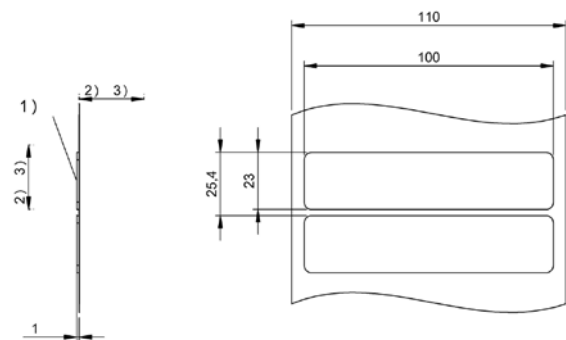
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO16E**



1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO16F**



1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO16H**





Europe: 865...868 MHz	<b>BIS015Z</b> BIS VU-320-C0-S4		
USA/Canada/Mexico: 902...928 MHz		<b>BIS015Y</b> BIS VU-320-C1-S4	
China: 920.5...924.5 MHz			
South Korea: 917...921 MHz			
Japan: 916.8...92.4 MHz			
Australia: 920.25...925.75 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Radio license	Europe	USA, Canada, Mexico	
Dimension	130 x 50.5 x 130 mm	130 x 50.5 x 130 mm	
Antenna type	Patch	Patch	
Polarization	circular	circular	
Output power adjustable	5 dBm...24 dBm (3.2 mW...250 mW)	7 dBm...26 dBm (5 mW...400 mW)	
Connection	M12x1-Male, 4-pole, A-coded	M12x1-Male, 4-pole, A-coded	
Housing material	PC ABS, zinc, die-cast, (connector)	PC ABS, zinc, die-cast, (connector)	
Interface	RS485	RS485	
Operating voltage Ub	24 V DC LPS Class 2	24 V DC LPS Class 2	
Ambient temperature	-20...55 °C	-20...55 °C	
Protection degree	IP67	IP67	
Approval/Conformity	CE, ETSI EN 302 208, UL Listed	FCC Part 15, IC RSS-210, UL Listed	
Productview	Page 30	Page 30	



	<b>BIS018Z</b> BIS VU-320-C2-S4			
		<b>BIS0190</b> BIS VU-320-C4-S4		
			<b>BIS0191</b> BIS VU-320-C5-S4	
				<b>BIS0192</b> BIS VU-320-C7-S4
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	China	South Korea	Japan	Australia
	130 x 50.5 x 130 mm	130 x 50.5 x 130 mm	130 x 50.5 x 130 mm	130 x 50.5 x 130 mm
	Patch	Patch	Patch	Patch
	circular	circular	circular	circular
	5 dBm...24 dBm (3.2 mW...250 mW)	7 dBm...26 dBm (5 mW...400 mW)	7 dBm...25 dBm (5 mW...320 mW)	7 dBm...26 dBm (5 mW...400 mW)
	M12x1-Male, 4-pole, A-coded	M12x1-Male, 4-pole, A-coded	M12x1-Male, 4-pole, A-coded	M12x1-Male, 4-pole, A-coded
	PC ABS, zinc, die-cast, (connector)	PC ABS, zinc, die-cast, (connector)	PC ABS, zinc, die-cast, (connector)	PC ABS, zinc, die-cast, (connector)
	RS485	RS485	RS485	RS485
	24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
	-20...55 °C	-20...55 °C	-20...55 °C	-20...55 °C
	IP67	IP67	IP67	IP67
	CMIIT-Radio Transmiss. Equipm., UL Listed	KC, UL Listed	ARIB T106, MIC Specified Radio Equipment, UL Listed	AS/NZS 4268, UL Listed
	Page 30	Page 30	Page 30	Page 30

Sensors

RFID

Machine Vision and  
Optical Identification

Human Machine  
Interfaces

Safety

Industrial Networking

Software and  
System Solutions

Power Supply

Connectivity

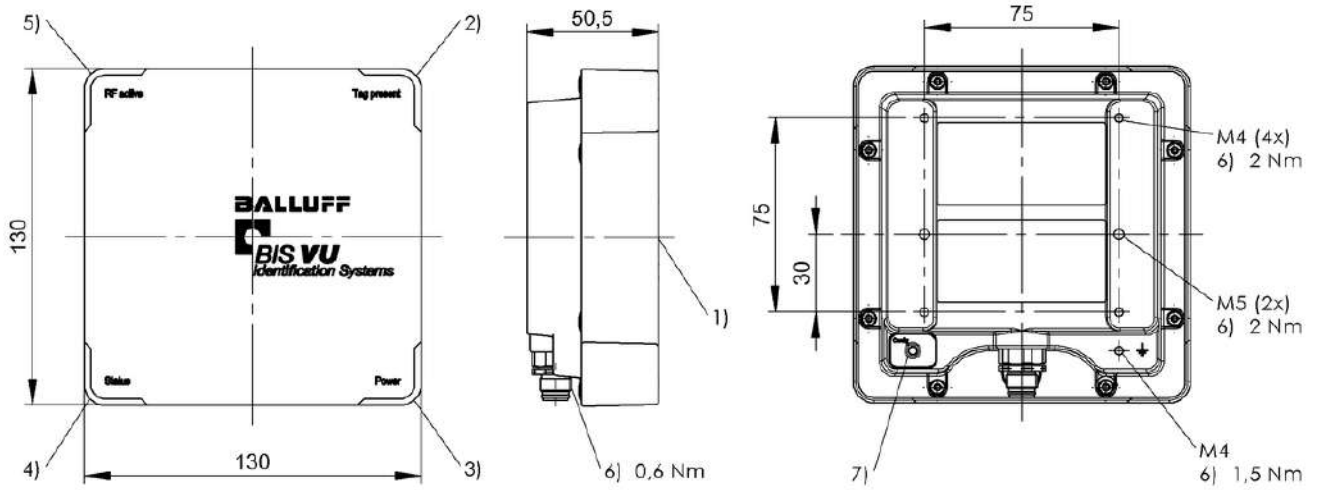
Accessories



Europe: 865...868 MHz	<b>BIS00P0</b> BIS U-301-C0-TNCB		
America/Asia: 902...928 MHz		<b>BIS00TY</b> BIS U-301-C1-TNCB	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	865...868 MHz	902...928 MHz	
Dimension	133 x 18.4 x 133 mm	133 x 18.4 x 133 mm	
Antenna type	Patch	Patch	
Polarization	circular	circular	
Connection	—	—	
Housing material	PC	PC	
Ambient temperature	-30...70 °C	-30...70 °C	
Protection degree	IP67	IP67	
Approval/Conformity	—	—	
Productview	Page 30	Page 30	

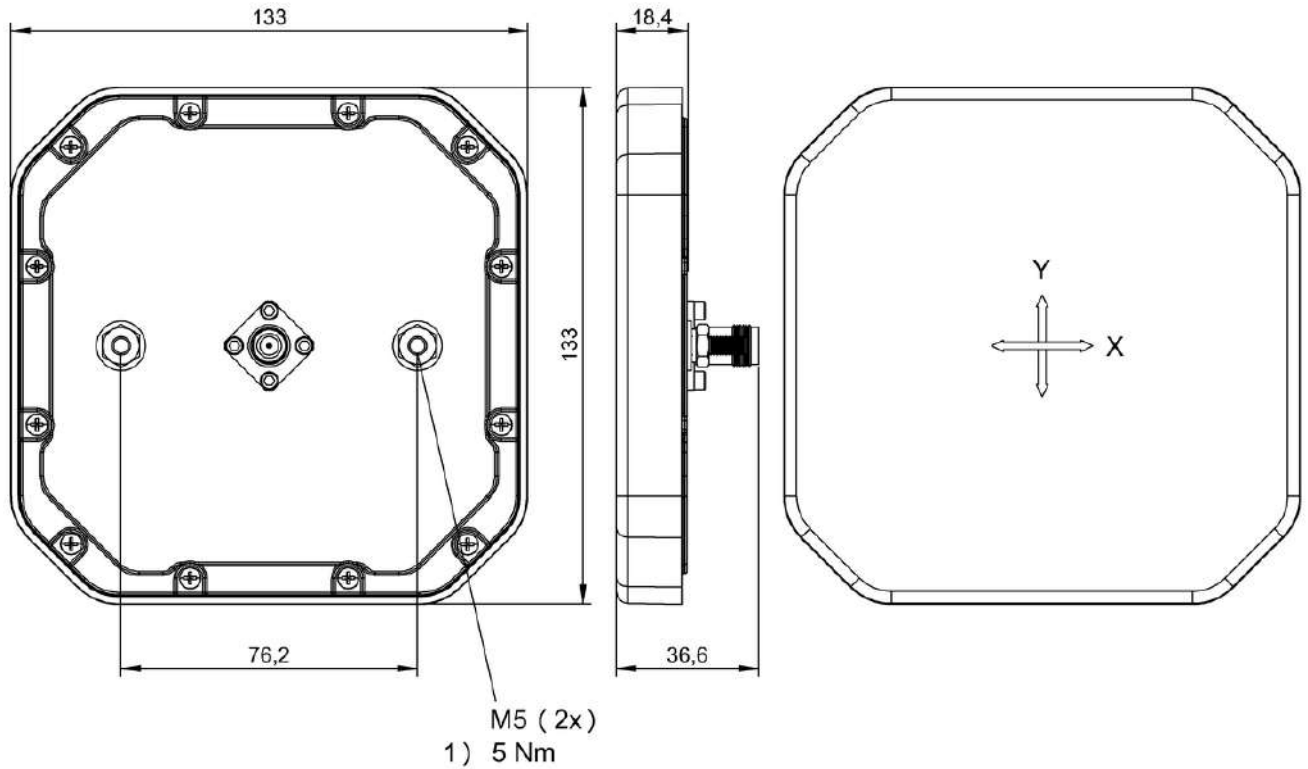


<b>BIS01AW</b> BIS U-303-C0-TNCB			
	<b>BIS01AY</b> BIS U-303-C1-TNCB		
UHF (860...960 MHz)	UHF (860...960 MHz)		
865...868 MHz	902...928 MHz		
300 x 49 x 300 mm	300 x 49 x 300 mm		
Patch	—		
right hand circular	right hand circular		
TNC-Female	TNC-Female		
Aluminum, Antenna hood: Polymer blend	Aluminum, Antenna hood: Polymer blend		
-20...55 °C	-20...55 °C		
IP67	IP67		
CE, WEEE	FCC, WEEE		
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1) Sensing surface, 2) LED (Tag present), 3) LED (Power), 4) LED (Status), 5) LED (RF active), 6) Tightening torque, 7) Button (Config)

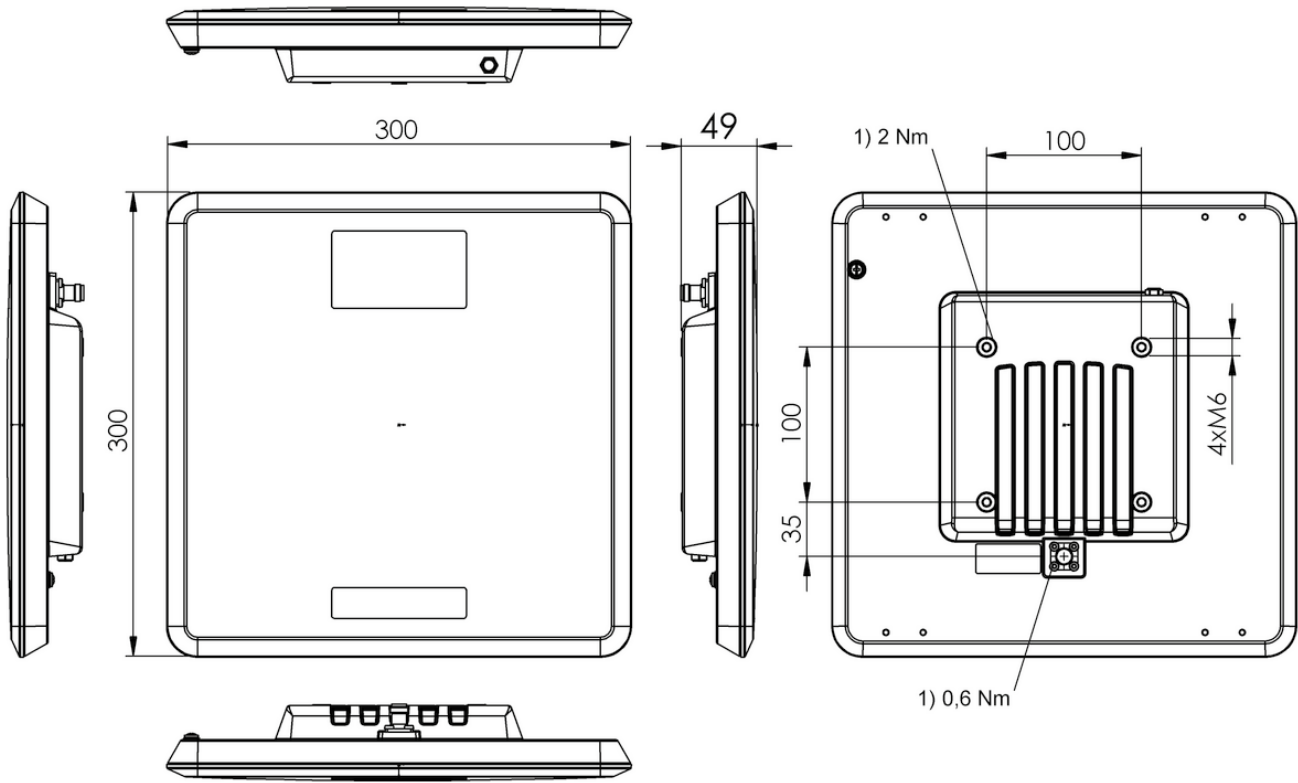
**BIS015Z, BIS015Y, BIS018Z, BIS0190, BIS0191, BIS0192**



1) Tightening torque

**BIS00P0, BIS00TY**





1) Tightening torque

**BIS01AW, BIS01AY**



Profibus DP Slave galvanically isolated	<b>BIS00T3</b> BIS V-6102-019-C001	
Ethernet/IP		
Product Group	Multi-Frequency Processor	
Working frequency	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	
Interface	Profibus DP Slave galvanically isolated	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	—	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Productview	Page 50	



	<b>BIS012E</b> BIS V-6102-019-C101		
		<b>BIS012F</b> BIS V-6106-034-C002	<b>BIS0122</b> BIS V-6106-034-C004
	Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz
	Profibus DP Slave galvanically isolated	Ethernet/IP	Ethernet/IP
	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)
	4	4	4
	—	—	—
	24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
	Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
	0...60 °C	0...60 °C	0...60 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
	Page 50	Page 50	Page 51



Ethernet/IP	<b>BIS014C</b> BIS V-6106-034-C102	
Product Group	Multi-Frequency Processor	
Working frequency	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	
Interface	Ethernet/IP	
Supported RFID technologies	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	—	
Operating voltage Ub	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Productview	Page 50	



<b>BIS0146</b> BIS V-6106-034-C104	<b>BIS0186</b> BIS V-6107-039-C005	<b>BIS018J</b> BIS V-6107-039-C006
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz
Ethernet/IP	Ethernet TCP/IP, USB	Ethernet TCP/IP, USB
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)
4	4	4
—	—	—
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
Page 51	Page 51	Page 52



TCP/IP, USB	<b>BIS01AA</b> BIS V-6107-039-C007	
Product Group	Multi-Frequency Processor	
Working frequency	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	
Interface	TCP/IP, USB	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	—	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Productview	Page 52	



<b>BIS0187</b> BIS V-6107-039-C105	<b>BIS018K</b> BIS V-6107-039-C106	<b>BIS01AC</b> BIS V-6107-039-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz
Ethernet TCP/IP, USB	Ethernet TCP/IP, USB	TCP/IP, USB
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)
4	4	4
—	—	—
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
Page 51	Page 52	Page 52



Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	<b>BIS013U</b> BIS V-6108-048-C002	
Product Group	Multi-Frequency Processor	
Working frequency	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	—	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Productview	Page 53	





BIS01AE BIS V-6108-048-C007	BIS013W BIS V-6108-048-C102	BIS01AF BIS V-6108-048-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz
Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)
4	4	4
—	—	—
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
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EtherCAT	<b>BIS00U9</b> BIS V-6110-063-C002	
Product Group	Multi-Frequency Processor	
Working frequency	865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz	
Interface	EtherCAT	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	—	
Operating voltage Ub	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Productview	Page 54	



<b>BIS0147</b> BIS V-6110-063-C102		
Multi-Frequency Processor		
865...868 MHz, 902...928 MHz, 920.5...924.5 MHz, 917...921 MHz, 916.8...920.4 MHz, 920.25...925.75 MHz		
EtherCAT		
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)		
4		
—		
24 V DC LPS Class 2		
Zinc, Die casting		
0...60 °C		
IP65, with connector		
CE, EAC, cULus, WEEE		
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Europe: 865...868 MHz	<b>BIS00M7</b> BIS U-6020-053-104-00-ST26	
USA/Canada/Mexico: 902...928 MHz		
China: 920.5...924.5 MHz		
Product Group	UHF (860...960 MHz)	
Working frequency	865...868 MHz	
Interface	RS232	
Supported RFID technologies	UHF 860/960 MHz (BIS U)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	17 dBm...33 dBm (50 mW...2 W)	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Steel, Aluminum, coated	
Ambient temperature	-20...55 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, ETSI EN 302 208, EAC, WEEE	
Productview	Page 55	



	<b>BIS013J</b> BIS U-6026-034-114-06-ST35		
		<b>BIS018N</b> BIS U-6026-034-124-06-ST35	<b>BIS012R</b> BIS U-6027-060-124-06-ST27
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	902...928 MHz	920.5...924.5 MHz	920.5...924.5 MHz
	EtherNet/IP galvanically isolated	EtherNet/IP galvanically isolated	Ethernet TCP/IP
	UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)
	4	4	4
	17 dBm...30 dBm (50 mW...1 W)	17 dBm...31.5 dBm (50 mW...1.4 W)	17 dBm...31.5 dBm (50 mW...1.4 W)
	19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
	Steel, Aluminum, coated	Steel, Aluminum, coated	Steel, Aluminum, coated
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	FCC Part 15, IC RSS-247, WEEE, cULus, EAC	CMIIT-Radio Transmiss. Equipm., WEEE, cULus	CMIIT-Radio Transmiss. Equipm., WEEE, cULus
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Europe: 865...868 MHz		
USA/Canada: 902...928 MHz		
South Korea: 917...921 MHz	<b>BIS00UR</b> BIS U-6027-060-144-06-ST27	
Australia: 920.25...925.75 MHz		
Product Group	UHF (860...960 MHz)	
Working frequency	917...921 MHz	
Interface	Ethernet TCP/IP	
Supported RFID technologies	UHF 860/960 MHz (BIS U)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	17 dBm...30 dBm (50 mW...1 W)	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Steel, Aluminum, coated	
Ambient temperature	-20...55 °C	
IP rating	IP65, with connector	
Approval/Conformity	KC, WEEE, EAC	
Productview	Page 56	



		<b>BIS00ZU</b> BIS U-6028-048-104-06-ST28	
			<b>BIS00ZW</b> BIS U-6028-048-114-06-ST28
	<b>BIS014H</b> BIS U-6027-060-174-06-ST27		
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	920.25...925.75 MHz	865...868 MHz	902...928 MHz
	Ethernet TCP/IP	Profinet galvanically isolated	Profinet galvanically isolated
	UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)
	4	4	4
	17 dBm...30 dBm (50 mW...1 W)	17 dBm...31.5 dBm (50 mW...1.4 W)	17 dBm...30 dBm (50 mW...1 W)
	19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
	Steel, Aluminum, coated	Steel, Aluminum, coated	Steel, Aluminum, coated
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	AS/NZS 4268, WEEE	CE, ETSI EN 302 208, WEEE, EAC, cULus	FCC Part 15, IC RSS-247, WEEE, cULus, EAC
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Europe: 865...868 MHz		
USA/Canada: 902...928 MHz		
Brazil: 915...928 MHz		
China: 920.5...924.5 MHz	<b>BIS017J</b> BIS U-6028-048-124-06-ST28	
Product Group	UHF (860...960 MHz)	
Working frequency	920.5...924.5 MHz	
Interface	Profinet galvanically isolated	
Supported RFID technologies	UHF 860/960 MHz (BIS U)	
Number of connectable R/W heads / antennas	4	
Output power adjustable	17 dBm...31.5 dBm (50 mW...1.4 W)	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Steel, Aluminum, coated	
Ambient temperature	-20...55 °C	
IP rating	IP65, with connector	
Approval/Conformity	CMIIT-Radio Transmiss. Equipm., cULus, WEEE, EAC	
Productview	Page 57	





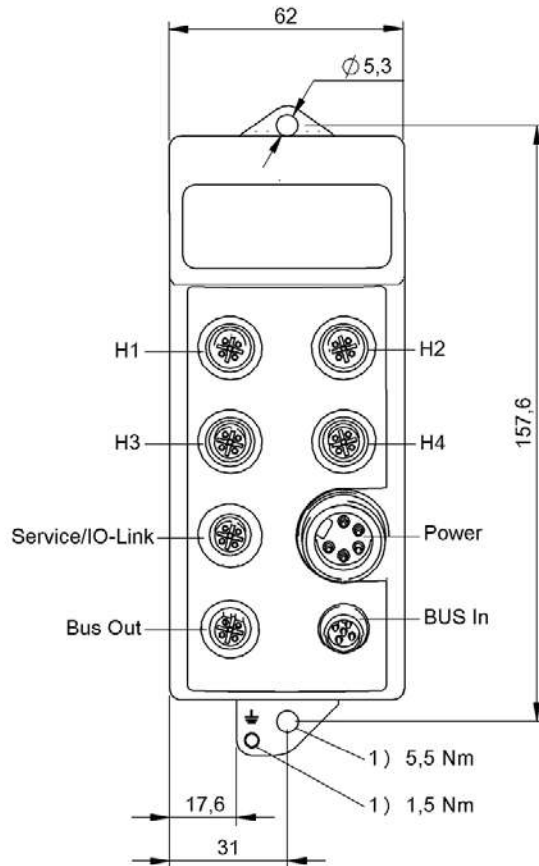
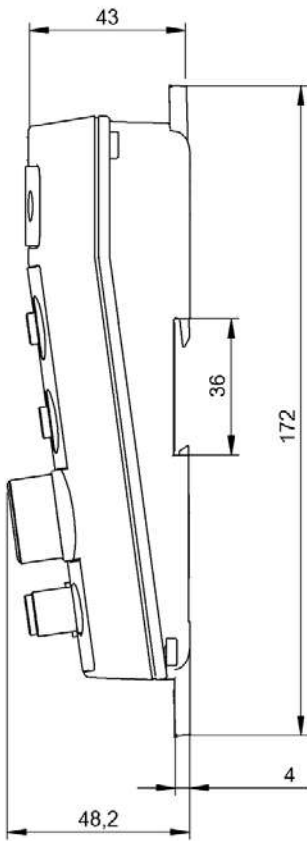
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			<b>BIS0194</b> BIS U-6127-081-114-06-ST36
<b>BIS0152</b> BIS U-6028-048-134-06-ST28			
UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
915.25...927.75 MHz	865...868 MHz		902...928 MHz
Profinet galvanically isolated	Ethernet TCP/IP		Ethernet TCP/IP
UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)		UHF 860/960 MHz (BIS U)
4	4		4
17 dBm...30 dBm (50 mW...1 W)	7 dBm...30 dBm (5 mW...1 W)		7 dBm...30 dBm (5 mW...1 W)
19.2...28.8 VDC	19.2...28.8 VDC LPS Class 2		19.2...28.8 VDC LPS Class 2
Steel, Aluminum, coated	Stainless steel, Aluminum, coated		Stainless steel, Aluminum, coated
-20...55 °C	-20...55 °C		-20...55 °C
IP65, with connector	IP65, with connector		IP65, with connector
Anatel 442/2006, Anatel 506/2008, WEEE	CE, ETSI EN 302 208, UL Listed, EAC, WEEE		FCC Part 15, IC RSS-210, UL Listed, WEEE, EAC
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Europe: 865...868 MHz		
USA: 902...928 MHz	<b>BIS0073</b> BIS U-620-068-111-00-S115	
Product Group	UHF (860...960 MHz)	
Working frequency	902...928 MHz	
Interface	RS232	
Supported RFID technologies	UHF 860/960 MHz (BIS U)	
Number of connectable R/W heads / antennas	1	
Output power adjustable	10 dBm...27 dBm (10 mW...500 mW)	
Operating voltage $U_b$	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
IP rating	IP65, with connector	
Approval/Conformity	FCC Part 15, WEEE, EAC	
Productview	Page 58	

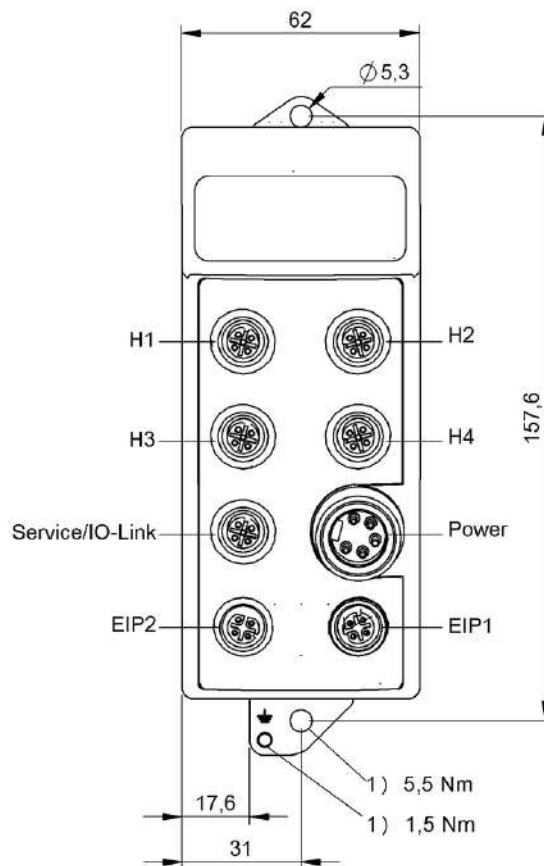
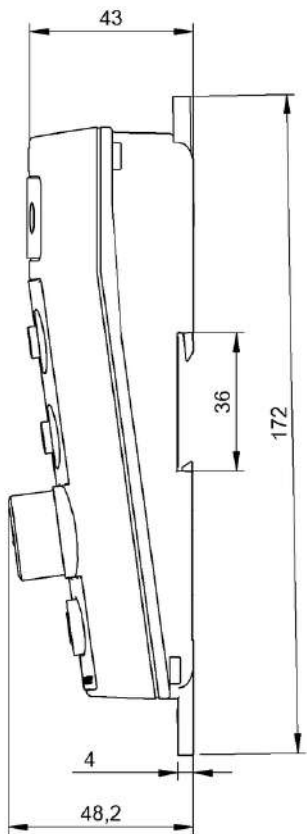


<b>BIS00Z0</b> BIS U-626-069-101-06-ST32		
	<b>BIS00YZ</b> BIS U-626-069-111-06-ST31	<b>BIS00YY</b> BIS U-626-069-111-06-ST32
UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
865...868 MHz	902...928 MHz	902...928 MHz
Industrial Ethernet / Ethernet TCP/IP / MOD-BUS TCP	Industrial Ethernet / Ethernet TCP/IP / MOD-BUS TCP	Industrial Ethernet / Ethernet TCP/IP / MOD-BUS TCP
UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)	UHF 860/960 MHz (BIS U)
1	1	1
10 dBm...27 dBm (10 mW...500 mW)	10 dBm...27 dBm (10 mW...500 mW)	10 dBm...27 dBm (10 mW...500 mW)
19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
Aluminum	Aluminum	Aluminum
-20...50 °C	-20...50 °C	-20...50 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, ETSI EN 302 208, EAC, WEEE	FCC Part 15, WEEE, EAC	FCC Part 15, WEEE, EAC
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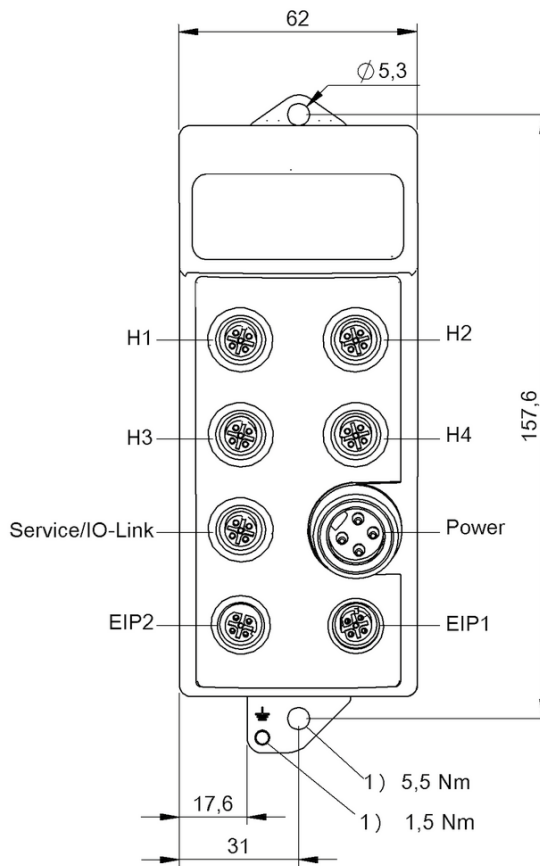
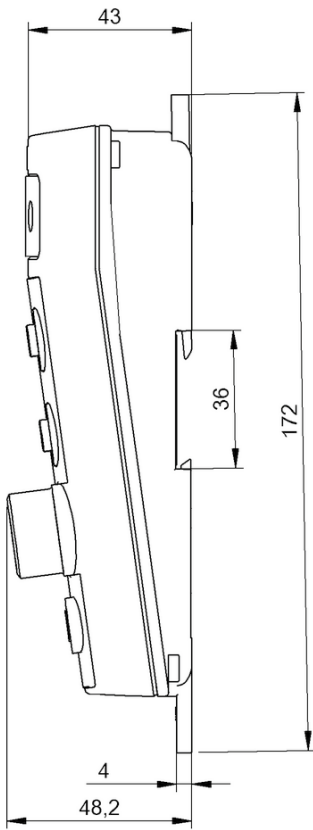
1) Tightening torque

**BISO0T3, BISO12E**



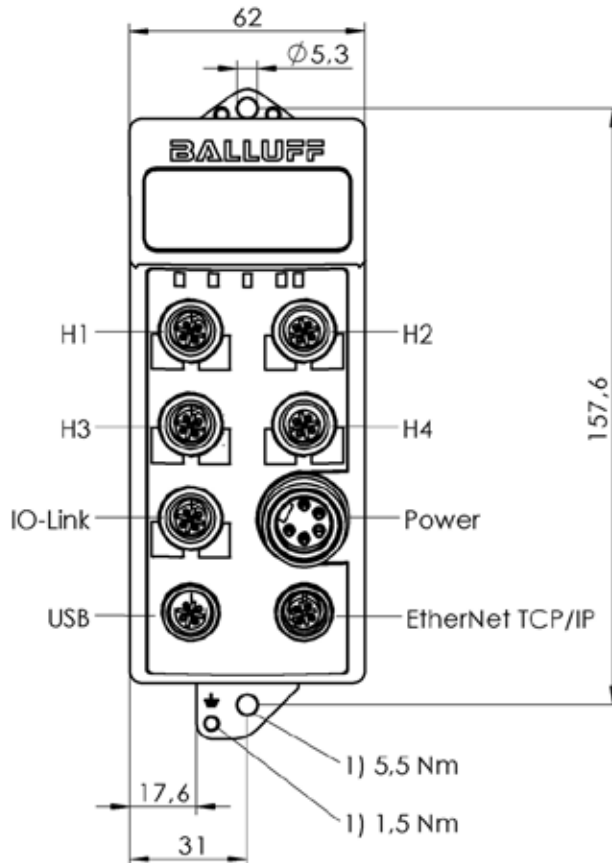
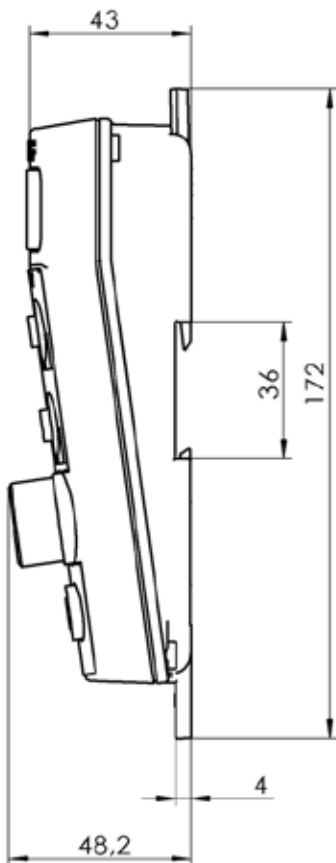
1) Tightening torque

**BISO12F, BISO14C**



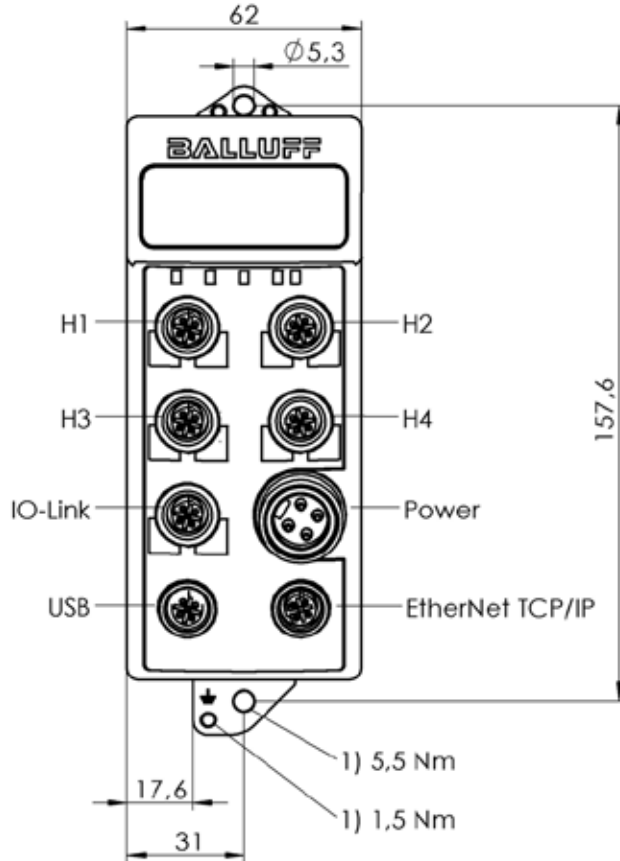
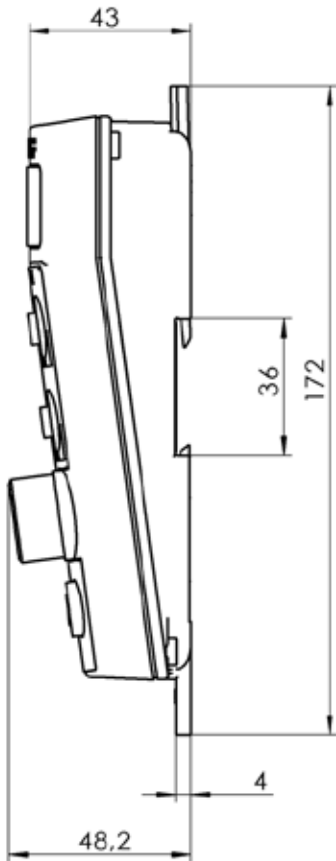
1) Tightening torque

**BIS0122, BIS0146**



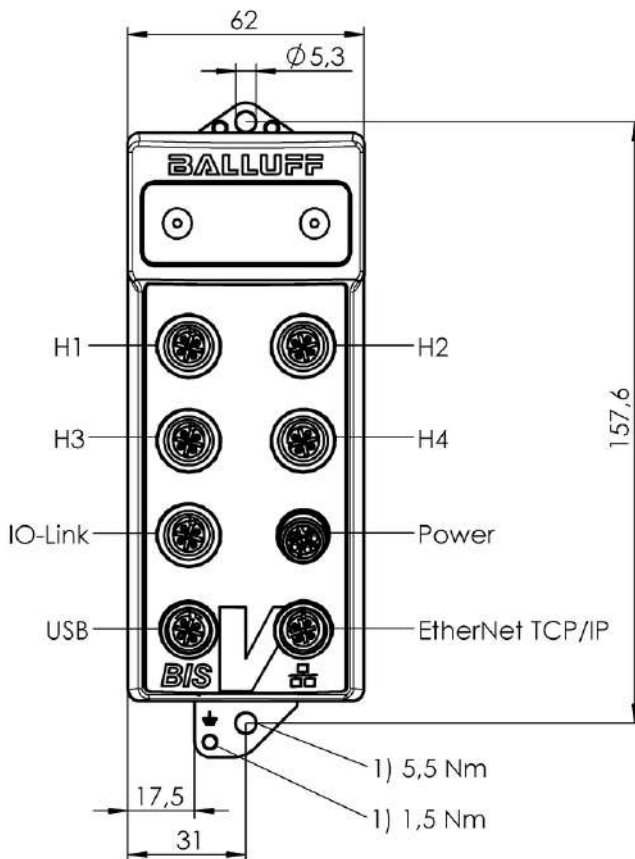
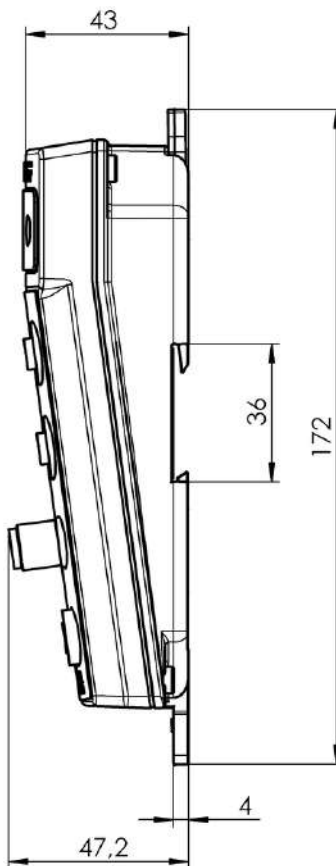
1) Tightening torque

**BIS0186, BIS0187**



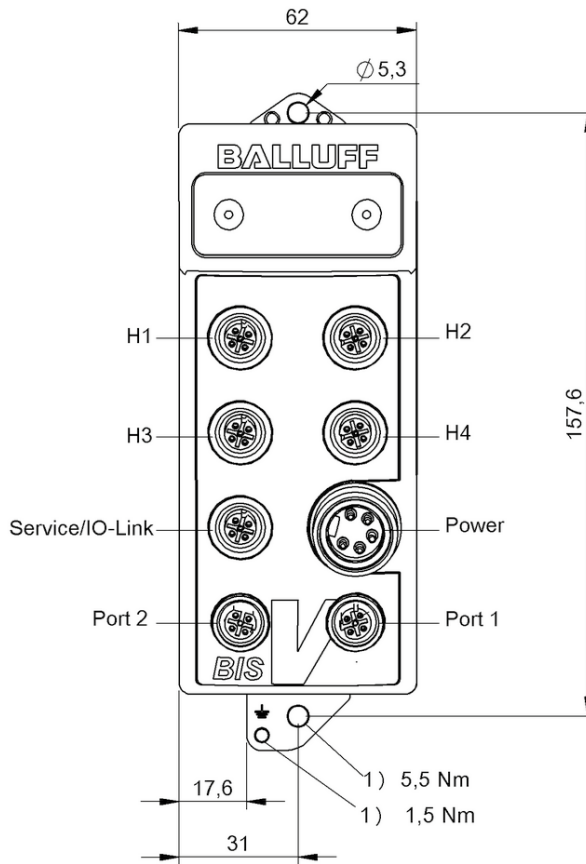
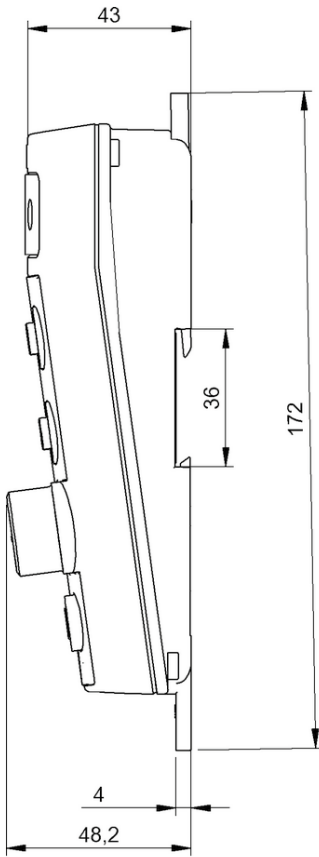
1) Tightening torque

**BIS018J, BIS018K**



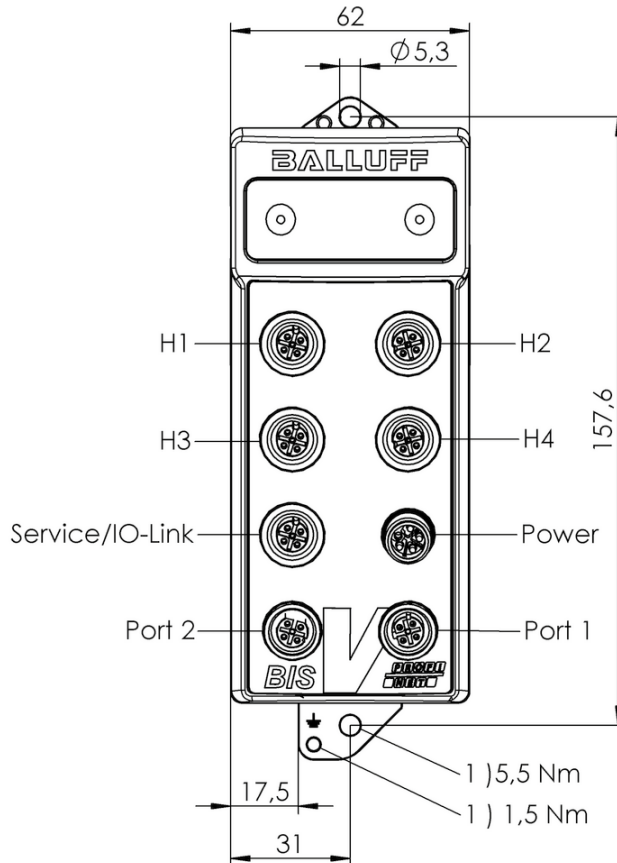
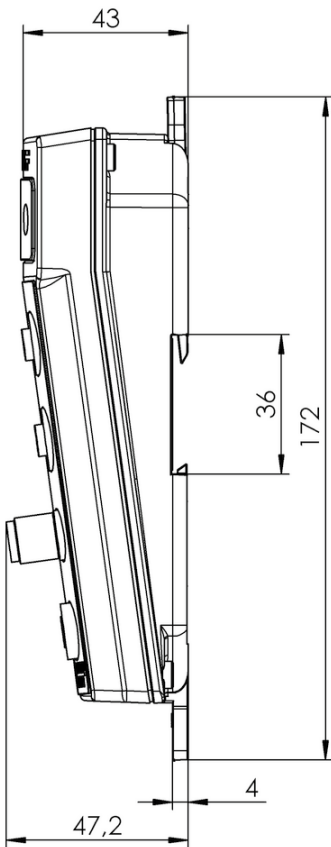
1) Tightening torque

**BIS01AA, BIS01AC**



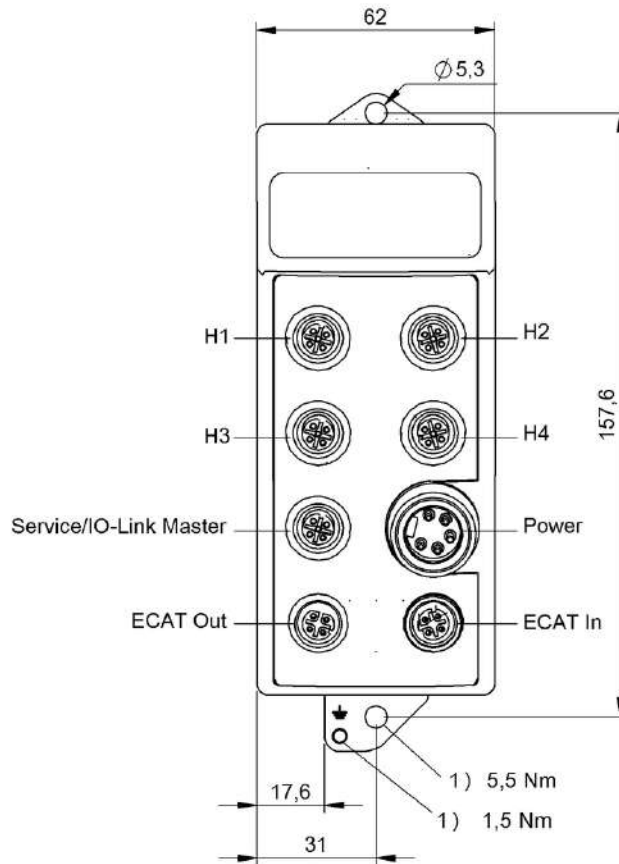
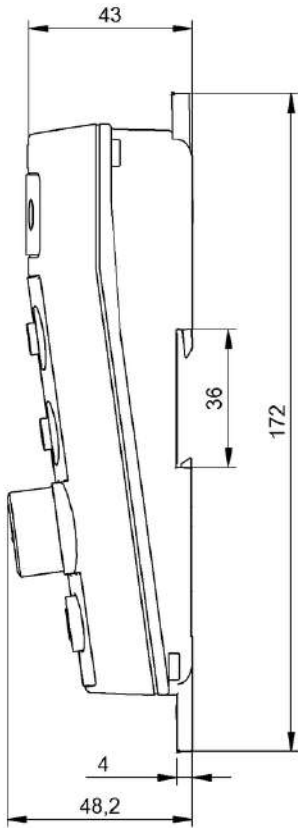
1) Tightening torque

**BISO13U, BISO13W**



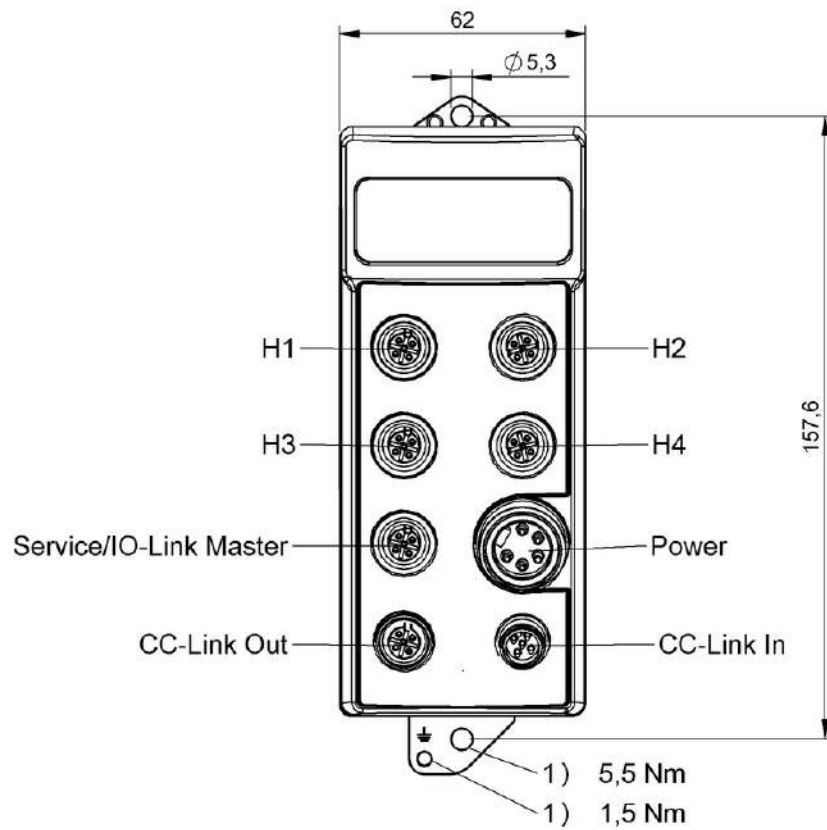
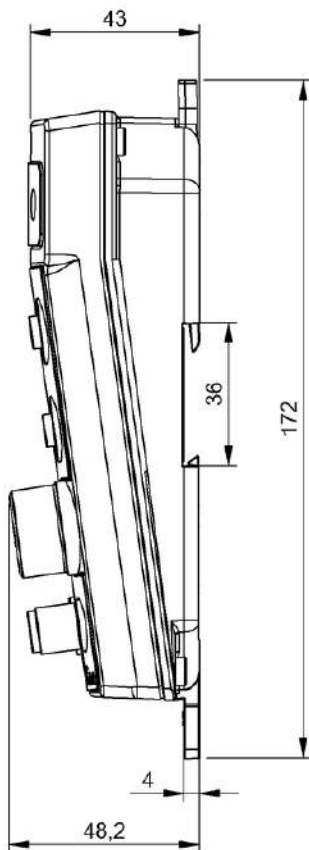
1) Tightening torque

**BISO1AE, BISO1AF**



1) Tightening torque

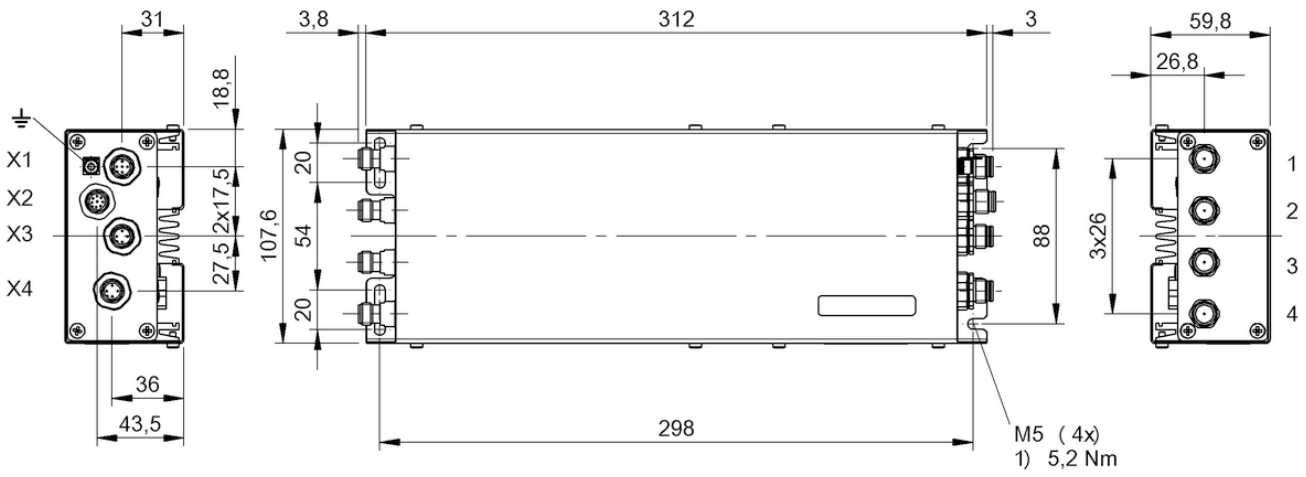
**BISO009, BISO147**



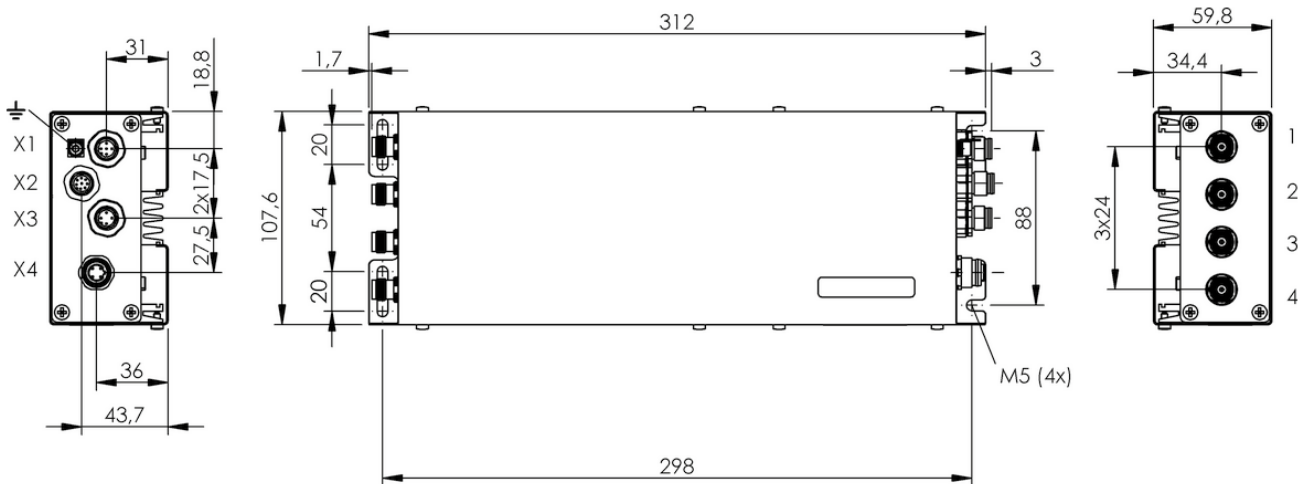
1) Tightening torque

**BISO10P, BISO14E**

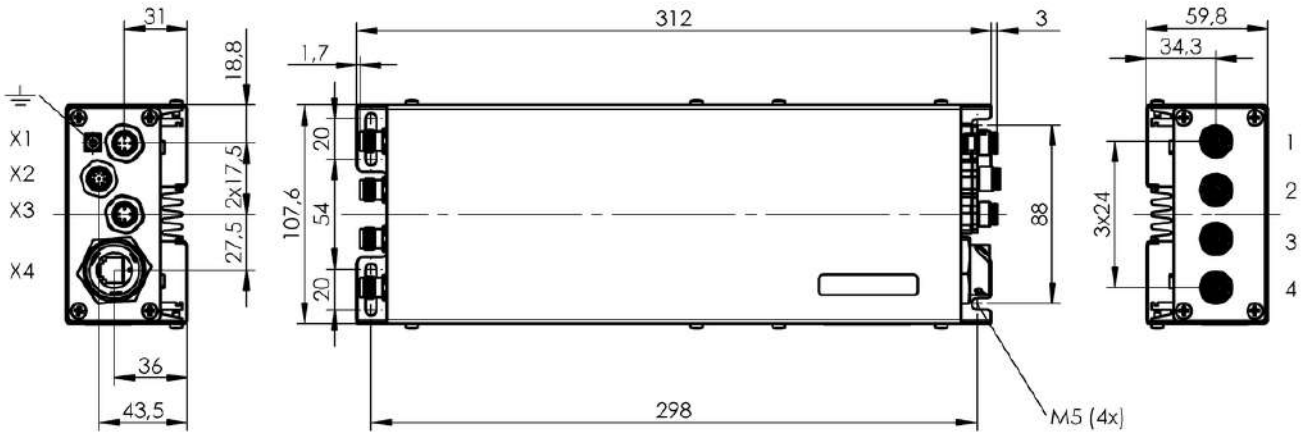




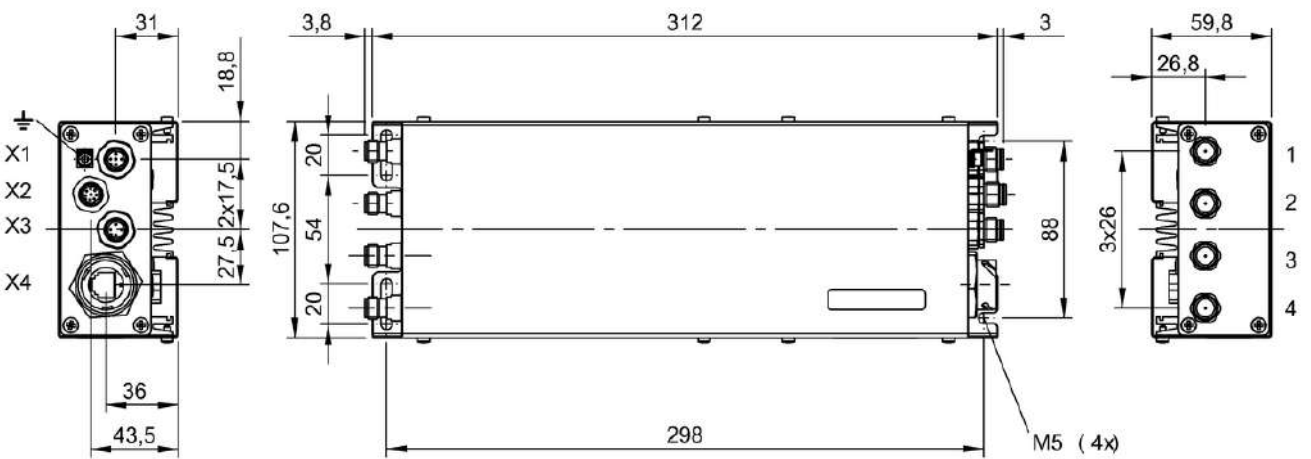
BISO00M7



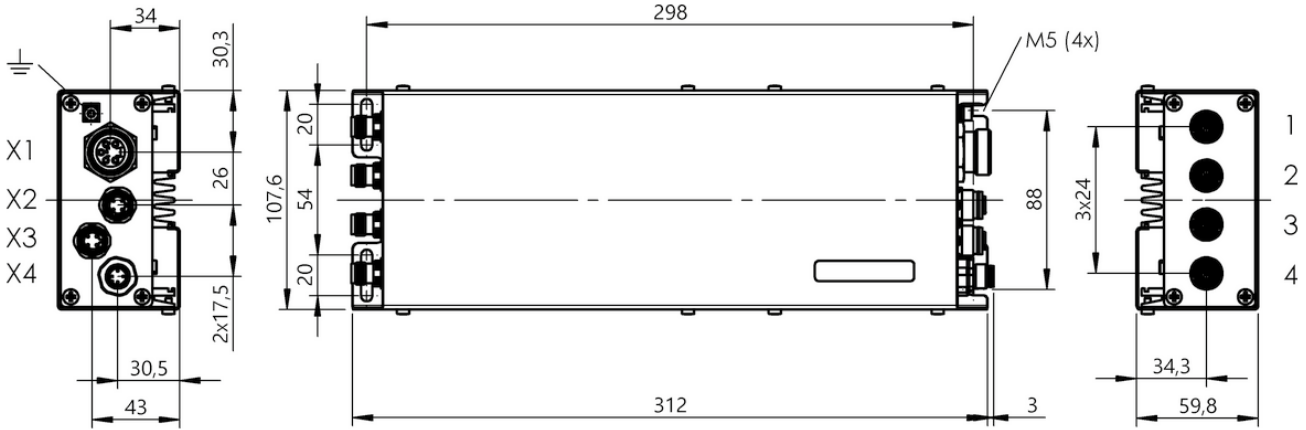
BISO13J, BISO18N



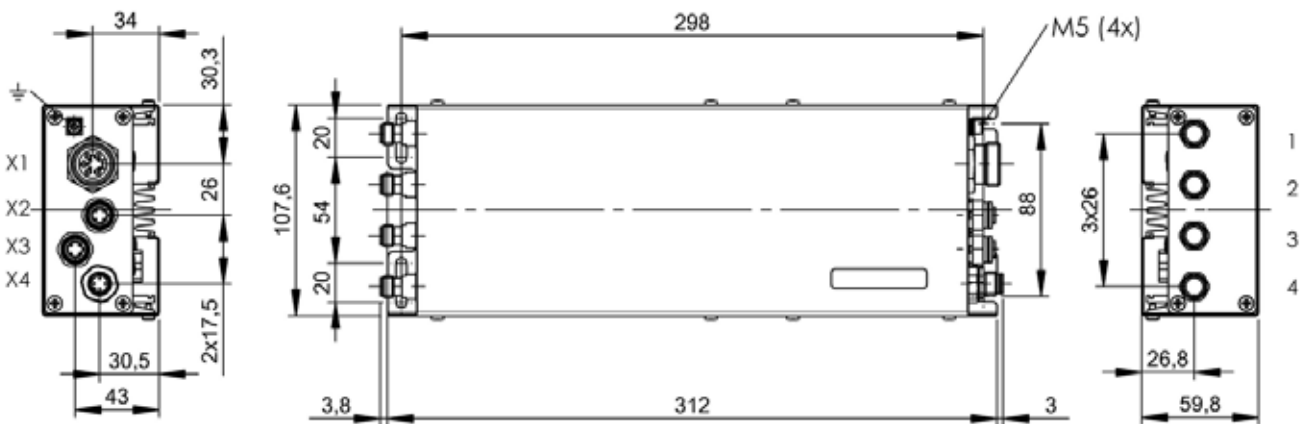
BISO12R



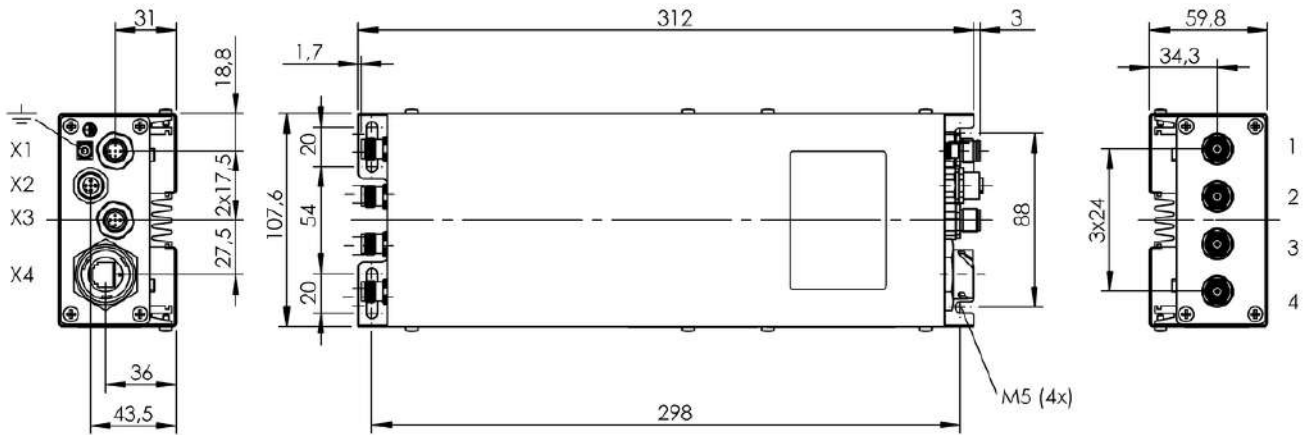
BISO00R, BISO14H



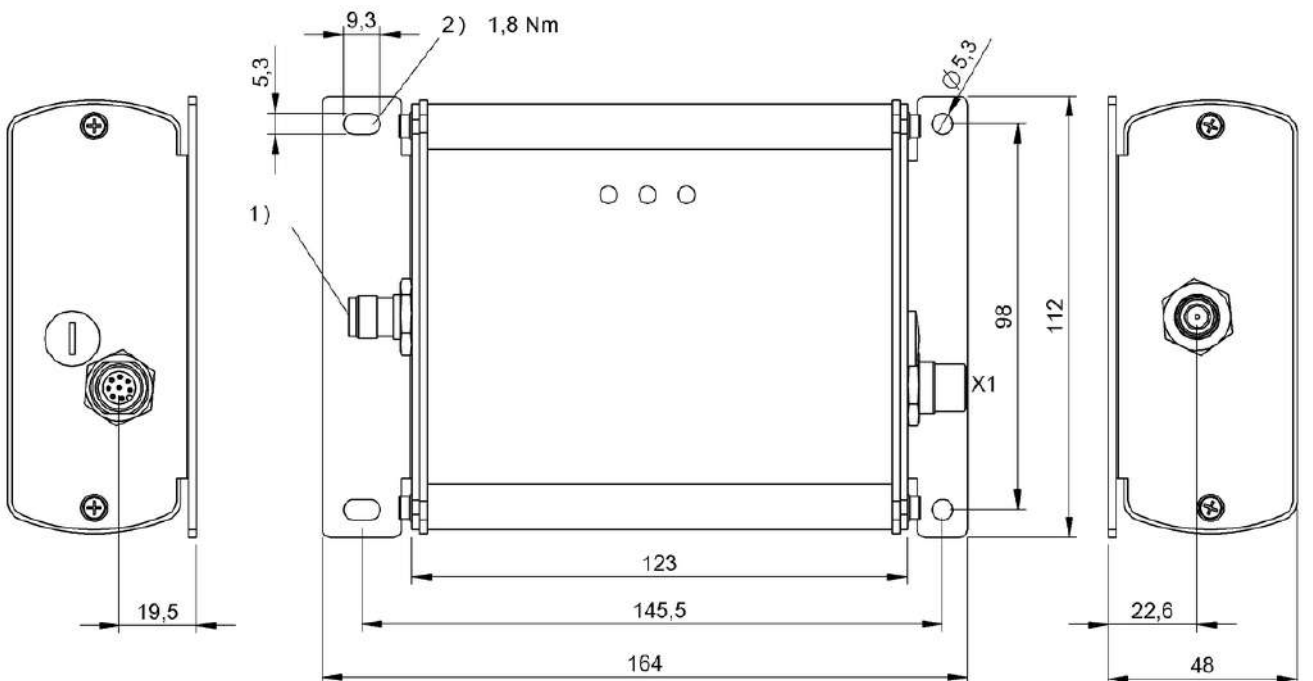
BIS00ZU, BIS00ZW, BIS017J



BIS0152

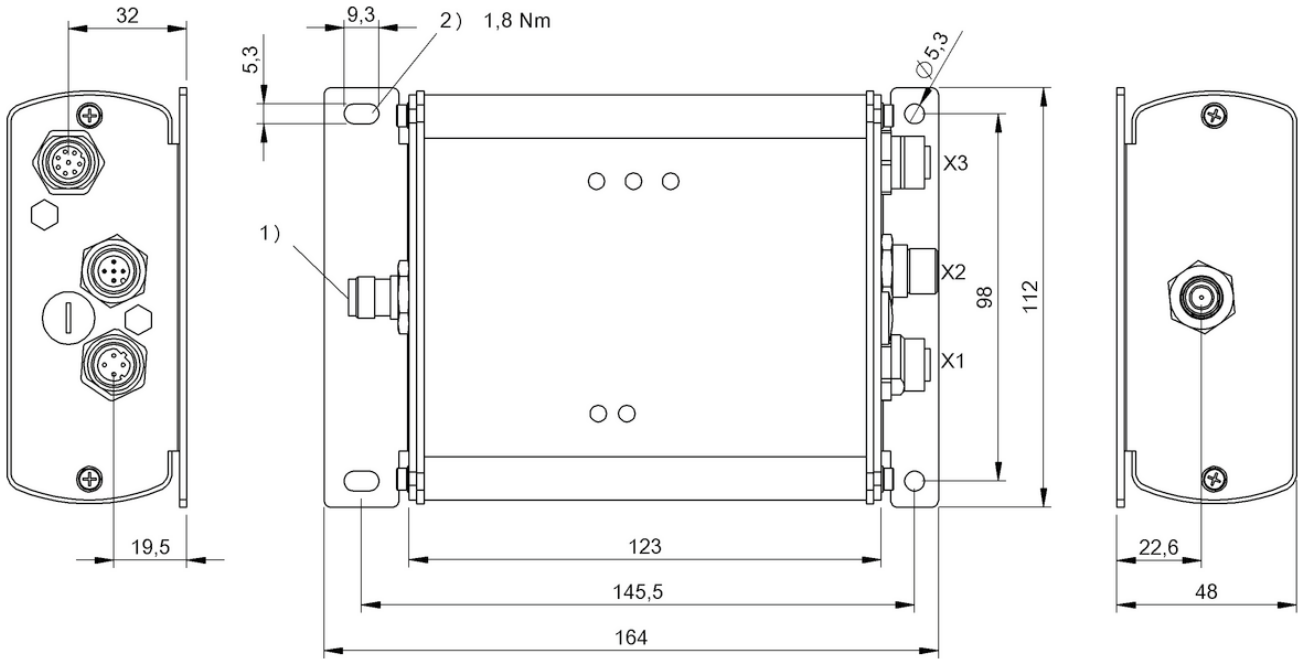


BIS0193, BIS0194



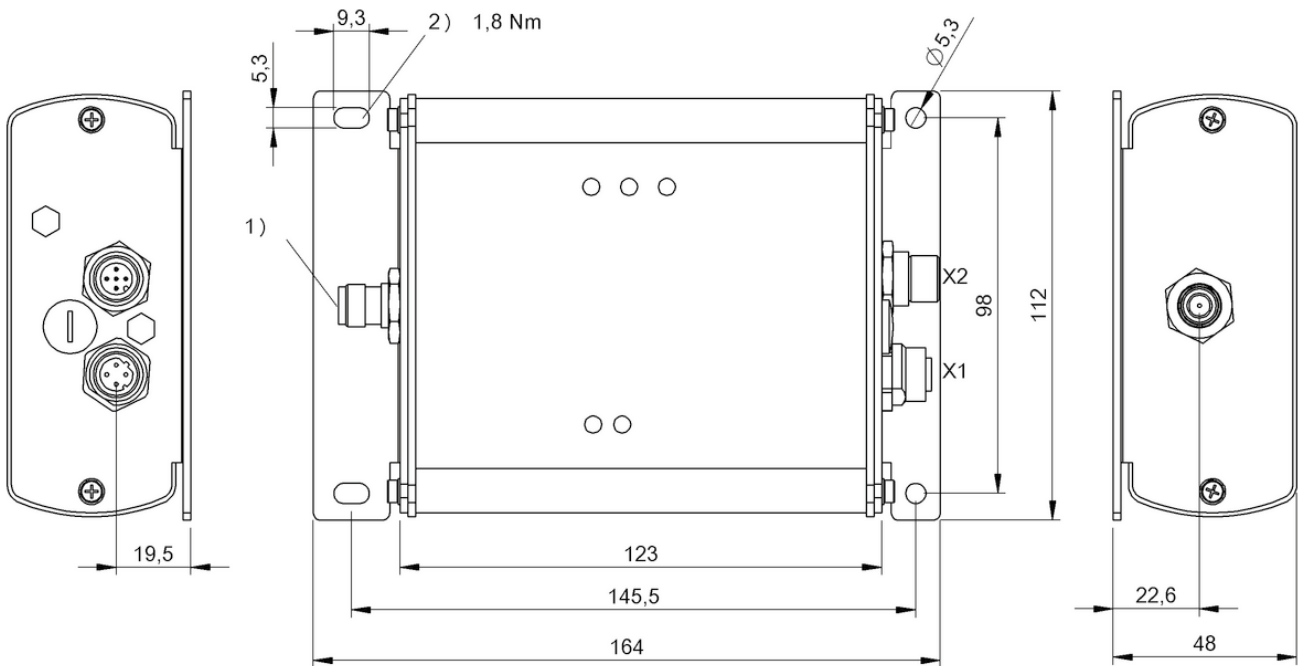
1) Antenna, 2) Tightening torque

BIS0023



1) Antenna, 2) Tightening torque

**BIS00ZO, BIS00YY**



1) Antenna, 2) Tightening torque

**BIS00YZ**



Europa: 865,6-867,6 MHz	<b>BIS01E4</b> BIS U-4A7-082-01C-07-S4		
USA/Kanada: 902...928 MHz		<b>BIS01E8</b> BIS U-4A7-082-11C-07-S4	
China 920,5...924,5 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Radio license	Europa	USA	
Dimension	Ø 30 x 98 mm	Ø 30 x 98 mm	
Antenna type	Patch	Patch	
Polarization	zirkular	Zirkular	
Output power adjustable	-9.25...+13.75 dBmERP	-7...+16 dBmEIRP	
Connection	Built-in connector M12, 4-pole, A-coded	Built-in connector M12, 4-pole, A-coded	
Housing material PC	Stainless steel, PBT	Stainless steel,, PBT	
Interface	IO-Link 1.1, COM 3	IO-Link 1.1, COM 3	
Prozessdaten IN	32 Byte	32 Byte	
Process data OUT	32 Byte	32 Byte	
Process data	24 V DC LPS Class 2	24 V DC LPS Class 2	
Ambient temperature	0°...+70°C	0°...+70°C	
Protection degree	IP68 / IP69K	IP68 / IP69K	
Approval/Conformity	CE, ETSI EN 302 208, cULus, EAC, WEEE	FCC Part 15, IC RSS-210, cULus, WEEE, EAC	



**BIS01E9**

BIS U-4A7-082-21C-07-S4

UHF (860...960 MHz)

China

Ø 30 x 98 mm

Patch

zirkular

-9.25...+13.75 dBmERP

Built-in connector M12, 4-pole, A-coded

Stainless steel,, PBT

IO-Link 1.1, COM 3

32 Byte

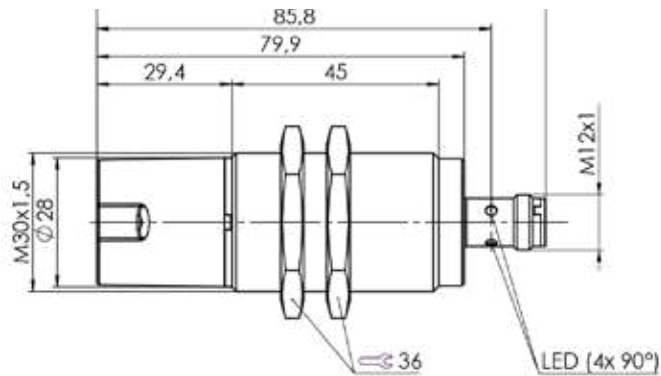
32 Byte

24 V DC LPS Class 2

0°...+70°C

IP68 / IP69K

CMIIT-Radio Transmiss. Equipm., cULus, WEEE



**BIS01E4, BIS01E8, BIS01E9**





High transmission speed for large volumes of data

# RFID SYSTEM HF (13.56 MHz) BIS M

The RFID system BIS M supports global ISO standards and scores with a high transmission speed for large volumes of data. Through various combination options of data carriers and read/write heads, the system can be used for a variety of applications. The system is ideal, for example, in close-range parts tracking or for applications in production control such as palletizing or recording data on the workpiece.

## Features

- 4-pin standard wiring and IO-Link components
- In combination with passive data carriers of average ranges up to a max. of 400 mm
- Seamless integration in applications through global RFID standards ISO 15693 and ISO 14443A
- All bus systems commonly used on a global basis available
- Easy, fast commissioning
- Balluff high-speed components (up to eight times faster than ISO 15693)
- Customer-specific developments
- A variety of accessories for an easy integration available at all places of use



	<b>BIS018Y</b> BIS M-113-03/L	
Product Group	HF (13.56 MHz)	
Dimension	Ø 4.35 x 3.6 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-40...85 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	Epoxy-resin/fiberglass PVC	
Protection degree	IPx8	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 106	

Suitable read/write head with max. read/write working distance

Installation	flush in metal*	on metal	metal-free (clear zone)	
BIS M-302				
BIS M-305				
BIS M-402-xxx-002				
BIS M-402-xxx-007				
BIS M-410				
BIS M-411				
BIS M-449		0-5.5	0-6	
BIS M-451				
BIS VM-330				
BIS VM-343-401				
BIS VM-346-401				
BIS VM-348-401				
BIS VM-349-401		0-5.5	0-6	

Dimensions in mm

\* Installation on request



BIS00UC BIS M-116-03/A	BIS00UE BIS M-116-08/A	BIS00YL BIS M-130-03/L
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 6 x 1 mm	Ø 6 x 1 mm	Ø 7.9 x 4.9 mm
round	round	round
8 Byte	8 Byte	8 Byte
EEPROM	EEPROM	EEPROM
DIN ISO 15693	DIN ISO 14443	DIN ISO 15693
112 Byte	160 Byte	112 Byte
-20...90 °C	-20...90 °C	-40...85 °C
—	—	—
0...50 °C	0...50 °C	-20...85 °C
Epoxy-resin/fiberglass	Epoxy-resin/fiberglass	ABS, black
IP67	IP67	IP68
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal	metal-free (clear zone) on metal flush in metal
CE	CE	CE
Page 106	Page 106	Page 106

flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
		0-7			0-7			
	0-4	0-7.5						
		0-3			0-3			0-9
								0-17
0-2	0-3	0-4.5				0-2	0-5.5	0-20
1.3-2.5	0-4	0-6.5						0-6
0-2	0-3	0-4.5				0-2	0-5.5	0-6
		0-3.5			0-3.5	0-3	0-6	0-6.5
		0-3.5			0-3.5	0-3	0-6	0-6.5
0-2	0-3	0-5						
1.3-2.5	0-4	0-6.5						



	<b>BIS00YJ</b> BIS M-130-10/L	
Product Group	HF (13.56 MHz)	
Dimension	Ø 7.9 x 4.9 mm	
Antenna type	round	
UID serial number, read-only	4 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 14443	
User data, read/write	736 Byte	
Storage temperature	-40...85 °C	
Storage temperature temporary	—	
Ambient temperature	-20...85 °C	
Housing material	ABS, black	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 106	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-302			
BIS M-304			
BIS M-305			
BIS M-307		0-7	0-5
BIS M-400-xxx-001			
BIS M-400-xxx-002			
BIS M-400-xxx-401			
BIS M-402-xxx-002			0-4.5
BIS M-402-xxx-004			
BIS M-404-xxx-401			
BIS M-408-045-001			0-6.5
BIS M-410			0-6
BIS M-411			0-6.5
BIS M-414	0-1	0-3	0-2
BIS M-449			
BIS VM-305			
BIS VM-306			
BIS VM-307	0-7		0-5
BIS VM-330	0-1	0-3	0-2
BIS VM-332			
BIS VM-333			
BIS VM-343-401	0-1.5	0-4	0-2.5
BIS VM-344-401			
BIS VM-345-401			
BIS VM-346-401	0-1.5	0-4	0-2.5
BIS VM-348-401			
BIS VM-349-401			

Dimensions in mm



BIS00YK BIS M-130-07/L	BIS01A1 BIS M-103-03/L-SA1	BIS01A0 BIS M-122-21/A
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 7.9 x 4.9 mm	Ø 8.1 x 4.9 mm	Ø 10 x 4.5 mm
round	round	round
8 Byte	8 Byte	8 Byte
EEPROM	EEPROM	EEPROM
DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
992 Byte	112 Byte	32 Byte
-40...85 °C	-40...85 °C	-25...85 °C
—	—	—
-20...85 °C	-20...85 °C	-25...70 °C
ABS, black	PEEK, Natural	PA 12, PU potting
IP68	IP68	IP67
metal-free (clear zone) on metal flush in metal	metal-free (clear zone)	metal-free (clear zone) on metal flush in metal
CE	CE, WEEE, EAC	CE
Page 106	Page 106	Page 106

flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
						0-5.5		0-7.5
						0-3.5		0-5.5
	0-8	0-10				0-3.5		0-5.5
						0-3.5		0-5.5
						0-5.5		0-11.5
						0-3.5		0-4.5
								0-7.5
		0-9				0-3.5		0-6.5
						0-3.5		0-6.5
						0-2	0-4	0-4.5
		0-13					0-7.5	0-9.5
		0-12						
		0-13						
0-2	0-4	0-4.5				0-2	0-3.5	0-4
						0-4.5	0-6.5	0-6.5
						0-3.5		0-5.5
						0-3.5		
0-8		0-10				0-3.5		0-5.5
0-2	0-4	0-4.5				0-2	0-3.5	0-4
						0-3	0-5	0-5.5
								0-8.5
0-2.5	0-5	0-5				0-2	0-3	0-3.5
							0-7.5	
0-2.5	0-5	0-5				0-2	0-3	0-3.5
						0-3.5		0-5.5
						0-4.5	0-6.5	0-6.5

Sensors

RFID

Machine Vision and Optical Identification

Human Machine Interfaces

Safety

Industrial Networking

Software and System Solutions

Power Supply

Connectivity

Accessories



	<b>BIS0048</b> BIS M-122-01/A	
Product Group	HF (13.56 MHz)	
Dimension	Ø 10 x 4.5 mm	
Antenna type	round	
UID serial number, read-only	4 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 14443	
User data, read/write	752 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	PA 12, PU potting	
Protection degree	IP67	
Installation	metal-free (clear zone) flush in metal	
Approval/Conformity	CE	
Productview	Page 106	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			
BIS M-302			0-7
BIS M-304			0-5
BIS M-305			0-5
BIS M-307			0-5
BIS M-400-xxx-001			0-9.5
BIS M-400-xxx-002			0-5
BIS M-400-xxx-401			
BIS M-402-xxx-002			0-5
BIS M-402-xxx-004			0-5
BIS M-404-xxx-401			
BIS M-405-xxx-001			
BIS M-408-045-001			
BIS M-414			
BIS M-449			
BIS VM-300			
BIS M-302			
BIS M-304			
BIS VM-305			0-5
BIS VM-306			
BIS VM-307			0-5
BIS VM-330			
BIS VM-332			
BIS VM-333			
BIS VM-343-401			
BIS VM-344-401			
BIS VM-345-401			
BIS VM-346-401			
BIS VM-348-401			
BIS VM-349-401			

Dimensions in mm

\* Installation on request



BISO04A BIS M-122-02/A	BIS019C BIS M-1R1-02/L	BISO040 BIS M-105-01/A
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 10 x 4.5 mm	Ø 10.1 x 4.5 mm	Ø 11.98 x 6 mm
round	round	round
8 Byte	8 Byte	4 Byte
FRAM	FRAM	EEPROM
DIN ISO 15693	DIN ISO 15693	DIN ISO 14443
2000 Byte	2000 Byte	752 Byte
-25...85 °C	-25...85 °C	-25...85 °C
—	—	—
-25...70 °C	-25...85 °C	-25...70 °C
PA 12, PU potting	PEEK, GF30	Epoxy resin-glass fiber, GF
IP67	IP68	IP67
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
CE	CE	CE
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flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)
								0-9
0-6		0-9	0-7	0-8		0-5		0-7
0-5		0-7	0-6.5	0-7		0-5		0-5
0-5		0-7				0-4		0-6
0-5		0-7				0-4		0-6
0-7		0-13						0-7
0-5		0-6				0-5		0-6
		0-9						
0-5		0-8				0-4		0-6
0-5		0-8				0-4		0-6
0-3.5	0-5.5	0-6						
								0-7
	0-9	0-11						
0-3.5	0-5	0-5.5						
0-6	0-8	0-8						
								0-9
			0-7	0-8				
			0-6.5	0-7				
0-5		0-7				0-4		0-6
0-5						0-5		
0-5		0-7				0-4		0-6
0-3.5	0-5	0-5.5						
0-4.5	0-6.5	0-7						
		0-10						
0-3.5	0-4.5	0-5						
	0-9	0-1						
0-3.5	0-4.5	0-5						
0-5		0-7						
0-6	0-8	0-8						

Sensors

RFID

Machine Vision and Optical Identification

Human Machine Interfaces

Safety

Industrial Networking

Software and System Solutions

Power Supply

Connectivity

Accessories



	<b>BIS0042</b> BIS M-105-02/A	
Product Group	HF (13.56 MHz)	
Dimension	Ø 11.98 x 6 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 106	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-11
BIS M-302	0-6		0-9
BIS M-304	0-6		0-7
BIS M-305	0-4		0-8
BIS M-307	0-6		0-8
BIS M-400-xxx-001			0-11
BIS M-400-xxx-002			0-9
BIS M-400-xxx-401			0-13
BIS M-402-xxx-002			0-6
BIS M-402-xxx-004	0-4		0-6
BIS M-404-xxx-401	0-6		0-8
BIS M-404-xxx-401	0-6	0-8	0-8.5
BIS M-405-xxx-001			0-11
BIS M-408-045-001		0-11	0-13
BIS M-410			
BIS M-411			
BIS M-414	0-5	0-6	0-6.5
BIS M-449	0-7	0-9.5	0-10
BIS M-451			
BIS VM-300			0-11
BIS VM-301			
BIS M-302			
BIS M-304			
BIS VM-305	0-6		0-8
BIS VM-306	0-6		
BIS VM-307	0-6		0-8
BIS VM-330	0-5	0-6	0-6.5
BIS VM-332	0-6	0-8	0-8.5
BIS VM-333			0-13
BIS VM-343-401	0-4	0-5	0-5.5
BIS VM-344-401			0-11
BIS VM-345-401			
BIS VM-346-401	0-4	0-5	0-5.5
BIS VM-348-401	0-5		0-7
BIS VM-349-401	0-7	0-9.5	0-10
BIS M-410			

Dimensions in mm

\* Installation on request





BIS00YH BIS M-131-10/L	BIS019E BIS M-1R2-02/L	BIS01CE BIS M-107-03/L
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 12 x 6.4 mm	Ø 15.3 x 4.5 mm	Ø 16 x 3 mm
round	round	round
4 Byte	8 Byte	8 Byte
EEPROM	FRAM	EEPROM
DIN ISO 14443	DIN ISO 15693	DIN ISO 15693
736 Byte	2000 Byte	112 Byte
-40...85 °C	-25...85 °C	—
—	—	-40...85 °C 1x1000 h
-20...85 °C	-25...85 °C	-25...85 °C
ABS	PEEK, GF30	PPS
IP68	IP68	IP68
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone)
CE	CE	CE, WEEE, EAC
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flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)
			0-11 0-10	0-12 0-10				0-28
	0-8	0-10						0-17
		0-9						
		0-13 0-12 0-13						0-11
0-2	0-4	0-4.5						0-25
			0-11 0-10	0-12 0-10				0-18
								0-16
								0-30
								0-15
		0-5						



	<b>BIS0044</b> BIS M-110-02/L	
Product Group	HF (13.56 MHz)	
Dimension	Ø 20 x 2.8 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...85 °C	
Housing material	PA 6	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 107	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-22
BIS M-301			0-32
BIS M-302			0-16
BIS M-304			0-14
BIS M-305			0-13
BIS M-307			0-13
BIS M-340			0-90
BIS M-371-000-A01			0-70
BIS M-372-000-A01			0-115
BIS M-373-000-A01			
BIS M-400-xxx-001			0-20
BIS M-400-xxx-002			0-15
BIS M-400-xxx-401			0-18
BIS M-401			0-30
BIS M-402-xxx-002			0-15
BIS M-402-xxx-004			0-15
BIS M-404-xxx-401			0-10
BIS M-405-xxx-001			0-20
BIS M-408-045-001			0-23
BIS M-410			
BIS M-411			0-45
BIS M-451		0-5	0-12
BIS VM-300		0-22	
BIS VM-301		0-32	
BIS M-302			
BIS M-304			
BIS VM-305		0-13	
BIS VM-307		0-13	
BIS VM-332		0-10	
BIS VM-333		0-18	
BIS VM-344-401		0-22	
BIS VM-345-401	0-5	0-22	
BIS VM-348-401		0-12	
BIS VM-349-401	0-5	0-12	
BIS M-371-000-A01			
BIS M-372-000-A01			
BIS M-373-000-A01			
BIS M-410			
BIS M-411			

Dimensions in mm, \* Installation on request



BIS00YF BIS M-132-03/L	BIS00YC BIS M-132-10/L	BIS0143 BIS M-128-03/L
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 24.9 x 4.8 mm	Ø 24.9 x 4.8 mm	Ø 26 x 6 mm
round	round	round
8 Byte	4 Byte	8 Byte
EEPROM	EEPROM	EEPROM
DIN ISO 15693	DIN ISO 14443	DIN ISO 15693
112 Byte	736 Byte	112 Byte
-40...85 °C	-40...85 °C	-25...85 °C
—	—	—
-20...85 °C	-20...85 °C	-25...70 °C
ABS, black	ABS, black	Epoxy-resin/fiberglass
IP68	IP68	IP67
metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
CE	CE	CE
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flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
		0-100 0-160 0-160						0-27 0-21 0-13
		0-48 0-80			0-15 0-26			
								0-13 0-21
		0-100 0-160 0-160 0-48 0-80			0-15 0-26			

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	<b>BIS003Y</b> BIS M-101-01/L	
Product Group	HF (13.56 MHz)	
Dimension	Ø 30 x 1 mm	
Antenna type	round	
UID serial number, read-only	4 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 14443	
User data, read/write	752 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Installation	metal-free (clear zone)	
Approval/Conformity	CE	
Productview	Page 107	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-22
BIS M-301			0-34
BIS M-302			0-16
BIS M-304			0-14
BIS M-340			
BIS M-371-000-A01			
BIS M-372-000-A01			
BIS M-400-xxx-001			0-20
BIS M-400-xxx-002			0-15
BIS M-400-xxx-401			
BIS M-401			0-28
BIS M-402-xxx-002			0-14
BIS M-402-xxx-004			0-15
BIS M-404-xxx-401			
BIS M-405-xxx-001			0-12
BIS M-406-045-001			
BIS M-408-045-001			
BIS M-410			
BIS M-411			
BIS M-449			
BIS M-4006-001			
BIS M-4008-001			
BIS VM-300			0-15
BIS VM-301			0-15
BIS VM-332			
BIS VM-333			
BIS VM-344-401			
BIS VM-345-401			
BIS VM-349-401			
BIS M-410			
BIS M-411			

Dimensions in mm

\* Installation on request



BIS0045 BIS M-111-02/L	BIS00Y8 BIS M-134-10/L	BIS003Z BIS M-102-01/L
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 30 x 2.8 mm	Ø 49.8 x 5.3 mm	Ø 50 x 1 mm
round	round	round
8 Byte	4 Byte	4 Byte
FRAM	EEPROM	FRAM
DIN ISO 15693	DIN ISO 14443	DIN ISO 14443
2000 Byte	736 Byte	752 Byte
-25...85 °C	-40...85 °C	-25...85 °C
—	—	—
-25...85 °C	-20...85 °C	-25...70 °C
PA 6	ABS, black	Epoxy resin-glass fiber, GF
IP68	IP68	IP67
metal-free (clear zone) on metal flush in metal	metal-free (clear zone)	metal-free (clear zone)
CE	CE	CE
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flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
		0-28						0-32
		0-45						0-45
		0-20						0-20
								0-18
		0-140						
		0-120						
		0-175						
		0-28						0-28
		0-20						0-18
		0-21						
		0-40						0-45
		0-18						
		0-28						0-28
		0-28						
		0-67						0-32
		3-13						0-56
		0-52						
		0-52						
0-28	0-18	0-10						0-32
0-45	0-30							0-45
0-21								
0-28	0-18	0-10						
0-28								
3-13								

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	<b>BIS0046</b> BIS M-112-02/L	
Product Group	HF (13.56 MHz)	
Dimension	Ø 50 x 3.3 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	140 °C 1x100 h, -40 °C...90 °C 1x1000 h	
Ambient temperature	-25...85 °C	
Housing material	PA 6	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE	
Productview	Page 108	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-44
BIS M-301			0-70
BIS M-302			0-30
BIS M-304			
BIS M-305			
BIS M-307			
BIS M-340			0-170
BIS M-341			35-90
BIS M-371-000-A01			0-150
BIS M-372-000-A01			0-235
BIS M-373-000-A01			0-270
BIS M-400-xxx-001			0-38
BIS M-400-xxx-002			0-28
BIS M-400-xxx-401			0-30
BIS M-401			0-60
BIS M-402-xxx-002			
BIS M-402-xxx-004			
BIS M-404-xxx-401			
BIS M-405-xxx-001			0-38
BIS M-406-045-001			0-38
BIS M-408-045-001			0-40
BIS M-414			
BIS M-449			
BIS M-4006-001			0-80
BIS M-4008-001			0-80
BIS VM-300			0-44
BIS VM-301			0-70
BIS VM-305			
BIS VM-307			
BIS VM-330			
BIS VM-332			
BIS VM-333			0-30
BIS VM-341-001			35-90
BIS VM-341-401			0-100
BIS VM-343-401			
BIS VM-344-401			0-44
BIS VM-345-401			0-45
BIS VM-346-401			
BIS VM-349-401			
Dimensions in mm			



BIS00NW BIS M-143-02/A-M8	BIS0100 BIS M-143-02/A-M8-SA2	BIS00NU BIS M-143-02/A-M6
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 22 x 21 mm	Ø 21 x 21 mm	Ø 21 x 21 mm
round	round	round
8 Byte	8 Byte	8 Byte
FRAM	FRAM	FRAM
DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
2000 Byte	2000 Byte	2000 Byte
-25...95 °C	-25...95 °C	-25...95 °C
—	—	—
-25...70 °C	-25...70 °C	-25...70 °C
Steel, data carrier: PA 12-GF30	Steel, data carrier: PA 12-GF30	Steel, data carrier: PA 12-GF30
IP68, IPx9K	IP68, IPx9K	IP68, IPx9K
on metal	on metal	on metal
CE	CE	CE
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flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
	0-13			0-13			0-13	
	0-13			0-13			0-13	
	0-12			0-12			0-12	
	0-12			0-12			0-12	
	0-23			0-23			0-23	
	0-13			0-13			0-13	
	0-12			0-12			0-12	
	0-13			0-13			0-13	
	0-16			0-16			0-16	
	0-9			0-9			0-9	
	0-9			0-9			0-9	
	0-9,5			0-9,5			0-9,5	
	0-13			0-13			0-13	
	0-13			0-13			0-13	
	0-7			0-7			0-7	
	0-10			0-10			0-10	
	0-18			0-18			0-18	
	0-18			0-18			0-18	
	0-13			0-13			0-13	
	0-12			0-12			0-12	
	0-12			0-12			0-12	
	0-7			0-7			0-7	
	0-9,5			0-9,5			0-9,5	
	0-13			0-13			0-13	
	0-23			0-23			0-23	
	0-7,5			0-7,5			0-7,5	
	0-13			0-13			0-13	
	0-16			0-16			0-16	
	0-7,5			0-7,5			0-7,5	
	0-10			0-10			0-10	

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	<b>BISO0M8</b> BIS M-140-02/A-M8	
Product Group	HF (13.56 MHz)	
Dimension	Ø 22 x 31 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...95 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	Steel, data carrier: PA 12-GF30	
Protection degree	IP68, IPx9K	
Installation	on metal	
Approval/Conformity	CE	
Productview	Page 108	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300		0-22	
BIS M-302		0-17	
BIS M-305		0-17	
BIS M-307		0-16	
BIS M-341		0-46	
BIS M-371-000-A01			
BIS M-372-000-A01			
BIS M-373-000-A01			
BIS M-400-xxx-001		0-22	
BIS M-400-xxx-002			
BIS M-400-xxx-401			
BIS M-401		0-32	
BIS M-402-xxx-002			
BIS M-402-xxx-004			
BIS M-404-xxx-401			
BIS M-405-xxx-001		0-22	
BIS M-408-045-001		0-22	
BIS M-414		0-9	
BIS M-449		0-13	
BIS M-4006-001			
BIS M-4008-001			
BIS VM-300		0-22	
BIS VM-305		0-17	
BIS VM-307		0-16	
BIS VM-330			
BIS VM-332			
BIS VM-333			
BIS VM-341-001		0-46	
BIS VM-341-401			
BIS VM-343-401			
BIS VM-344-401		0-22	
BIS VM-345-401			
BIS VM-346-401			
Dimensions in mm			





BIS00M9 BIS M-140-02/A-M6	BIS0119 BIS M-142-20/A-M6-GY	
HF (13.56 MHz)	HF (13.56 MHz)	
Ø 22 x 31 mm	Ø 22 x 26 mm	
round	round	
8 Byte	8 Byte	
FRAM	FRAM	
DIN ISO 15693	DIN ISO 15693	
2000 Byte	8192 Byte	
-25...95 °C	-25...95 °C	
—	—	
-25...70 °C	-25...70 °C	
Steel, data carrier: PA 12-GF30	Steel, data carrier: PA 12-GF30 gray	
IP68, IPx9K	IP68, IPx9K	
on metal	on metal	
CE	CE	
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flush in metal	on metal*	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
	0-22							
	0-17							
	0-17							
	0-16							
	0-46							
				0-50				
				0-65				
				0-65				
	0-22							
	0-32							
	0-22							
	0-22							
	0-9							
	0-13							
				0-38				
				0-38				
	0-22							
	0-17							
	0-16							
	0-46							
				0-40				
				0-7.5				
	0-22							
				0-22				
				0-7.5				

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	<b>BIS004E</b> BIS M-125-01/L	
Product Group	HF (13.56 MHz)	
Dimension	30 x 6 x 30 mm	
Antenna type	round	
UID serial number, read-only	4 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 14443	
User data, read/write	752 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	PBT	
Protection degree	IP67	
Installation	metal-free (clear zone) on metal	
Approval/Conformity	CE	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)*
BIS M-300			
BIS M-301			
BIS M-302			
BIS M-304			
BIS M-305			
BIS M-341			
BIS M-371-000-A01			
BIS M-372-000-A01			
BIS M-373-000-A01			
BIS M-400-xxx-001			
BIS M-400-xxx-002			
BIS M-400-xxx-401			
BIS M-401			
BIS M-404-xxx-401			
BIS M-405-xxx-001			
BIS M-410			
BIS M-449			
BIS M-458-045-001			
BIS M-4006-001			
BIS M-4006-002			
BIS M-4008-001			
BIS VM-300			
BIS VM-301			
BIS VM-305			
BIS VM-332			
BIS VM-333			
BIS VM-341-001			
BIS VM-341-401			
BIS VM-343-401			
BIS VM-344-401			
BIS VM-345-401			
BIS VM-349-401			

Dimensions in mm, \* Installation on request



BIS0043 BIS M-108-02/L	BIS011F BIS M-108-11/A	
HF (13.56 MHz)	HF (13.56 MHz)	
32 x 11 x 52 mm	32 x 11 x 52 mm	
round	round	
8 Byte	8 Byte	
FRAM	FRAM	
DIN ISO 15693	DIN ISO 15693 (High Memory)	
2000 Byte	8192 Byte	
-25...85 °C	-25...85 °C	
—	—	
-25...70 °C	-25...70 °C	
PBT, GF	PBT, GF	
IP67	IP67	
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal	
CE	CE	
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flush in metal	on metal*	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
0-16		0-30 0-45						
0-12		0-20						
0-10		0-18						
0-11		0-17						
0-50		20-60						
		0-110						
		0-160						
		0-185						
0-16		0-28						
0-12		0-20						
0-13	0-15	0-21						
		0-40						
0-6	0-8	0-11	0-5	0-6	0-6.5			
0-16		0-28						
		0-40						
0-7	0-9.5	0-13						
10-19	0-32	0-52	11-18	0-28	0-36			
			11-18	0-28	0-36			
10-19	0-32	0-52						
0-16		0-30						
		0-45						
0-11		0-17						
0-6	0-8	0-11	0-5	0-6	0-6.5			
0-13	0-15	0-21						
14-25		20-60						
14-20	0-36	0-64	11-20	0-30	0-42			
0-16		0-30		0-15	0-18			
		0-28			0-18			
0-7	0-9.5	0-13						



	<b>BIS0111</b> BIS M-108-20/A	
Product Group	HF (13.56 MHz)	
Dimension	32 x 11 x 52 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	8192 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	PBT, GF	
Protection degree	IP67	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)	
BIS M-301			0-45	
BIS M-371-000-A01			0-100	
BIS M-372-000-A01			0-150	
BIS M-373-000-A01			0-150	
BIS M-400-xxx-401	0-13	0-15	0-21	
BIS M-404-xxx-401				
BIS M-4006-001				
BIS M-4008-001	11-18	0-28	0-36	
BIS VM-301			0-50	
BIS VM-332				
BIS VM-333	0-13	0-15	0-21	
BIS VM-341-401				
BIS VM-344-401	0-16		0-30	
BIS VM-345-401			0-28	
Dimensions in mm				



BIS011E BIS M-108-13/A	BIS011A BIS M-108-14/A	
HF (13.56 MHz)	HF (13.56 MHz)	
32 x 11 x 52 mm	32 x 11 x 52 mm	
round	round	
8 Byte	8 Byte	
FRAM	FRAM	
DIN ISO 15693 (High Memory)	DIN ISO 15693 (High Memory)	
32768 Byte	65536 Byte	
-25...85 °C	-25...85 °C	
—	—	
-25...70 °C	-25...70 °C	
PBT, GF	PBT, GF	
IP67	IP67	
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	
CE	CE	
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flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)			
0-5	0-6	0-6.5	0-5	0-6	0-6.5			
11-18	0-28	0-36	11-18	0-28	0-36			
11-18	0-28	0-36	11-18	0-28	0-36			
0-5	0-6	0-6.5	0-5	0-6	0-6.5			
					0-15			
11-20	0-30	0-42	11-20	0-30	0-42			
	0-15	0-18		0-15	0-18			
		0-18			0-18			



	<b>BIS00Y5</b> BIS M-135-03/L	
Product Group	HF (13.56 MHz)	
Dimension	51.5 x 6.4 x 51.5 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-40...85 °C	
Storage temperature temporary	—	
Ambient temperature	-20...85 °C	
Housing material	ABS, black	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-371-000-A01			10-205
BIS M-372-000-A01			0-300
BIS M-373-000-A01			0-340
BIS M-400-xxx-001			0-50
BIS M-408-045-001			0-48
BIS M-410			0-68
BIS M-411			0-110
BIS M-371-000-A01			10-205
BIS M-372-000-A01			0-300
BIS M-373-000-A01			0-340
BIS M-400-xxx-001			0-50
BIS M-408-045-001			0-48
BIS M-410			0-68
BIS M-411			0-110

Dimensions in mm



	<b>BIS00Y3</b> BIS M-135-07/L	<b>BIS00Y6</b> BIS M-135-02/L	<b>BIS00W9</b> BIS M-136-03/L
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	51.5 x 6.4 x 51.5 mm	51.5 x 6.4 x 51.5 mm	52 x 11.5 x 128 mm
	round	round	round
	8 Byte	8 Byte	8 Byte
	EEPROM	FRAM	EEPROM
	DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
	992 Byte	2000 Byte	112 Byte
	-40...85 °C	-40...85 °C	-40...85 °C
	—	—	—
	-20...85 °C	-20...85 °C	-20...85 °C
	ABS, black	ABS, black	ABS, black
	IP68	IP68	IP68
	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
	CE	CE	CE
	Page 109	Page 109	Page 109

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
						25-140			15-210
						0-230			0-350
						0-230			0-370
			23-46			0-60			
			11-75			0-100			
						25-140			15-210
						0-230			0-350
						0-230			0-370
			23-46			0-60			
			11-75			0-100			

Sensors

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	<b>BIS00Y9</b> BIS M-133-02/A	
Product Group	HF (13.56 MHz)	
Dimension	Ø 30 x 9.7 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-40...130 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	PA, black	
Protection degree	IP67	
Installation	metal-free (clear zone) on metal	
Approval/Conformity	CE	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			
BIS M-340			
BIS M-351			
BIS M-371-000-A01			0-70
BIS M-372			
BIS M-400-xxx-001			
BIS M-408-045-001			
BIS M-410			0-32
BIS M-411			38-52
BIS M-451			
BIS M-458-045-001			
BIS M-4006-001			0-55
BIS M-4006-002			
BIS M-4008-001		0-45	0-55
BIS M-4008-002			
BIS VM-300			
BIS VM-343-401			
BIS VM-344-401			
BIS VM-346-401			
BIS VM-351-001			
BIS VM-351-401			
BIS M-410			0-32
BIS M-411			38-52
BIS M-4006-001			0-55
BIS M-4008-001		0-45	0-55

Dimensions in mm

\*\* Combined with metal mounting plate BAM012M





	<b>BIS00LC</b> BIS M-107-03/L-H200	<b>BIS004F</b> BIS M-150-02/A	<b>BIS004H</b> BIS M-151-02/A
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	22 x 6.5 x 40 mm	22 x 6.5 x 40 mm	22 x 6.5 x 40 mm
	round	Rod	Rod
	8 Byte	8 Byte	8 Byte
	EEPROM	FRAM	FRAM
	DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
	112 Byte	2000 Byte	2000 Byte
	-25...85 °C	-25...85 °C	-25...85 °C
	200 °C 1x1000 h	-25...130 °C 1x1000 h	-25...130 °C 1x1000 h
	-25...70 °C	-25...70 °C	-25...70 °C
	PPS, GF40, with EP potting	PPS, GF40, with EP potting	PPS, GF40, with EP potting
	IP67	IP67	IP67
	metal-free (clear zone) on metal	metal-free (clear zone) on metal	metal-free (clear zone) on metal
	CE	CE	CE
	Page 109	Page 109	Page 110

	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**
		0-13	0-27 0-100						
					0-65	0-65		0-65	0-65
		0-13 0-12	0-27 0-25						
					0-65 0-42	0-65 0-42		0-65 0-38	0-65 0-38
					0-60	0-60		0-65	0-65
					0-60 0-27 0-7	0-60 0-27 0-7		0-65	0-65
		0-13	0-13		0-27 0-7	0-27 0-7			
		0-13	0-13		0-65 0-52	0-65 0-52		0-65 0-52	0-65 0-52



	<b>BIS011M</b> BIS M-155-11/A	
Produktgruppe	HF (13.56 MHz)	
Abmessung	22 x 9.7 x 40 mm	
Antennenform	Rod	
UID Seriennummer, nur lesbar	8 Byte	
Speichertyp	FRAM	
Unterstützte Datenträgertypen	DIN ISO 15693 (High Memory)	
Nutzerdaten, lesen/schreiben	8192 Byte	
Lagertemperatur	-25...85 °C	
Lagertemperatur temporär	-25...130 °C 1x1000 h	
Umgebungstemperatur	-25...70 °C	
Gehäusematerial	PPS, GF40, with EP potting	
Schutzart	—	
Einbau	metal-free (clear zone) on metal	
Zulassung/Konformität	CE	
Zeichnung	Page 110	

Suitable read/write head with max. read/write working distance

Montage	flush in metal	on metal	metal-free (clear zone)**
BIS M-4006-002		0-42	0-42
BIS M-4008-002		0-42	0-42
BIS VM-351-401		0-50	0-50
BIS VM-355-401		0-34	0-34

Dimensions in mm

\*\* Combined with metal mounting plate BAM012M



	<b>BIS012J</b> BIS M-156-11/A	<b>BIS0112</b> BIS M-156-20/A	
	HF (13.56 MHz)	HF (13.56 MHz)	
	22 x 9.7 x 40 mm	22 x 9.7 x 40 mm	
	Rod	Rod	
	8 Byte	8 Byte	
	FRAM	FRAM	
	DIN ISO 15693 (High Memory)	DIN ISO 15693	
	8192 Byte	8192 Byte	
	-25...85 °C	-25...85 °C	
	-25...130 °C 1x1000 h	-25...130 °C 1x1000 h	
	-25...70 °C	-25...70 °C	
	PPS, GF40, with EP potting	PPS, GF40, with PU potting	
	—	—	
	metal-free (clear zone) on metal	metal-free (clear zone) on metal	
	CE	CE	
	Page 110	Page 110	

	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**
		0-42	0-42		0-68	0-68			
		0-42	0-42		0-68	0-68			
		0-42	0-42		0-70	0-70			
		0-30	0-30		0-45	0-45			



	<b>BIS011Z</b> BIS M-155-13/A	
Product Group	HF (13.56 MHz)	
Dimension	22 x 9.7 x 40 mm	
Antenna type	Rod	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693 (High Memory)	
User data, read/write	32768 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	-25...130 °C 1x1000 h	
Ambient temperature	-25...70 °C	
Housing material	PPS, GF40, with EP potting	
Protection degree	—	
Installation	metal-free (clear zone) on metal	
Approval/Conformity	CE	
Productview	Page 110	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)**
BIS M-4006-002		0-42	0-42
BIS M-4008-002		0-42	0-42
BIS VM-351-401		0-50	0-50
BIS VM-355-401		0-34	0-34

Dimensions in mm

\*\* Combined with metal mounting plate BAM012M



	<b>BIS012K</b> BIS M-156-13/A	<b>BIS011N</b> BIS M-155-14/A	<b>BIS012L</b> BIS M-156-14/A
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	22 x 9.7 x 40 mm	22 x 9.7 x 40 mm	22 x 9.7 x 40 mm
	Rod	Rod	Rod
	8 Byte	8 Byte	8 Byte
	FRAM	FRAM	FRAM
	DIN ISO 15693 (High Memory)	DIN ISO 15693 (High Memory)	DIN ISO 15693 (High Memory)
	32768 Byte	65536 Byte	65536 Byte
	-25...85 °C	-25...85 °C	-25...85 °C
	-25...130 °C 1x1000 h	-25...130 °C 1x1000 h	-25...130 °C 1x1000 h
	-25...70 °C	-25...70 °C	-25...70 °C
	PPS, GF40, with EP potting	PPS, GF40, with EP potting	PPS, GF40, with EP potting
	—	—	—
	metal-free (clear zone) on metal	metal-free (clear zone) on metal	metal-free (clear zone) on metal
	CE	CE	CE
	Page 110	Page 110	Page 110

	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**	flush in metal	on metal	metal-free (clear zone)**
		0-42	0-42		0-42	0-42		0-42	0-42
		0-42	0-42		0-42	0-42		0-42	0-42
		0-42	0-42		0-50	0-50		0-42	0-42
		0-30	0-30		0-34	0-34		0-30	0-30



	<b>BIS00P3</b> BIS M-153-02/A	
Product Group	HF (13.56 MHz)	
Dimension	40 x 22 x 80 mm	
Antenna type	Rod	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...85 °C	
Housing material	POM	
Protection degree	—	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 110	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)**
BIS M-351			0-100
BIS M-451			0-100
BIS M-458-045-001			0-54
BIS M-4006-002			0-100
BIS M-4008-002			0-100
BIS VM-351-001	0-100		
BIS VM-351-401	0-100	0-100	
BIS VM-355-401	0-60	0-60	

Dimensions in mm

\*\* Combined with metal mounting plate BAM012M



	<b>BIS011W</b> BIS M-153-11/A	<b>BIS011Y</b> BIS M-153-13/A	<b>BIS011U</b> BIS M-153-14/A
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	40 x 22 x 80 mm	40 x 22 x 80 mm	40 x 22 x 80 mm
	Rod	Rod	Rod
	8 Byte	8 Byte	8 Byte
	FRAM	FRAM	FRAM
	DIN ISO 15693 (High Memory)	DIN ISO 15693 (High Memory)	DIN ISO 15693 (High Memory)
	8192 Byte	32768 Byte	65536 Byte
	-25...85 °C	-25...85 °C	-25...85 °C
	—	—	—
	-25...85 °C	-25...85 °C	-25...85 °C
	POM	POM	POM
	—	—	—
	metal-free (clear zone) on metal	metal-free (clear zone) on metal	metal-free (clear zone) on metal
	CE	CE	CE
	Page 110	Page 110	Page 110

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
			0-55			0-55			0-55
			0-55			0-55			0-55
		0-60							
				0-60				0-60	
		0-36		0-36				0-36	



	<b>BIS00YE</b> BIS M-132-03/L-HT	
Product Group	HF (13.56 MHz)	
Dimension	Ø 24.9 x 4.8 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-40...220 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	PPS	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, Ecolab	
Productview	Page 107	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-30
BIS M-371-000-A01			0-100
BIS M-372-000-A01			0-145
BIS M-373-000-A01			0-155
BIS M-400-xxx-001			0-30
BIS M-400-xxx-002			0-24
BIS M-401			0-50
BIS M-402-xxx-002			0-20
BIS M-406-045-001			
BIS M-408-045-001			
BIS M-410			
BIS M-411			0-70
BIS M-4006-001			0-60
BIS M-4008-001			0-60
BIS VM-300			0-30
BIS VM-341-401			
BIS VM-344-401			0-30
BIS VM-345-401			0-34
BIS M-371-000-A01			
BIS M-372-000-A01			
BIS M-400-xxx-001			
BIS M-406-045-001			
BIS M-410			
BIS M-411			

Dimensions in mm





BIS00YA BIS M-132-10/L-HT	BIS00Y7 BIS M-134-10/L-HT	BIS018P BIS M-137-10/L-HT
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
Ø 24.9 x 4.8 mm	Ø 49.8 x 5.3 mm	Ø 49.8 x 5.3 mm
round	round	round
4 Byte	4 Byte	4 Byte
EEPROM	EEPROM	EEPROM
DIN ISO 14443	DIN ISO 14443	DIN ISO 14443
736 Byte	736 Byte	736 Byte
-40...220 °C	-40...220 °C	-40...220 °C
—	—	—
-40...85 °C	-40...85 °C	-40...85 °C
PPS	PPS	PPS
IP68	IP68	IP68
metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
CE, Ecolab	CE, Ecolab	CE
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flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
		0-40 0-30						
					0-24			0-24
					0-24			0-24
		0-15 0-22			0-36 0-60			0-36 0-60
		0-40 0-30						
					0-24			0-24
					0-24			0-24
		0-15 0-22			0-36 0-60			0-36 0-60



	<b>BIS00Y4</b> BIS M-135-03/L-HT	
Product Group	HF (13.56 MHz)	
Dimension	51.5 x 6.4 x 51.5 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-40...220 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	PPS	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, Ecolab	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-42
BIS M-371-000-A01			10-205
BIS M-372-000-A01			0-300
BIS M-373-000-A01			0-340
BIS M-400-xxx-001			0-42
BIS M-401			0-75
BIS M-406-045-001			0-42
BIS M-408-045-001			0-48
BIS M-410			0-70
BIS M-411			0-125
BIS M-4006-001			0-90
BIS M-4008-001			0-90
BIS VM-300			0-42
BIS VM-341-401			0-120
BIS VM-344-401			0-42
BIS VM-345-401			0-52

Dimensions in mm



BIS018R BIS M-138-03/L-HT	BIS00Y2 BIS M-135-07/L-HT	BIS018T BIS M-138-07/L-HT
HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
51.5 x 6.4 x 51.5 mm	51.5 x 6.4 x 51.5 mm	51.5 x 6.4 x 51.5 mm
round	round	round
8 Byte	8 Byte	8 Byte
EEPROM	EEPROM	EEPROM
DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
112 Byte	992 Byte	992 Byte
-40...220 °C	-40...220 °C	-40...220 °C
—	—	—
-40...85 °C	-40...85 °C	-40...85 °C
PPS	PPS	PPS
IP68	IP68	IP68
metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
CE	CE, Ecolab	CE
Page 110	Page 109	Page 110

flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
		0-42						
		10-205			10-135			10-135
		0-300			0-190			0-190
		0-340			0-215			0-215
		0-42						
		0-75						
		0-42						
		0-48						
		0-70			23-46			23-46
		0-125			11-75			11-75
		0-90			0-65			0-65
		0-90			0-65			0-65
		0-42						
		0-120						
		0-42						
		0-52						

Sensors

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Software and System Solutions

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Accessories



	<b>BIS00Y1</b> BIS M-136-03/L-HT	
Product Group	HF (13.56 MHz)	
Dimension	52 x 11.5 x 128 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-40...220 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	PPS	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, Ecolab	
Productview	Page 109	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)	
BIS M-300				
BIS M-352				
BIS M-458-045-001				
BIS M-4006-001			0-95	
BIS M-4006-002				
BIS M-4008-001			0-95	
BIS M-4008-002				
BIS VM-351-401				
BIS VM-352				
BIS VM-355-401				
Dimensions in mm				



	<b>BISO198</b> BIS M-157-17/A-SA1	<b>BIS00NZ</b> BIS M-191-02/A	<b>BISO180</b> BIS M-127-02/A-SA1
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	9 x 5.3 x 39 mm	24 x 21 x 24 mm	40 x 23 x 28 mm
	Rod	Rod	round
	8 Byte	8 Byte	8 Byte
	EEPROM	FRAM	FRAM
	DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
	208 Byte	2000 Byte	2000 Byte
	-25...85 °C	-25...85 °C	-25...85 °C
	120 °C 1x100 h, -40 °C...90 °C 1x1000 h, 140 °C 1x10 h	—	—
	-25...85 °C	-25...70 °C	-25...70 °C
	PEEK	PBT, PU potted	PA 12 Cast aluminum
	IP68	IP67	IP67
	—	metal-free (clear zone)	metal-free (clear zone) on metal flush in metal
	CE, WEEE, EAC	CE	CE
	Page 110	Page 110	Page 111

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	Combined with BISO18E
						0-22	
						0-25	
						0-55	
						0-55	
						0-25	
						0-17	
						0-15	



	<b>BIS0176</b> BIS M-127-02/A	
Product Group	HF (13.56 MHz)	
Dimension	93 x 43.3 x 57.2 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	FRAM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	2000 Byte	
Storage temperature	-25...85 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	PA 12 Cast aluminum	
Protection degree	IP67	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE	
Productview	Page 111	

Passender Schreib-/Lesekopf mit max. Arbeitsabstand Lesen/Schreiben

Montage	Combined with BIS0189			
BIS M-300				
BIS M-351				
BIS M-352				
BIS M-451				
BIS M-458-045-001				
BIS M-4006-002				
BIS M-4008-002				
BIS VM-301				
Dimensions in mm				



	<b>BIS017F</b> BIS M-157-17/A	<b>BIS00M2</b> BIS M-152-03/A	<b>BIS00L8</b> BIS M-106-03/L
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	Ø 2.12 x 12 mm	Ø 4 x 22.2 mm	Ø 18 x 15 mm
	Rod	Rod	round
	8 Byte	8 Byte	8 Byte
	EEPROM	EEPROM	EEPROM
	DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
	208 Byte	112 Byte	112 Byte
	-25...85 °C	-25...85 °C	10...126 °C
	120 °C 1x100 h, -40 °C...90 °C 1x1000 h, 140 °C 1x10 h	120 °C 1x100 h, -40 °C...90 °C 1x1000 h	—
	-25...85 °C	-25...85 °C	10...70 °C
	Glass, transparent	Glass, transparent	Glass
	IP68	IP68	IP68
	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
	CE	CE	CE
	Page 111	Page 111	Page 111

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
									0-32
						0-30			
			0-17			0-17			
						0-30			
						0-18			
						0-35			
						0-35			
									0-32



	<b>BIS00KM</b> BIS M-115-03/A	
Product Group	HF (13.56 MHz)	
Dimension	25 x 3 x 65 mm	
Antenna type	round	
UID serial number, read-only	8 Byte	
Memory type	EEPROM	
Supported data carrier types	DIN ISO 15693	
User data, read/write	112 Byte	
Storage temperature	-30...60 °C	
Storage temperature temporary	—	
Ambient temperature	-25...50 °C	
Housing material	Epoxy-resin/fiberglass PVC	
Protection degree	IP65	
Installation	metal-free (clear zone)	
Approval/Conformity	CE	
Productview	Page 111	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS M-300			0-18
BIS M-301			0-38
BIS M-371-000-A01			0-85
BIS M-400-xxx-001			0-24
BIS M-400-xxx-002			0-17
BIS M-401			0-44
BIS M-402-xxx-002			0-14
BIS M-405			
BIS M-406-045-001			0-18
BIS VM-300			0-18
BIS VM-344-401			0-18

Dimensions in mm

\* Installation on request

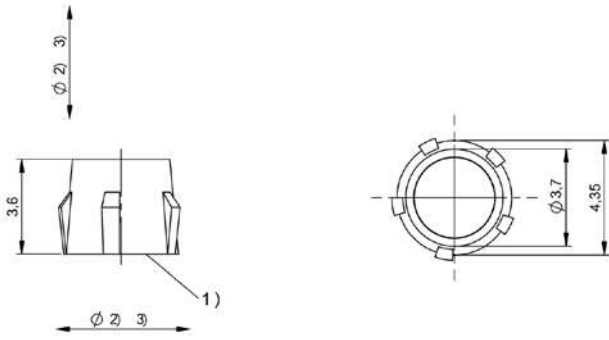




	<b>BIS00N5</b> BIS M-115-07/A-SA1	<b>BIS01CA</b> BIS M-1L4-03/L-D015	<b>BIS012H</b> BIS M-1L4-03/L-D018
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	25 x 3 x 65 mm	—	1 x 20 x 20 mm
	round	round	round
	8 Byte	8 Byte	8 Byte
	EEPROM	EEPROM	EEPROM
	DIN ISO 15693	DIN ISO 15693	DIN ISO 15693
	992 Byte	112 Byte	112 Byte
	-30...60 °C	-25...85 °C	-20...80 °C
	—	—	—
	-25...50 °C	-25...85 °C	0...50 °C
	Epoxy-resin/fiberglass PVC	PET	PET, transparent
	IP65	IP20	IP20
	metal-free (clear zone)	metal-free (clear zone) on metal	metal-free (clear zone) on metal
	CE	CE, WEEE, EAC	CE
	Page 111	Page 111	Page 111

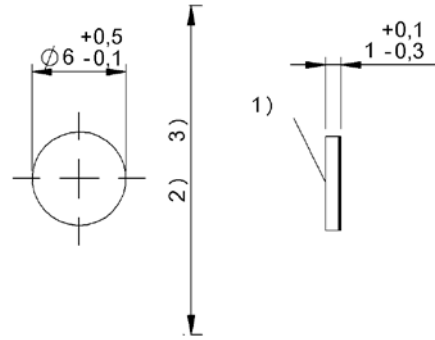
	flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)
									0-18

106 | RFID | HF (13.56 MHz)



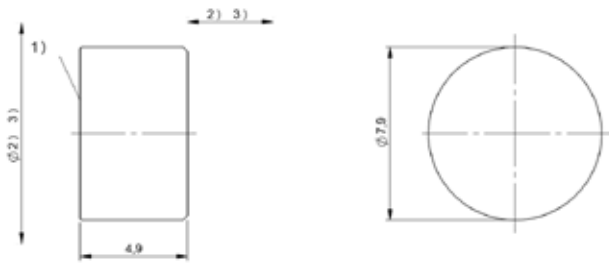
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO18Y**



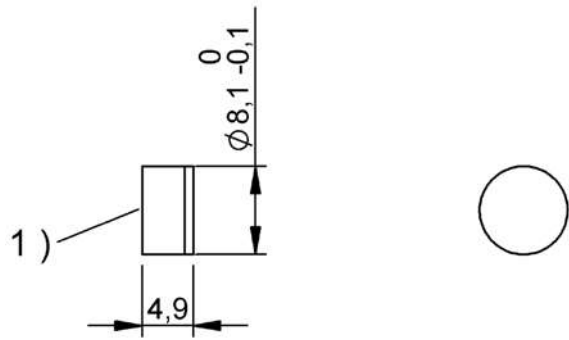
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BIS00UC, BIS00UE**



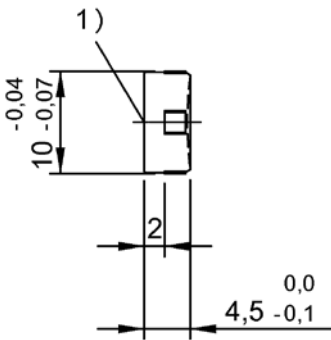
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BIS00YL, BIS00YJ, BIS00YK**



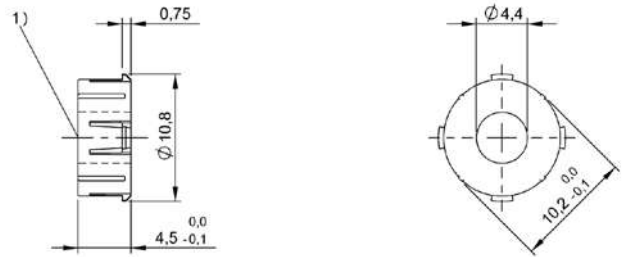
1) Sensing surface

**BIS01A1**



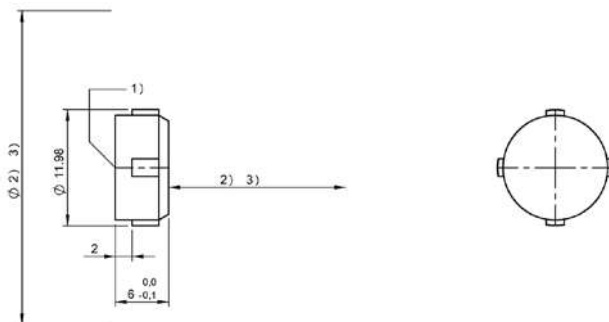
1) Sensing surface

**BIS01A0, BIS0048, BIS004A**



1) Sensing surface

**BIS019C**



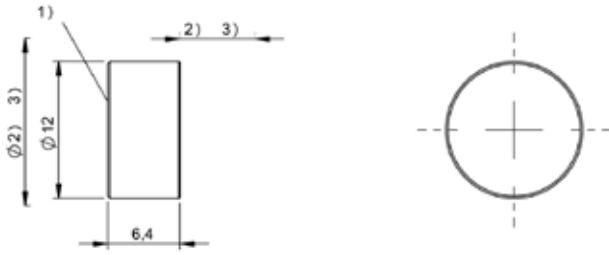
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BIS0040**



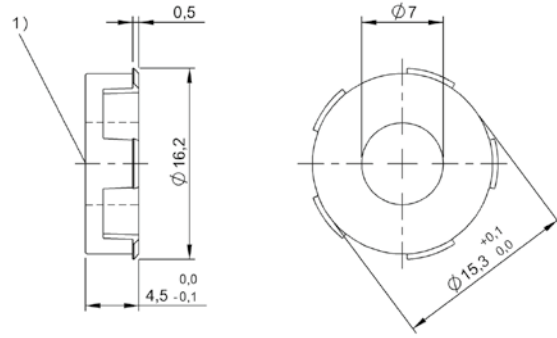
1) Sensing surface

**BIS0042**



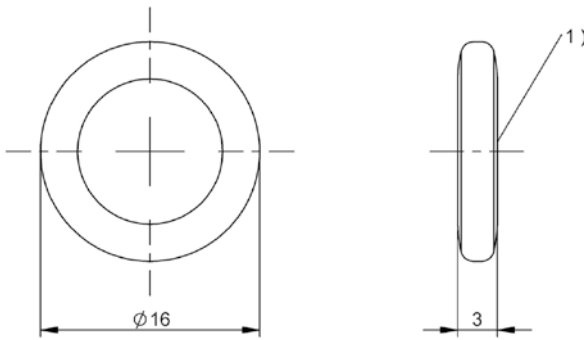
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head

**BISO0YH**



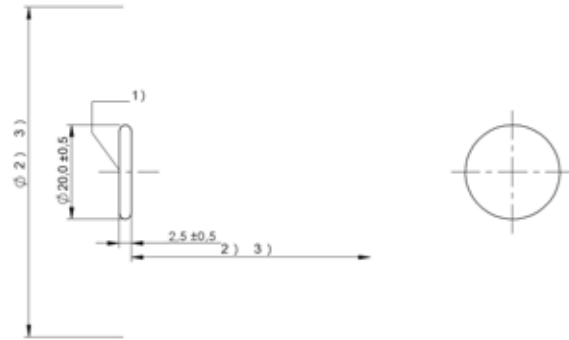
1) Sensing surface

**BIS019E**



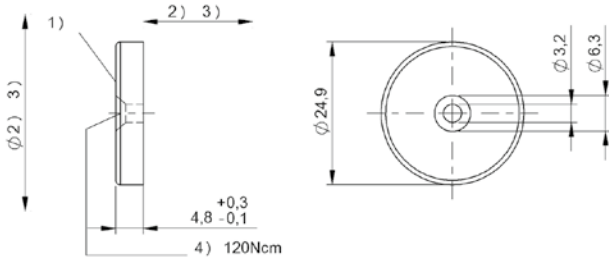
1) Sensing surface

**BIS01CE**



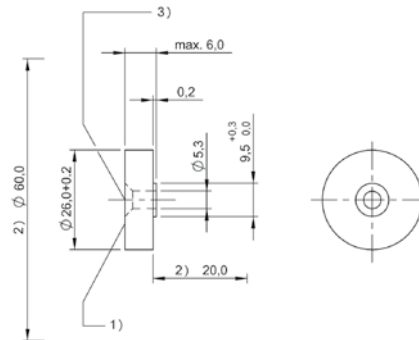
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head

**BIS0044**



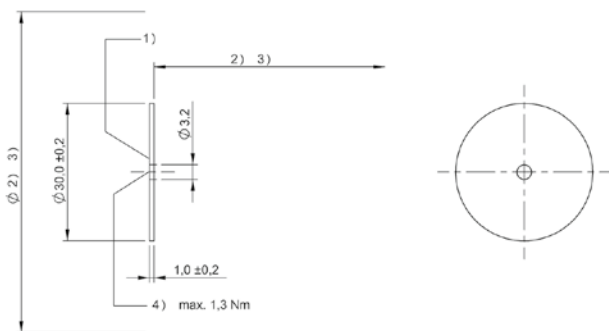
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head, 4) Tightening torque

**BISO0YF, BIS00YC, BISO0YE, BISO0YA**



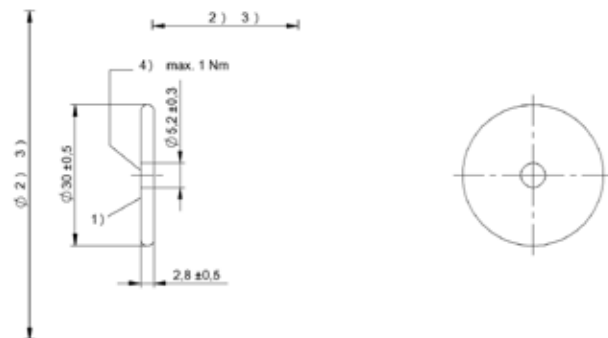
1) Sensing surface, 2) Clear zone, 3) Tightening torque max. 2.5 Nm

**BIS0143**



1) Sensing surface, 2) Clear zone, 3) see corresponding RW head, 4) Tightening torque

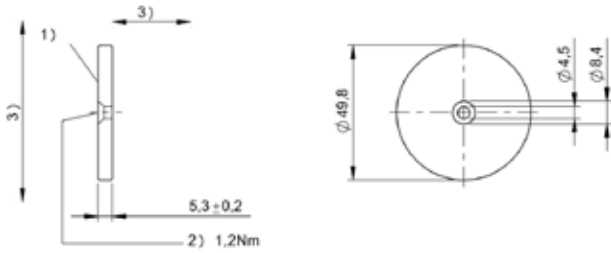
**BISO03Y**



1) Sensing surface, 2) Clear zone, 3) see corresponding RW head, 4) Tightening torque

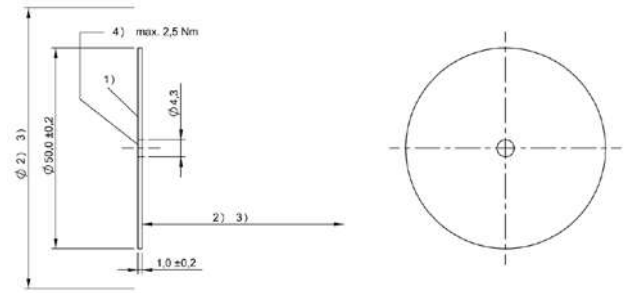
**BISO045**

108 | RFID | HF (13.56 MHz)



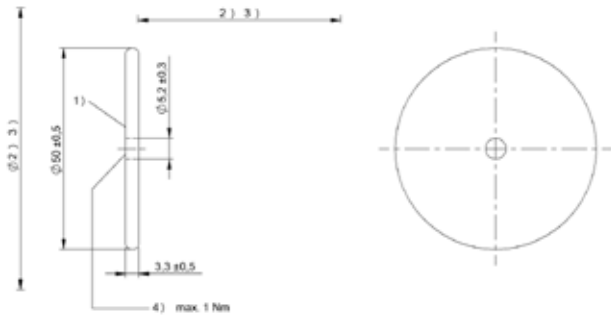
1) Sensing surface, 2) Tightening torque, 3) see R/W head table

**BISO0Y8, BISO0Y7**



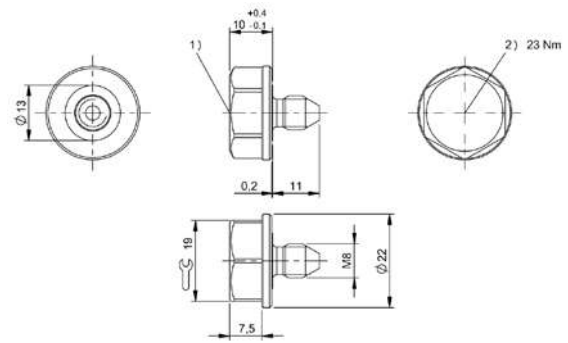
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

**BISO03Z**



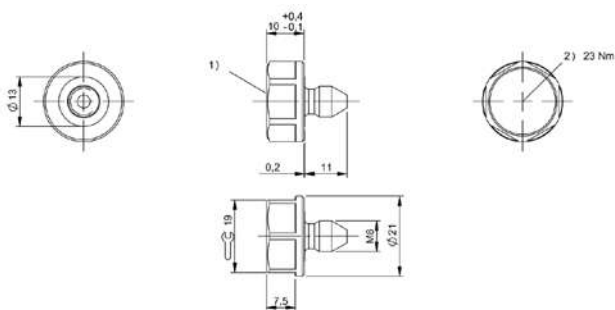
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

**BISO046**



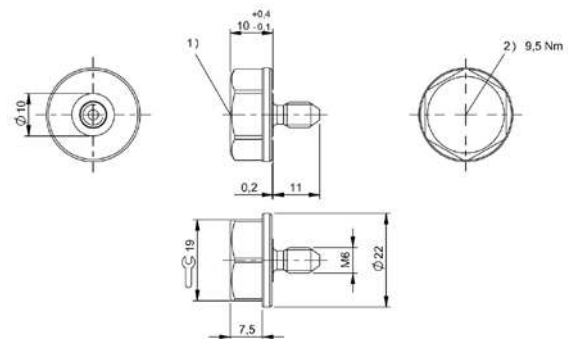
1) Sensing surface, 2) Tightening torque

**BISO00NW**



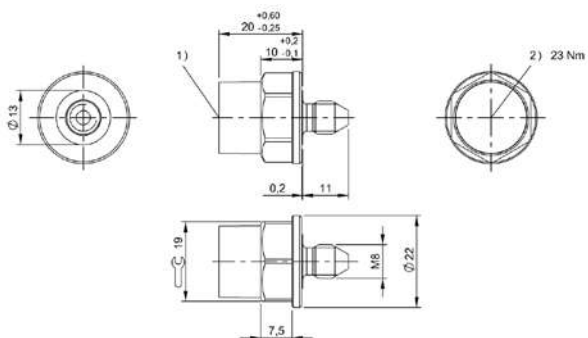
1) Sensing surface, 2) Tightening torque

**BISO100**



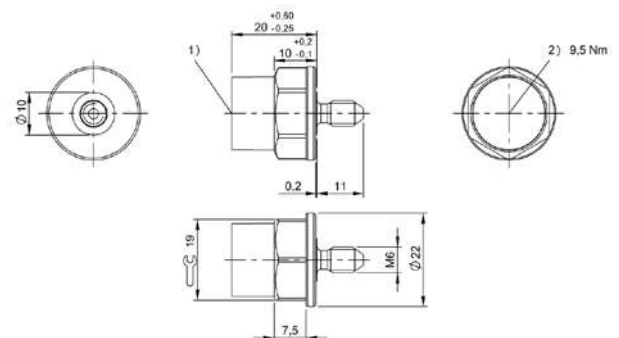
1) Sensing surface, 2) Tightening torque

**BISO00NU**



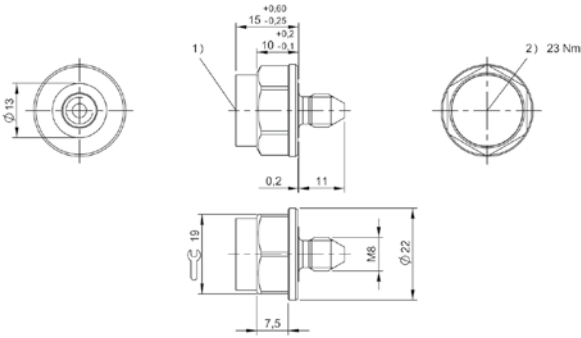
1) Sensing surface, 2) Tightening torque

**BISO00M8**



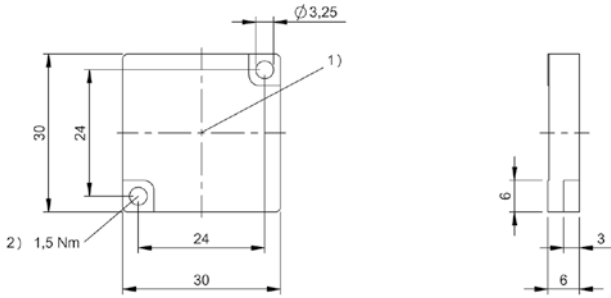
1) Sensing surface, 2) Tightening torque

**BISO00M9**



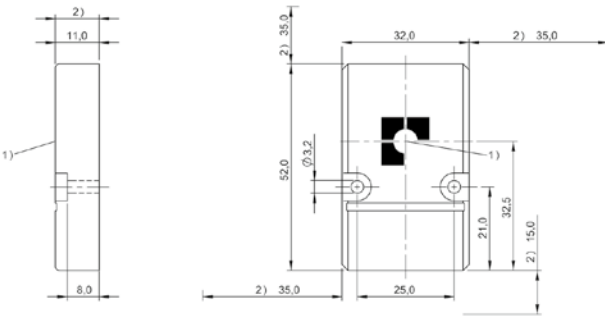
1) Sensing surface, 2) Tightening torque

BISO119



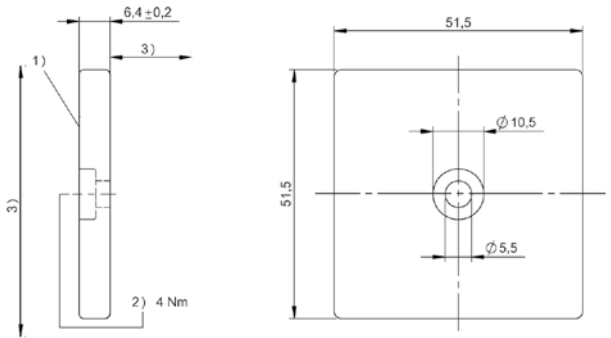
1) Sensing surface, 2) Tightening torque

BIS004E



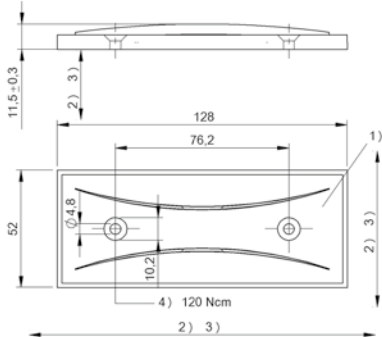
1) Sensing surface, 2) Clear zone

BISO043, BIS011F, BIS0111, BIS011E, BIS011A



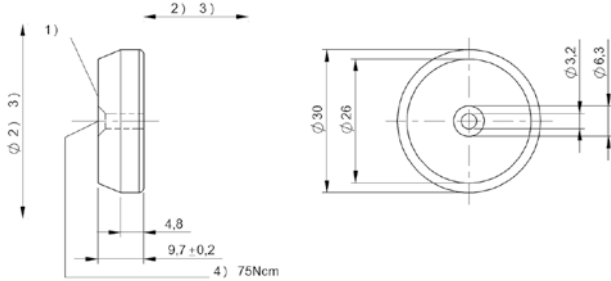
1) Sensing surface, 2) Tightening torque, 3) see R/W head table

BIS00Y5, BIS00Y3, BIS00Y6, BIS00Y4, BIS00Y2



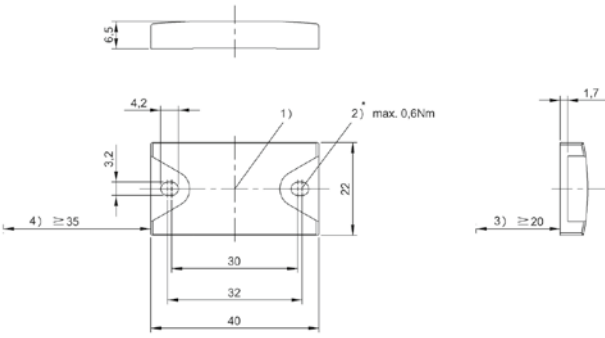
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

BISO00W9, BIS00Y1



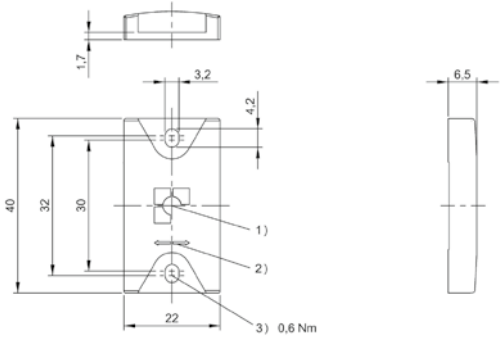
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

BIS00Y9



1) Sensing surface, 2) Tightening torque, 3) Clear zone, 4) Clear zone surrounding

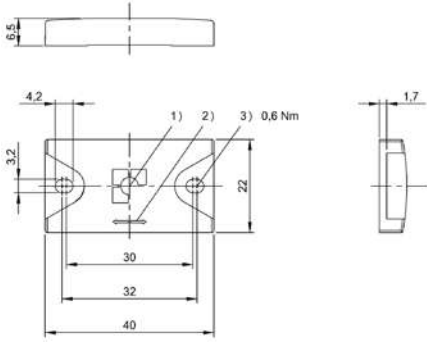
BISO0LC



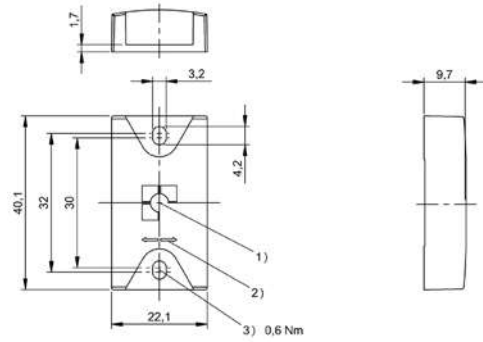
1) Sensing surface, 2) Read/write axis, 3) Tightening torque

BISO04F

**110 I RFID | HF (13.56 MHz)**

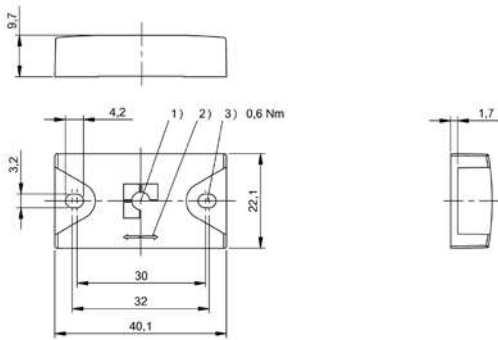


1) Sensing surface, 2) Read/write axis, 3) Tightening torque



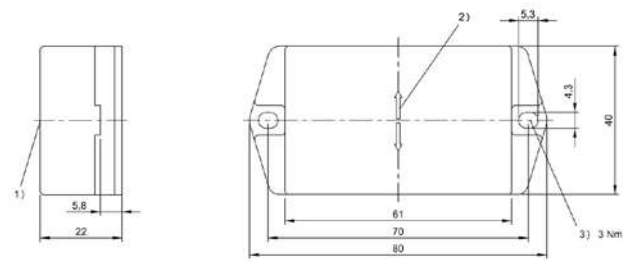
1) Sensing surface, 2) Read/write axis, 3) Tightening torque

**BISO04H**



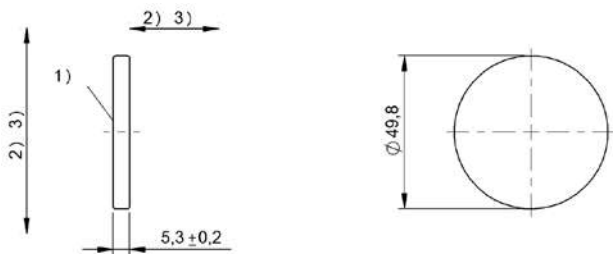
1) Sensing surface, 2) Read/write axis, 3) Tightening torque

**BISO11M, BISO11Z, BISO11N**



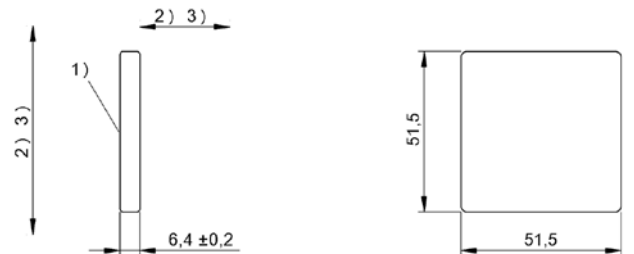
1) Sensing surface, 2) Read/write axis, 3) Tightening torque

**BISO12J, BISO112, BISO12K, BISO12L**



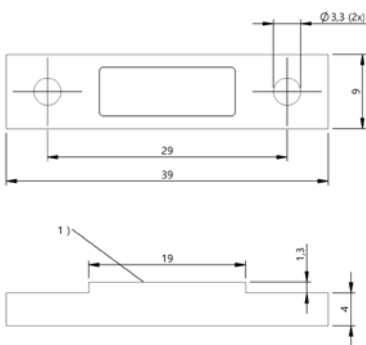
1) Sensing surface, 2) Clear zone, 3) see R/W head table

**BISO0P3, BISO11W, BISO11Y, BISO11U**



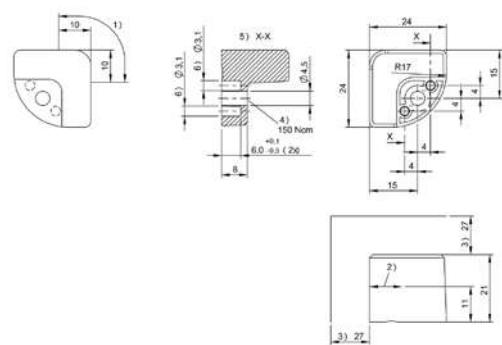
1) Sensing surface, 2) Clear zone, 3) see R/W head table

**BISO18P**



1) Sensing surface

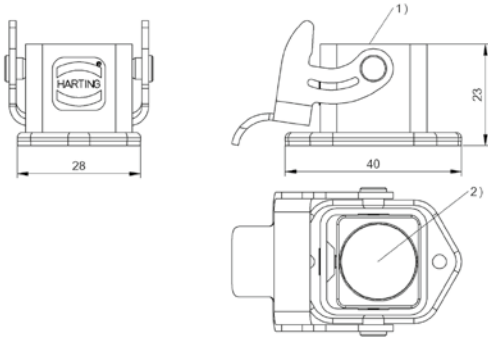
**BISO18R, BISO18T**



1) Read/write range, 2) Read/write axis, 3) Clear zone, 4) Tightening torque, 5) Cut-out, 6) see remarks

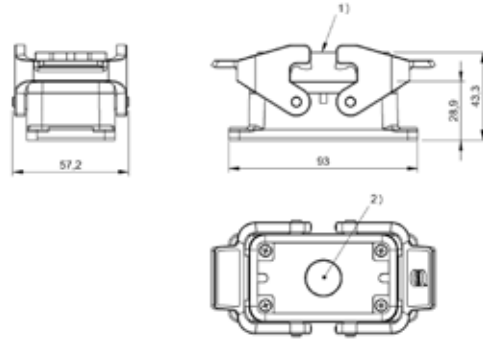
**BISO198**

**BISO0NZ**



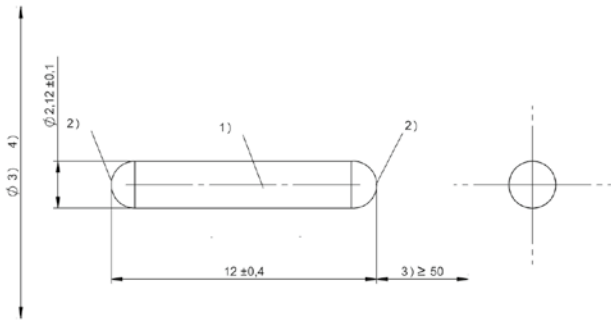
1) Sensing surface, 2) Data carrier

**BISO180**



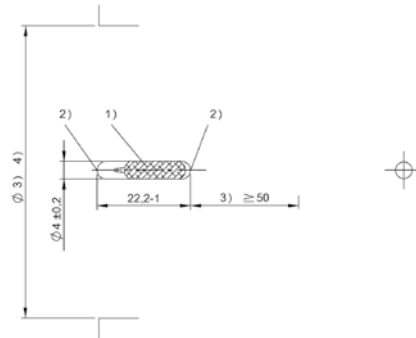
1) Sensing surface, 2) Data carrier

**BISO176**



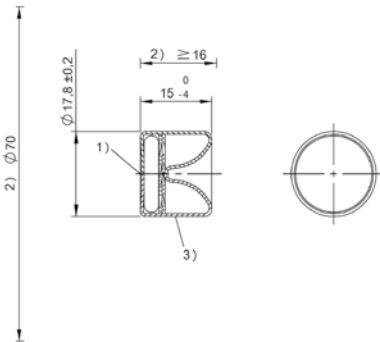
1) Sensing surface parallel, 2) Sensing surface axial, 3) Clear zone, 4) see corresponding R/W head

**BISO17F**



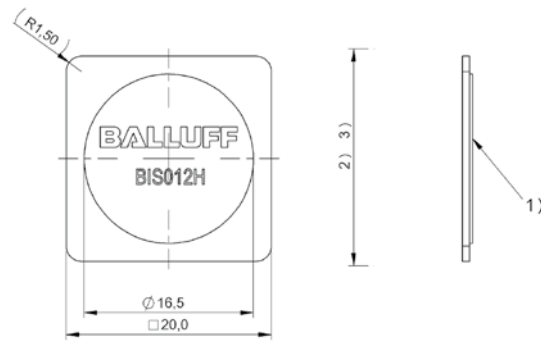
1) Sensing surface parallel, 2) Sensing surface axial, 3) Clear zone, 4) see corresponding R/W head

**BISO00M2**



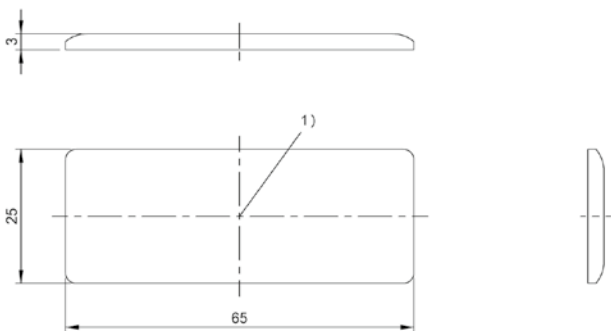
1) Sensing surface, 2) Clear zone, 3) Glass

**BISO00L8**



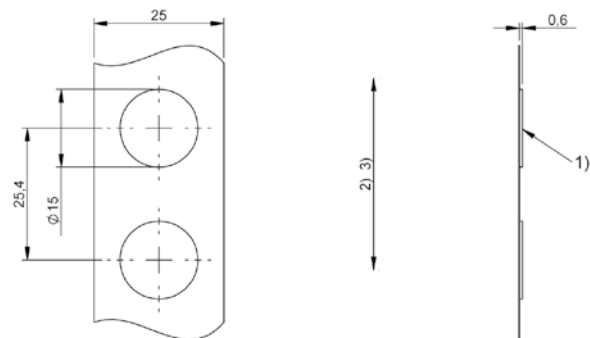
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO12H**



1) Sensing surface

**BISO00KM, BISO00N5**



1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO1CA**



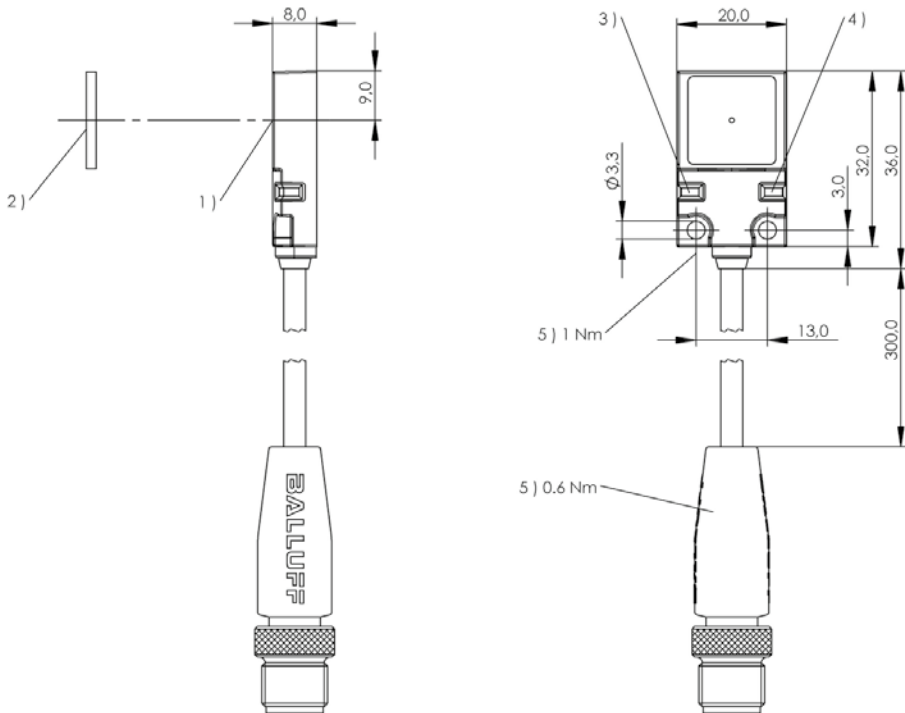
For processor units BIS V-6...	<b>BIS0197</b> BIS VM-349-401-S4
Product Group	HF (13.56 MHz)
Dimension	20 x 8 x 32 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Zinc, die-cast
Ambient temperature	0...80 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL Listed

Appropriate data carrier

	BIS0042			BIS0043			BIS0044		BIS0045		BIS018Y			
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>25	>0	>25			>20	>0	
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>100			>100	>100	
Working distance for writing	0-10	0-9.5	0-7	0-13	0-9.5	0-7	0-12	0-5	3-13			0-6	0-5.5	
Working distance for reading	0-10	0-9.5	0-7	0-13	0-9.5	0-7	0-12	0-5	3-13			0-6	0-5.5	
Offset at distance														
	0	±5	±5	±5	±9	±8	±7	±7	±5			0	±5	±4
	2	±5	±5	±5	±9	±8	±7	±7	±5			2	±5	±4
	4	±5	±5	±4.5	±9	±8	±6	±7	±4	±9		2.5	±4	±3.5
	5	±4.5	±4	±4	±9	±7	±5	±7	±2	±9		3	±4	±3.5
	6	±4.5	±4	±4	±8	±7	±5	±6		±8		4	±4	±3.5
	7	±4.5	±4	±2	±8	±7	±1.5	±6		±8		5	±4	±2
	8	±4.5	±4		±8	±7		±6		±8		5.5	±2	±2
	9	±2	±2		±8	±4		±6		±8		6	±2	
	9.5	±2	±2		±8	±4		±6		±8		6.5		
	10	±1			±8			±6		±8		7		
	12				±3			±3		±3		8		
	13				±3					±3		9		
	15											9.5		
	20											10		

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) LED (Power), 4) LED (CP), 5) Tightening torque

	BIS00UC			BIS004A			BIS00NU BIS00NW BIS0100
	>20	>0	>0	>20	>0	>0	>0
	>100	>100	>0	>100	>100	>0	>100
	0-6.5	0-4	1.3-2.5	0-8	0-8	0-6	0-10
	0-6.5	0-4	1.3-2.5	0-8	0-8	0-6	0-10
	±4	±4		±5	±4.5	±4	±6
	±4	±4	±2	±5	±4.5	±4	±6
	±3	±3	±0.5	±5	±4.5	±3	±6
	±3	±3		±5	±4.5	±3	±6
	±3	±2		±5	±4.5	±3	±6
	±3			±4	±4	±3	±5
	±2			±4	±4	±2	±5
	±2			±4	±4	±2	±5
	±2			±4	±4		±5
				±4	±4		±5
				±2	±2		±5
							±3
							±3
							±3

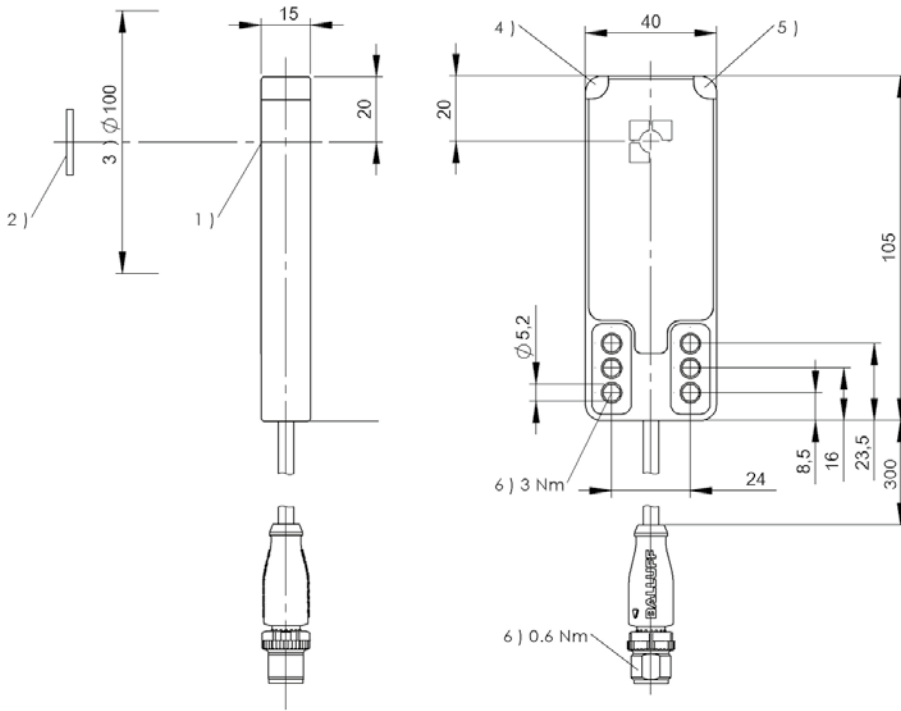


For processor units BIS V-6...	<b>BIS0133</b> BIS VM-345-401-S4
Product Group	HF (13.56 MHz)
Dimension	40 x 15 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Zinc, die-cast
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0043 BIS0111	BIS011F BIS011E BIS011A BIS0139	BIS004A	BIS00YE	BIS00Y4		BIS0044	BIS0045	BIS0046		BIS0119	BIS00NU BIS00NW BIS0100
Data carrier distance to metal	>50	>50	>10 >0	>25	>50		>50 >0	>50	>50		>0	>0
Data carrier clear zone	>200	>200	>60 >60	>100	>200		>200 >200	>200	>200		>100	>100
Working distance for writing	0-28	0-18	0-11 0-9	0-34	0-52		0-22 0-5	0-28	0-45		0-22	0-16
Working distance for reading	0-28	0-18	0-11 0-9	0-34	0-52		0-22 0-5	0-28	0-45		0-22	0-16
Offset at distance												
	0 ±16	±14	±8 ±8	±20	±30		0 ±14 ±7	±16	±26		0 ±13	±10
	4 ±16	±14	±8 ±8	±20	±30		4 ±14 ±6	±16	±26		5 ±13	±10
	8 ±16	±14	±7 ±6	±20	±30		5 ±14 ±3	±16	±26		10 ±13	±9
	9 ±16	±14	±7 ±4	±20	±30		10 ±14	±16	±26		13 ±10	±8
	10 ±16	±14	±7	±20	±30		15 ±12	±14	±26		16 ±10	±4
	11 ±14	±11	±4	±18	±30		18 ±10	±14	±26		18 ±10	
	15 ±14	±11		±18	±30		20 ±10	±14	±26		20 ±10	
	18 ±14	±5		±18	±30		22 ±6	±12	±24		22 ±6	
	22 ±12			±15	±28		24	±12	±24		24	
	25 ±12			±15	±28		28	±9	±24		28	
	28 ±9			±15	±28		30		±24		30	
	32			±8	±28		31		±24		31	
	35				±28		35		±24		35	
	40				±28		40		±24		40	
	42				±24		43		±15		43	
	45				±24		45		±15		45	
	48				±24		48				48	
	50				±24		52				52	
	52				±10		60				60	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque

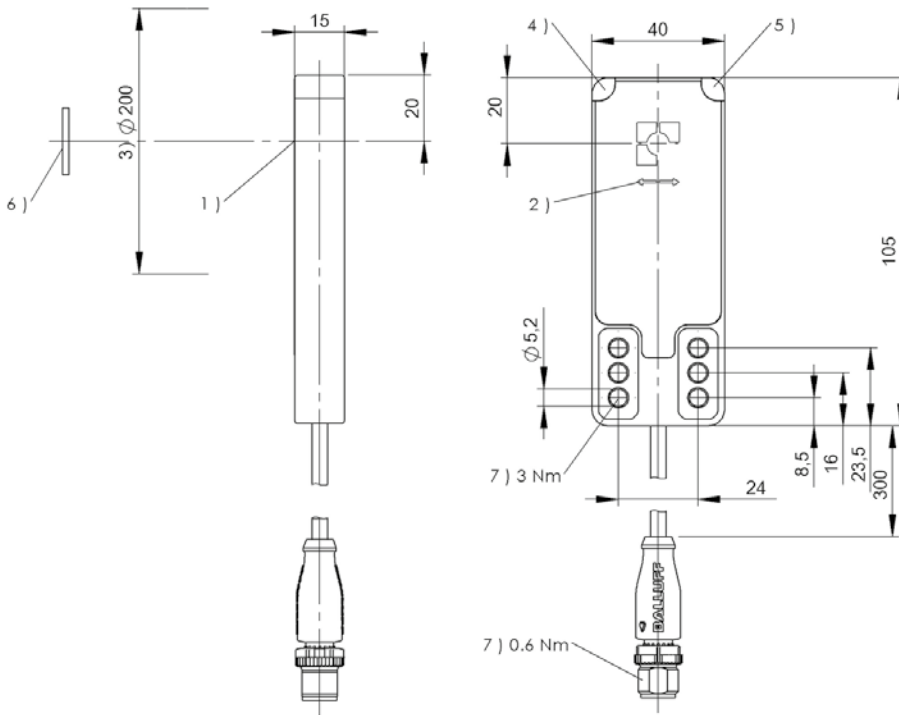


For processor units BIS V-6...	<b>BISO131</b> BIS VM-355-401-S4
Product Group	HF (13.56 MHz)
Dimension	40 x 15 x 105 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Zinc, die-cast
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BISO04F				BISO04H					BISO0M2		BISO0P3				
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200		>200	>200	>240	>240	>240	>240	
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200		>200	>200	>480	>480	>480	>480	
Data carrier clear zone C										>50	>50	>50	>50	>0	>0	
Metallic mounting surface 40 x 22 mm	0-45	0-45			0-45	0-45										
Metallic mounting surface > 200 x 200 mm			0-45	0-45			0-45	0-45								
Working distance for writing	0-45	0-45	0-45	0-45	0-45	0-45	0-45	0-45		0-25	0-25	0-60	0-60	0-60	0-60	
Working distance for reading	0-45	0-45	0-45	0-45	0-45	0-45	0-45	0-45		0-25	0-25	0-60	0-60	0-60	0-60	
Offset at distance	X	Y	X	Y	X	Y	X	Y		X	Y	X	Y	X	Y	
	0	±50	±24	±50	±24	±24	±50	±24	±50	0	±32	±16	±80	±36	±80	±36
	5	±50	±24	±50	±24	±24	±50	±24	±50	5	±32	±16	±80	±36	±80	±36
	12	±50	±24	±50	±24	±24	±50	±24	±50	10	±32	±16	±80	±36	±80	±36
	15	±50	±24	±50	±24	±24	±50	±24	±50	13	±30	±14	±80	±36	±80	±36
	18	±50	±24	±50	±24	±24	±50	±24	±50	15	±30	±14	±80	±36	±80	±36
	20	±50	±24	±50	±24	±24	±50	±24	±50	20	±30	±14	±80	±36	±80	±36
	22	±40	±20	±40	±20	±20	±40	±20	±40	25	±15	±8	±75	±30	±75	±30
	25	±40	±20	±40	±20	±20	±40	±20	±40	30			±75	±30	±75	±30
	30	±40	±20	±40	±20	±20	±40	±20	±40	36			±75	±30	±75	±30
	32	±40	±20	±40	±20	±20	±40	±20	±40	40			±75	±30	±75	±30
	35	±40	±20	±40	±20	±20	±40	±20	±40	42			±75	±30	±75	±30
	40	±38	±18	±38	±18	±18	±38	±18	±38	50			±75	±30	±75	±30
	45	±20	±10	±20	±10	±10	±20	±10	±20	52			±55	±25	±55	±25
	50									60			±20	±10	±20	±10
	52									75						
	60									83						
	65									100						

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Data carrier, 7) Tightening torque

BIS011W BIS011Y BIS011U				BIS017F				BIS011M BIS011Z BIS011N				BIS012J BIS012K BIS012L				BIS0112				BIS00NZ		
>240	>240	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	
>480	>480	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	
>50	>50	>50	>50																			
0-36	0-36	0-15	0-15	0-34	0-34	0-34	0-34	0-30	0-30	0-30	0-30	0-45	0-45	0-45	0-45	0-25	0-25	0-45	0-45	0-25	0-25	
0-36	0-36	0-15	0-15	0-34	0-34	0-34	0-34	0-30	0-30	0-30	0-30	0-45	0-45	0-45	0-45	0-25	0-25	0-45	0-45	0-25	0-25	
X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	
±50	±26	±20	±11	0	±38	±18	±40	±18	±20	±40	±20	±40	0	±24	±55	±20	±48	0	±30	±20		
±50	±26	±20	±11	5	±38	±18	±40	±18	±20	±40	±20	±40	5	±24	±55	±20	±48	5	±30	±20		
±50	±26	±17	±9	10	±38	±18	±40	±18	±20	±40	±20	±40	10	±24	±55	±20	±48	10	±30	±20		
±50	±26	±14	±7	15	±38	±18	±40	±18	±17	±38	±17	±38	15	±24	±55	±20	±48	15	±25	±15		
±50	±26	±8	±3	18	±35	±15	±40	±18	±17	±38	±17	±38	20	±24	±55	±20	±48	20	±15	±10		
±50	±26			20	±35	±15	±40	±18	±17	±38	±17	±38	25	±20	±50	±16	±38	25	±5	±5		
±40	±20			22	±35	±15	±35	±16	±15	±30	±15	±30	30	±20	±50	±16	±38	27				
±35	±17			25	±35	±15	±35	±16	±7	±16	±7	±16	35	±20	±50	±16	±38	35				
±20	±10			30	±27	±12	±35	±16	±7	±16	±7	±16	40	±18	±40	±16	±38	40				
				34	±15	±8	±15	±8					45	±10	±20	±10	±20	42				
				36									50					50				
				39									54					57				
				42									56					60				
				50									60					65				
				52									70					70				
				60									75					75				
				65									80									

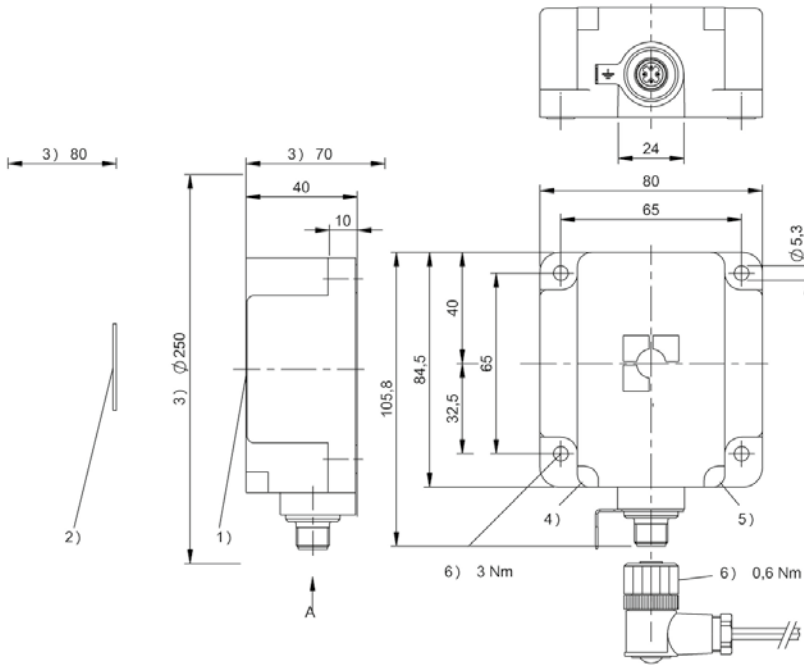


For processor units BIS V-6...	<b>BIS00T0</b> BIS VM-301-001-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 4-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0043		BIS0044		BIS0045		BIS0046		BIS0047		BIS00L8		BIS0111	
Data carrier distance to metal	>50	>10	>5	>50	>25	>10	>50	>20	>50	>30	>50	>30	>50	>30	>80	>1	0	>50		
Data carrier clear zone	>200	>60	>50	>200	>150	>150	>200	>60	>200	>100	>200	>100	>200	>100	>250	>70	>70	>200		
Working distance for writing	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50	0-32	0-32	0-50		
Working distance for reading	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50	0-32	0-32	0-50		
Offset at distance																				
0	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30	±30	±25	±30		
5	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30	±30	±25	±30		
9	±22	±18	±14	±30	±24	±18	±32	±20	±28	±18	±32	±22	±40	±25	±30	±30	±25	±30		
12	±22	±18	±10	±30	±24	±18	±32	±18	±24	±18	±32	±22	±40	±25	±30	±25	±25	±30		
15	±22	±18	±10	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30	±25	±25	±30		
16	±22	±16	±8	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30	±25	±25	±30		
18	±22	±16	±6	±30	±24	±18	±32	±16	±24	±12	±32	±18	±40	±25	±30	±25	±22	±30		
20	±22	±16	±4	±30	±24	±18	±32	±16	±24	±8	±32	±16	±40	±25	±30	±25	±22	±30		
22	±20	±10		±30	±24	±15	±25	±14	±20		±25	±14	±40	±22	±30	±25	±22	±25		
25	±15	±10		±30	±24	±15	±25		±20		±25	±12	±40	±22	±30	±25	±22	±25		
30	±15	±4		±30	±20	±12	±25		±12		±25	±10	±40	±22	±28	±20	±17	±25		
32	±8			±30	±18	±8	±20		±12		±20		±40	±22	±24	±20	±17	±25		
35	±4			±30	±16	±4	±20				±20		±40	±20	±22			±25		
40				±24	±10		±20				±20		±40	±20	±18			±25		
43				±20	±4		±12				±12		±35	±15	±14			±25		
45				±16			±12				±12		±35	±12	±12			±25		
50				±4									±35		±4			±5		
52													±35							
60													±30							
65													±30							
70													±20							

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque



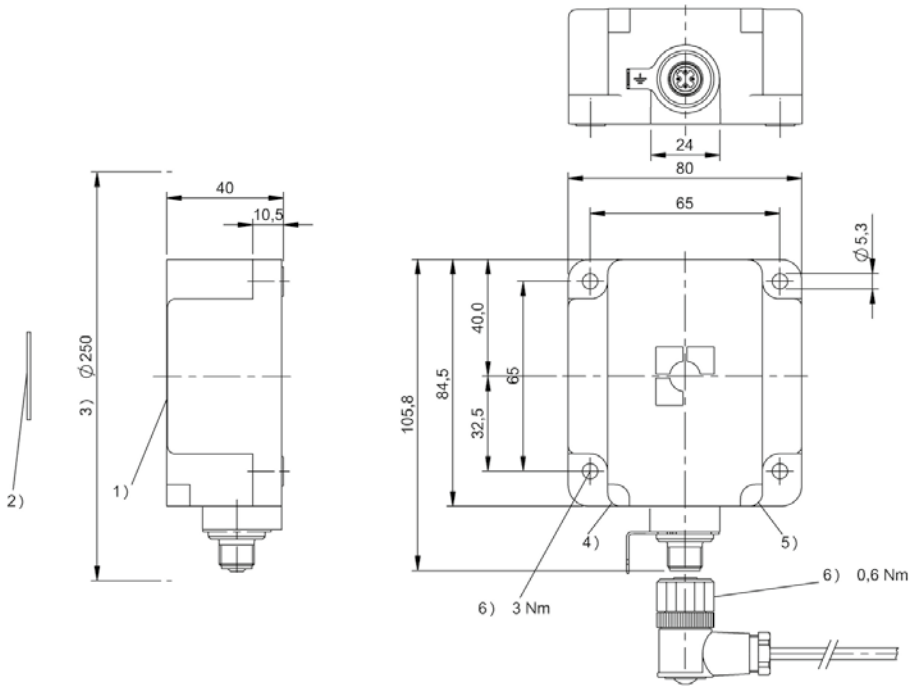
For processor units BIS V-6...	<b>BIS0130</b> BIS VM-341-401-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0043			BIS011F BIS011E BIS011A BIS0139			BIS0046	BIS00Y4		BIS0119	
Data carrier distance to metal	>50	>0	>0	>50	>0	>0	>50	>50		>0	
Data carrier clear zone	>200	>200	>0	>200	>200	>0	>200	>200		>100	
Working distance for writing	0-64	0-36	14-20	0-42	0-30	11-20	0-100	0-120		0-40	
Working distance for reading	0-64	0-36	14-20	0-42	0-30	11-20	0-100	0-120		0-40	
Offset at distance											
	0	±40	±25		±30	±24		±50		0	±30
	8	±40	±25		±30	±24		±50		5	±30
	11	±40	±25		±30	±24	±25	±50		10	±30
	14	±40	±25	±20	±30	±24	±25	±50		12	±25
	16	±40	±25	±20	±30	±24	±9	±50		15	±25
	18	±40	±25	±10	±30	±24	±9	±50		16	±25
	20	±40	±25	±10	±30	±24	±9	±50		18	±25
	25	±36	±22		±25	±20		±50		20	±25
	30	±36	±22		±25	±10		±50		22	±25
	36	±36	±10		±25			±50		25	±25
	40	±36			±25			±50		30	±25
	42	±30			±5			±50		32	±20
	50	±30						±50		36	±20
	60	±30						±45		40	±15
	64	±15						±45		43	
	80							±45		45	
	90							±45		50	
	100							±20		52	
	110									60	
	120									65	

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque



For processor units BIS V-6...	<b>BIS012Z</b> BIS VM-351-401-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS004F				BIS004H					BIS00M2		BIS00P3					
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200		>200	>200	>240	>240	>240	>240		
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200		>200	>200	>480	>480	>480	>480		
Data carrier clear zone C										>50	>50	>50	>50	>0	>0		
Metallic mounting surface 40 x 22 mm	0-52	0-52			0-52	0-52											
Metallic mounting surface > 200 x 200 mm			0-52	0-52			0-52	0-52									
Working distance for writing	0-52	0-52	0-52	0-52	0-52	0-52	0-52	0-52		0-36	0-36	0-100	0-100	0-100	0-100		
Working distance for reading	0-52	0-52	0-52	0-52	0-52	0-52	0-52	0-52		0-36	0-36	0-100	0-100	0-100	0-100		
Offset at distance	X	Y	X	Y	X	Y	X	Y		X	Y	X	Y	X	Y		
	0	±60	±25	±60	±25	±25	±60	±25	±60		0	±45	±23	±110	±50	±120	±50
	5	±60	±25	±60	±25	±25	±60	±25	±60		5	±45	±23	±110	±50	±120	±50
	12	±60	±25	±60	±25	±25	±60	±25	±60		10	±45	±23	±110	±50	±120	±50
	15	±60	±25	±60	±25	±25	±60	±25	±60		15	±45	±23	±110	±50	±120	±50
	18	±60	±25	±60	±25	±25	±60	±25	±60		20	±40	±20	±110	±50	±120	±50
	20	±60	±25	±60	±25	±25	±60	±25	±60		25	±40	±20	±100	±50	±100	±50
	22	±60	±25	±60	±25	±25	±60	±25	±60		30	±36	±18	±100	±50	±100	±50
	25	±60	±25	±60	±25	±25	±60	±25	±60		36	±20	±10	±100	±50	±100	±50
	30	±60	±25	±60	±25	±25	±60	±25	±60		40			±100	±50	±100	±50
	32	±50	±25	±50	±25	±25	±50	±25	±50		45			±100	±50	±100	±50
	35	±50	±25	±50	±25	±25	±50	±25	±50		50			±100	±50	±100	±50
	40	±50	±20	±50	±20	±20	±50	±20	±50		60			±80	±35	±80	±35
	45	±25	±20	±25	±20	±20	±25	±20	±25		70			±80	±35	±80	±35
	50	±25	±20	±25	±20	±20	±25	±20	±25		80			±80	±35	±80	±35
	52	±25	±8	±25	±8	±8	±25	±8	±25		90			±80	±35	±80	±35
	60										100			±35	±15	±80	±35
	65										110					±25	±15

Dimensions in mm



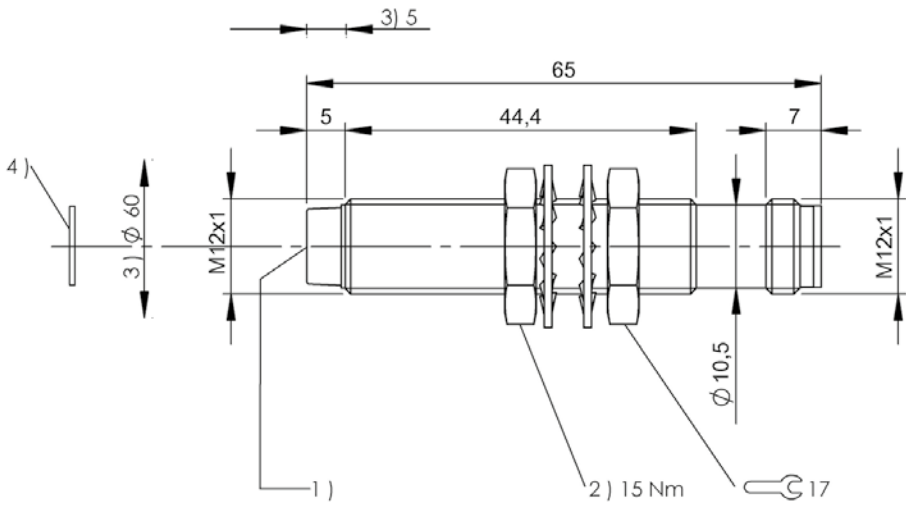


For processor units BIS V-6...	<b>BIS013H</b> BIS VM-348-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 12 x 65 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0042		BIS004A		BIS0044		BIS00UC		
Data carrier distance to metal	>50	>0	>50	>0	>50		>50	>0	>0
Data carrier clear zone	>200	>0	>200	>0	>200		>200	>200	>0
Working distance for writing	0-7	0-5	0-7	0-5	0-12		0-5	0-3	0-2
Working distance for reading	0-7	0-5	0-7	0-5	0-12		0-5	0-3	0-2
Offset at distance									
	0	±5	±3	±4.5	±3	±7	±4	±2.5	±2
	1	±5	±3	±4.5	±3	±7	±4	±2.5	±1
	2	±5	±3	±4.5	±3	±7	±4	±2	
	3	±4.5	±2.5	±4	±2.5	±7	±3	±1	
	4	±4.5	±2.5	±4	±2.5	±7	±3		
	5	±4.5	±1	±4	±1	±6	±1.5		
	6	±4.5		±4		±6			
	7	±2.5		±2		±6			
	8					±6			
	10					±3			
	12					±3			
	18								

Dimensions in mm



1) Sensing surface, 2) Tightening torque, 3) Clear zone, 4) Data carrier

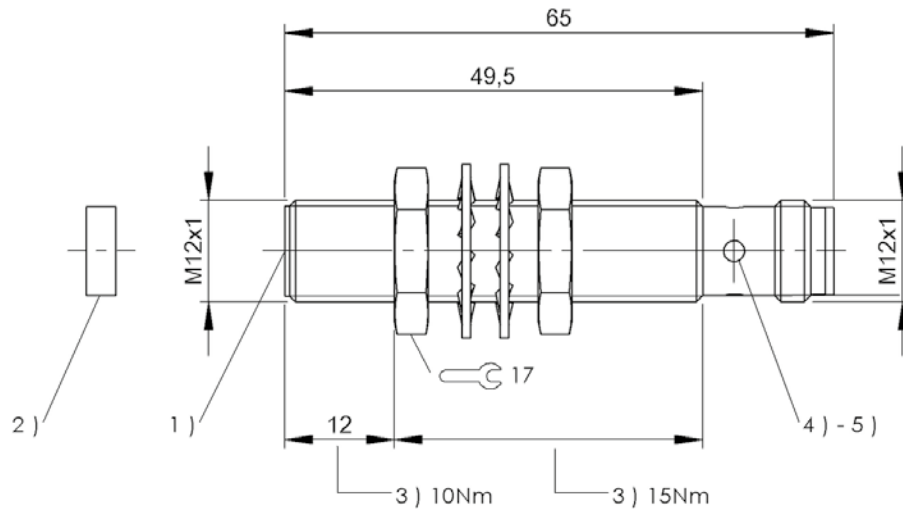


For processor units BIS V-6...	<b>BIS015M</b> BIS VM-330-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 12 x 65 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Brass, nuts brass with white bronze
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0042			BIS00UC			BIS004A			BIS00YL			BIS00YK			BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0	>0	
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	
Working distance for writing	0-6.5	0-6	0-5	0-4.5	0-3	0-2	0-5.5	0-5	0-3.5	0-6	0-5.5	0-2	0-4.5	0-4	0-2	0-7	
Working distance for reading	0-6.5	0-6	0-5	0-4.5	0-3	0-2	0-5.5	0-5	0-3.5	0-6	0-5.5	0-2	0-4.5	0-4	0-2	0-7	
Offset at distance																	
	0	±4	±3.5	±3.5	±2.5	±2.5	±2	±3	±3	±2.5	±3.5	±3.5	±2	±3.5	±3	±2	0 ±4.5
	1	±4	±3.5	±3.5	±2.5	±2.5	±2	±3	±3	±2.5	±3.5	±3.5	±2	±3.5	±3	±2	2 ±4.5
	2	±4	±3.5	±3.5	±2.5	±2	±1	±3	±3	±2.5	±3.5	±3.5	±1	±3.5	±3	±1	3 ±4
	3	±3	±3	±2.5	±2	±1		±2	±2	±2	±3	±3		±3	±2		4 ±4
	3.5	±3	±3	±2.5	±2			±2	±2	±1	±3	±3		±2	±1		5 ±4
	4	±3	±3	±2.5	±2			±2	±2		±3	±3		±2	±1		7 ±1.5
	4.5	±3	±3	±1.5	±1			±1	±1		±2	±2		±2			9
	5	±3	±3	±1.5				±1	±1		±2	±2					10
	5.5	±2	±2					±1			±2	±2					15
	6	±2	±2								±2						20
	6.5	±2															25

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Tightening torque, 4) LED (CP), 5) LED (Power)



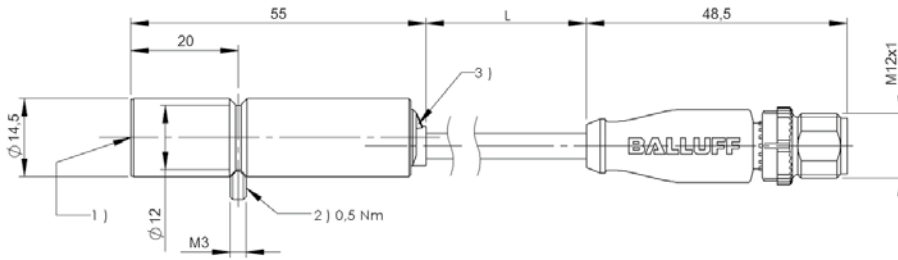
For processor units BIS V-6...	<b>BIS013Z</b> BIS VM-343-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 14.5 x 55 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pole, 0.30 m, PU
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0042			BIS00UC BIS00UE		BIS004A			BIS00YL			BIS00YK			
Data carrier distance to metal	>50	>0	>0	>50		>50	>0	>0	>50	>0	>0	>50	>0	>0	
Data carrier clear zone	>200	>200	>0	>200		>200	>200	>0	>200	>200	>0	>200	>200	>0	
Working distance for writing	0-5.5	0-5	0-4	0-3.5		0-5	0-4.5	0-3.5	0-6.5	0-6	0-3	0-5	0-5	0-2.5	
Working distance for reading	0-5.5	0-5	0-4	0-3.5		0-5	0-4.5	0-3.5	0-6.5	0-6	0-3	0-5	0-5	0-2.5	
Offset at distance															
	0	±3.5	±3	±2.5	±3		±3.5	±3	±2.5	±4	±3.5	±3	±3	±3	±2.5
	1	±3.5	±3	±2.5	±3		±3.5	±3	±2.5	±4	±3.5	±3	±3	±3	±2.5
	2	±3.5	±3	±2.5	±3		±3.5	±3	±2.5	±4	±3.5	±2	±3	±3	±2
	2.5	±3	±2.5	±2	±2		±3	±2.5	±2	±3	±3	±1	±2.5	±2.5	±1
	3	±3	±2.5	±2	±2		±3	±2.5	±1	±3	±3	±1	±2.5	±2.5	
	3.5	±3	±2.5	±1	±1		±3	±2.5	±1	±3	±3		±2.5	±2.5	
	4	±3	±2.5	±1			±3	±1.5		±3	±3		±2	±2	
	4.5	±2	±1.5				±2	±1.5		±3	±3		±1	±1	
	5	±2	±1.5				±2			±3	±3		±1	±1	
	5.5	±2								±2	±2				
	6									±2	±2				
	6.5									±2					

Dimensions in mm





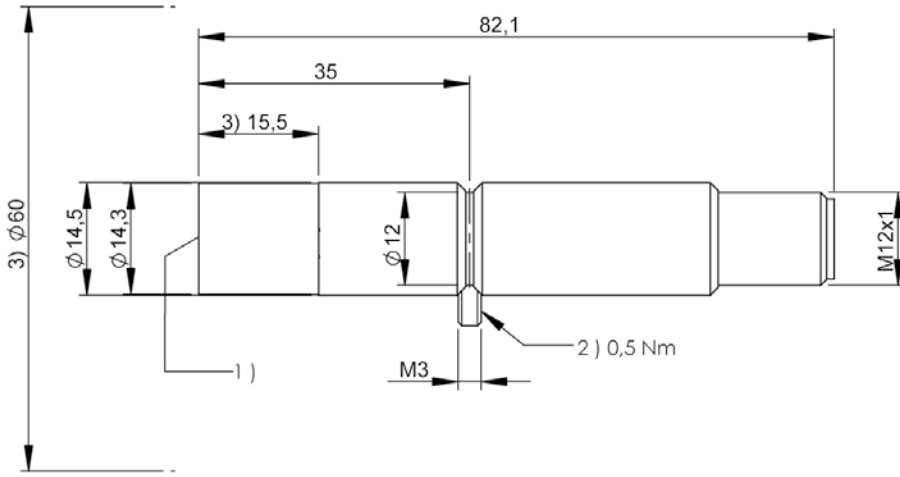
1) Sensing surface, 2) Tightening torque, 3) Function indicator

	BIS00LC	BIS0119	BIS00NU BIS00NW BIS0100
	>25	>0	>0
	>100	>100	>100
	0-7	0-7.5	0-7.5
	0-7	0-7.5	0-7.5
	0 ±4	±5	±5
	2 ±4	±5	±5
	4 ±3.5	±5	±4.5
	5 ±3.5	±4	±4
	6 ±2	±4	±4
	7 ±2	±2.5	±2
	7.5	±2.5	±2
	10		
	14		
	16		
	18		
	20		



For processor units BIS V-6...	<b>BIS019U</b> BIS VM-343-501/05-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 14.5 x 82.1 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory), LF 70/455 kHz
Connection	Male, 8-pin
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carriers on request

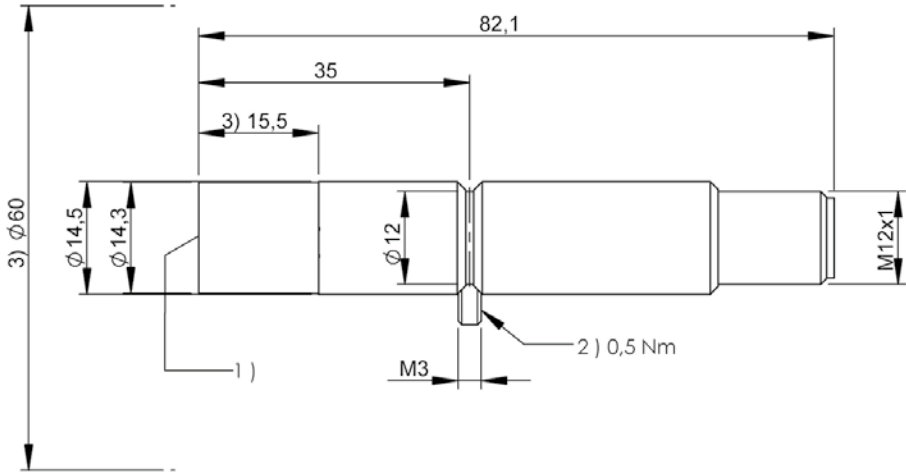


1) Sensing surface, 2) Tightening torque



For processor units BIS V-6...	<b>BIS019W</b> BIS VM-343-501/10-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 14.5 x 82.1 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory), LF 70/455 kHz
Connection	Male, 8-pin
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carriers on request



1) Sensing surface, 2) Tightening torque

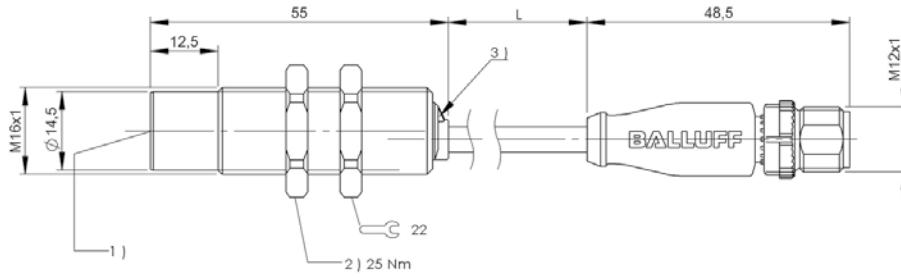


For processor units BIS V-6...	<b>BISO140</b> BIS VM-346-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 16 x 55 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	0.30 m, PU
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0042			BIS00UC BIS00UE		BIS004A			BIS00YL			BIS00YK		
Data carrier distance to metal	>50	>0	>0	>50		>50	>0	>0	>50	>0	>0	>50	>0	>0
Data carrier clear zone	>200	>200	>0	>200		>200	>200	>0	>200	>200	>0	>200	>200	>0
Working distance for writing	0-5.5	0-5	0-4	0-3.5		0-5	0-4.5	0-3.5	0-6.5	0-6	0-3	0-5	0-5	0-2.5
Working distance for reading	0-5.5	0-5	0-4	0-3.5		0-5	0-4.5	0-3.5	0-6.5	0-6	0-3	0-5	0-5	0-2.5
Offset at distance														
	0	±3.5	±3	±2.5	±3	±3.5	±3	±2.5	±4	±3.5	±3	±3	±3	±2.5
	1	±3.5	±3	±2.5	±3	±3.5	±3	±2.5	±4	±3.5	±3	±3	±3	±2.5
	2	±3.5	±3	±2.5	±3	±3.5	±3	±2.5	±4	±3.5	±2	±3	±3	±2
	2.5	±3	±2.5	±2	±2	±3	±2.5	±2	±3	±3	±1	±2.5	±2.5	±1
	3	±3	±2.5	±2	±2	±3	±2.5	±1	±3	±3	±1	±2.5	±2.5	
	3.5	±3	±2.5	±1	±1	±3	±2.5	±1	±3	±3		±2.5	±2.5	
	4	±3	±2.5	±1		±3	±1.5		±3	±3		±2	±2	
	4.5	±2	±1.5			±2	±1.5		±3	±3		±1	±1	
	5	±2	±1.5			±2			±3	±3		±1	±1	
	5.5	±2							±2	±2				
	6								±2	±2				
	6.5								±2					

Dimensions in mm



1) Sensing surface, 2) Tightening torque, 3) Function indicator

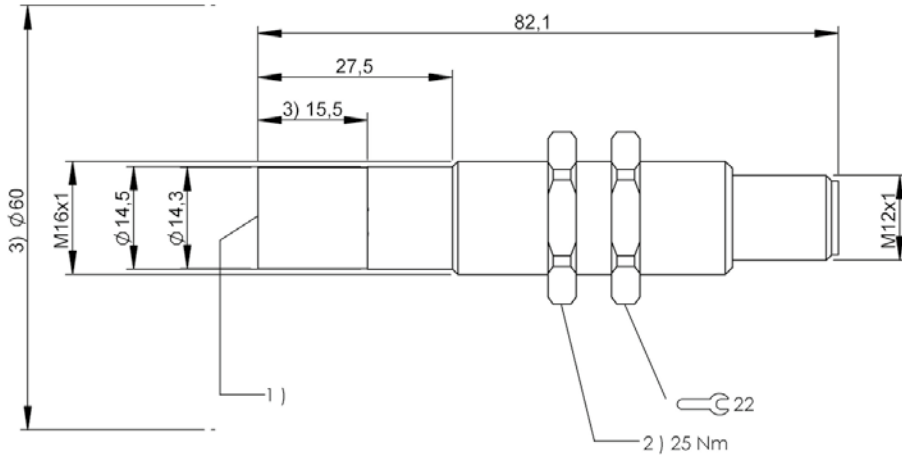
	BIS00LC	BIS0119	BIS00NU BIS00NW BIS0100
	>25	>0	>0
	>100	>100	>100
	0-7	0-7.5	0-7.5
	0-7	0-7.5	0-7.5
	0 ±4	±5	±5
	2 ±4	±5	±5
	4 ±3.5	±5	±4.5
	5 ±3.5	±4	±4
	6 ±2	±4	±4
	7 ±2	±2.5	±2
	7.5	±2.5	±2
	10		
	14		
	16		
	18		
	20		



For processor units BIS V-6...	<b>BIS019Y</b> BIS VM-346-501/05-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 16 x 82.1 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory), LF 70/455 kHz
Connection	Male, 8-pin
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carriers on request



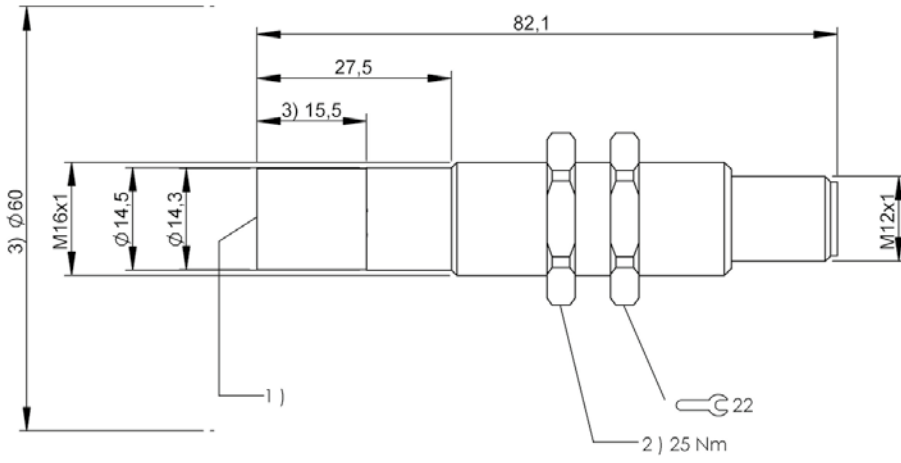


1) Sensing surface, 2) Tightening torque



For processor units BIS V-6...	<b>BIS019Z</b> BIS VM-346-501/10-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 16 x 82.1 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory), LF 70/455 kHz
Connection	Male, 8-pin
Housing material	Brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carriers on request



1) Sensing surface, 2) Tightening torque

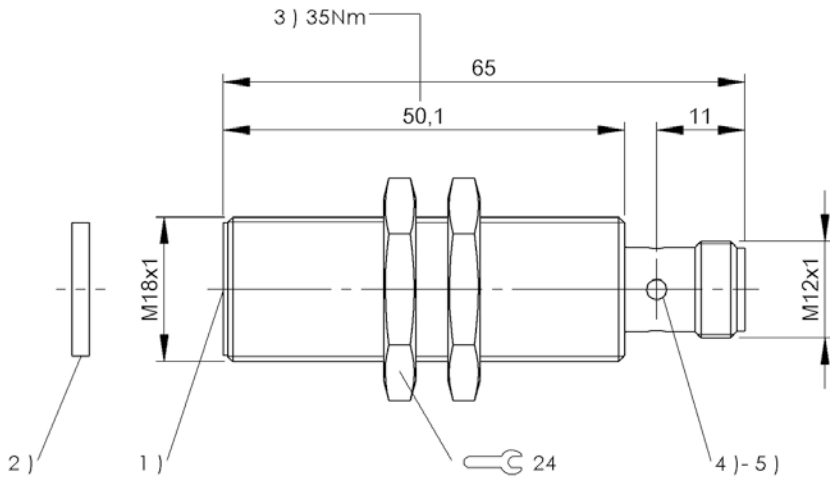


For processor units BIS V-6...	<b>BIS015P</b> BIS VM-332-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 65 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Brass, nuts brass with white bronze
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0042			BIS0043			BIS011F BIS011E BIS011A BIS0139			BIS004A			BIS0143		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20		
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100		
Working distance for writing	0-8.5	0-8	0-6	0-11	0-8	0-6	0-6.5	0-6	0-5	0-7	0-6.5	0-4.5	0-13		
Working distance for reading	0-8.5	0-8	0-6	0-11	0-8	0-6	0-6.5	0-6	0-5	0-7	0-6.5	0-4.5	0-13		
Offset at distance															
	0	±5	±5	±4	±8	±8	±7	±8	±8	±7	±4.5	±4	±3.5	±8	
	2	±5	±5	±4	±8	±8	±7	±8	±8	±7	±4.5	±4	±3.5	±8	
	4	±4.5	±4	±3	±8	±7	±6	±7	±7	±6	±4	±3	±2.5	±8	
	4.5	±4.5	±4	±3	±8	±7	±4	±7	±6	±3	±3.5	±3	±1.5	±8	
	5	±4.5	±4	±3	±8	±7	±4	±7	±6	±3	±3.5	±3		±8	
	6	±4	±3	±2	±7	±5	±1	±4	±3		±3.5	±2		±7	
	6.5	±4	±3		±7	±5		±4			±2	±2		±7	
	7	±4	±3		±7	±5					±2			±7	
	8	±2	±2		±7	±4								±7	
	8.5	±2			±7									±7	
	10				±7									±7	
	11				±4									±4	
	13													±4	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Tightening torque, 4) LED (CP), 5) LED (Power)

	BIS0044	BIS00NU BIS00NW BIS0100
	>25	>0
	>100	>100
	0-10	0-9.5
	0-10	0-9.5
	0 ±6	±5
	2 ±6	±5
	4 ±6	±5
	5 ±6	±5
	6 ±5	±4
	7 ±5	±4
	8 ±5	±4
	9.5 ±3	±2
	10 ±3	
	12	
	15	
	20	
	25	

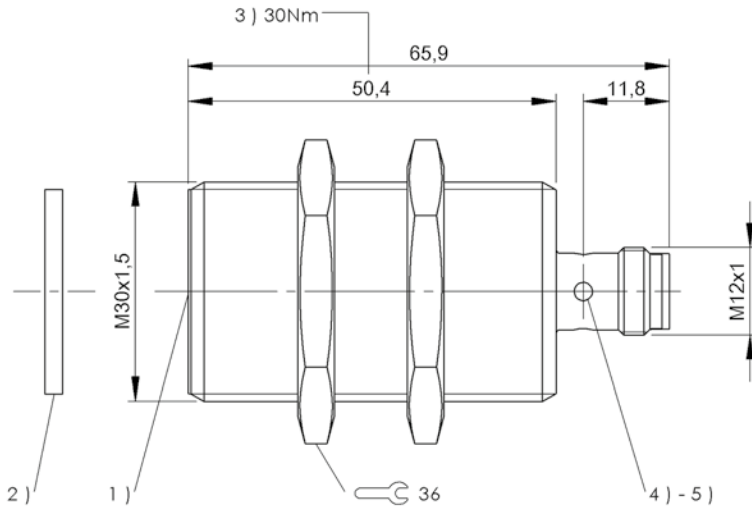


For processor units BIS V-6...	<b>BIS015K</b> BIS VM-333-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 65.9 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Brass, nuts brass with white bronze
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0042	BIS0043 BIS0111			BIS004A	BIS0143		BIS0044	BIS0045	
Data carrier distance to metal	>20	>25	>0	>0	>20	>20		>25	>25	
Data carrier clear zone	>100	>100	>100	>0	>100	>100		>100	>100	
Working distance for writing	0-13	0-21	0-15	0-13	0-10	0-21		0-18	0-21	
Working distance for reading	0-13	0-21	0-15	0-13	0-10	0-21		0-18	0-21	
Offset at distance										
	0 ±8	±13	±10	±10	±7	±12		0 ±9	±13	
	5 ±8	±13	±10	±10	±7	±12		5 ±9	±13	
	8 ±8	±13	±10	±9	±6	±12		10 ±9	±13	
	10 ±7	±13	±8	±8	±4	±12		13 ±8	±12	
	13 ±4	±12	±8	±3		±11		15 ±8	±12	
	15	±12	±3			±11		16 ±4	±11	
	18	±11				±10		18 ±4	±11	
	20	±5				±5		20	±5	
	21	±5				±5		21	±5	
	25							25		
	30							30		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Tightening torque, 4) LED (CP), 5) LED (Power)

BIS0046		BIS00NU BIS00NW BIS0100		BIS011A	
>50		>0		>20	
>150		>100		>100	
0-30		0-13		0-15	
0-30		0-13		0-15	
±20		±9		0	±11
±20		±9		5	±11
±20		±7		10	±10
±18		±3		12	±8
±18				13	±8
±18				15	±4
±18				18	
±18				20	
±16				21	
±16				25	
±8				30	



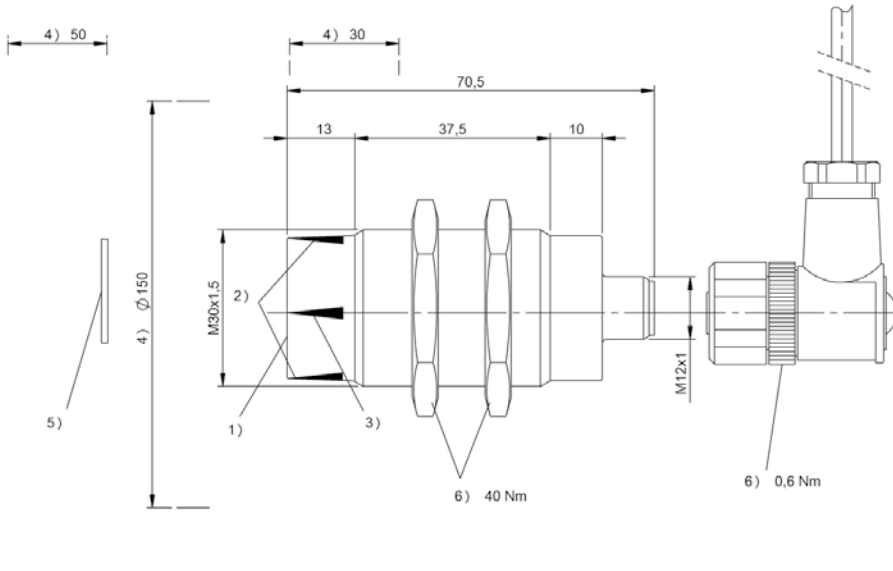
For processor units BIS V-6...	<b>BIS00RF</b> BIS VM-300-001-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 70.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 4-pin
Housing material	Brass, nuts brass with white bronze
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0043			BIS0044			
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0		>25	>10	>5	
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0		>100	>60	>50	
Working distance for writing	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16		0-22	0-16	0-10	
Working distance for reading	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16		0-22	0-16	0-10	
Offset at distance																	
	0	±15	±12	±8	±20	±15	±6	±7	±6	±10	±7	±18	±10	0	±14	±8	±7
	5	±15	±12	±8	±20	±15	±6	±7	±6	±8	±7	±18	±10	5	±14	±8	±7
	9	±15	±10	±6	±20	±15	±5	±2	±1	±5	±3	±18	±8	8	±12	±6	±2
	12	±15	±8	±4	±20	±15	±4					±16	±6	10	±12	±6	±2
	15	±15	±8	±4	±20	±12						±16	±6	12	±12	±5	
	16	±12	±6		±20	±10						±16	±4	15	±12	±4	
	18	±12	±6		±20	±8						±16		16	±10	±2	
	20	±12	±4		±20	±6						±16		18	±10		
	22	±4			±18	±4						±14		20	±10		
	25				±14							±14		22	±6		
	30				±10							±10		25			
	32				±4									30			
	35													32			
	40													35			
	43													40			
	45													42			
	50													44			

Dimensions in mm





1) Sensing surface, 2) LED (CP), 3) LED (Power), 4) Clear zone, 5) Data carrier, 6) Tightening torque

BIS0045			BIS0046			BIS00YE		BIS00Y4		BIS00LC		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
>25	>10	>5	>50	>15	>10	>25	>0	>50		>25	>0	>0		>0	
>100	>60	>50	>150	>90	>70	>100	>100	>150		>100	>100	>100		>100	
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22		0-13	
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22		0-13	
±16	±10	±7	±25	±18	±15	±18	±8	±30		0	±16	±10	±13		±10
±16	±10	±7	±25	±18	±15	±18	±6	±30		5	±16	±10	±13		±10
±14	±8	±2	±25	±16	±12	±18	±3	±30		10	±16	±7	±13		±9
±14	±8	±2	±25	±16	±12	±18		±30		13	±14	±5	±11		±5
±14	±7		±24	±15	±10	±16		±28		15	±14		±11		
±14	±6		±24	±14	±8	±16		±28		18	±14		±11		
±14	±3		±24	±12		±16		±28		20	±14		±7		
±14	±2		±24	±12		±16		±28		22	±12		±7		
±14			±24	±10		±16		±28		25	±12				
±12			±22	±8		±16		±24		27	±5				
±12			±22	±6		±16		±24		30					
			±22			±10		±24		32					
			±16					±24		35					
			±16					±24		40					
			±16					±5		43					
			±10					±5		45					
			±5							50					

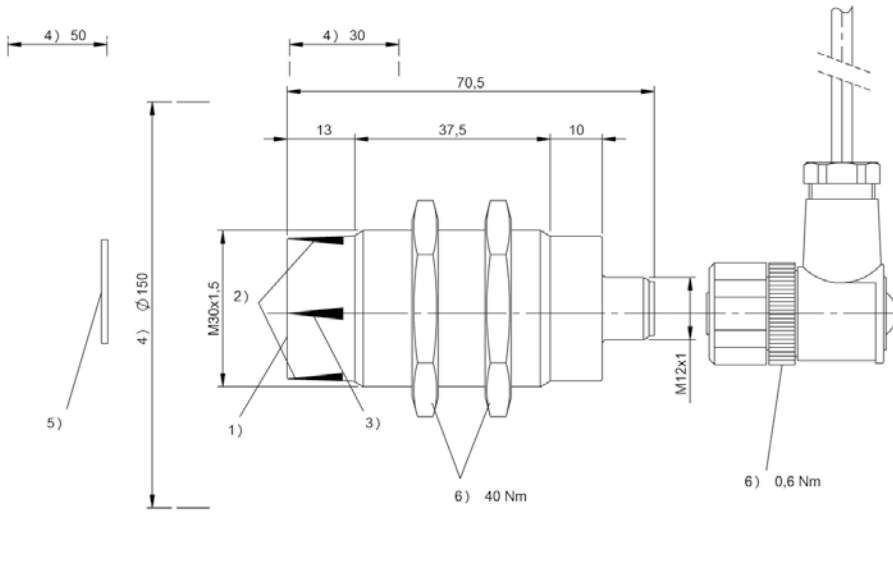


For processor units BIS V-6...	<b>BIS0132</b> BIS VM-344-401-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 70.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Male, 4-pin
Housing material	Brass, nuts nickel plated brass, nuts brass with white bronze
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0042		BIS00LC		BIS0043 BIS0111		BIS011F BIS011E BIS011A BIS0139		BIS0044			BIS0045				
Data carrier distance to metal	>20	>5	>25	>0	>25	>0	>25	>0	>25	>10	>5	>25	>10	>5		
Data carrier clear zone	>100	>100	>100	>100	>100	>0	>100	>100	>100	>60	>50	>100	>60	>50		
Working distance for writing	0-11	0-11	0-27	0-13	0-30	0-16	0-18	0-15	0-22	0-16	0-10	0-28	0-18	0-10		
Working distance for reading	0-11	0-11	0-27	0-13	0-30	0-16	0-18	0-15	0-22	0-16	0-10	0-28	0-18	0-10		
Offset at distance	0	±10	±7	±16	±10	±18	±10	±12	±11	0	±14	±8	±7	±16	±10	±7
	5	±8	±7	±16	±10	±18	±10	±12	±11	5	±14	±8	±7	±16	±10	±7
	9	±5	±3	±16	±7	±18	±8	±11	±10	8	±12	±6	±2	±14	±8	±2
	13			±14	±5	±16	±6	±10	±9	10	±12	±6	±2	±14	±8	±2
	15			±14		±16	±6	±10	±5	12	±12	±5		±14	±7	
	16			±14		±16	±4	±5		15	±12	±4		±14	±6	
	18			±14		±16		±5		16	±10	±2		±14	±3	
	20			±14		±16				18	±10			±14	±2	
	22			±12		±14				20	±10			±14		
	25			±12		±14				22	±6			±12		
	27			±5		±10				25				±12		
	32									30						
	35									32						
	40									35						
	43									40						
	45									42						
	50									44						

Dimensions in mm



1) Sensing surface, 2) LED (CP), 3) LED (Power), 4) Clear zone, 5) Data carrier, 6) Tightening torque

BIS0046			BIS00YE		BIS00Y4		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
>50	>15	>10	>25	>0	>50		>0	>0		
>150	>90	>70	>100	>100	>150		>100	>100		
0-44	0-25	0-15	0-30	0-8	0-42		0-22	0-13		
0-44	0-25	0-15	0-30	0-8	0-42		0-22	0-13		
±25	±18	±15	±18	±8	±30		0 ±13	±10		
±25	±18	±15	±18	±6	±30		5 ±13	±10		
±25	±16	±12	±18	±3	±30		10 ±13	±9		
±25	±16	±12	±18		±30		12 ±11	±5		
±24	±15	±10	±16		±28		13 ±11	±5		
±24	±14	±8	±16		±28		15 ±11			
±24	±12		±16		±28		18 ±11			
±24	±12		±16		±28		20 ±7			
±24	±10		±16		±28		22 ±7			
±22	±8		±16		±24		28			
±22	±6		±16		±24		30			
±22			±10		±24		32			
±16					±24		35			
±16					±24		40			
±16					±5		43			
±10					±5		45			
±5							50			

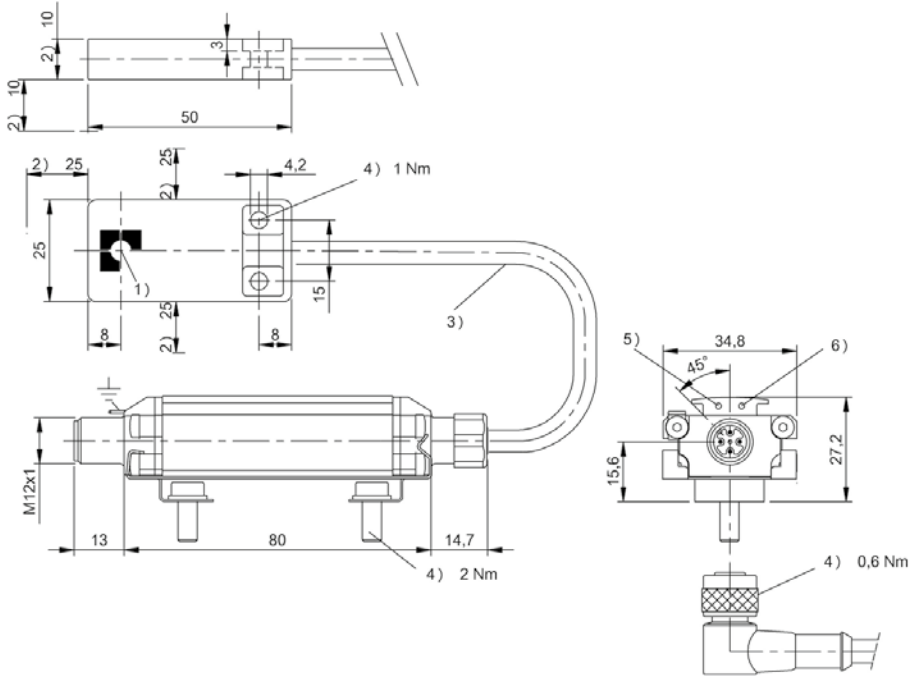


For processor units BIS V-6...	<b>BIS00T9</b> BIS VM-305-001-S4
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, 4-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS0043		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0		>25	>0	>0		>0
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0		>100	>0	>100		>100
Working distance for writing	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5		0-17	0-11	0-17		0-12
Working distance for reading	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5		0-17	0-11	0-17		0-12
Offset at distance																
	0	±3	±3	±4	±4	±6		±3	±3	±4	±3	0	±12	±8	±10	±7
	5	±2		±4	±2	±6		±2		±3	±2	5	±12	±8	±10	±7
	9					±4						8	±12	±6	±10	±6
	12					±2						10	±12	±6	±9	±6
	15											11	±8	±4	±9	±3
	16											12	±8		±9	±3
	18											15	±8		±4	
	20											17	±4		±4	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) Tightening torque, 5) LED (Power), 6) LED (CP)

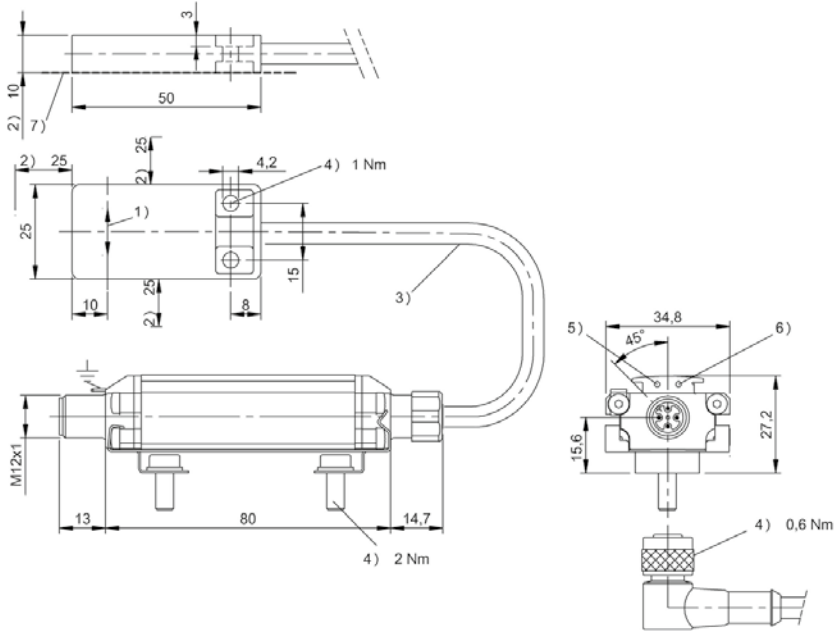


For processor units BIS V-6...	<b>BIS00T6</b> BIS VM-352-001-S4
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 15693
Connection	Connector, 4-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS00NZ		BIS017F	
Data carrier clear zone A	>27	>27	>200	>200
Data carrier clear zone B	>27	>27	>200	>200
Data carrier clear zone C			>50	>50
Metallic mounting surface 40 × 22 mm				
Metallic mounting surface > 200 × 200 mm				
Working distance for writing	0-22	0-22	0-17	0-17
Working distance for reading	0-22	0-22	0-17	0-17
Offset at distance	X	Y	X	Y
	0	±25 ±5	0	±22 ±9
	5	±25 ±5	5	±22 ±9
	10	±25 ±5	10	±19 ±8
	15	±25 ±5	15	±12 ±6
	20	±15 ±5	17	±3 ±2
	22	±15 ±5	20	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) Tightening torque, 5) LED (Power), 6) LED (CP), 7) Mounting on steel



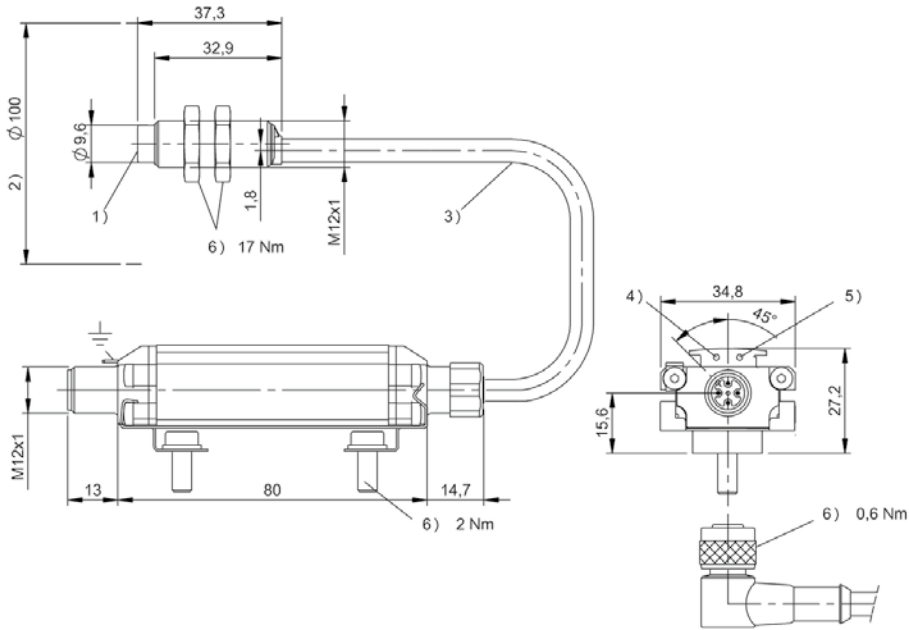
For processor units BIS V-6...	<b>BIS00T7</b> BIS VM-306-001-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 12 x 37.3 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 4-pin, 0.50 m, PU
Housing material	Brass, Interface aluminum, nickel plate
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0040	BIS0042	BIS0048	BIS004A
Data carrier distance to metal	>10	>10	>10	>10
Data carrier clear zone	>60	>60	>60	>60
Working distance for writing	0-5	0-6	0-4	0-5
Working distance for reading	0-5	0-6	0-4	0-5
Offset at distance				
	0 ±2	±2	±2	±2
	2 ±2	±2	±2	±2
	4 ±1	±1	±1	±1
	5 ±1	±1		±1
	6 ±1	±1		

Dimensions in mm

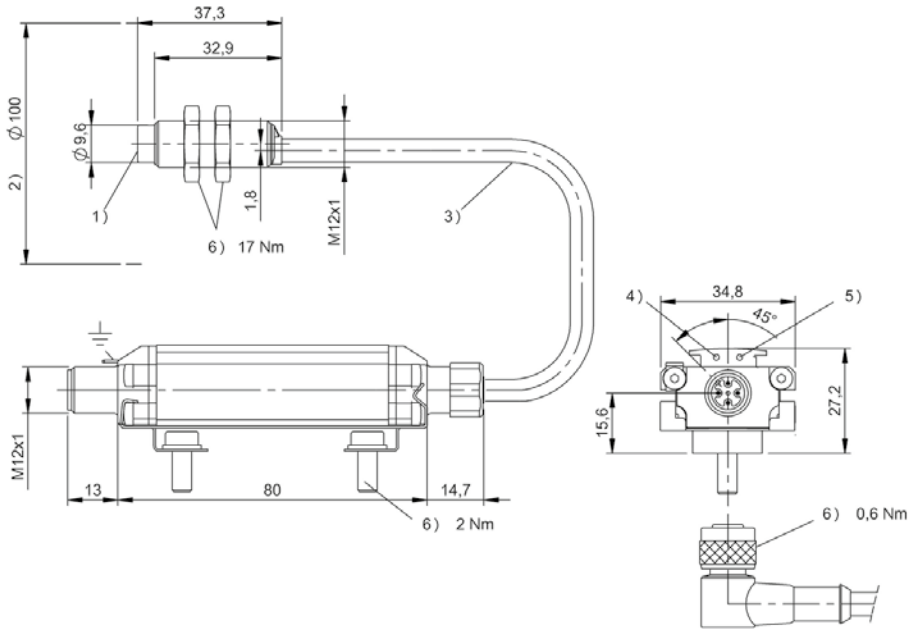




1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED (Power), 5) LED (CP), 6) Tightening torque



For processor units BIS V-6...	<b>BIS01CU</b> BIS VM-309-001-S4
Product Group	HF (13.56 MHz)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Protection degree	IP67
Approval/Conformity	CE, cULus, EAC, WEEE



1) Active area, 2) Free zone, 3) Cable length see text, 4) LED (Power), 5) LED (CP), 6) Tightening torque

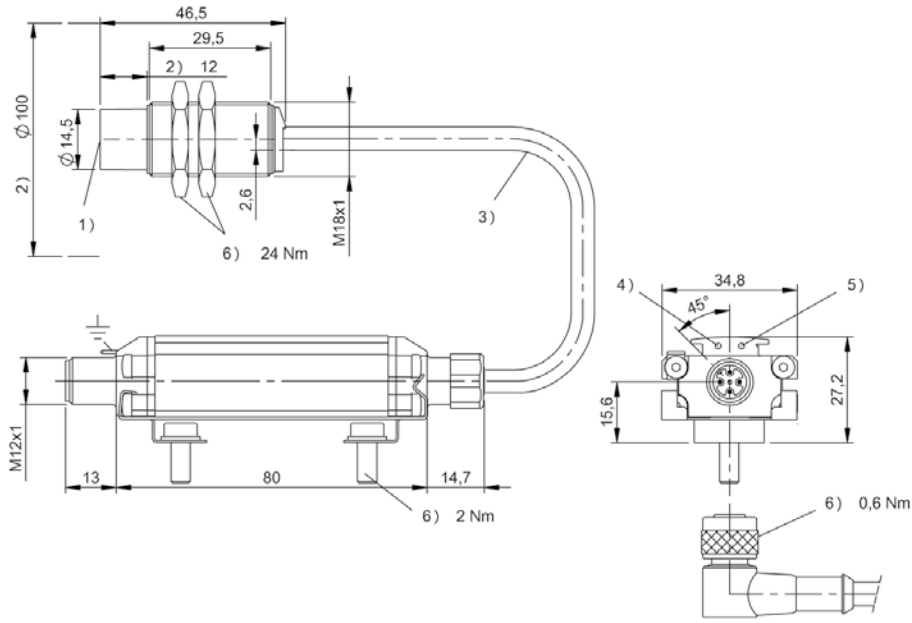


For processor units BIS V-6...	<b>BIS00T8</b> BIS VM-307-001-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 12 x 37.3 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS00YK		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0		>10	>0	>0		>0
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0		>60	>60	>100		>100
Working distance for writing	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5		0-10	0-8	0-16		0-12
Working distance for reading	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5		0-10	0-8	0-16		0-12
Offset at distance																
	0	±3	±3	±4	±4	±6		±3	±3	±4	±3	0	±7	±5	±9	±7
	5	±2		±4	±2	±6		±2		±3	±2	5	±7	±5	±9	±7
	9					±4						7	±6	±4	±9	±6
	12					±2						8	±6	±2	±9	±6
	15											10	±3		±8	±6
	16											12			±8	±3
	18											14			±8	
	20											16			±3	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED (Power), 5) LED (CP), 6) Tightening torque

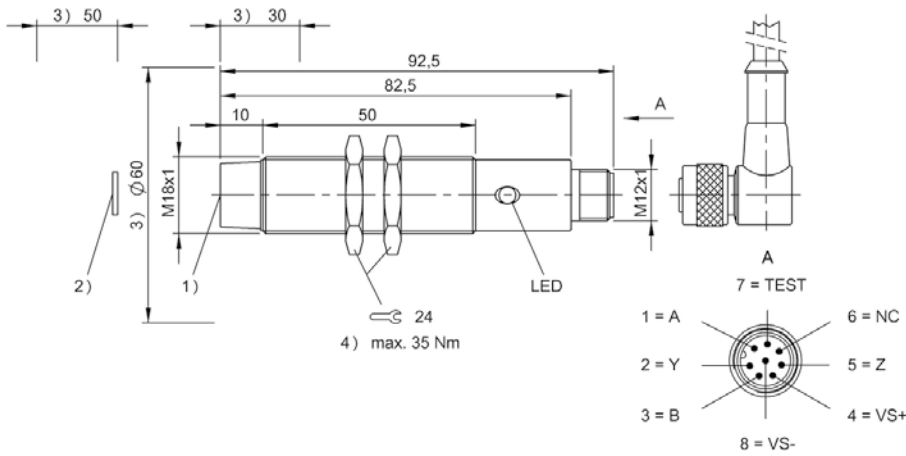


For processor units BIS M-60...	<b>BISO057</b> BIS M-302-001-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 92.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03Y			BISO03Z			BISO040		BISO042		BISO048		BISO04A		BISO043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-16	0-15	0-10	0-20	0-18	0-10	0-7	0-5	0-9	0-6	0-7	0-5	0-9	0-6	0-20	0-12	
Working distance for reading	0-16	0-15	0-10	0-20	0-18	0-10	0-7	0-5	0-9	0-6	0-7	0-5	0-9	0-6	0-20	0-12	
Offset at distance	0	±10	±8	±4	±18	±14	±8	±5	±4	±5	±5	±4	±3	±4	±3	±14	±10
	5	±10	±8	±4	±18	±14	±6	±4	±3	±5	±3.5	±3	±2	±3	±2	±12	±8
	9	±10	±7	±2	±16	±12	±4			±3.5						±12	±6
	12	±8	±6		±14	±8										±10	±4
	15	±7	±4		±12	±6										±10	
	16	±4			±10	±4										±7	
	18				±8	±4										±7	
	20				±4											±5	
	22																
	25																
	30																

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0044			BIS0045			BIS0046					BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS00UC BIS00UE		BIS019C		BIS019E	
>25	>10	>5	>25	>10	>5	>50	>25	>20		>0		>0		>10	>0	>0	>0	>0		
>80	>50	>50	>80	>50	>50	>150	>90	>70		>100		>100		>60	>100	>0	>100	>0		
0-16	0-12	0-8	0-20	0-12	0-5	0-30	0-22	0-12		0-17		0-13		0-7	0-8	0-7	0-12	0-11		
0-16	0-12	0-8	0-20	0-12	0-5	0-30	0-22	0-12		0-17		0-13		0-7	0-8	0-7	0-12	0-11		
±8	±6	±4	±12	±8	±7	±20	±16	±14	0	±10		±8		±4	±6	±4.5	±7	±6		
±8	±6	±4	±12	±8	±4	±20	±16	±14	5	±10		±8		±4	±6	±4.5	±7	±6		
±6	±5		±10	±6		±18	±16	±10	7	±10		±7		±4	±5.5	±4	±7	±6		
±4	±3		±10	±4		±18	±14	±6	8	±10		±7			±3	±2	±6.5	±5.5		
±4			±10			±18	±14		10	±9		±7			±3		±6.5	±5.5		
±3			±5			±16	±12		13	±9		±4					±6.5	±5.5		
			±5			±16	±12		14	±9							±6.5	±3		
			±5			±16	±12		17	±4							±3	±3		
						±12	±8		22								±3			
						±12			25											
						±8			30											



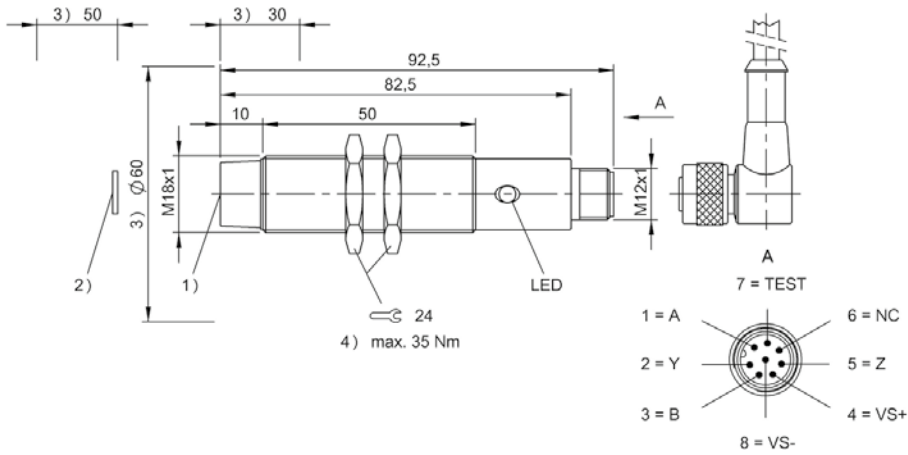
For processor unit BIS00EP	<b>BIS0059</b> BIS M-302-003-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 92.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0048		BIS004A		BIS0043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-16	0-15	0-10	0-20	0-18	0-10	0-7	0-5	0-9	0-6	0-7	0-5	0-9	0-6	0-20	0-12	
Working distance for reading	0-16	0-15	0-10	0-20	0-18	0-10	0-7	0-5	0-9	0-6	0-7	0-5	0-9	0-6	0-20	0-12	
Offset at distance																	
	0	±10	±8	±4	±18	±14	±8	±5	±4	±5	±5	±4	±3	±4	±3	±14	±10
	5	±10	±8	±4	±18	±14	±6	±4	±3	±5	±3.5	±3	±2	±3	±2	±12	±8
	9	±10	±7	±2	±16	±12	±4			±3.5						±12	±6
	12	±8	±6		±14	±8										±10	±4
	15	±7	±4		±12	±6										±10	
	16	±4			±10	±4										±7	
	18				±8	±4										±7	
	20				±4											±5	
	22																
	25																
	30																

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0044			BIS0045			BIS0046			BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS00UC BIS00UE		BIS019C		BIS019E	
>25	>10	>5	>25	>10	>5	>50	>25	>20	>0	>0	>10	>0	>0	>0	>0	>0		
>80	>50	>50	>80	>50	>50	>150	>90	>70	>100	>100	>60	>100	>0	>100	>0	>0		
0-16	0-12	0-8	0-20	0-12	0-5	0-30	0-22	0-12	0-17	0-13	0-7	0-8	0-7	0-12	0-11	0-11		
0-16	0-12	0-8	0-20	0-12	0-5	0-30	0-22	0-12	0-17	0-13	0-7	0-8	0-7	0-12	0-11	0-11		
±8	±6	±4	±12	±8	±7	±20	±16	±14	0	±10	±8	±4	±6	±4.5	±7	±6		
±8	±6	±4	±12	±8	±4	±20	±16	±14	5	±10	±8	±4	±6	±4.5	±7	±6		
±6	±5		±10	±6		±18	±16	±10	7	±10	±7	±4	±5.5	±4	±7	±6		
±4	±3		±10	±4		±18	±14	±6	8	±10	±7		±3	±2	±6.5	±5.5		
±4			±10			±18	±14		10	±9	±7		±3		±6.5	±5.5		
±3			±5			±16	±12		13	±9	±4				±6.5	±5.5		
			±5			±16	±12		14	±9					±6.5	±3		
			±5			±16	±12		17	±4					±3	±3		
						±12	±8		22						±3			
						±12			25									
						±8			30									

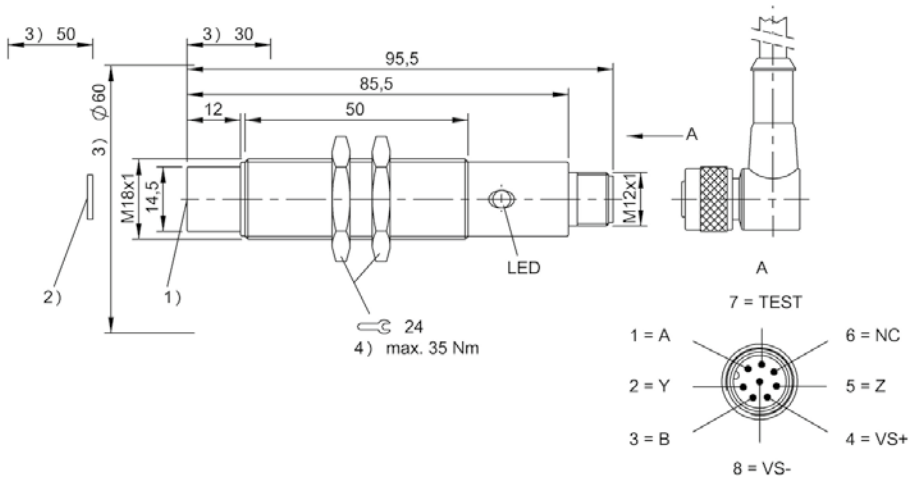


For processor units BIS M-60...	<b>BIS005A</b> BIS M-304-001-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 95.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0048		BIS004A		BIS0043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-14	0-10	0-8	0-18	0-15	0-10	0-5	0-5	0-7	0-6	0-5	0-4	0-7	0-5	0-18	0-10	
Working distance for reading	0-14	0-10	0-8	0-18	0-15	0-10	0-5	0-5	0-7	0-6	0-5	0-4	0-7	0-5	0-18	0-10	
Offset at distance																	
	0	±10	±8	±4	±18	±14	±8	±5	±4	±5	±5	±4	±2	±4	±3	±14	±10
	5	±10	±8	±4	±18	±14	±6	±4	±3	±5	±3.5	±3		±3	±2	±12	±8
	9	±10	±7		±16	±12	±4			±3						±12	±6
	12	±8			±14	±8										±10	
	15				±12	±6										±10	
	16				±10											±7	
	18				±8											±5	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0044			BIS019C		BIS019E	
>25	>10	>5	>0	>0	>0	>0
>80	>50	>50	>100	>0	>100	>0
0-14	0-10	0-8	0-7	0-6.5	0-10	0-10
0-14	0-10	0-8	0-7	0-6.5	0-10	0-10
$\pm 8$	$\pm 6$	$\pm 4$	0	$\pm 5$	$\pm 5$	$\pm 6.5$
$\pm 8$	$\pm 6$	$\pm 4$	2	$\pm 5$	$\pm 5$	$\pm 6.5$
$\pm 6$	$\pm 5$		5	$\pm 4$	$\pm 4$	$\pm 6.5$
$\pm 4$			6	$\pm 2$	$\pm 2$	$\pm 6$
			7	$\pm 2$		$\pm 6$
			8			$\pm 6$
			10			$\pm 2$

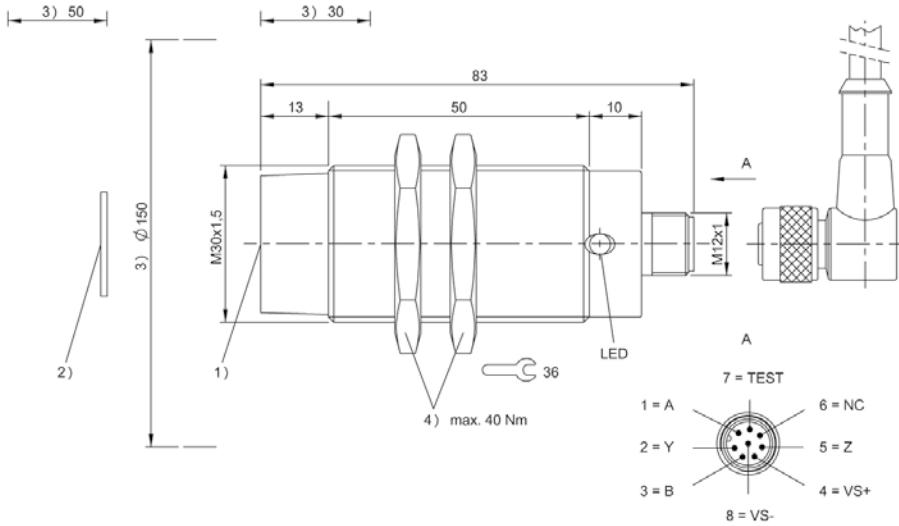


For processor units BIS M-60...	<b>BIS0053</b> BIS M-300-001-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 83 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0043		BIS0044				
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0	>25	>10	>5		
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0	>100	>60	>50		
Working distance for writing	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16	0-22	0-16	0-10		
Working distance for reading	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16	0-22	0-16	0-10		
Offset at distance	0	±15	±12	±8	±20	±15	±6	±7	±6	±10	±7	±18	±10	0	±14	±8	±7
	5	±15	±12	±8	±20	±15	±6	±7	±6	±8	±7	±18	±10	5	±14	±8	±7
	9	±15	±10	±6	±20	±15	±5	±2	±1	±5	±3	±18	±8	8	±12	±6	±2
	12	±15	±8	±4	±20	±15	±4					±16	±6	10	±12	±6	±2
	15	±15	±8	±4	±20	±12						±16	±6	12	±12	±5	
	16	±12	±6		±20	±10						±16	±4	15	±12	±4	
	18	±12	±6		±20	±8						±16		16	±10	±2	
	20	±12	±4		±20	±6						±16		18	±10		
	22	±4			±18	±4						±14		20	±10		
	25				±14							±14		22	±6		
	30				±10							±10		25			
	32				±4									30			
														32			
														35			
														40			
														42			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0045			BIS0046			BIS00YE		BIS00Y4		BIS00LC			BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
>25	>10	>5	>50	>15	>10	>25	>0	>50		>25	>0	>0	>0	>0		
>100	>60	>50	>150	>90	>70	>100	>100	>150		>100	>100	>100	>100	>100		
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22	0-22	0-13		
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22	0-22	0-13		
±16	±10	±7	±25	±18	±15	±18	±8	±30	0	±16	±10	±13	±13	±10		
±16	±10	±7	±25	±18	±15	±18	±6	±30	5	±16	±10	±13	±13	±10		
±14	±8	±2	±25	±16	±12	±18	±3	±30	10	±16	±7	±13	±13	±9		
±14	±8	±2	±25	±16	±12	±18		±30	13	±14	±5	±11	±11	±5		
±14	±7		±24	±15	±10	±16		±28	15	±14		±11	±11			
±14	±6		±24	±14	±8	±16		±28	18	±14		±11	±11			
±14	±3		±24	±12		±16		±28	20	±14		±7	±7			
±14	±2		±24	±12		±16		±28	22	±12		±7	±7			
±14			±24	±10		±16		±28	25	±12						
±12			±22	±8		±16		±24	27	±5						
±12			±22	±6		±16		±24								
			±22			±10		±24								
			±16					±24								
			±16					±24								
			±16					±5								
			±10					±5								

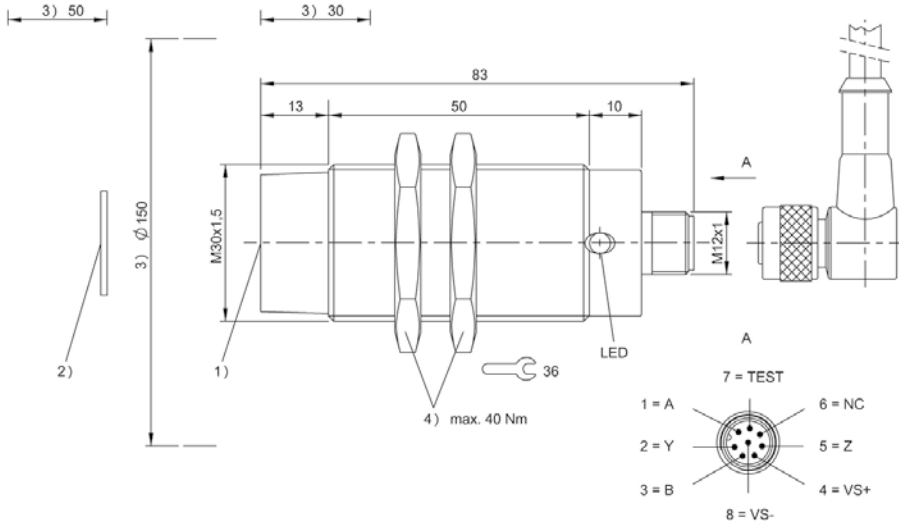


For processor unit BISO0EP	<b>BISO054</b> BIS M-300-003-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 83 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	Brass, nuts nickel plated brass
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03Y			BISO03Z			BISO040		BISO042		BISO043		BISO044				
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0	>25	>10	>5		
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0	>100	>60	>50		
Working distance for writing	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16	0-22	0-16	0-10		
Working distance for reading	0-22	0-20	0-15	0-32	0-22	0-12	0-9	0-9	0-11	0-11	0-30	0-16	0-22	0-16	0-10		
Offset at distance	0	±15	±12	±8	±20	±15	±6	±7	±6	±10	±7	±18	±10	0	±14	±8	±7
	5	±15	±12	±8	±20	±15	±6	±7	±6	±8	±7	±18	±10	5	±14	±8	±7
	9	±15	±10	±6	±20	±15	±5	±2	±1	±5	±3	±18	±8	8	±12	±6	±2
	12	±15	±8	±4	±20	±15	±4					±16	±6	10	±12	±6	±2
	15	±15	±8	±4	±20	±12						±16	±6	12	±12	±5	
	16	±12	±6		±20	±10						±16	±4	15	±12	±4	
	18	±12	±6		±20	±8						±16		16	±10	±2	
	20	±12	±4		±20	±6						±16		18	±10		
	22	±4			±18	±4						±14	±18	20	±10		
	25				±14							±14		22	±6		
	30				±10							±10		25			
	32				±4									30			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0045			BIS0046			BIS00YE		BIS00Y4		BIS00LC			BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
>25	>10	>5	>50	>15	>10	>25	>0	>50		>25	>0	>0	>0	>0		
>100	>60	>50	>150	>90	>70	>100	>100	>150		>100	>100	>100	>100	>100		
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22	0-22	0-13		
0-28	0-18	0-10	0-44	0-25	0-15	0-30	0-8	0-42		0-27	0-13	0-22	0-22	0-13		
±16	±10	±7	±25	±18	±15	±18	±8	±30	0	±16	±10	±13	±13	±10		
±16	±10	±7	±25	±18	±15	±18	±6	±30	5	±16	±10	±13	±13	±10		
±14	±8	±2	±25	±16	±12	±18	±3	±30	10	±16	±7	±13	±13	±9		
±14	±8	±2	±25	±16	±12	±18		±30	13	±14	±5	±11	±11	±5		
±14	±7		±24	±15	±10	±16		±28	15	±14		±11	±11			
±14	±6		±24	±14	±8	±16		±28	18	±14		±11	±11			
±14	±3		±24	±12		±16		±28	20	±14		±7	±7			
±14	±2		±24	±12		±16		±28	22	±12		±7	±7			
±14			±24	±10		±16		±28	25	±12						
±12			±22	±8		±16		±24	27	±5						
±12			±22	±6		±16		±24								
			±22			±10		±24								



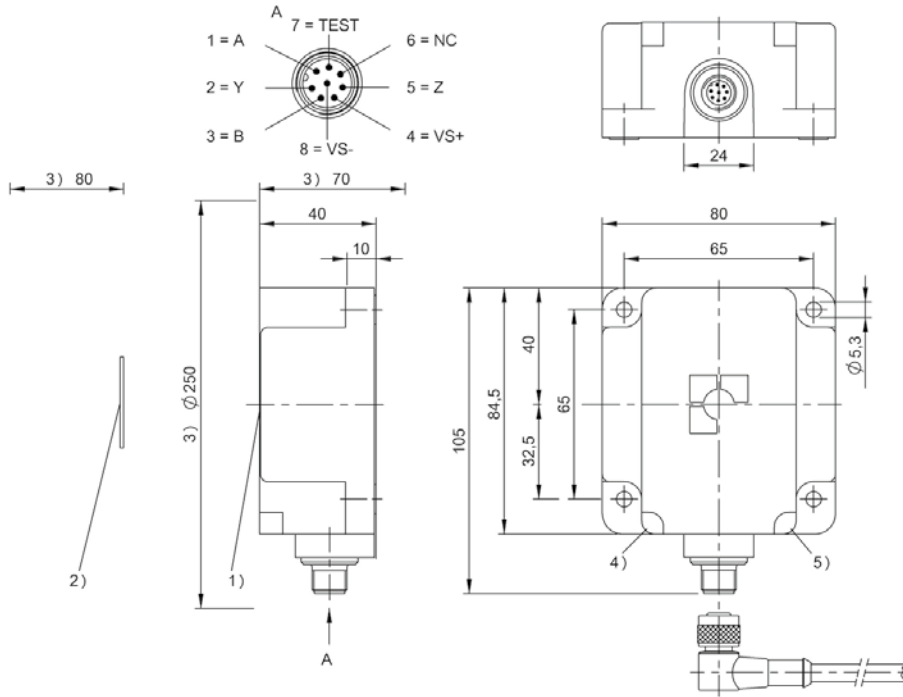
For processor units BIS M-60...	<b>BIS0055</b> BIS M-301-001-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0043 BIS0111			BIS0044		BIS0045		BIS0046		BIS0047		BIS00L8	
Data carrier distance to metal	>50	>10	>5	>50	>25	>10	>50	>20	>50	>30	>50	>30	>50	>30	>80		>1	0	
Data carrier clear zone	>200	>60	>50	>200	>150	>150	>200	>60	>200	>100	>200	>100	>200	>100	>250		>70	>70	
Working distance for writing	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50		0-32	0-32	
Working distance for reading	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50		0-32	0-32	
Offset at distance	0	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30		±30	±25
	5	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30		±30	±25
	9	±22	±18	±14	±30	±24	±18	±32	±20	±28	±18	±32	±22	±40	±25	±30		±30	±25
	12	±22	±18	±10	±30	±24	±18	±32	±18	±24	±18	±32	±22	±40	±25	±30		±25	±25
	15	±22	±18	±10	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30		±25	±25
	16	±22	±16	±8	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30		±25	±25
	18	±22	±16	±6	±30	±24	±18	±32	±16	±24	±12	±32	±18	±40	±25	±30		±25	±22
	20	±22	±16	±4	±30	±24	±18	±32	±16	±24	±8	±32	±16	±40	±25	±30		±25	±22
	22	±20	±10		±30	±24	±15	±25	±14	±20		±25	±14	±40	±22	±30		±25	±22
	25	±15	±10		±30	±24	±15	±25		±20		±25	±12	±40	±22	±30		±25	±22
	30	±15	±4		±30	±20	±12	±25		±12		±25	±10	±40	±22	±28		±20	±17
	32	±8			±30	±18	±8	±20		±12		±20		±40	±22	±24		±20	±17
	35	±4			±30	±16	±4	±20				±20		±40	±20	±22			
	40				±24	±10		±20				±20		±40	±20	±18			
	43				±20	±4		±12				±12		±35	±15	±14			
	45				±16			±12				±12		±35	±12	±12			
	50				±4									±35		±4			

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP)

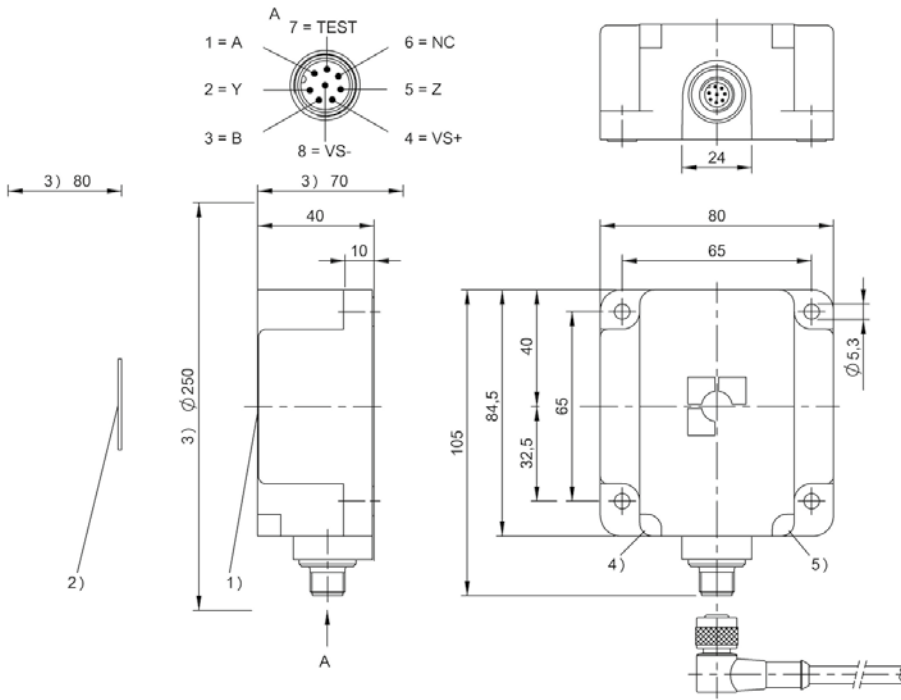


For processor unit BIS00EP	<b>BIS0056</b> BIS M-301-003-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0043 BIS0111		BIS0044	BIS0045		BIS0046		BIS0047	BIS00L8			
Data carrier distance to metal	>50	>10	>5	>50	>25	>10	>50	>20	>50	>30	>50	>30	>50	>30	>80	>1	0	
Data carrier clear zone	>200	>60	>50	>200	>150	>150	>200	>60	>200	>100	>200	>100	>200	>100	>250	>70	>70	
Working distance for writing	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50	0-32	0-32	
Working distance for reading	0-34	0-20	0-15	0-45	0-43	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50	0-32	0-32	
Offset at distance																		
	0	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30	±30	±25
	5	±22	±18	±14	±30	±24	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30	±30	±25
	9	±22	±18	±14	±30	±24	±18	±32	±20	±28	±18	±32	±22	±40	±25	±30	±30	±25
	12	±22	±18	±10	±30	±24	±18	±32	±18	±24	±18	±32	±22	±40	±25	±30	±25	±25
	15	±22	±18	±10	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30	±25	±25
	16	±22	±16	±8	±30	±24	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30	±25	±25
	18	±22	±16	±6	±30	±24	±18	±32	±16	±24	±12	±32	±18	±40	±25	±30	±25	±22
	20	±22	±16	±4	±30	±24	±18	±32	±16	±24	±8	±32	±16	±40	±25	±30	±25	±22
	22	±20	±10		±30	±24	±15	±25	±14	±20		±25	±14	±40	±22	±30	±25	±22
	25	±15	±10		±30	±24	±15	±25		±20		±25	±12	±40	±22	±30	±25	±22
	30	±15	±4		±30	±20	±12	±25		±12		±25	±10	±40	±22	±28	±20	±17
	32	±8			±30	±18	±8	±20		±12		±20		±40	±22	±24	±20	±17
	35	±4			±30	±16	±4	±20				±20		±40	±20	±22		
	40				±24	±10		±20				±20		±40	±20	±18		
	43				±20	±4		±12				±12		±35	±15	±14		
	45				±16			±12				±12		±35	±12	±12		
	50				±4									±35	±4			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP)

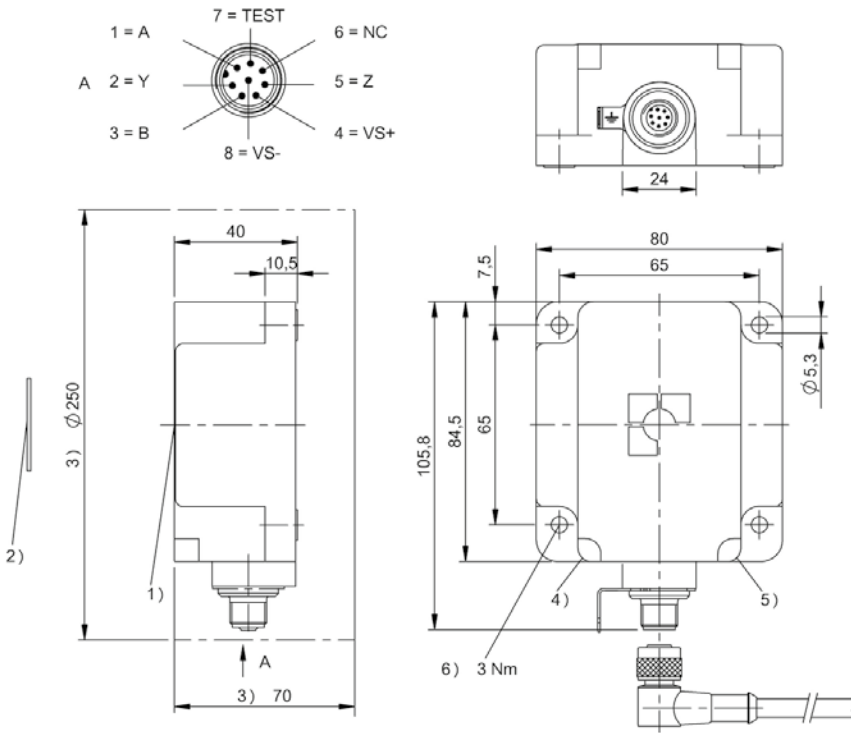


For processor units BIS M-60...	<b>BIS00M6</b> BIS M-341-001-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0046		BIS0043		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>50		>50	>0	>0		>0	
Data carrier clear zone	>200		>200	>0	>100		>100	
Working distance for writing	35-90		20-60	0-50	0-46		0-23	
Working distance for reading	35-90		20-60	0-50	0-46		0-23	
Offset at distance								
	0			±30	0	±33		±25
	5			±30	5	±33		±25
	9			±30	10	±33		±25
	12			±30	12	±33		±20
	15			±30	16	±33		±20
	16			±30	20	±30		±20
	18			±30	23	±30		±10
	20			±35	25	±30		
	22			±35	30	±30		
	25			±35	35	±24		
	30			±35	40	±24		
	35	±55		±30	46	±8		
	40	±55		±30	50			
	45	±55		±30	55			
	50	±55		±30	60			
	60	±55		±30	65			
	70	±40			70			
	80	±40			80			
	90	±20			90			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP)

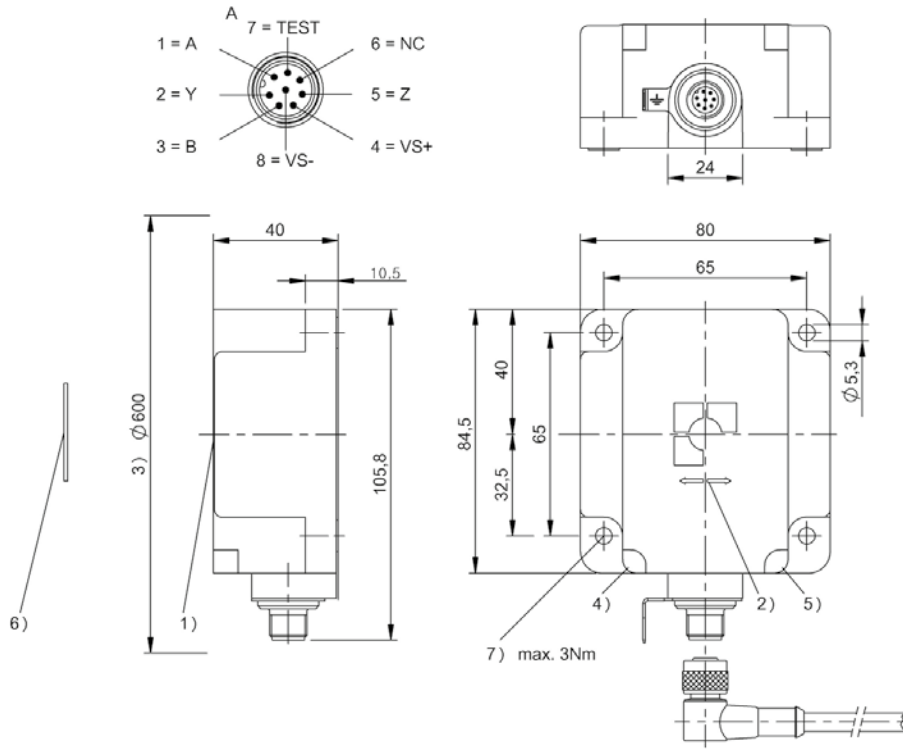


For processor units BIS M-60...	<b>BIS005C</b> BIS M-351-001-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Male, 8-pin
Housing material	PBT
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2				BIS00P3				
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>10	>10	>240	>240	>240	>240	
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>50	>50	>480	>480	>480	>480	
Data carrier clear zone C									>50	>50	>2	>2	>50	>50	0	0	
Metallic mounting surface 40 x 22 mm	0-52	0-52			0-52	0-52											
Metallic mounting surface > 200 x 200 mm			0-65	0-65			0-65	0-65									
Working distance for writing	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100	0-90	0-90	
Working distance for reading	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100	0-90	0-90	
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	
	0	±60	±25	±65	±26	±25	±60	±26	±65	±35	±20			±100	±20	±100	±20
	5	±60	±25	±65	±26	±25	±60	±26	±65	±35	±20			±100	±20	±100	±20
	12	±60	±25	±65	±25	±25	±60	±25	±65	±35	±20			±100	±20	±100	±20
	15	±60	±25	±65	±25	±25	±60	±25	±65	±35	±20	±35	±15	±100	±20	±100	±20
	18	±60	±25	±65	±25	±25	±60	±25	±65	±35	±20	±35	±15	±100	±20	±100	±20
	20	±60	±25	±65	±25	±25	±60	±25	±65	±20	±12	±28	±15	±80	±20	±80	±20
	22	±60	±25	±65	±25	±25	±60	±25	±65	±20	±12	±28	±15	±80	±20	±80	±20
	25	±60	±25	±65	±25	±25	±60	±25	±65					±80	±20	±80	±20
	30	±60	±25	±65	±25	±25	±60	±25	±65					±80	±20	±80	±20
	32	±50	±25	±65	±25	±25	±50	±25	±65					±80	±20	±80	±20
	35	±50	±25	±65	±25	±25	±50	±25	±65					±80	±20	±80	±20
	40	±50	±20	±50	±25	±20	±50	±25	±50					±65	±20	±65	±20
	45	±25	±20	±50	±25	±20	±25	±25	±50					±65	±20	±65	±20
	50	±25	±20	±50	±25	±20	±25	±25	±50					±65	±20	±65	±20
	52	±25	±8	±25	±25	±8	±25	±25	±25					±50	±20	±50	±20
	60			±25	±10			±10	±25					±40	±20		
	65			±25	±10			±10	±25								

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Data carrier on steel, 7) Tightening torque



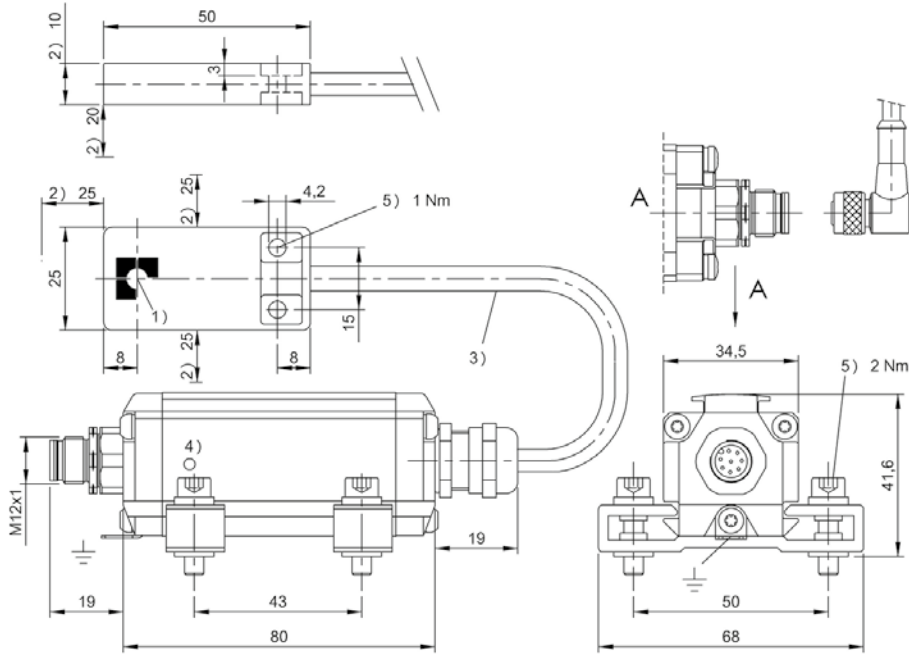
For processor units BIS M-60...	<b>BISO0NK</b> BIS M-305-001-S115
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Plug, 8-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS0043		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS00UC			
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0	>25	>0	>0				>10	>0		
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0	>100	>0	>100		>100		>60	>60		
Working distance for writing	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-17	0-11	0-17		0-12		0-7.5	0-4		
Working distance for reading	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-17	0-11	0-17		0-12		0-7.5	0-4		
Offset at distance																				
	0	±3	±3	±4	±4	±6		±3	±3	±4	±3	0	±12	±8	±10	±7		0	±5	±3.5
	5	±2		±4	±2	±6		±2		±3	±2	5	±12	±8	±10	±7		2	±5	±3.5
	9					±4						8	±12	±6	±10	±6		3	±4	±3
	12					±2						10	±12	±6	±9	±6		4	±4	±1
	15											11	±8	±4	±9	±3		5	±4	
	16											12	±8		±9	±3		6	±4	
	18											15	±8		±4			7.5	±1.5	
	20											17	±4		±4			10		

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque

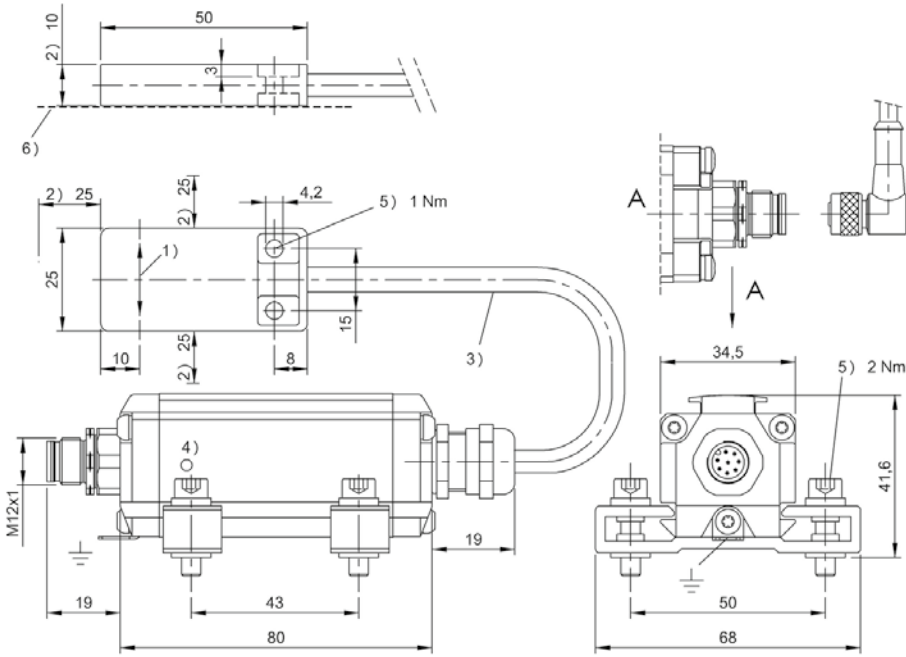


For processor units BIS M-60...	<b>BISO0NY</b> BIS M-352-001-S115
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Plug, 8-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS00NZ		BIS017F		BIS00M2			
Data carrier clear zone A	>27	>27	>200	>200	>200	>200	>200	>200
Data carrier clear zone B	>27	>27	>200	>200	>200	>200	>200	>200
Data carrier clear zone C			>50	>50	>50	>50	>0	>0
Metallic mounting surface 40 x 22 mm								
Metallic mounting surface > 200 x 200 mm								
Working distance for writing	0-22	0-22	0-17	0-17	0-17	0-17	0-20	0-20
Working distance for reading	0-22	0-22	0-17	0-17	0-17	0-17	0-20	0-20
Offset at distance	X	Y	X	Y	X	Y	X	Y
	0	±25 ±5	0	±22 ±9	±22	±10	±25	±12
	5	±25 ±5	5	±22 ±9	±22	±10	±25	±12
	10	±25 ±5	10	±19 ±8	±20	±9	±25	±12
	15	±25 ±5	15	±12 ±6	±16	±7	±22	±10
	20	±15 ±5	17	±3 ±2	±5	±3	±18	±8
	22	±15 ±5	20				±8	±4

Dimensions in mm



1) Read/write axis, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque, 6) Mounting on steel



For processor units BIS M-60...	<b>BIS00P2</b> BIS M-307-001-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 46.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Plug, 8-pin, 0.50 m, PU
Housing material	Brass, interface aluminum
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS00YK		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0	>10	>0	>0		>0	
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0	>60	>60	>100		>100	
Working distance for writing	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-10	0-8	0-16		0-12	
Working distance for reading	0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-10	0-8	0-16		0-12	
Offset at distance																
	0	±3	±3	±4	±4	±6	±3	±3	±4	±3	0	±7	±5	±9		±7
	5	±2		±4	±2	±6	±2		±4	±2	5	±7	±5	±9		±7
	9					±4					7	±6	±4	±9		±6
	12					±2					8	±6	±2	±9		±6
	15										10	±3		±8		±6
	16										12			±8		±3
	18										14			±8		
	20										16			±3		

Dimensions in mm





For processor units BIS M-62... For processor units BIS V-6... with BIS014N	<b>BIS00WM</b> BIS M-371-000-A01
Product Group	HF (13.56 MHz)
Dimension	113.4 x 42.4 x 118 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, RCA
Housing material	PA
Ambient temperature	-20...50 °C
Protection degree	IP65
Approval/Conformity	CE

Appropriate data carrier

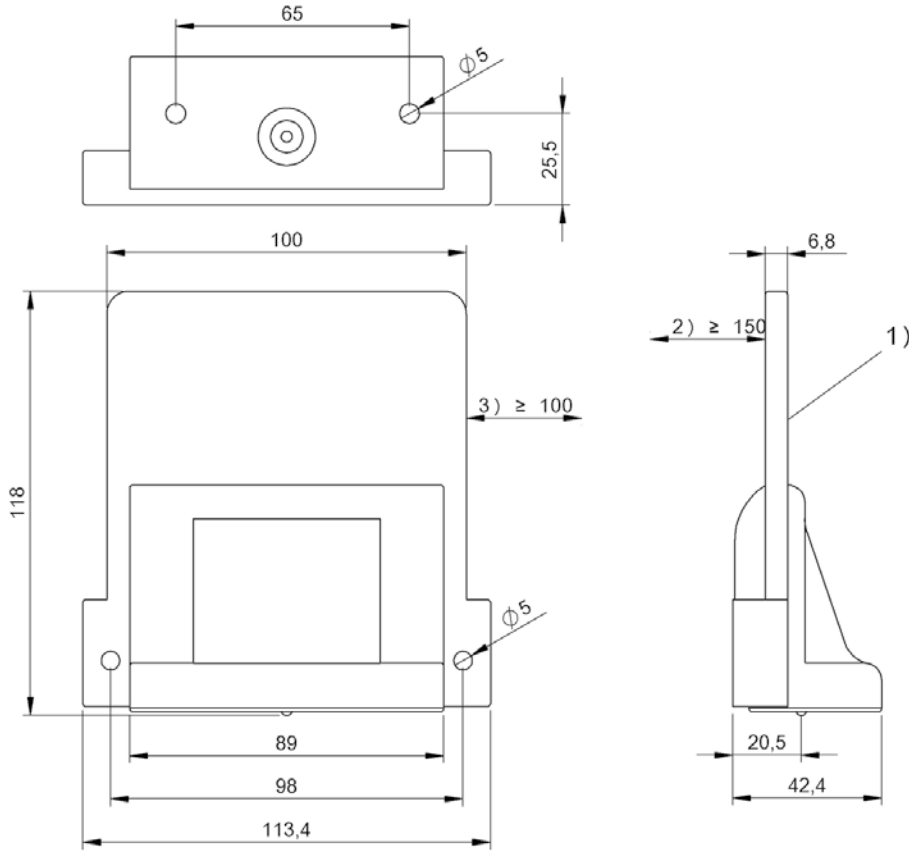
	BIS0043	BIS0111	BIS0044	BIS0045	BIS0046		BIS0119		BIS00YF
Data carrier distance to metal	>40	>40	>40	>40	>40		>0		>25
Data carrier clear zone	>230	>230	>220	>230	>250		>120		>230
Working distance for writing	0-110	0-100	0-70	0-120	0-150		0-50		0-100
Working distance for reading	0-110	0-100	0-70	0-120	0-150		0-50		0-100
Offset at distance									
	0 ±40	±40	±40	±40	±40		0 ±30		0 ±75
	20 ±40	±40	±40	±40	±40		5 ±30		20 ±75
	40 ±40	±40	±40	±40	±40		15 ±30		30 ±75
	60 ±40	±40	±40	±40	±40		28 ±30		40 ±75
	70 ±40	±40	±25	±40	±40		35 ±30		50 ±70
	100 ±40	±25		±40	±40		50 ±20		70 ±70
	110 ±25			±40	±40				100 ±25
	120			±25	±40				
	150				±25				

Dimensions in mm

Appropriate data carrier

	BIS00YE	BIS00YA	BIS00Y9		BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y2
Data carrier distance to metal	>25	>25	>40		>40	>40	>40	>40
Data carrier clear zone	>230	>230	>230		>250	>250	>250	>250
Working distance for writing	0-100	0-40	0-70		25-140	10-205	10-205	10-135
Working distance for reading	0-100	0-40	0-70		25-140	10-205	10-205	10-135
Offset at distance								
	0 ±75	±30	±40		50 ±75	±75	±75	±75
	20 ±75	±30	±40		75 ±75	±75	±75	±75
	30 ±75	±30	±40		100 ±75	±75	±75	±75
	40 ±75	±20	±40		120 ±75	±75	±75	±75
	50 ±70		±40		135 ±75	±75	±75	±25
	70 ±70		±25		140 ±25	±75	±75	
	100 ±25				190	±75	±75	
					205	±25	±25	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding



For processor units BIS M-62... For processor units BIS V-6... with BIS014N	<b>BIS00WL</b> BIS M-372-000-A01
Product Group	HF (13.56 MHz)
Dimension	200 x 42.4 x 218 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, RCA
Housing material	PA
Ambient temperature	-20...50 °C
Protection degree	IP65
Approval/Conformity	CE

Appropriate data carrier

	BIS0043	BIS0111	BIS0044	BIS0045	BIS0046		BIS0119		BIS00YF
Data carrier distance to metal	>45	>45	>45	>45	>45		>0		>45
Data carrier clear zone	>430	>430	>420	>430	>450		>420		>430
Working distance for writing	0-160	0-150	0-115	0-175	0-235		0-65		0-160
Working distance for reading	0-160	0-150	0-115	0-175	0-235		0-65		0-160
Offset at distance									
	0 ±75	±75	±50	±75	±75		0 ±50		0 ±100
	25 ±75	±75	±50	±75	±75		20 ±50		20 ±100
	50 ±75	±75	±50	±75	±75		37 ±50		30 ±100
	80 ±75	±75	±50	±75	±75		65 ±30		40 ±100
	100 ±75	±75	±50	±75	±75		80		60 ±100
	115 ±75	±75	±30	±75	±75		100		90 ±100
	135 ±75	±75		±75	±75		115		115 ±50
	150 ±75	±50		±75	±75				130 ±50
	160 ±50			±75	±75				145 ±50
	175			±50	±75				160 ±25

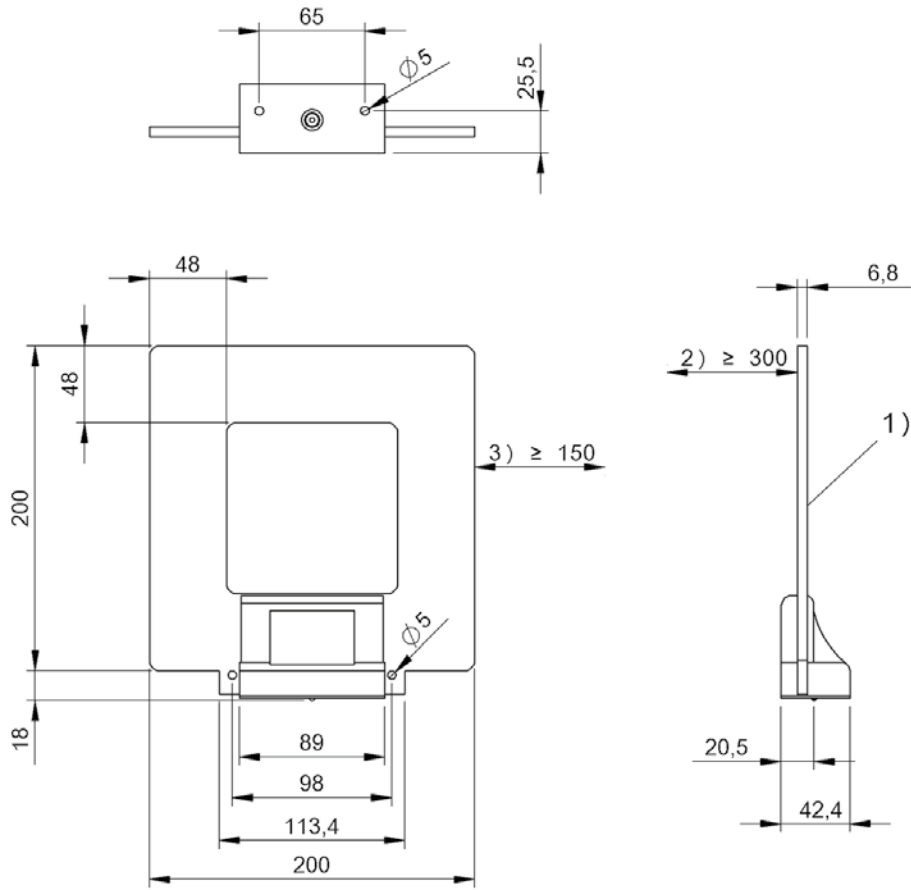
Dimensions in mm

Appropriate data carrier

	BIS00YE	BIS00YA	BIS00Y9		BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y2
Data carrier distance to metal	>45	>45	>45		>45	>45	>45	>45
Data carrier clear zone	>430	>430	>430		>450	>450	>450	>450
Working distance for writing	0-145	0-30	0-115		0-230	0-300	0-300	0-190
Working distance for reading	0-145	0-30	0-115		0-230	0-300	0-300	0-190
Offset at distance								
	0 ±100	±50	±75		0 ±100	±100	±100	±100
	20 ±100	±50	±75		50 ±100	±100	±100	±100
	30 ±100	±30	±75		100 ±100	±100	±100	±100
	40 ±100		±75		150 ±100	±100	±100	±100
	60 ±100		±75		190 ±100	±100	±100	±50
	90 ±100		±75		230 ±50	±100	±100	
	115 ±50		±50		250	±100	±100	
	130 ±50				300	±50	±50	
	145 ±25							
	160							

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding

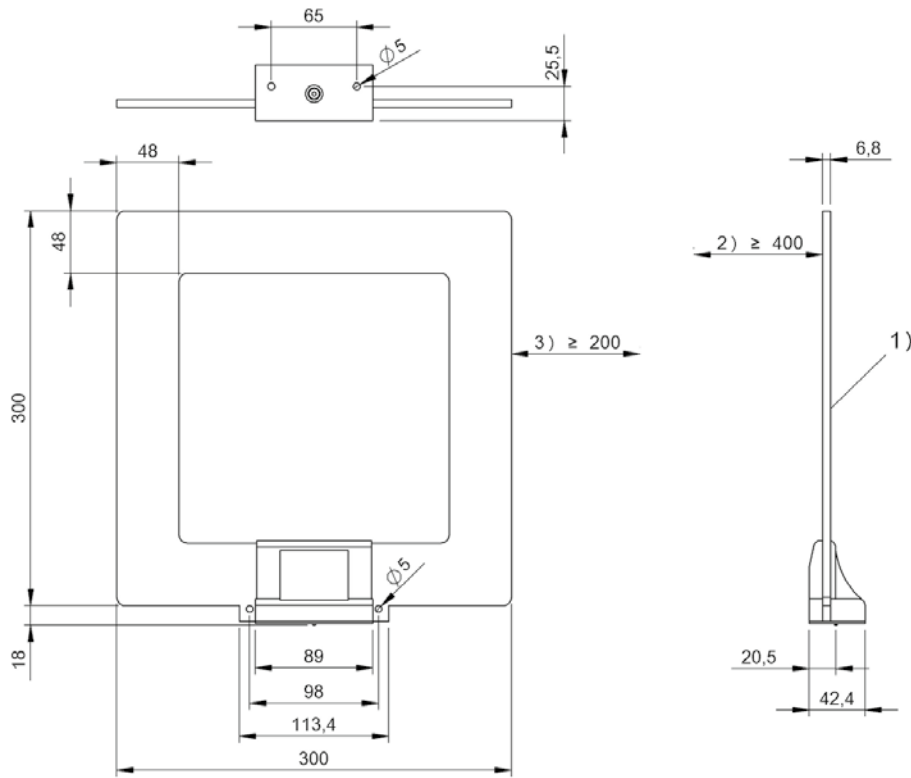


For processor units BIS M-62... For processor units BIS V-6... with BIS014N	<b>BIS00WK</b> BIS M-373-000-A01
Product Group	HF (13.56 MHz)
Dimension	300 x 42.4 x 318 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, RCA
Housing material	PA
Ambient temperature	-20...50 °C
Protection degree	IP65
Approval/Conformity	CE

Appropriate data carrier

	<b>BIS00YF</b>	<b>BIS00YE</b>	<b>BIS00Y5</b>	<b>BIS00Y4</b>	<b>BIS00W9</b>
Working distance for writing	0-195	0-185	0-320	0-355	0-360
Working distance for reading	0-195	0-185	0-320	0-355	0-360

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding

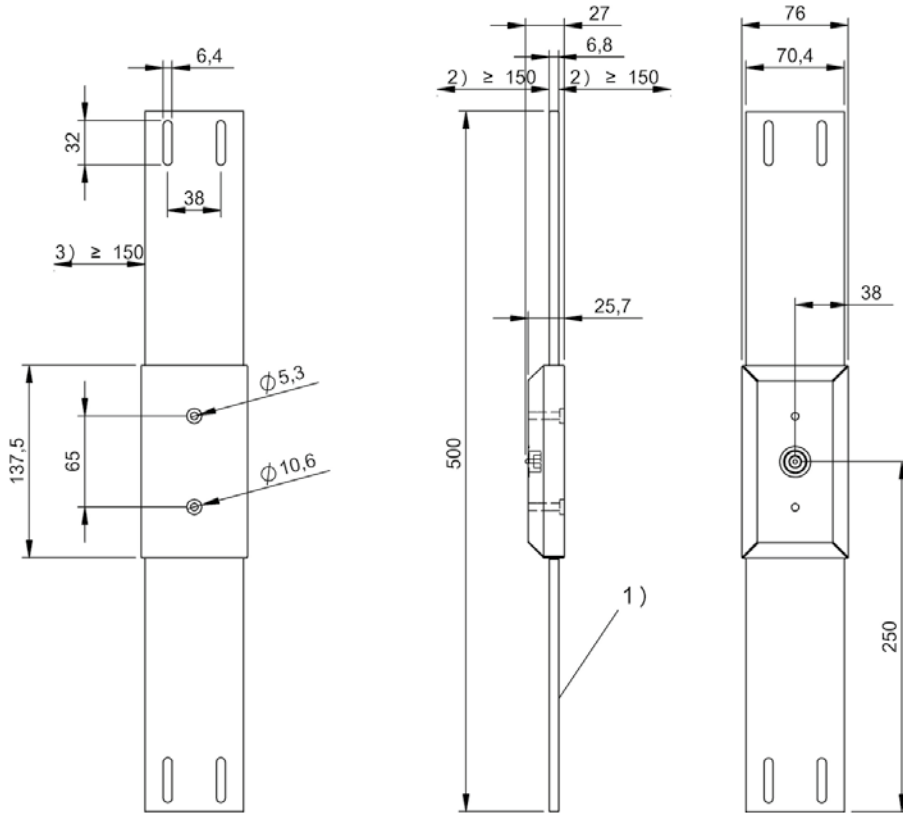


For processor units BIS M-62... For processor units BIS V-6... with BIS014N	<b>BIS00WN</b> BIS M-370-000-A02
Product Group	HF (13.56 MHz)
Dimension	500 x 27 x 76 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, RCA
Housing material	PA
Ambient temperature	-20...50 °C
Protection degree	IP65
Approval/Conformity	CE

Appropriate data carrier

	<b>BIS00Y7</b>	<b>BIS00Y6</b>	<b>BIS00Y5</b>	<b>BIS00Y4</b>	<b>BIS00Y2</b>	<b>BIS00Y1</b>
Working distance for writing	0-48	10-95	0-135	0-130	15-95	0-100
Working distance for reading	0-48	10-95	0-135	0-130	15-95	0-100

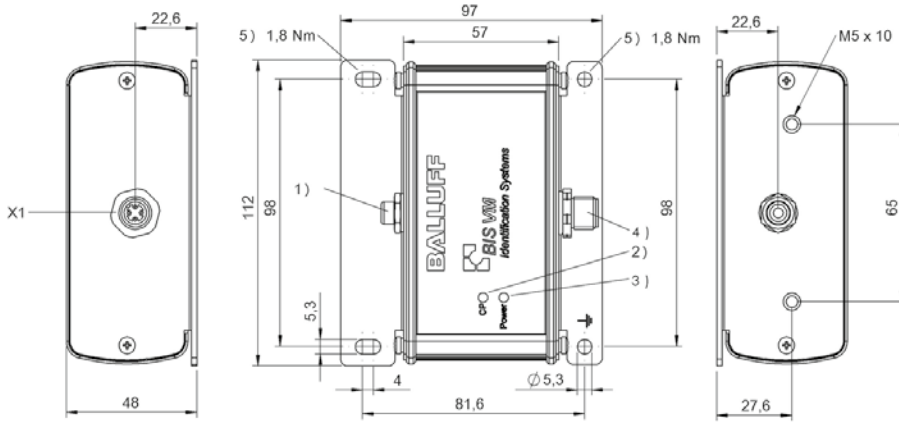
Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding



For antennas BIS M-37...	<b>BIS014N</b> BIS VM-920
Product Group	HF (13.56 MHz)
Dimension	112 x 48 x 97 mm
Connection	Male, 4-pin
Housing material	Aluminum
Ambient temperature	-20...50 °C
Protection degree	IP65
Approval/Conformity	CE



1) Antenna connection, 2) LED (CP), 3) LED (Power), 4) Read head connection X1, 5) Tightening torque



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS013U</b> BIS V-6108-048-C002	
Product Group	Multi-Frequency Processor	
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage Ub	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 211	

\* Use adapter **BISOFCK** to connect read/write heads **BIS C (LF 70/455 kHz)**.





BIS01AE BIS V-6108-048-C007	BIS013W * BIS V-6108-048-C102	BIS01AF * BIS V-6108-048-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded M12x1-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded M12x1-Male, 5-pin
Page 211	Page 211	Page 211



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS00T3</b> BIS V-6102-019-C001	
Product Group	Multi-Frequency Processor	
Interface	Profibus DP Slave galvanically isolated	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	M12x1-Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded 7/8"-Male, 5-pin	
Productview	Page 212	

\* Use adapter **BISOFCK** to connect read/write heads **BIS C (LF 70/455 kHz)**.



BIS012E *	BIS01AA	BIS01AC *
BIS V-6102-019-C101	BIS V-6107-039-C007	BIS V-6107-039-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Profibus DP Slave galvanically isolated	TCP/IP, USB	TCP/IP, USB
max. 500 mA	max. 1.700 mA	max. 1.700 mA
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
M12x1-Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded M12x1-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded M12x1-Male, 5-pin
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For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS0186</b> BIS V-6107-039-C005	
Product Group	Multi-Frequency Processor	
Interface	Ethernet TCP/IP, USB	
IO-Link-Master-Port	max. 1.700 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	
Productview	Page 212	

\* Use adapter **BISOFC** to connect read/write heads **BIS C (LF 70/455 kHz)**.



BIS018J BIS V-6107-039-C006	BIS0187 * BIS V-6107-039-C105	BIS018K * BIS V-6107-039-C106
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Ethernet TCP/IP, USB	Ethernet TCP/IP, USB	Ethernet TCP/IP, USB
max. 1.700 mA	max. 1.700 mA	max. 1.700 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 4-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 4-pin
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For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS012F</b> BIS V-6106-034-C002	
Product Group	Multi-Frequency Processor	
Interface	Ethernet/IP	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 213	

\* Use adapter **BISOFC** to connect read/write heads **BIS C (LF 70/455 kHz)**.



<b>BIS0122</b> BIS V-6106-034-C004	<b>BIS014C *</b> BIS V-6106-034-C102	<b>BIS0146</b> BIS V-6106-034-C104
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Ethernet/IP	Ethernet/IP	Ethernet/IP
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 4-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 4-pin
Page 214	Page 213	Page 214



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS00U9</b> BIS V-6110-063-C002	
Product Group	Multi-Frequency Processor	
Interface	EtherCAT	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 214	

\* Use adapter **BIS0FCK** to connect read/write heads **BIS C (LF 70/455 kHz)**.





<b>BIS0147</b> BIS V-6110-063-C102	<b>BIS010P</b> BIS V-6111-073-C003	<b>BIS014E *</b> BIS V-6111-073-C103
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
EtherCAT	CC-Link	CC-Link
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	M12x1-Male, 5-pin, A-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	M12x1-Male, 5-pin, A-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin
Page 214	Page 215	Page 215



For read/write heads BIS M-3xx-001...	<b>BIS00N1</b> BIS M-6000-007-050-00-ST15	
Product Group	HF (13.56 MHz)	
Interface	RS232	
Supported RFID technologies	HF 13.56 MHz (BIS M)	
Number of connectable R/W heads / antennas	2	
Operating voltage U <sub>b</sub>	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, cULus	
Connection	Male, 4-pole Male, 5-pole	
Productview	Page 215	



	<b>BIS00J0</b> BIS M-6000-007-050-00-ST24	<b>BIS00L7</b> BIS M-6008-048-050-06-ST23	<b>BIS00EW</b> BIS M-6002-019-050-03-ST11
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	RS232	Profinet I/O (IRT), Profinet I/O (IRT) 2 port Switch	Profibus DP Slave galvanically isolated
	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)
	2	2	2
	19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
	ABS	ABS	ABS
	0...60 °C	0...60 °C	0...60 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
	Male, 5-pole, B-coded Male, 5-pole	Female, 4-pole, D-coded M12x1-Female, 4-pole, D-coded Male, 5-pole	Male, 5-pole, B-coded M12x1-Female, 5-pole, B-coded Male, 5-pole
	Page 216	Page 216	Page 217



For read/write heads BIS M-3xx-001...	<b>BIS00F0</b> BIS M-6022-019-050-03-ST14	
For read/write heads BIS M-3xx-003...		
Product Group	HF (13.56 MHz)	
Interface	Profibus DP Slave galvanically isolated	
Supported RFID technologies	HF 13.56 MHz (BIS M)	
Number of connectable R/W heads / antennas	2	
Operating voltage $U_b$	19.2...28.8 VDC	
Housing material	Aluminum, die-cast	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Connection	Male, 5-pole, B-coded M12x1-Female, 5-pole, B-coded Male, 5-pole	
Productview	Page 217	



	<b>BIS00EP</b> BIS M-407-039-003-06-S115	<b>BIS00F2</b> BIS M-6026-034-050-06-ST19	<b>BIS00LY</b> BIS M-699-052-050-03-ST11
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	Ethernet TCP/IP	Ethernet/IP	CC-Link
	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)
	1	2	2
	19.2...28.8 VDC	19.2...28.8 VDC	21.6...26.4 VDC Supports only LPS/Class 2
	Aluminum	Aluminum, die-cast	Aluminum, die-cast
	0...60 °C	0...60 °C	0...55 °C
	IP67 with connector	IP65 with connector	IP65 with connector
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, CLPA, UL-FILE E227256, Vol.X1, BIS
	Female, 4-pole, D-coded Male, 5-pole	Female, 4-pole, D-coded Male, 5-pole	Male, 5-pole Female, 5-pole Male, 5-pole
	Page 218	Page 218	Page 219



For read/write heads BIS M-37x-000...	<b>BIS00ZJ</b> BIS M-620-068-A01-00-S115	
Product Group	HF (13.56 MHz)	
Interface	RS232	
Supported RFID technologies	HF 13.56 MHz (BIS M)	
Number of connectable R/W heads / antennas	1	
Operating voltage U <sub>b</sub>	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Connection	M12x1 connector, 8-pin	
Productview	Page 219	



	<b>BIS00ZH</b> BIS M-620-068-A01-00-ST29	<b>BIS011P</b> BIS M-628-075-A01-03-ST34	<b>BIS00ZF</b> BIS M-622-070-A01-03-ST33
	HF (13.56 MHz)	HF (13.56 MHz)	HF (13.56 MHz)
	RS232	Profinet galvanically isolated	Profibus DP Slave galvanically isolated
	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)
	1	1	1
	19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
	Aluminum	Aluminum	Aluminum
	-20...50 °C	-20...50 °C	-20...50 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
	M12x1 connector, 8-pin	2x M12x1-Female, 4-pole, D-coded M12x1-Male, 5-pole	M12x1-Male, 5-pole, B-coded M12x1-Female, 5-pole, B-coded M12x1-Male, 5-pole
	Page 220	Page 237	Page 220

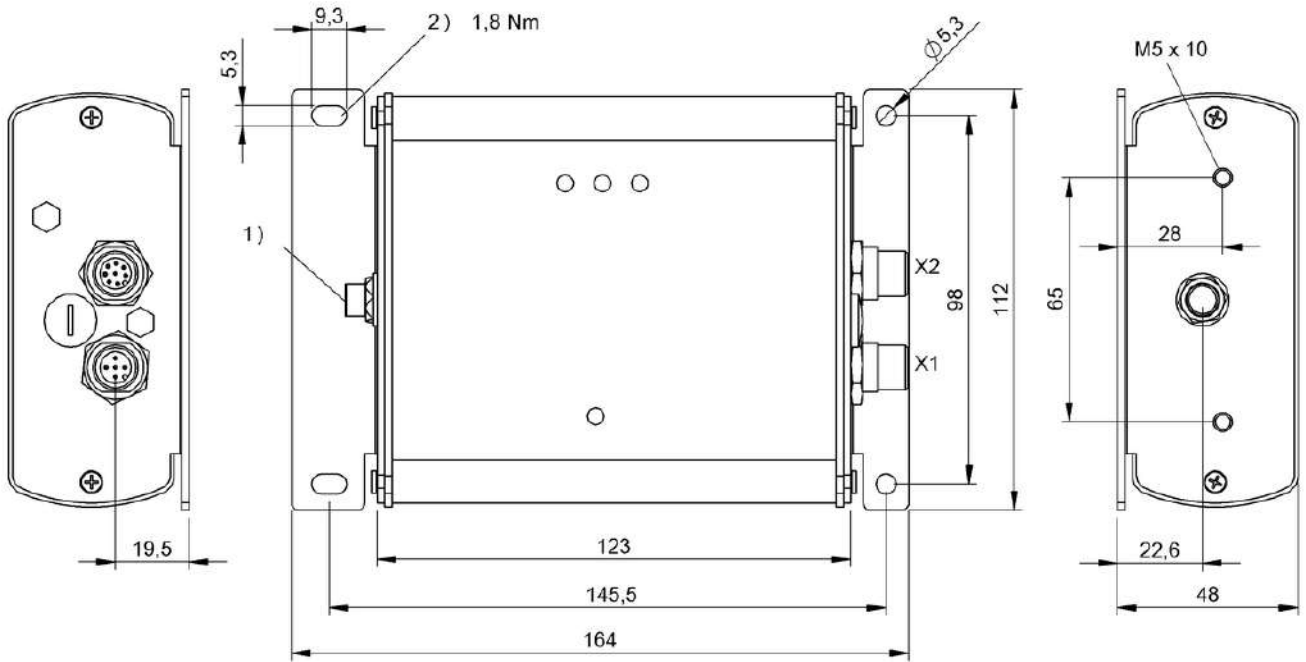


For read/write heads BIS M-37x-000...	<b>BIS00ZC</b> BIS M-626-069-A01-06-ST31	
Product Group	HF (13.56 MHz)	
Interface	Industrial Ethernet/Ethernet TCP/IP/MODBUS TCP	
Supported RFID technologies	HF 13.56 MHz (BIS M)	
Number of connectable R/W heads / antennas	1	
Operating voltage U <sub>b</sub>	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Connection	M12x1-Female, 4-pole, D-coded M12x1-Male, 5-pole	
Productview	Page 221	



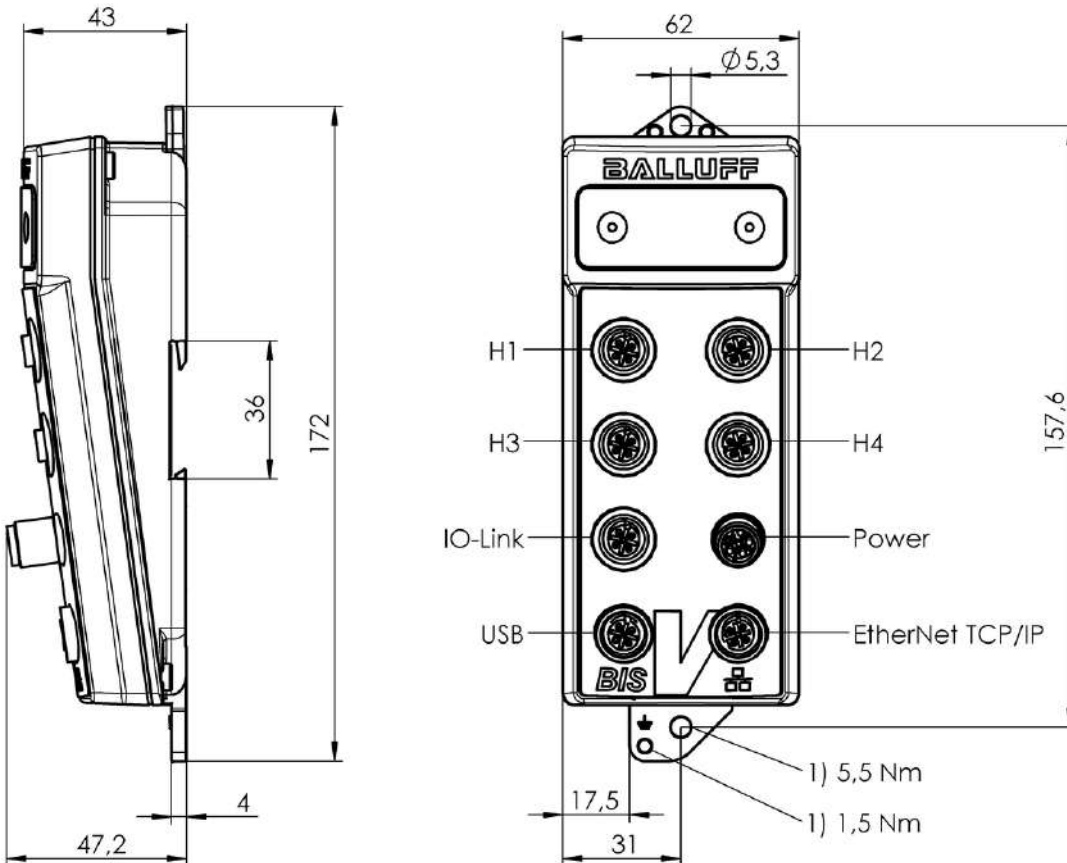


<b>BIS00ZA</b> BIS M-626-069-A01-06-ST32	<b>BIS00ZE</b> BIS M-623-071-A01-03-ST30	
HF (13.56 MHz)	HF (13.56 MHz)	
Industrial Ethernet/Ethernet TCP/IP/MODBUS TCP	DeviceNet galvanically isolated	
HF 13.56 MHz (BIS M)	HF 13.56 MHz (BIS M)	
1	1	
19.2...28.8 VDC	19.2...28.8 VDC	
Aluminum	Aluminum	
-20...50 °C	-20...50 °C	
IP65 with connector	IP65 with connector	
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	
M12x1-Female, 4-pole, D-coded M12x1-Male, 5-pole	M12x1-Male, 5-pole M12x1-Male, 8-pole	
Page 222	Page 210	



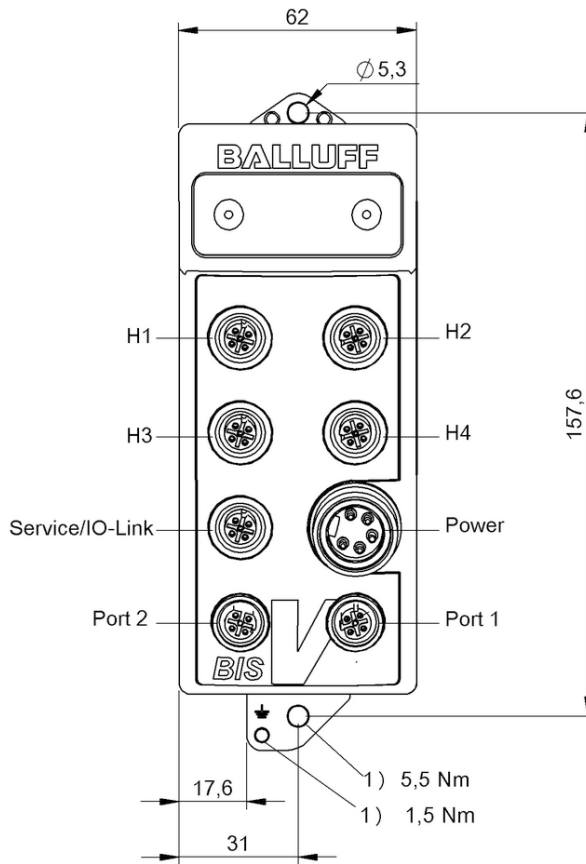
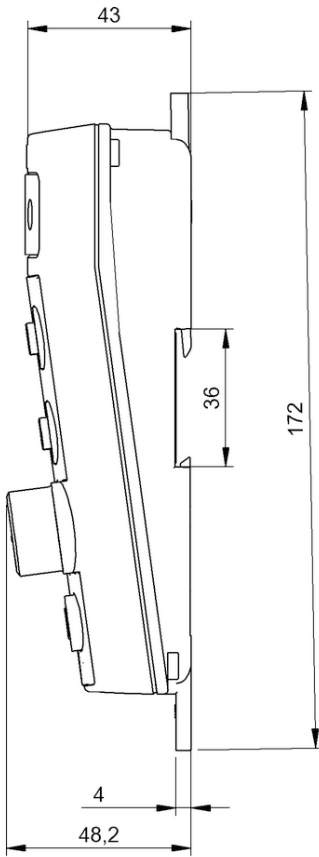
1) Antenna, 2) Tightening torque

**BIS00ZE**



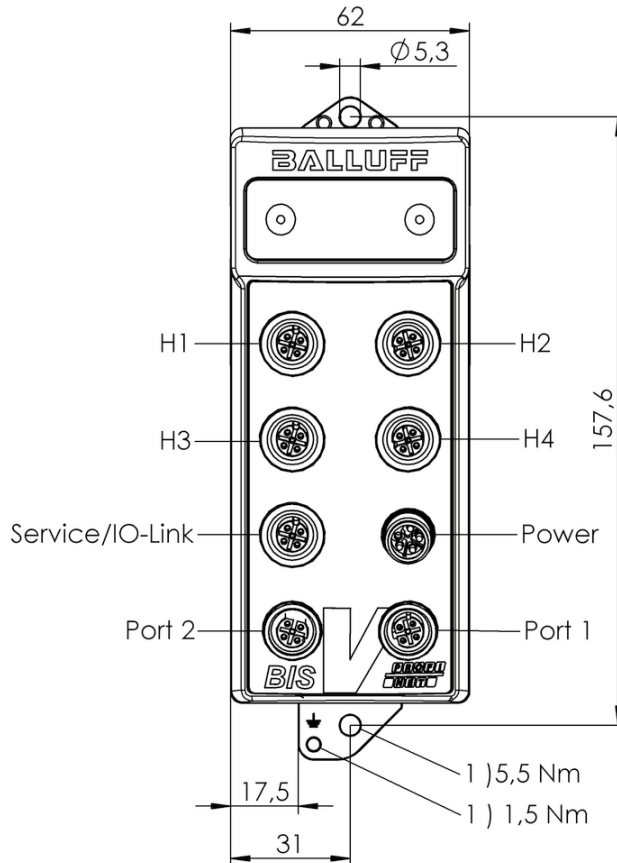
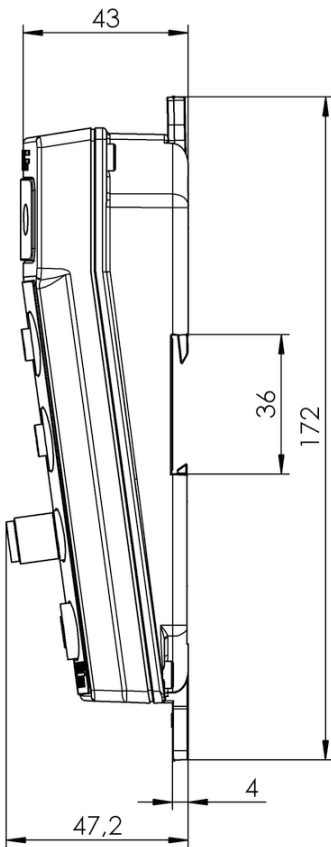
1) Tightening torque

**BIS01AA, BIS01AC**



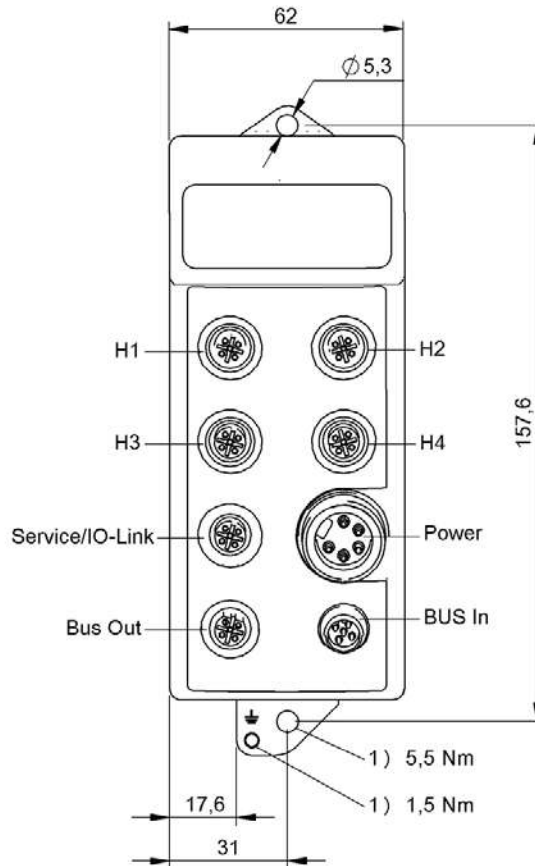
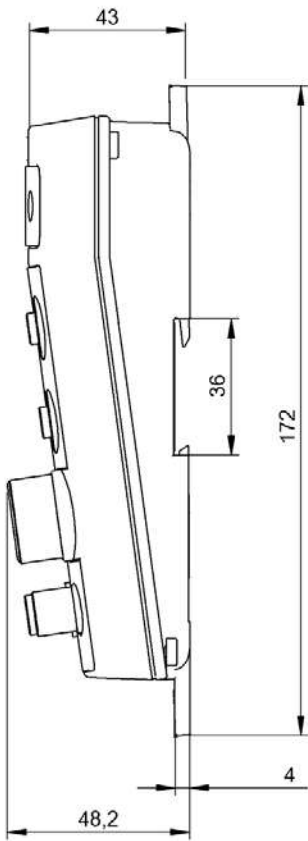
1) Tightening torque

**BISO13U, BISO13W**



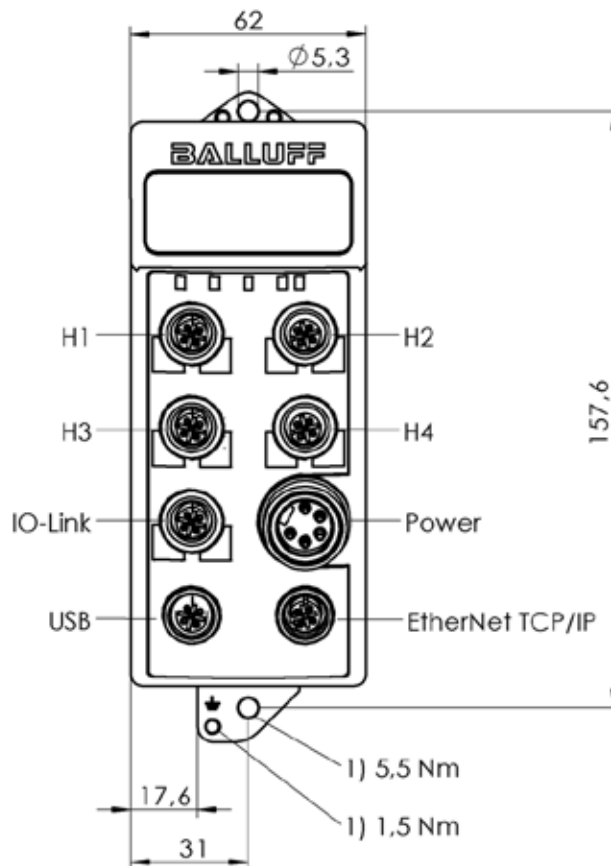
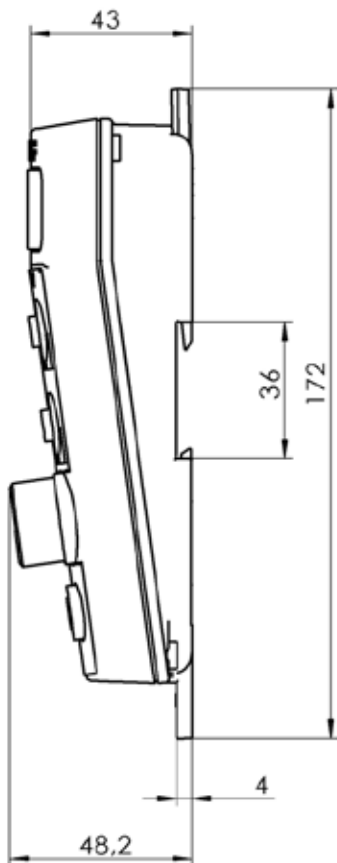
1) Tightening torque

**BISO1AE, BISO1AF**



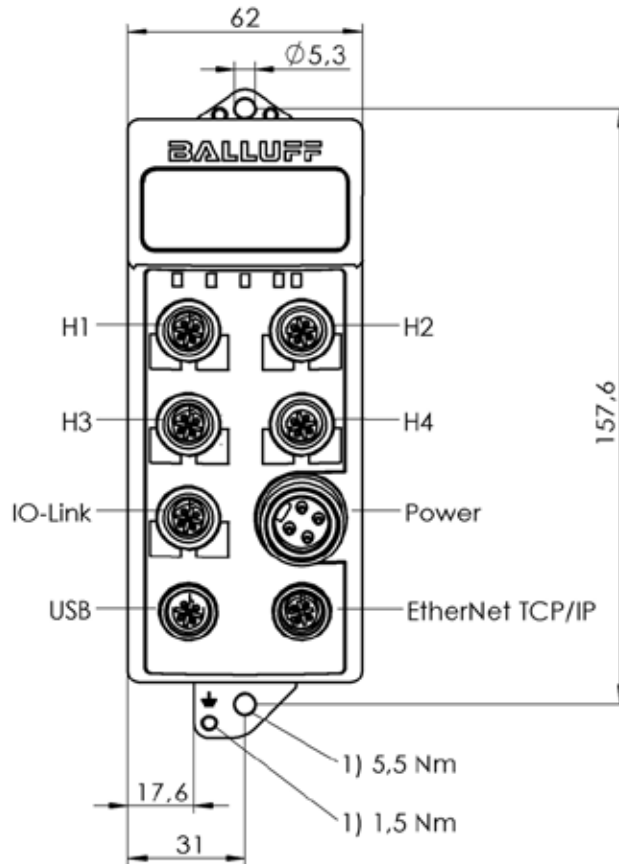
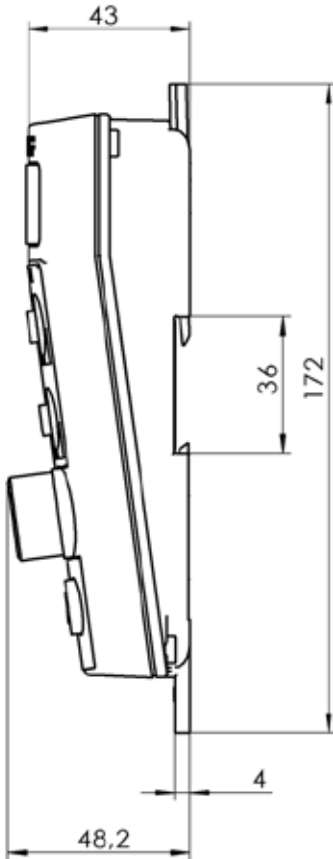
1) Tightening torque

**BIS00T3, BIS012E**



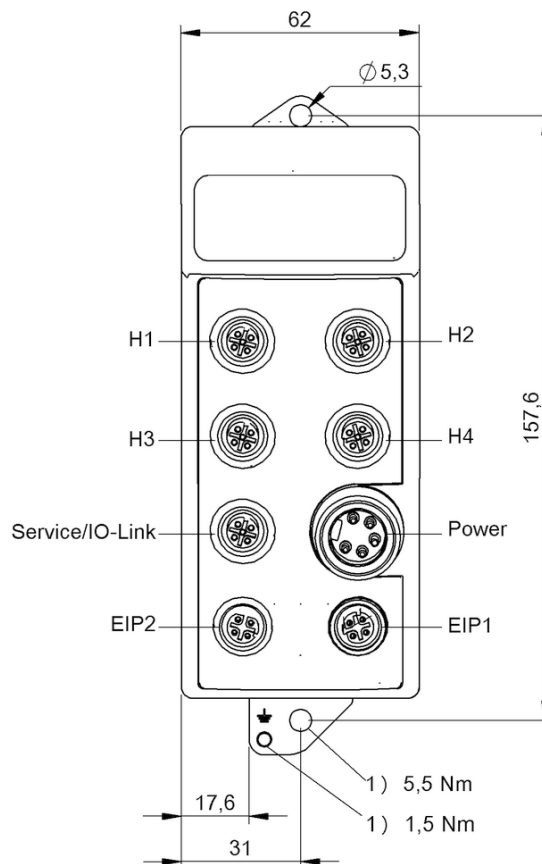
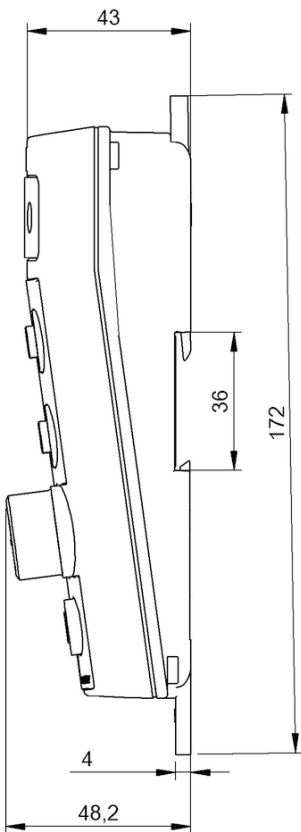
1) Tightening torque

**BIS0186, BIS0187**



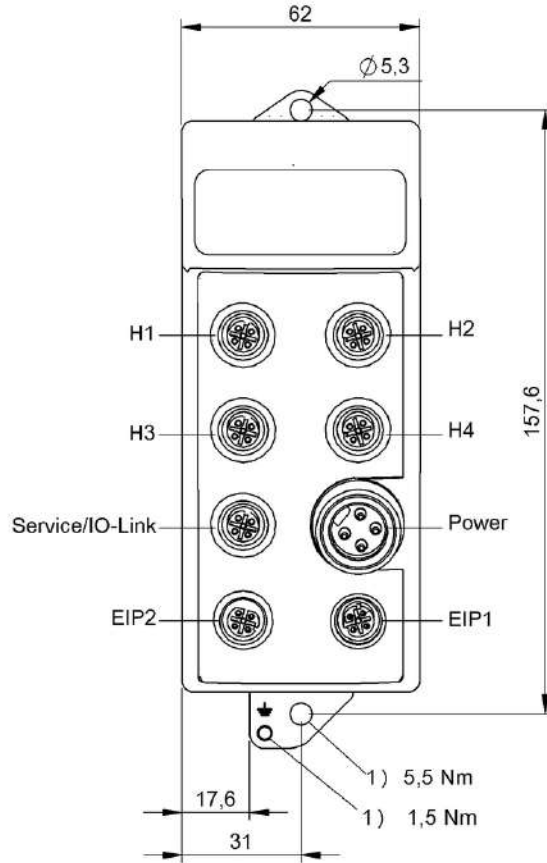
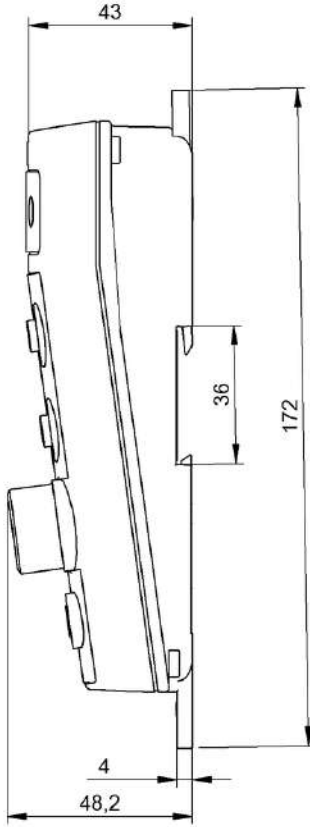
1) Tightening torque

**BISO18J, BISO18K**



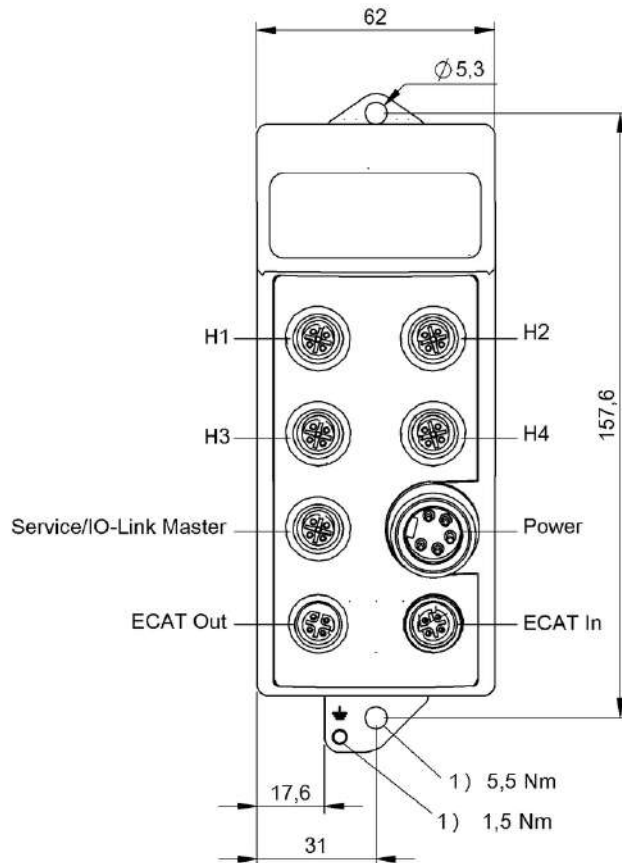
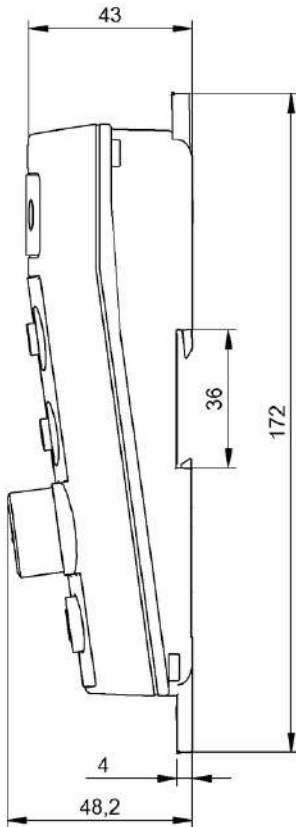
1) Tightening torque

**BISO12F, BISO14C**



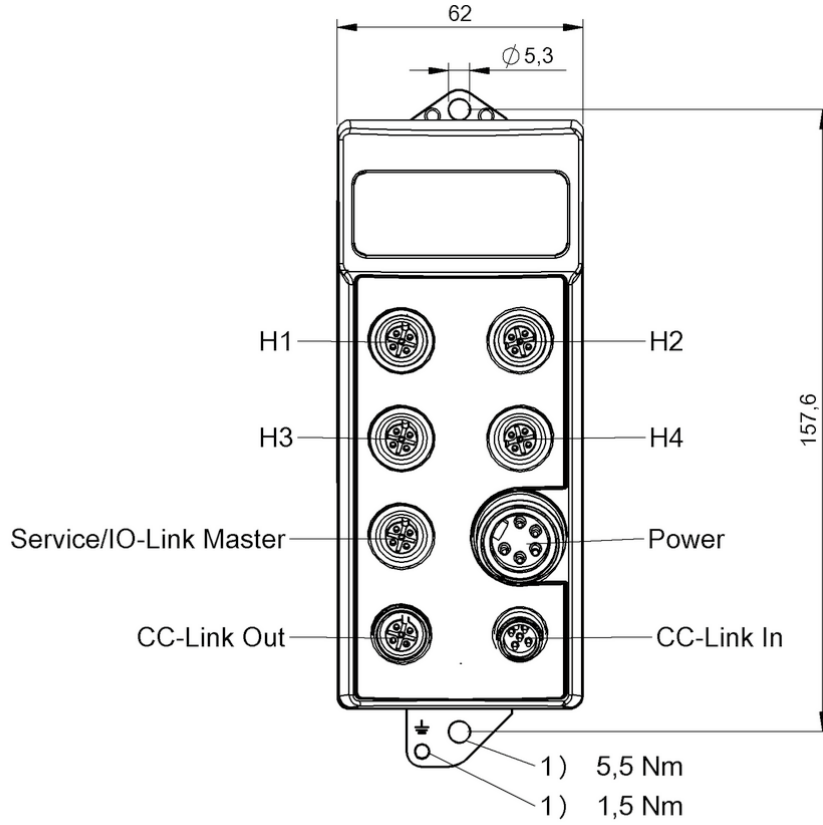
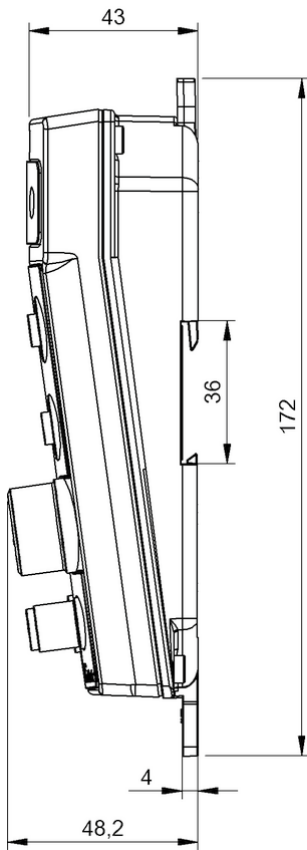
1) Tightening torque

**BIS0122, BIS0146**



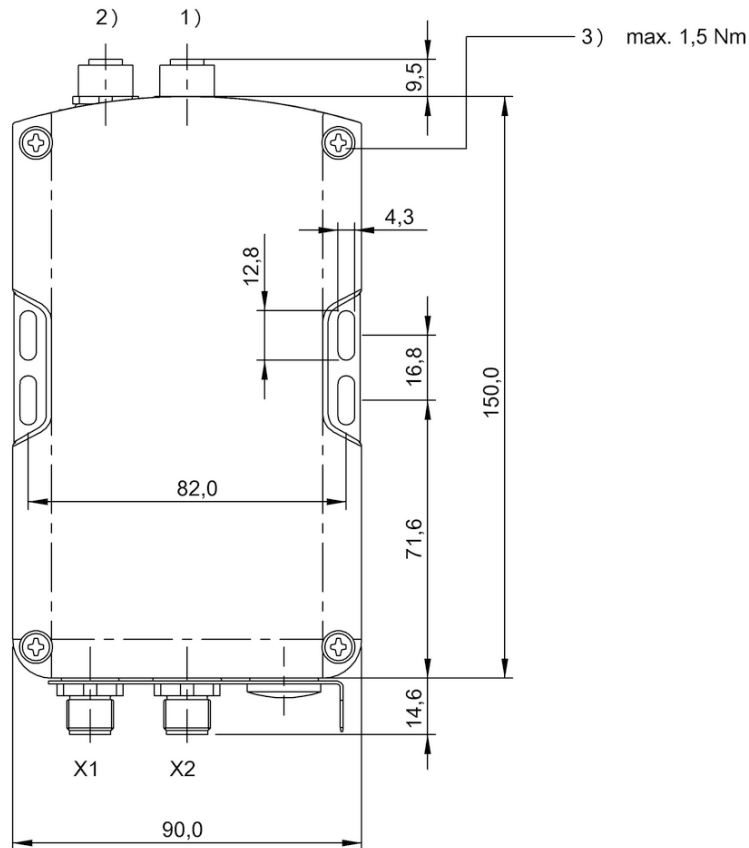
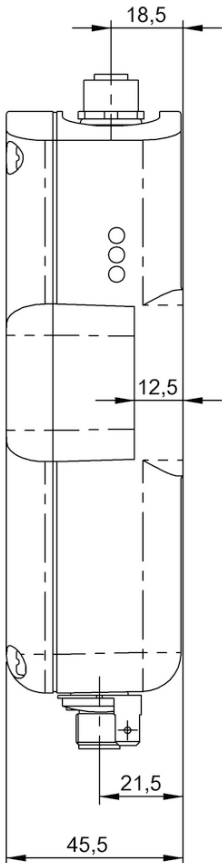
1) Tightening torque

**BIS00U9, BIS0147**



1) Tightening torque

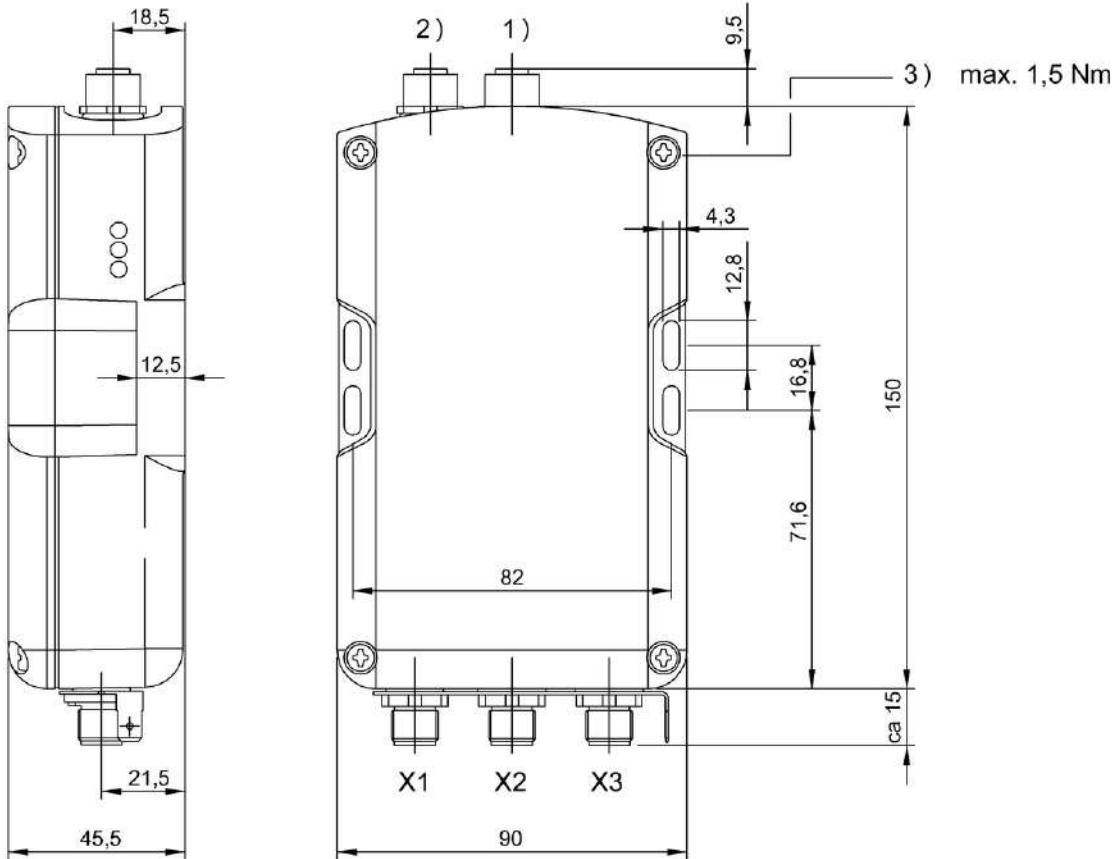
**BIS010P, BIS014E**



1) Head 1, 2) Head 2, 3) Tightening torque

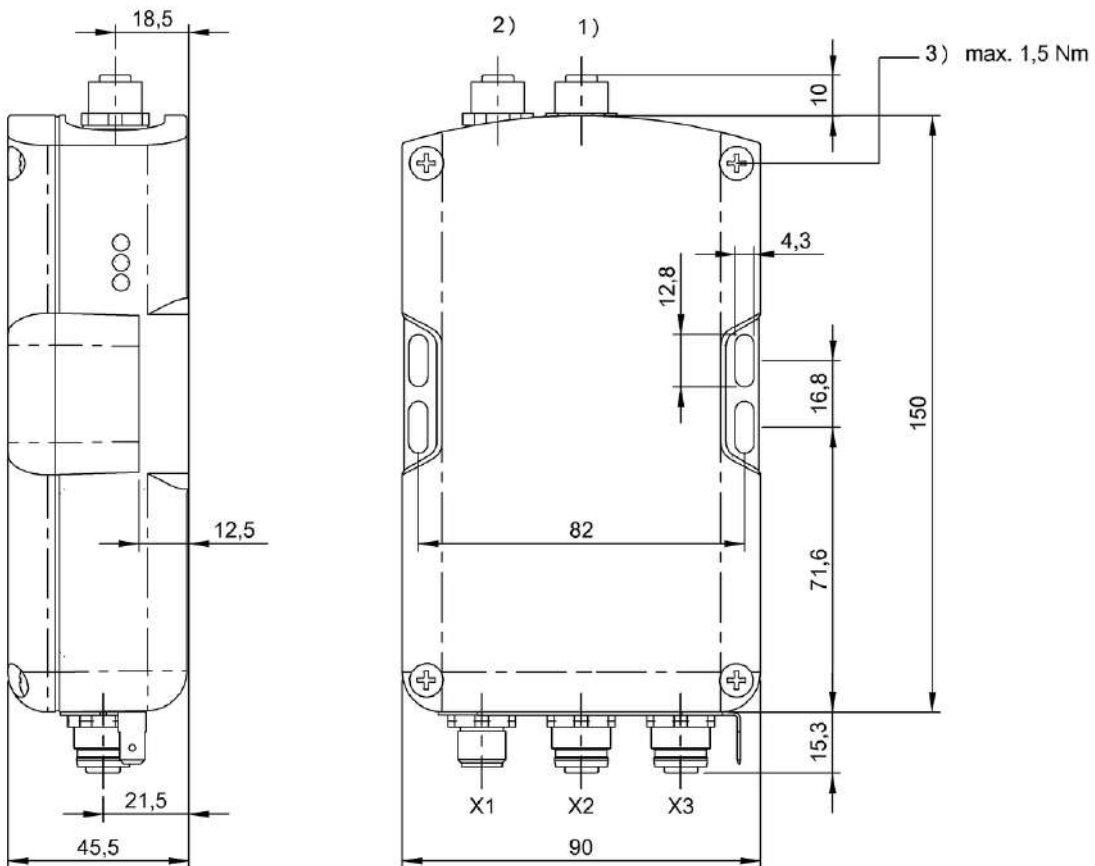
**BISO0N1**

216 I RFID I HF (13.56 MHz)



1) Head 1, 2) Head 2, 3) Tightening torque

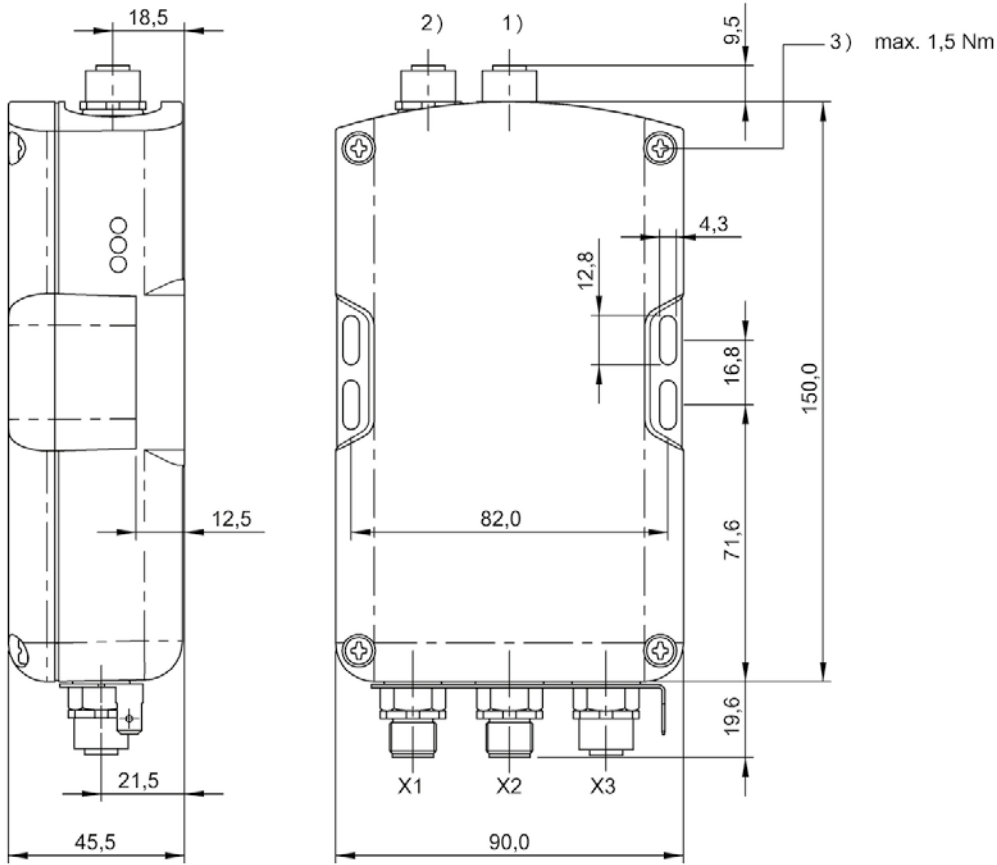
BIS00J0



1) Head 1, 2) Head 2, 3) Tightening torque

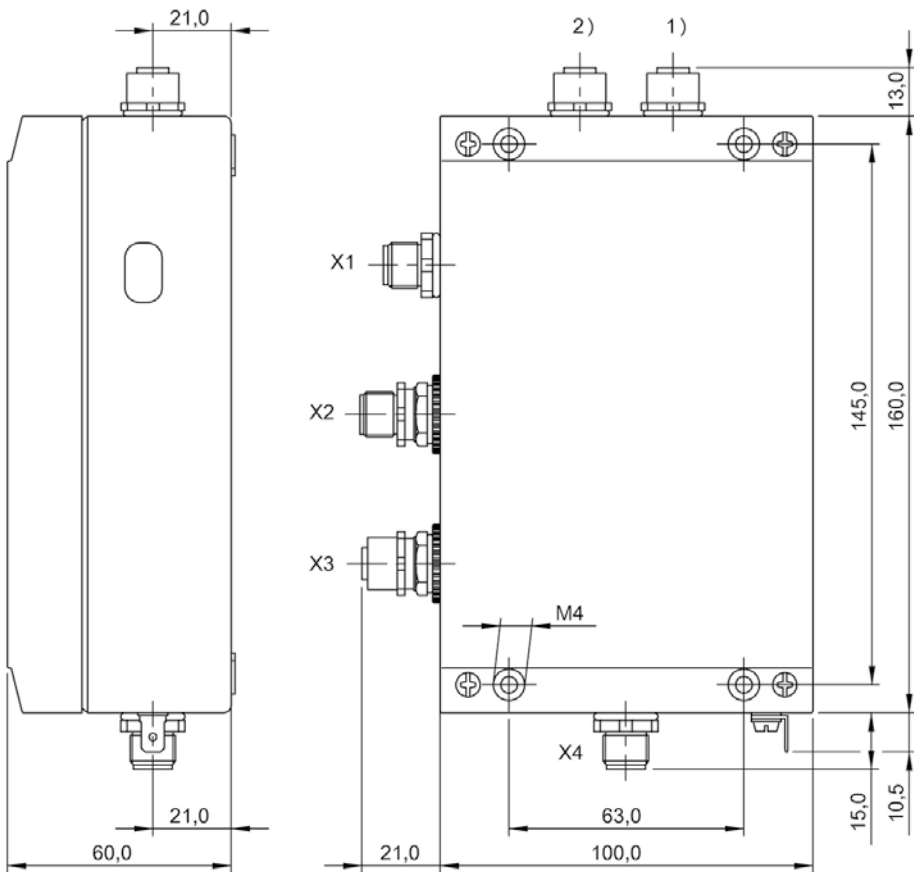
BIS00L7





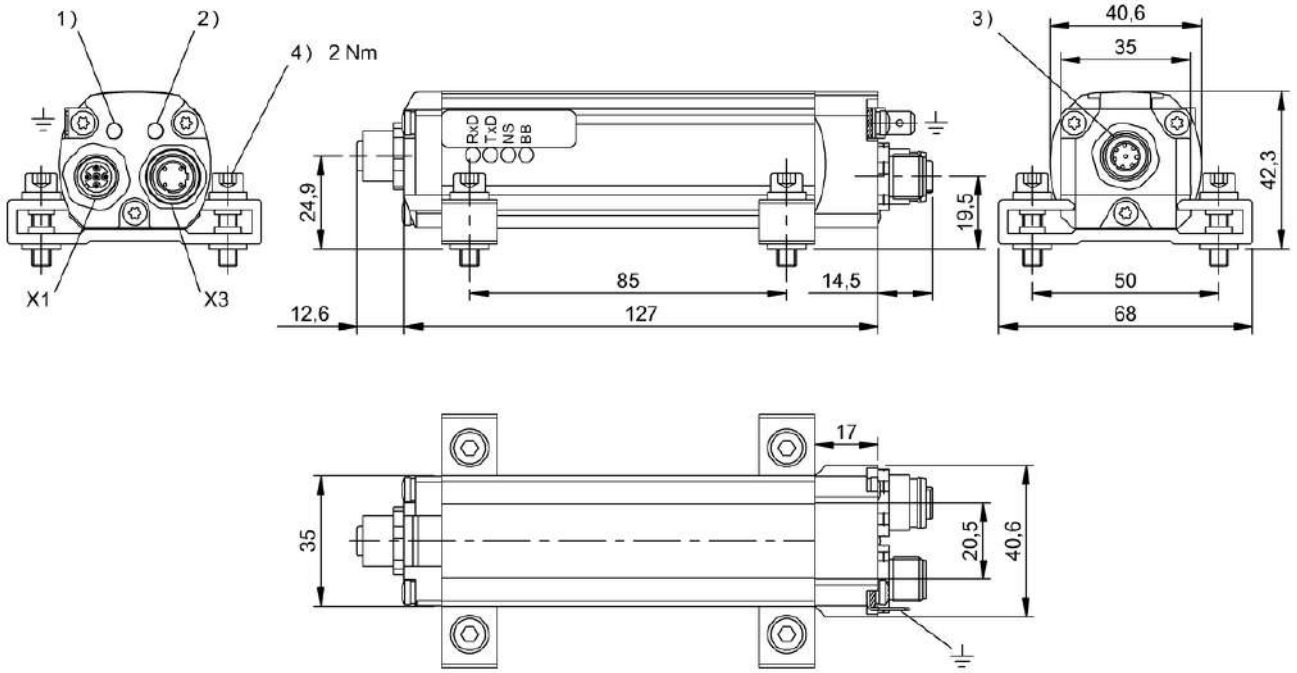
1) Head 1, 2) Head 2, 3) Tightening torque

**BISO0EW**



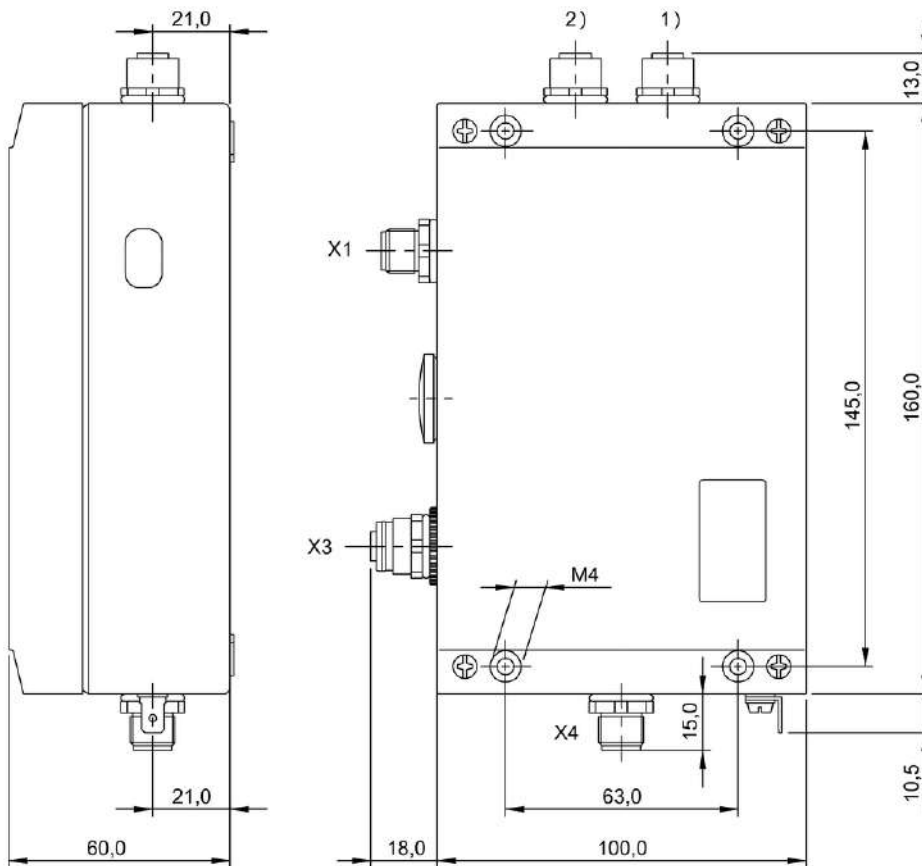
1) Head 1, 2) Head 2

**BISO0FO**



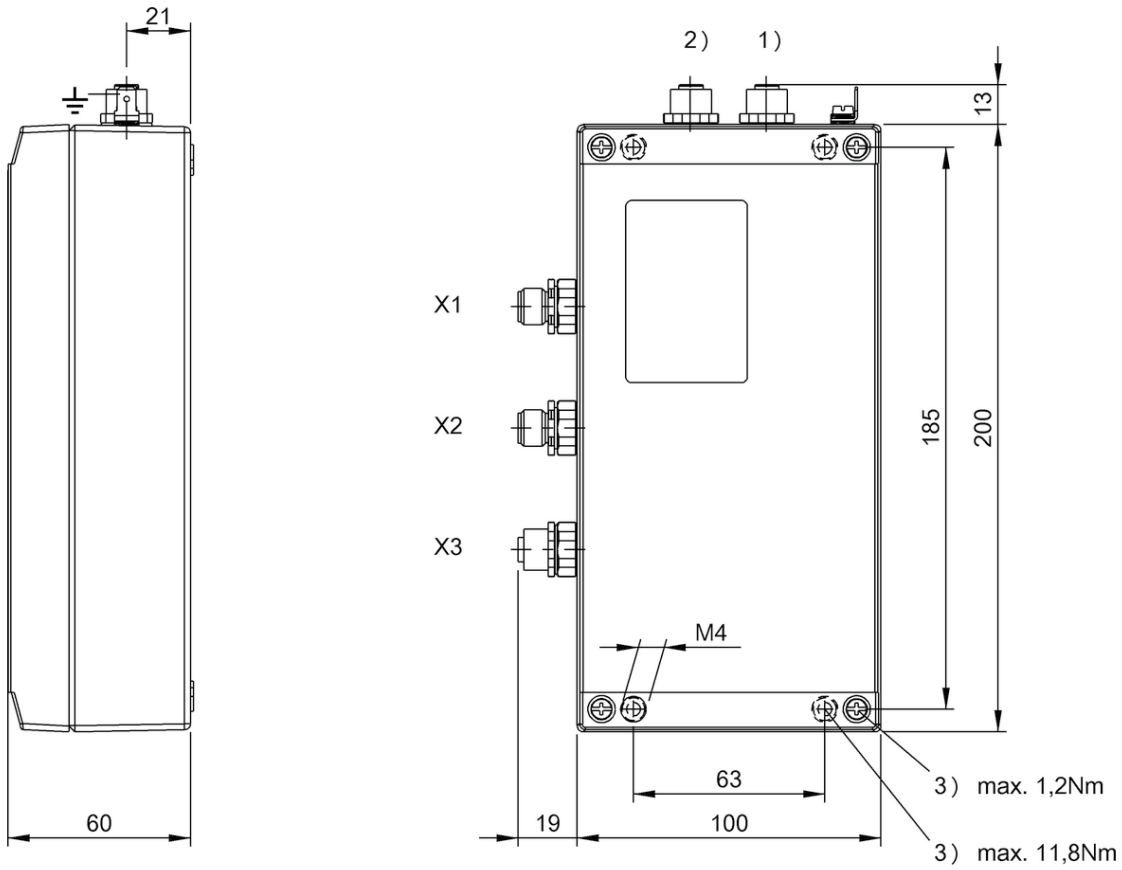
1) LED1 Ethernet Status, 2) LED2 Ethernet Status, 3) Head, 4) Tightening torque

**BIS00EP**



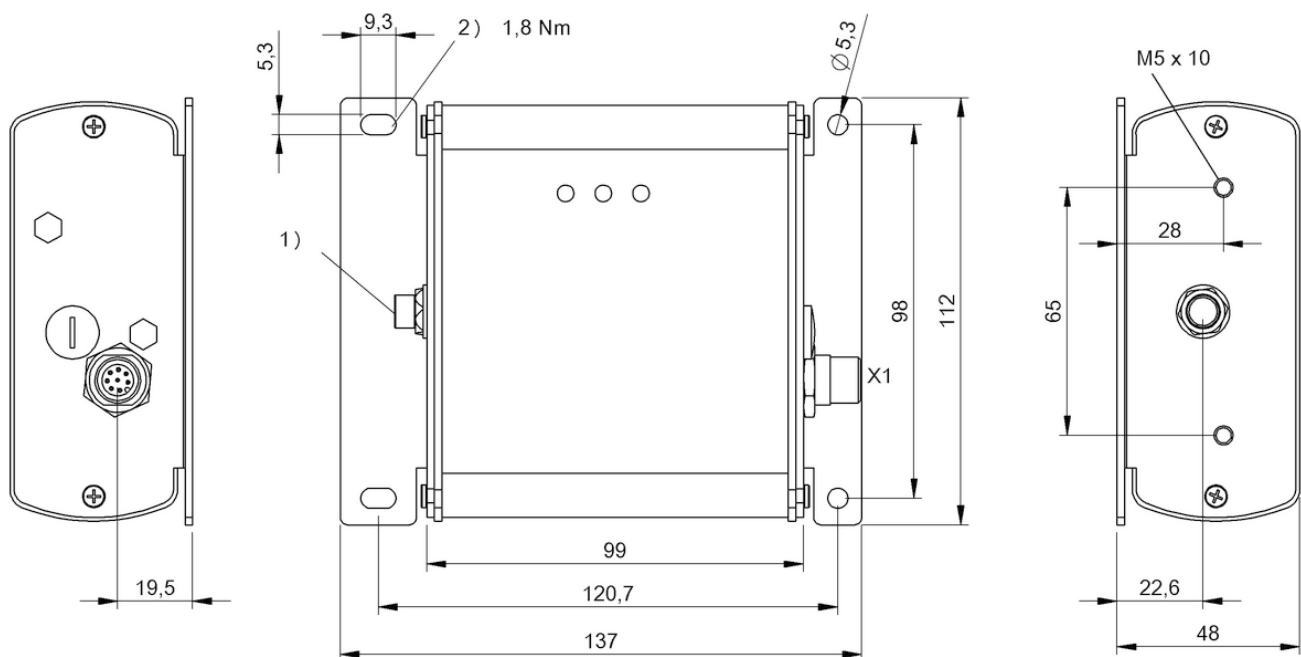
1) Head 1, 2) Head 2

**BIS00F2**



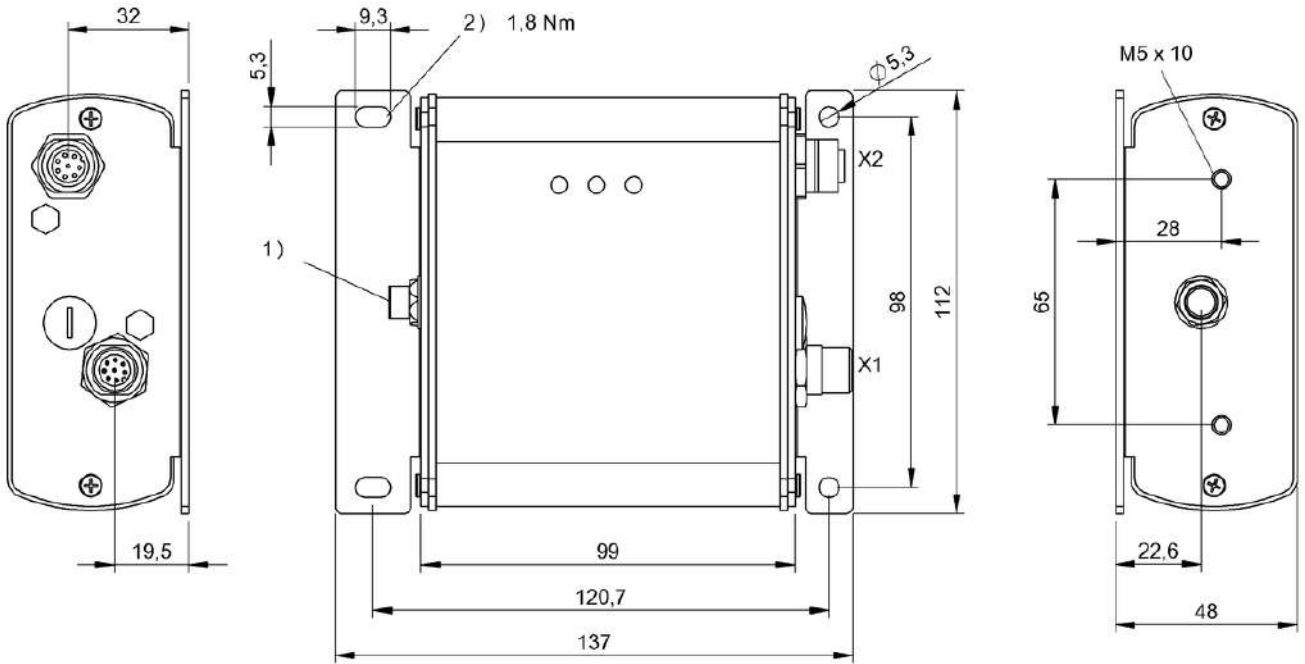
1) Head 1, 2) Head 2, 3) Tightening torque

**BISOOLY**



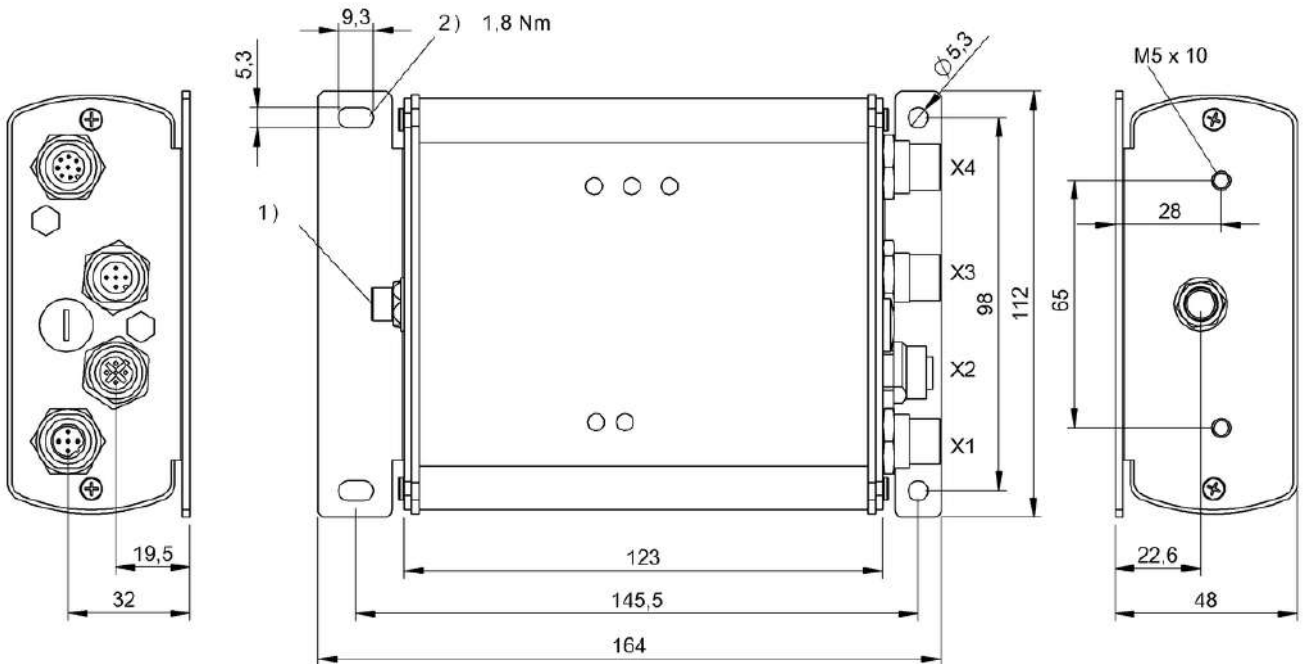
1) Antenna, 2) Tightening torque

**BISO0ZJ**



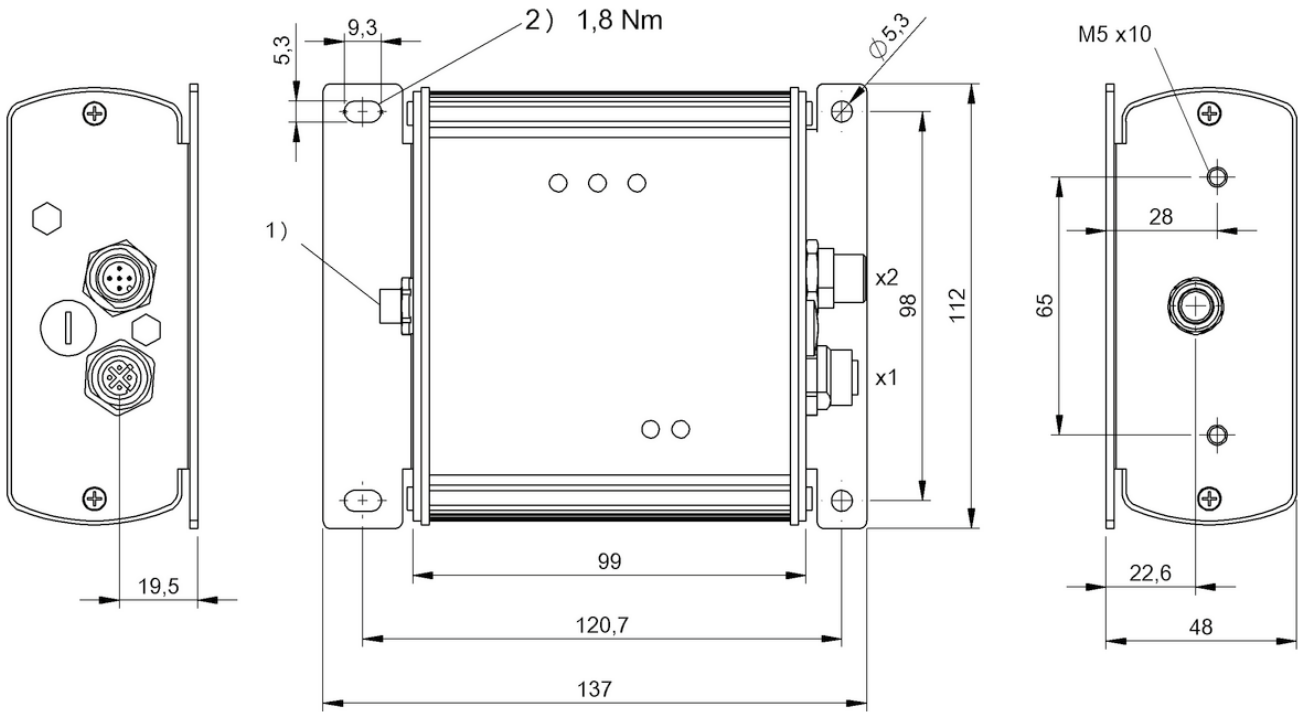
1) Antenna, 2) Tightening torque

**BISO00ZH**



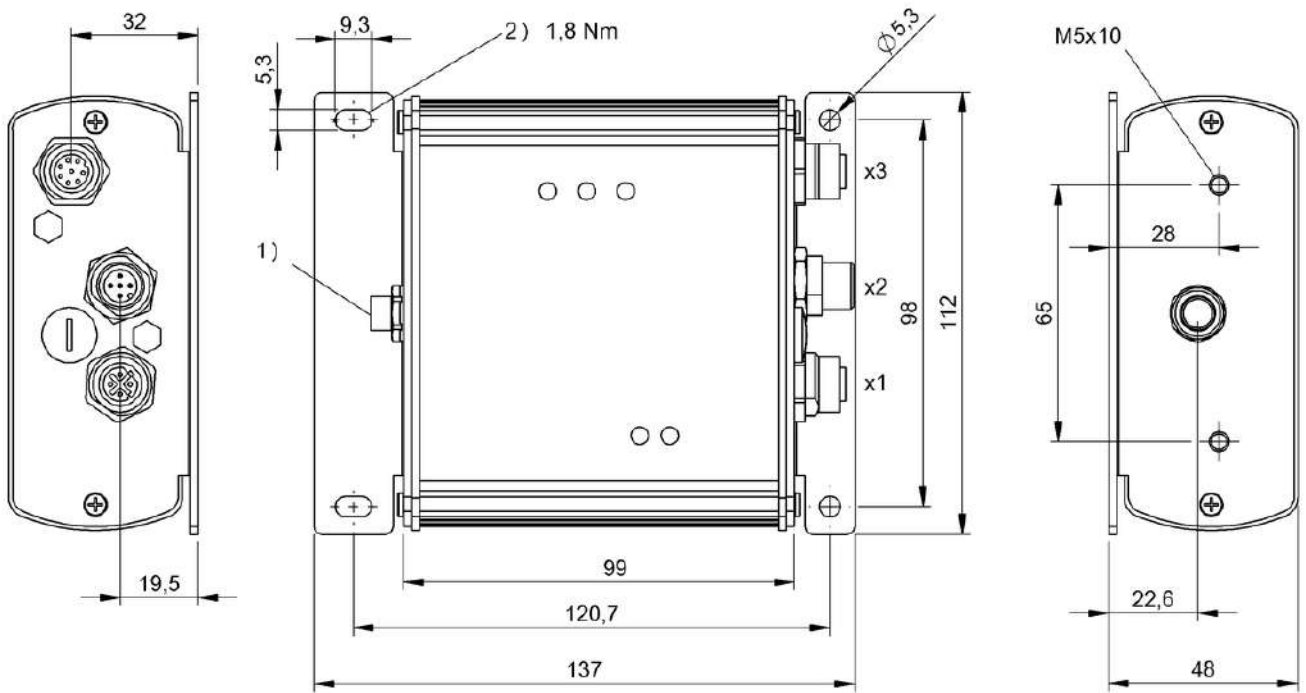
1) Antenna, 2) Tightening torque

**BISO00ZF**



1) Antenna, 2) Tightening torque

**BIS00ZC**



1) Antenna, 2) Tightening torque

**BISO0ZA**





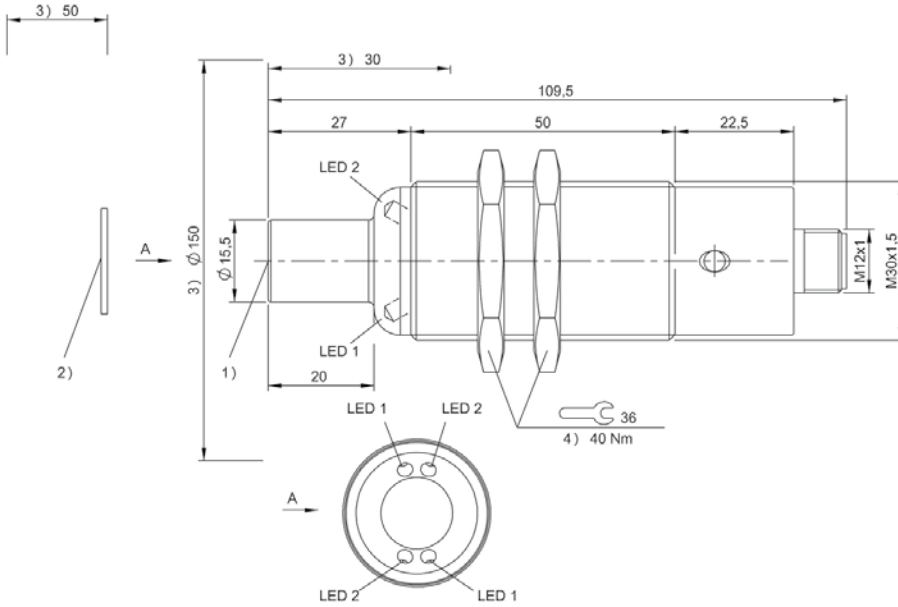
	<b>BIS00EK</b> BIS M-400-007-002-00-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 109.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	Brass, nuts nickel plated brass
Interface	RS232
Operating voltage Ub	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0048		BIS004A		BIS0043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Working distance for reading	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Offset at distance																	
	0	±9	±6	±4	±16	±12	±4	±5	±4	±6	±4	±4	±3	±4	±3	±14	±10
	5	±9	±6	±4	±16	±12	±4	±4	±2	±6	±2	±3		±3	±2	±14	±8
	9	±8	±4	±2	±12	±10	±2			±2						±12	±6
	12	±6	±2		±8	±5										±10	±4
	15	±4			±8	±5										±10	
	16				±7	±3										±7	
	18				±6	±2										±7	
	20															±7	
	22																
	25																

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0044			BIS0045			BIS0046			BIS00YE		BIS00NU BIS00NW BIS0100	
>25	>15	>5	>25	>10	>5	>50	>25	>20	>25	>0		
>80	>50	>50	>80	>50	>50	>150	>90	>70	>100	>100		
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12		
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12		
±8	±6	±4	±12	±8	±7	±20	±14	±14	0 ±14	±7		
±8	±6	±4	±12	±8	±4	±20	±14	±14	5 ±14	±7		
±6	±5		±10	±6		±18	±14	±10	10 ±14	±6		
±4			±10	±4		±18	±12	±6	12 ±12	±2		
±4			±10			±18	±12		15 ±12			
			±7			±16	±10		20 ±12			
			±7			±16	±8		24 ±6			
			±7			±16			30			
						±12			35			
						±12			40			

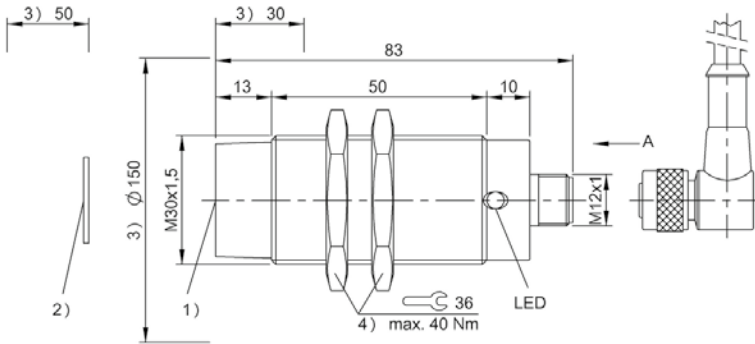


	<b>BIS00EJ</b> BIS M-400-007-001-00-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 83 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	Brass, nuts nickel plated brass
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0043		BIS0044			BIS0045				
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0	>25	>10	>5	>25	>10	>5		
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0	>100	>60	>50	>100	>60	>50		
Working distance for writing	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10		
Working distance for reading	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10		
Offset at distance																				
	0																			
	5	±14	±10	±6	±20	±15	±6	±7	±6	±9	±6	±16	±10	0	±12	±8	±6	±16	±10	±7
	9	±14	±10	±6	±20	±15	±6	±7	±6	±8	±6	±16	±10	2	±12	±8	±5	±16	±10	±7
	12	±14	±8	±4	±20	±15	±3			±5		±14	±8	5	±12	±8	±5	±16	±10	±7
	15	±10	±4	±2	±20	±13	±2					±14	±6	7	±10	±6	±4	±14	±8	±2
	16	±10	±2	±20	±10						±14	±6	8	±10	±6	±2	±14	±8	±2	
	18	±8		±18	±3						±14	±4	9	±10	±6		±14	±8	±2	
	20	±6		±16							±14		10	±8	±4		±14	±7	±1	
	22	±5		±15							±14		12	±8	±4		±14	±7		
	25			±15							±12		13	±8	±2		±14	±6		
	30			±10							±12		15	±8	±2		±14	±6		
	32												16	±5			±14	±3		
	35												18	±5			±14	±2		
	40												20	±5			±14			
	43												22				±12			
	45												25				±12			
	50												27				±6			
	52												28				±6			
	60												30							
	65												35							
	70												38							
													45							

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0046			BIS0048		BIS004A		BIS00LC			BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS0143			BIS00YE			BIS00Y7		BIS00Y5		BIS00Y4											
>50	>15	>10	>20	>20	>0	>0	>25	>0	>0	>0	>0	>25	>25	>0	>25	>50	>50	>150	>90	>70	>100	>100	>100	>100	>150	>150	>50	>50							
0-38	0-25	0-15	0-9.5	0-13	0-7	0-7	0-27	0-13	0-22	0-13	0-13	0-27	0-30	0-8	0-24	0-50	0-42	0-38	0-25	0-15	0-9.5	0-13	0-7	0-27	0-13	0-22	0-13	0-27	0-30	0-8	0-24	0-50	0-42		
±22	±16	±13	±9	±10	±7	0	±16	±10	±13	±10	0	±18	±18	±8	±18	±30	±30	±22	±16	±13	±9	±10	±7	0	±16	±10	±13	±10	0	±18	±18	±8	±18	±30	±30
±22	±16	±13	±8	±10	±6	5	±16	±10	±13	±10	5	±18	±18	±8	±18	±30	±30	±22	±16	±13	±8	±10	±6	10	±16	±7	±13	±9	7	±18	±18	±6	±18	±30	±30
±22	±14	±10	±7	±8	±1	13	±14	±5	±11	±5	13	±18	±18	±3	±18	±30	±30	±22	±14	±10	±7	±8	±1	13	±14	±5	±11	±5	8	±18	±18	±3	±18	±30	±30
±22	±14	±10	±1	±8		15	±14		±11		15	±18	±18		±18	±30	±30	±22	±14	±10	±1	±8		15	±14		±11		10	±18	±18		±18	±30	±30
±22	±14	±10	±1	±8		18	±14		±11		18	±16	±18		±16	±30	±28	±22	±14	±10	±1	±8		18	±14		±11		15	±16	±18		±16	±30	±28
±20	±13	±8		±8		20	±14		±7		20	±16	±18		±16	±30	±28	±20	±13	±8		±8		20	±14		±7		20	±16	±18		±16	±30	±28
±20	±13	±8		±3		22	±12		±7		22	±10	±16		±5	±25	±24	±20	±13	±8		±3		22	±12		±7		24	±10	±16		±5	±25	±24
±20	±12	±6		±3		25	±12				25	±10	±16			±25	±24	±20	±12	±6		±3		25	±12				25	±10	±16			±25	±24
±20	±12	±6				27	±5				27	±5	±5			±25	±24	±20	±12	±6				27	±5				27	±5	±5			±25	±24
±20	±10					30					30		±5		±25	±24	±20	±10					30					30		±5			±25	±24	
±20	±10					32					32				±25	±24	±20	±10					32					35					±25	±24	
±20	±8					35					35				±25	±5	±20	±8					35					40					±25	±5	
±20	±6					40					40				±25	±5	±20	±6					40					42					±5	±5	
±20	±4					43					43				±25	±5	±20	±4					43					45					±5		
±16						45					45				±25	±5	±16						45					50					±5		
±16						50					50				±25	±5	±16						50					40							
±16						52					52				±25	±5	±16						52					42							
±10						60					60				±25	±5	±10						60					45							
±5						65					65				±25	±5	±5						65					50							
						70					70				±25	±5							70					55							

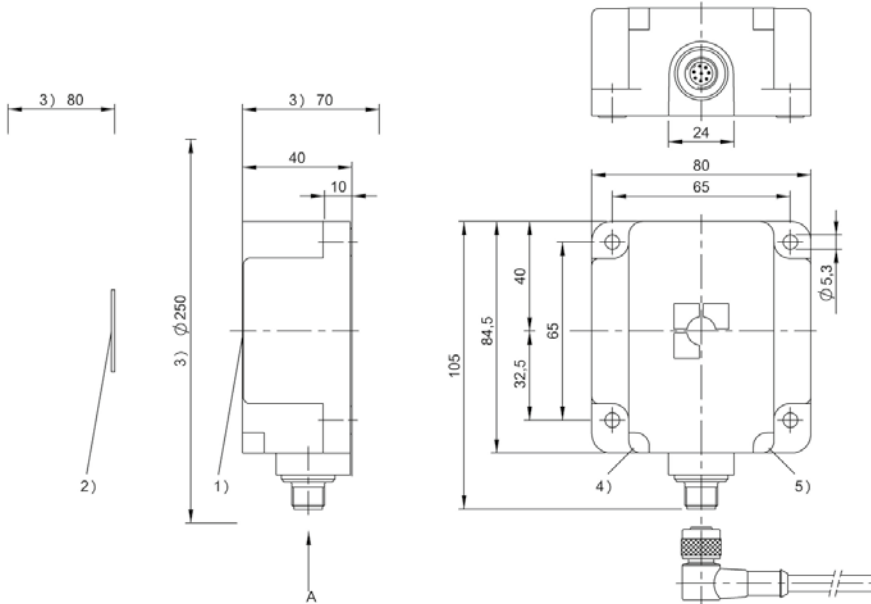


	<b>BIS00EM</b> BIS M-401-007-001-00-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0047	BIS0043	BIS0044	BIS0045	BIS0046					
Data carrier distance to metal	>50	>25	>10	>50	>25	>10	>80	>50	>20	>50	>30	>50	>30			
Data carrier clear zone	>200	>150	>150	>200	>150	>150	>250	>200	>60	>200	>100	>200	>100			
Working distance for writing	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Working distance for reading	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Offset at distance																
	0	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	5	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	9	±22	±18	±10	±30	±24	±16	±30	±30	±16	±25	±15	±30	±20	±35	±25
	12	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±15	±25	±20	±35	±25
	15	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±12	±25	±18	±35	±25
	16	±20	±15	±6	±30	±20	±12	±30	±25	±16	±20	±12	±25	±18	±35	±25
	18	±20	±13	±4	±30	±20	±10	±30	±25	±14	±20	±8	±25	±16	±35	±25
	20	±20	±12	±2	±30	±20	±10	±30	±25		±20		±25	±14	±35	±25
	22	±16	±8		±24	±18	±8	±30	±20		±15		±20	±12	±35	±22
	25	±12	±4		±24	±18	±8	±30	±20		±15		±20	±10	±35	±22
	30				±24	±15	±6	±28	±20		±10		±20		±35	±22
	32				±20	±12	±4	±24	±15		±10		±15		±35	±22
	35				±20	±10		±22	±15				±15		±35	±20
	40				±15	±5		±18	±15				±15		±35	
	43				±8			±14							±25	
	45				±5			±12							±25	
	50							±4							±25	
	52														±25	
	60														±25	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP)

	BIS00M9 BIS00M8	BIS00NU BIS00NW BIS0100		BIS00YE	BIS00Y4
	>0	>0		>50	>50
	>100	>100		>200	>200
	0-32	0-16		0-50	0-75
	0-32	0-16		0-50	0-75
	±25	±24	0	±30	±50
	±25	±24	5	±30	±50
	±25	±20	10	±30	±50
	±25	±14	15	±30	±50
	±25	±4	20	±30	±50
	±25	±4	25	±28	±50
	±25		30	±28	±50
	±25		35	±28	±50
	±20		40	±28	±50
	±20		45	±10	±45
	±15		50	±10	±45
	±15		55		±45
			60		±45
			65		±35
			70		±35
			75		±35
			80		
			85		
			90		

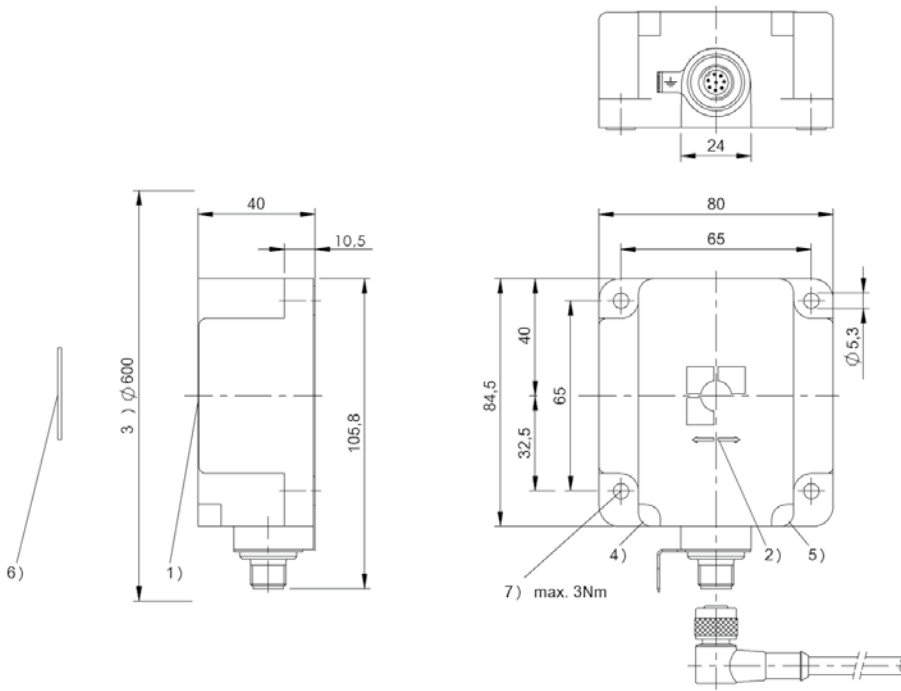


	<b>BIS00ER</b> BIS M-451-007-001-00-S115
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2				BIS00P3	
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>10	>10	>240	>240
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>50	>50	>480	>480
Data carrier clear zone C									>50	>50	>2	>2	>50	>50
Metallic mounting surface 40 x 22 mm	0-52	0-52			0-52	0-52								
Metallic mounting surface > 200 x 200 mm			0-65	0-65			0-65	0-65						
Working distance for writing	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Working distance for reading	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
0	±60	±25	±65	±26	±25	±60	±26	±65	0	±35	±20		±60	±20
5	±60	±25	±65	±26	±25	±60	±26	±65	5	±35	±20		±60	±20
12	±60	±25	±65	±25	±25	±60	±25	±65	10	±35	±20		±60	±20
15	±60	±25	±65	±25	±25	±60	±25	±65	15	±35	±20	±35	±15	±60
18	±60	±25	±65	±25	±25	±60	±25	±65	20	±35	±20	±35	±15	±60
20	±60	±25	±65	±25	±25	±60	±25	±65	25	±20	±12	±28	±15	±60
22	±60	±25	±65	±25	±25	±60	±25	±65	30	±20	±12	±28	±15	±60
25	±60	±25	±65	±25	±25	±60	±25	±65	35				±60	±20
30	±60	±25	±65	±25	±25	±60	±25	±65	40				±60	±20
32	±50	±25	±65	±25	±25	±50	±25	±65	45				±60	±20
35	±50	±25	±65	±25	±25	±50	±25	±65	50				±60	±20
40	±50	±20	±50	±25	±20	±50	±25	±50	60				±60	±20
45	±25	±20	±50	±25	±20	±25	±25	±50	70				±60	±20
50	±25	±20	±50	±25	±20	±25	±25	±50	80				±60	±20
52	±25	±8	±25	±25	±8	±25	±25	±25	90				±40	±20
60			±25	±10			±10	±25	100				±40	±20
65			±25	±10			±10	±25						

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Data carrier on steel, 7) Tightening torque



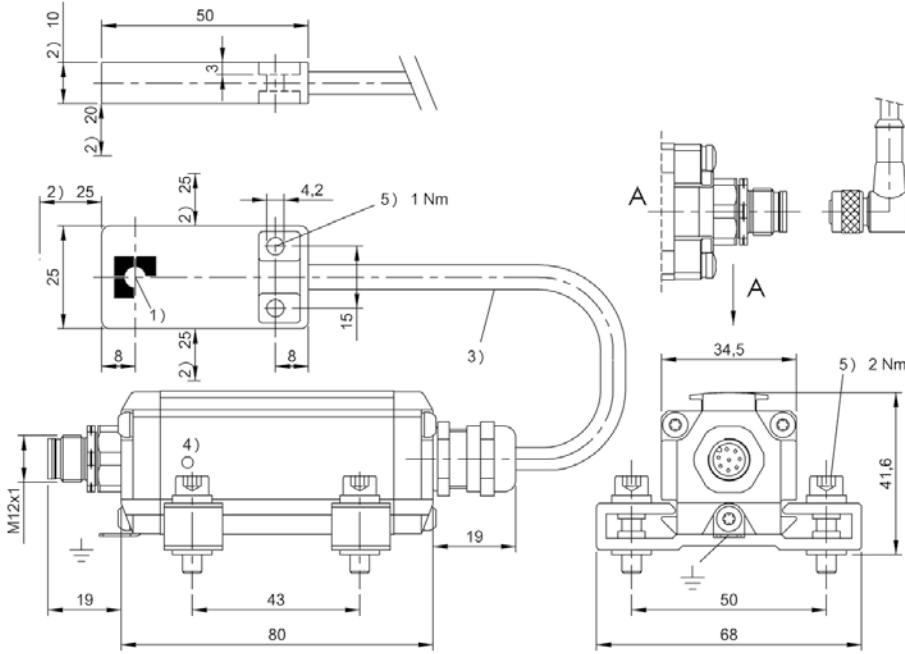
	<b>BIS00RU</b> BIS M-402-007-004-00-S115
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

## Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS00NU BIS00NW BIS0100		BIS003Y	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0		>0		>25
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0		>100		>100
Working distance for writing	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Working distance for reading	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Offset at distance														
	0	±4	±3	±5	±4	±8		±4	±3	±4	±4	0	±6	±11
	5	±2		±5	±2	±8		±2		±4	±2	5	±6	±11
	9					±6						7	±6	±9
	12					±4						9	±4	±9
	15					±4						12		±9
	16											15		±5

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque

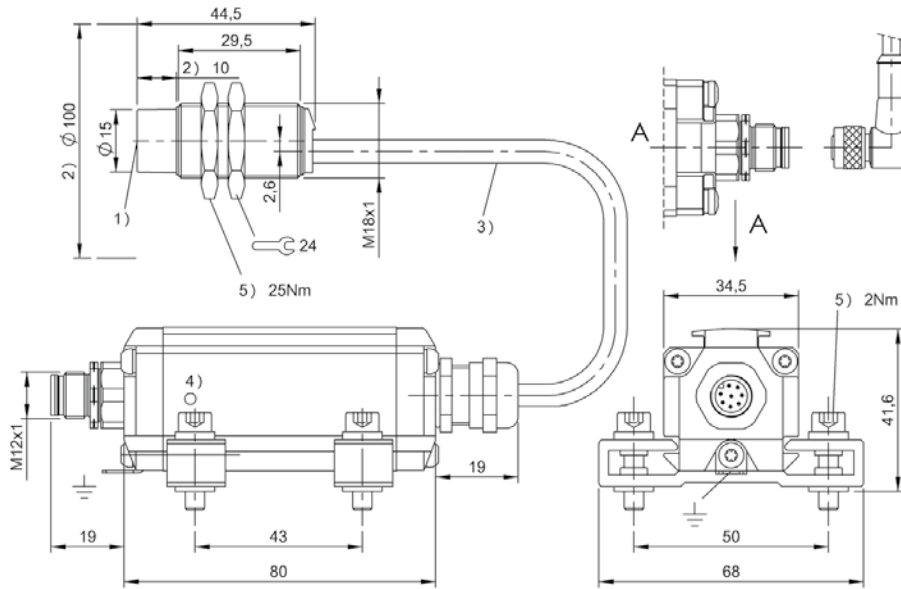


	<b>BIS000EN</b> BIS M-402-007-002-00-S115
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 44.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface aluminum
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Appropriate data carrier

	BIS0040		BIS0042		BIS0048		BIS004A		BIS0044			BIS003Y		BIS0045	
Data carrier distance to metal	>10	>0	>10	>0	>10	>0	>10	>0	>25			>25		>25	
Data carrier clear zone	>60	>0	>60	>0	>60	>0	>60	>0	>80			>100		>100	
Working distance for writing	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14		0-18	
Working distance for reading	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14		0-18	
Offset at distance	0	±3	±3	±4	±3	±2	±4	±3	±7			0	±10	±12	
	5	±2		±3	±2		±3	±2	±7			5	±10	±12	
	9								±5			10	±9	±11	
	12								±3			14	±5	±10	
	15								±3			15		±10	
	16											18		±5	

Dimensions in mm



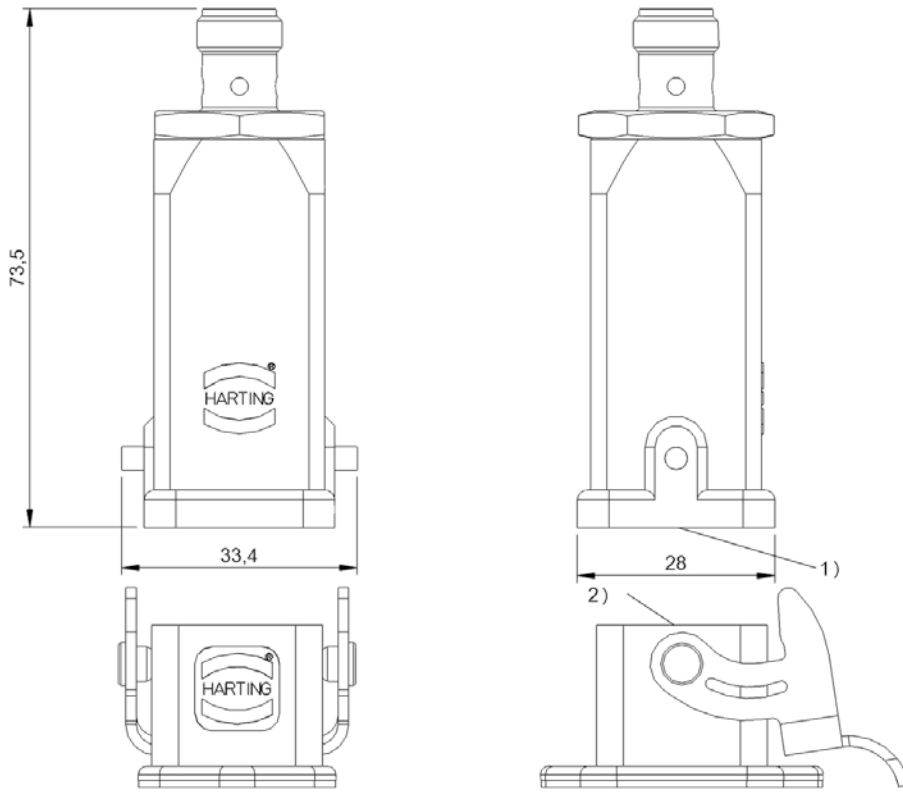
1) Sensing surface, 2) Clear zone, 3) Cable length, 4) LED function indicator, 5) Tightening torque

BIS00YL	BIS00YK	BIS00YE	BIS00NU BIS00NW BIS0100
>25	>25	>25	>0
>100	>100	>100	>100
0-9	0-9	0-20	0-9
0-9	0-9	0-20	0-9
±6	±6	±12	±6
±6	±6	±12	±6
±5	±5	±12	±6
±1	±1	±12	±4
		±12	
		±10	



IO-Link, 10 bytes process data length	<b>BIS018E</b> BIS M-404-045-401-07-S4-SA1
Product Group	HF (13.56 MHz)
Dimension	28 x 60 x 33.4 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Connector, M12x1 connector, 4-pin
Housing material	Die casting Brass nickel plated, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210

Use with data carrier **BIS0180** only



1) Sensing surface, 2) Data carrier



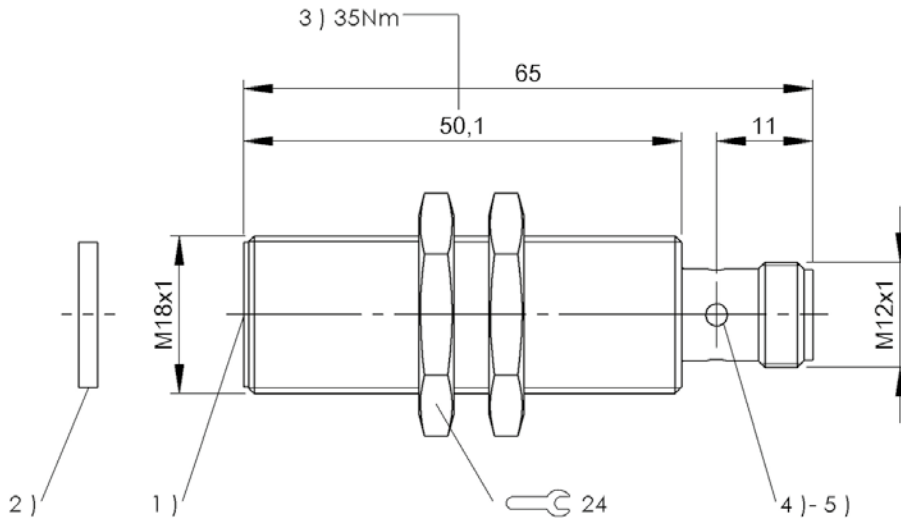
IO-Link, 10 bytes process data length	<b>BIS015R</b> BIS M-404-045-401-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 65 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage U <sub>b</sub>	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210

Use with **IO-Link master** only

Appropriate data carrier

	BIS0042			BIS0043			BIS011F BIS011E BIS011A BIS0139			BIS004A			BIS0143		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20		
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100		
Working distance for writing	0-8.5	0-8	0-6	0-11	0-8	0-6	0-6.5	0-6	0-5	0-6	0-5.5	0-3.5	0-13		
Working distance for reading	0-8.5	0-8	0-6	0-11	0-8	0-6	0-6.5	0-6	0-5	0-6	0-5.5	0-3.5	0-13		
Offset at distance															
	0	±5	±5	±4	±8	±8	±7	±8	±8	±7	±4.5	±4	±3.5	±8	
	2	±5	±5	±4	±8	±8	±7	±8	±8	±7	±4.5	±4	±3	±8	
	3.5	±4.5	±4	±3	±8	±7	±6	±7	±7	±6	±4	±3	±1.5	±8	
	4	±4.5	±4	±3	±8	±7	±6	±7	±7	±6	±4	±3		±8	
	4.5	±4.5	±4	±3	±8	±7	±4	±7	±6	±3	±3.5	±3		±8	
	5	±4.5	±4	±3	±8	±7	±4	±7	±6	±3	±3.5	±2		±8	
	5.5	±4	±3	±2	±7	±5	±1	±4	±3		±2	±2		±7	
	6	±4	±3	±2	±7	±5	±1	±4	±3		±2			±7	
	6.5	±4	±3		±7	±5		±4						±7	
	7	±4	±3		±7	±5								±7	
	8	±2	±2		±7	±4								±7	
	8.5	±2			±7									±7	
	10				±7									±7	
	11				±4									±4	
	13													±4	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Tightening torque, 4) LED (CP), 5) LED (Power)

	BIS0044	BIS00NU BIS00NW BIS0100
	>25	>0
	>100	>100
	0-10	0-9.5
	0-10	0-9.5
	0 ±6	±5
	2 ±6	±5
	4 ±6	±5
	5 ±6	±5
	6 ±5	±4
	7 ±5	±4
	8 ±5	±4
	9.5 ±3	±2
	10 ±3	
	12	
	15	
	20	
	25	
	30	
	35	



IO-Link, 10 bytes process data length	<b>BIS00LH</b> BIS M-400-045-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 83 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

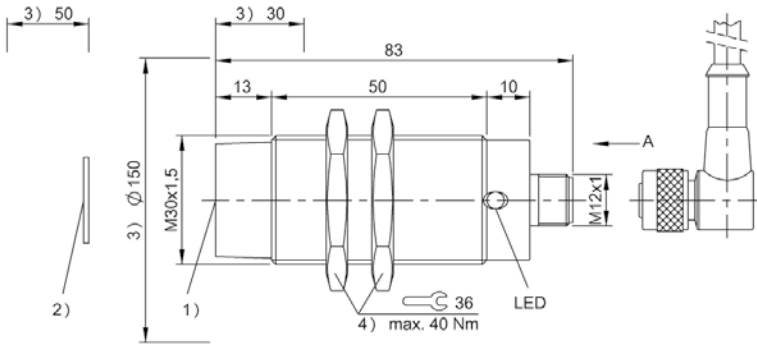
Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0043		BIS0044			BIS0045			
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0	>25	>10	>5	>25	>10	>5	
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0	>100	>60	>50	>100	>60	>50	
Working distance for writing	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10	
Working distance for reading	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10	
Offset at distance																			
0																			
5	±14	±10	±6	±20	±15	±6	±7	±6	±9	±6	±16	±10	0	±12	±8	±6	±16	±10	±7
9	±14	±10	±6	±20	±15	±6	±7	±6	±8	±6	±16	±10	2	±12	±8	±5	±16	±10	±7
12	±14	±8	±4	±20	±15	±3			±5		±14	±8	5	±12	±8	±5	±16	±10	±7
15	±10	±4	±2	±20	±13	±2					±14	±6	7	±10	±6	±4	±14	±8	±2
16	±10	±2		±20	±10						±14	±6	8	±10	±6	±2	±14	±8	±2
18	±8			±18	±3						±14	±4	9	±10	±6		±14	±8	±2
20	±6			±16							±14		10	±8	±4		±14	±7	±1
22	±5			±15							±14		12	±8	±4		±14	±7	
25				±15							±12		13	±8	±2		±14	±6	
30				±10							±12		15	±8	±2		±14	±6	
32													16	±5			±14	±3	
35													18	±5			±14	±2	
40													20	±5			±14		
43													22				±12		
45													25				±12		
50													27				±6		
52													28				±6		
60													30						
65													35						
70													38						
													45						

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0046		BIS0048		BIS004A		BIS00LC		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS0143		BIS00YE		BIS00Y7		BIS00Y5		BIS00Y4		
>50	>15	>10	>20	>20	>0	>25	>0	>0	>0	>25	>0	>25	>25	>0	>25	>50	>50	>150	>90	>70	>100	
0-38	0-25	0-15	0-9.5	0-13	0-7	0-27	0-13	0-22	0-13	0-27	0-30	0-8	0-24	0-50	0-42	0-38	0-25	0-15	0-9.5	0-13	0-7	
±22	±16	±13	±9	±10	±7	0	±16	±10	±13	±10	0	±18	±18	±8	±18	±30	±30	±22	±16	±13	±9	
±22	±16	±13	±9	±10	±7	5	±16	±10	±13	±10	5	±18	±18	±8	±18	±30	±30	±22	±16	±13	±9	
±22	±16	±13	±8	±10	±6	10	±16	±7	±13	±9	7	±18	±18	±6	±18	±30	±30	±22	±16	±13	±8	
±22	±14	±10	±7	±8	±1	13	±14	±5	±11	±5	8	±18	±18	±3	±18	±30	±30	±22	±14	±10	±7	
±22	±14	±10	±1	±8		15	±14		±11		10	±18	±18		±18	±30	±30	±22	±14	±10	±1	
±22	±14	±10	±1	±8		18	±14		±11		15	±16	±18		±16	±30	±28	±22	±14	±10	±1	
±20	±13	±8		±8		20	±14		±7		20	±16	±18		±16	±30	±28	±20	±13	±8		
±20	±13	±8		±3		22	±12		±7		24	±10	±16		±5	±25	±24	±20	±13	±8		
±20	±12	±6		±3		25	±12				25	±10	±16			±25	±24	±20	±12	±6		
±20	±12	±6				27	±5				27	±5	±5			±25	±24	±20	±12	±6		
±20	±10					30					30		±5			±25	±24	±20	±10			
±20	±10					32					35					±25	±24	±20	±10			
±20	±8					35					40					±25	±5	±20	±8			
±20	±6					40					42					±5	±5	±20	±6			
±20	±4					43					45					±5		±20	±4			
±16						45					50					±5		±16				
±16						50					40							±16				
±16						52					42							±16				
±10						60					45							±10				
±5						65					50							±5				
						70					55											



IO-Link, 10 bytes process data length	<b>BIS015T</b> BIS M-400-045-401-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 65.9 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210

Use with **IO-Link master** only

Appropriate data carrier

	BIS0042		BIS0043 BIS0111			BIS004A		BIS0143		BIS0044		BIS0045		BIS0046	
Data carrier distance to metal	>20		>25	>0	>0	>20		>20		>25		>25		>50	
Data carrier clear zone	>100		>100	>100	>0	>100		>100		>100		>100		>150	
Working distance for writing	0-13		0-21	0-15	0-13	0-9		0-21		0-18		0-21		0-30	
Working distance for reading	0-13		0-21	0-15	0-13	0-9		0-21		0-18		0-21		0-30	
Offset at distance															
	0	±8	±13	±10	±10	±7		±12		0	±9	±13		±20	
	5	±8	±13	±10	±10	±7		±12		5	±9	±13		±20	
	8	±8	±13	±10	±9	±6		±12		10	±9	±13		±20	
	9	±7	±13	±8	±8	±4		±12		13	±8	±12		±18	
	10	±7	±13	±8	±8			±12		15	±8	±12		±18	
	13	±4	±12	±8	±3			±11		16	±4	±11		±18	
	15		±12	±3				±11		18	±4	±11		±18	
	18		±11					±10		20		±5		±18	
	20		±5					±5		21		±5		±16	
	21		±5					±5		25				±16	
	30									30				±8	

Dimensions in mm





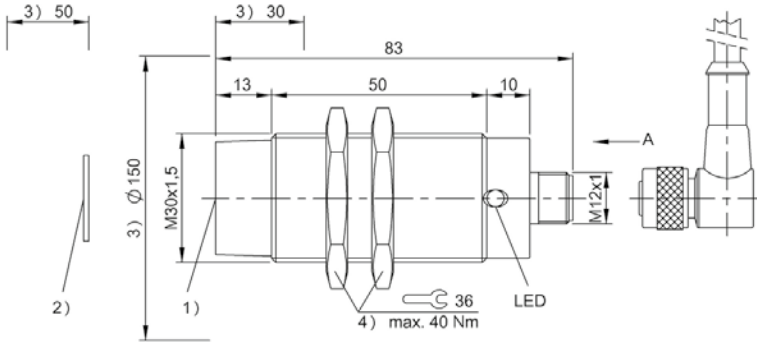
IO-Link, 32 bytes process data length	<b>BIS0108</b> BIS M-400-072-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 83 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS, FCC, IC

Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0043		BIS0044			BIS0045			
Data carrier distance to metal	>25	>10	>5	>50	>15	>10	>20	>5	>20	>5	>25	>0	>25	>10	>5	>25	>10	>5	
Data carrier clear zone	>100	>60	>50	>150	>90	>70	>100	>100	>100	>100	>100	>0	>100	>60	>50	>100	>60	>50	
Working distance for writing	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10	
Working distance for reading	0-20	0-15	0-12	0-28	0-20	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-15	0-8	0-28	0-18	0-10	
Offset at distance																			
0																			
5	±14	±10	±6	±20	±15	±6	±7	±6	±9	±6	±16	±10	0	±12	±8	±6	±16	±10	±7
9	±14	±10	±6	±20	±15	±6	±7	±6	±8	±6	±16	±10	2	±12	±8	±5	±16	±10	±7
12	±14	±8	±4	±20	±15	±3			±5		±14	±8	5	±12	±8	±5	±16	±10	±7
15	±10	±4	±2	±20	±13	±2					±14	±6	7	±10	±6	±4	±14	±8	±2
16	±10	±2		±20	±10						±14	±6	8	±10	±6	±2	±14	±8	±2
18	±8			±18	±3						±14	±4	9	±10	±6		±14	±8	±2
20	±6			±16							±14		10	±8	±4		±14	±7	±1
22	±5			±15							±14		12	±8	±4		±14	±7	
25				±15							±12		13	±8	±2		±14	±6	
30				±10							±12		15	±8	±2		±14	±6	
32													16	±5			±14	±3	
35													18	±5			±14	±2	
40													20	±5			±14		
43													22				±12		
45													25				±12		
50													27				±6		
52													28				±6		
60													30						
65													35						
70													38						
													45						

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0046			BIS0048		BIS004A		BIS00LC			BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS0143			BIS00YE		BIS00Y7		BIS00Y5		BIS00Y4		
>50	>15	>10	>20	>20	>0	>0	>25	>0	>0	>0		>25	>25	>0	>25	>50	>50								
>150	>90	>70	>100	>100	>0	>0	>100	>100	>100	>100		>100	>100	>100	>100	>150	>150								
0-38	0-25	0-15	0-9.5	0-13	0-7	0-7	0-27	0-13	0-22	0-13		0-27	0-30	0-8	0-24	0-50	0-42								
0-38	0-25	0-15	0-9.5	0-13	0-7	0-7	0-27	0-13	0-22	0-13		0-27	0-30	0-8	0-24	0-50	0-42								
±22	±16	±13	±9	±10	±7	±7	0	±16	±10	±13	±10	0	±18	±18	±8	±18	±30	±30							
±22	±16	±13	±9	±10	±7	±7	5	±16	±10	±13	±10	5	±18	±18	±8	±18	±30	±30							
±22	±16	±13	±8	±10	±6	±6	10	±16	±7	±13	±9	7	±18	±18	±6	±18	±30	±30							
±22	±14	±10	±7	±8	±1	±1	13	±14	±5	±11	±5	8	±18	±18	±3	±18	±30	±30							
±22	±14	±10	±1	±8			15	±14		±11		10	±18	±18		±18	±30	±30							
±22	±14	±10	±1	±8			18	±14		±11		15	±16	±18		±16	±30	±28							
±20	±13	±8		±8			20	±14		±7		20	±16	±18		±16	±30	±28							
±20	±13	±8		±3			22	±12		±7		24	±10	±16		±5	±25	±24							
±20	±12	±6		±3			25	±12				25	±10	±16			±25	±24							
±20	±12	±6					27	±5				27	±5	±5			±25	±24							
±20	±10						30					30		±5			±25	±24							
±20	±10						32					35					±25	±24							
±20	±8						35					40					±25	±5							
±20	±6						40					42					±5	±5							
±20	±4						43					45					±5								
±16							45					50					±5								
±16							50					40													
±16							52					42													
±10							60					45													
±5							65					50													
							70					55													



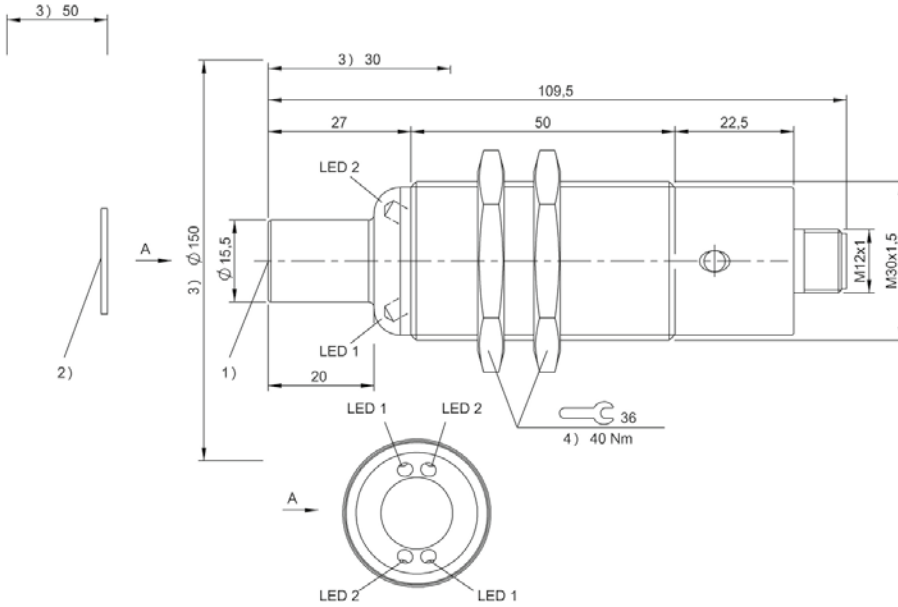
IO-Link, 10 bytes process data length	<b>BIS00LJ</b> BIS M-400-045-002-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 109.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0048		BIS004A		BIS0043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Working distance for reading	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Offset at distance																	
	0	±9	±6	±4	±16	±12	±4	±5	±4	±6	±4	±4	±3	±4	±3	±14	±10
	5	±9	±6	±4	±16	±12	±4	±4	±2	±6	±2	±3		±3	±2	±14	±8
	9	±8	±4	±2	±12	±10	±2			±2						±12	±6
	12	±6	±2		±8	±5										±10	±4
	15	±4			±8	±5										±10	
	16				±7	±3										±7	
	18				±6	±2										±7	
	20															±7	
	22																
	25																

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

BIS0044			BIS0045			BIS0046			BIS00YE			BIS00NU BIS00NW BIS0100		
>25	>15	>5	>25	>10	>5	>50	>25	>20	>25	>10	>5	>0	>0	>0
>80	>50	>50	>80	>50	>50	>150	>90	>70	>100	>50	>20	>100	>50	>20
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12	0-6	0-24	0-12	0-6
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12	0-6	0-24	0-12	0-6
$\pm 8$	$\pm 6$	$\pm 4$	$\pm 12$	$\pm 8$	$\pm 7$	$\pm 20$	$\pm 14$	$\pm 14$	0 $\pm 14$	$\pm 7$	$\pm 7$	$\pm 7$	$\pm 7$	$\pm 7$
$\pm 8$	$\pm 6$	$\pm 4$	$\pm 12$	$\pm 8$	$\pm 4$	$\pm 20$	$\pm 14$	$\pm 14$	5 $\pm 14$	$\pm 7$	$\pm 7$	$\pm 7$	$\pm 7$	$\pm 7$
$\pm 6$	$\pm 5$		$\pm 10$	$\pm 6$		$\pm 18$	$\pm 14$	$\pm 10$	10 $\pm 14$	$\pm 6$	$\pm 6$	$\pm 6$	$\pm 6$	$\pm 6$
$\pm 4$			$\pm 10$	$\pm 4$		$\pm 18$	$\pm 12$	$\pm 6$	12 $\pm 12$	$\pm 2$	$\pm 2$	$\pm 2$	$\pm 2$	$\pm 2$
$\pm 4$			$\pm 10$			$\pm 18$	$\pm 12$		15 $\pm 12$					
			$\pm 7$			$\pm 16$	$\pm 10$		20 $\pm 12$					
			$\pm 7$			$\pm 16$	$\pm 8$		24 $\pm 6$					
			$\pm 7$			$\pm 16$			30					
						$\pm 12$			35					
						$\pm 12$			40					



IO-Link, 32 bytes process data length	<b>BIS0104</b> BIS M-400-072-002-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 30 x 109.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Brass, nuts nickel plated brass
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

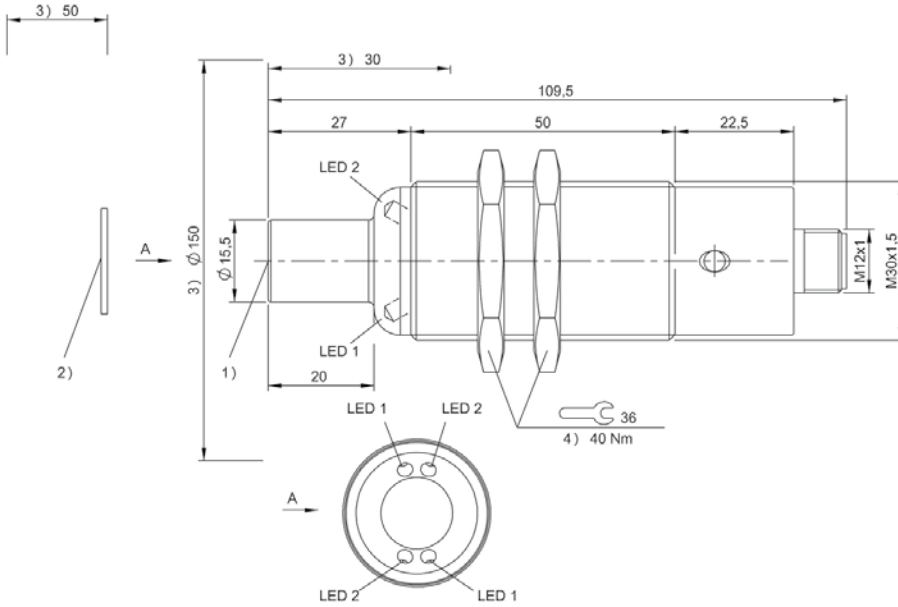
Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0040		BIS0042		BIS0048		BIS004A		BIS0043		
Data carrier distance to metal	>25	>10	>5	>50	>25	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	
Data carrier clear zone	>60	>50	>50	>60	>50	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	
Working distance for writing	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Working distance for reading	0-15	0-12	0-9	0-18	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	
Offset at distance																	
	0	±9	±6	±4	±16	±12	±4	±5	±4	±6	±4	±4	±3	±4	±3	±14	±10
	5	±9	±6	±4	±16	±12	±4	±4	±2	±6	±2	±3		±3	±2	±14	±8
	9	±8	±4	±2	±12	±10	±2			±2						±12	±6
	12	±6	±2		±8	±5										±10	±4
	15	±4			±8	±5										±10	
	16				±7	±3										±7	
	18				±6	±2										±7	
	20															±7	
	22																
	25																

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque

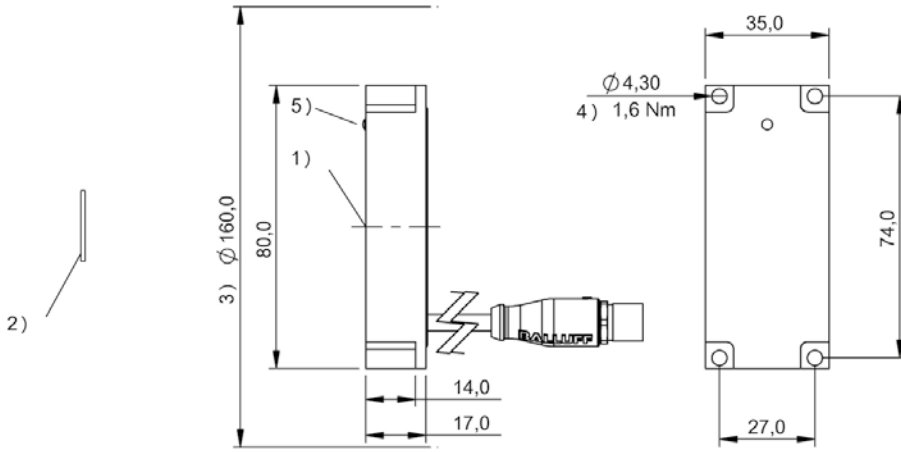
BIS0044			BIS0045			BIS0046			BIS00YE			BIS00NU BIS00NW BIS0100		
>25	>15	>5	>25	>10	>5	>50	>25	>20	>25	>10	>5	>0	>0	>0
>80	>50	>50	>80	>50	>50	>150	>90	>70	>100	>50	>20	>100	>50	>20
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12	0-6	0-24	0-12	0-6
0-15	0-10	0-6	0-20	0-12	0-5	0-28	0-18	0-10	0-24	0-12	0-6	0-24	0-12	0-6
±8	±6	±4	±12	±8	±7	±20	±14	±14	0 ±14	±7	±4	±7	±4	±2
±8	±6	±4	±12	±8	±4	±20	±14	±14	5 ±14	±7	±4	±7	±4	±2
±6	±5		±10	±6		±18	±14	±10	10 ±14	±6	±4	±6	±4	±2
±4			±10	±4		±18	±12	±6	12 ±12	±2	±4	±2	±4	±2
±4			±10			±18	±12		15 ±12		±4		±4	±2
			±7			±16	±10		20 ±12		±4		±4	±2
			±7			±16	±8		24 ±6		±4		±4	±2
			±7			±16			30		±4		±4	±2
						±12			35		±4		±4	±2
						±12			40		±4		±4	±2



IO-Link, 10 bytes process data length	<b>BIS0155</b> BIS M-405-045-008-07-S4
Product Group	HF (13.56 MHz)
Dimension	35 x 17 x 80 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.30 m
Housing material	ABS
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier on request



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Tightening torque, 5) LED Power



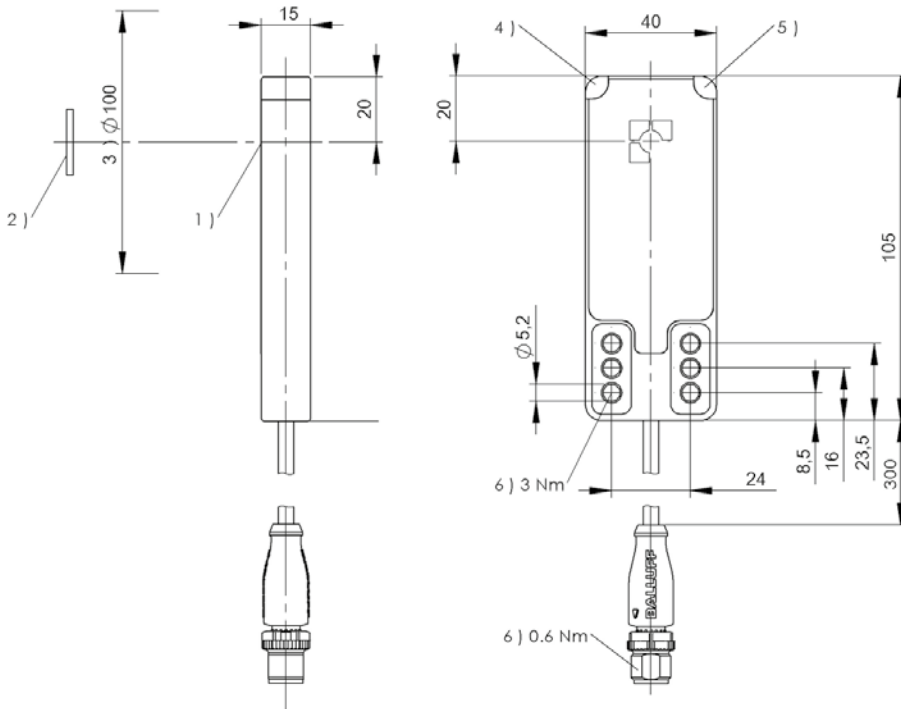
IO-Link, 10 bytes process data length	<b>BISO14J</b> BIS M-408-045-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	40 x 15 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Zinc, die-cast
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210

Use with **IO-Link master** only

Appropriate data carrier

	BIS0042		BIS004A		BIS0044		BIS0045		BIS0143		BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>10	>0	>10	>0	>25	>25	>25	>25	>25	>25	>0	>0	>0	>0
Data carrier clear zone	>60	>60	>60	>60	>100	>100	>100	>100	>100	>100	>100	>100	>100	>100
Working distance for writing	0-13	0-11	0-11	0-9	0-23	0-23	0-28	0-26	0-26	0-26	0-22	0-22	0-13	0-13
Working distance for reading	0-13	0-11	0-11	0-9	0-23	0-23	0-28	0-26	0-26	0-26	0-22	0-22	0-13	0-13
Offset at distance														
	0	±10	±8	±8	±8	±8	±15	±16	±15	±15	0	±13	±10	±10
	4	±10	±8	±8	±8	±8	±15	±16	±15	±15	5	±13	±10	±10
	5	±10	±8	±8	±7	±7	±15	±16	±15	±15	10	±13	±9	±9
	6	±9	±7	±7	±7	±7	±15	±16	±15	±15	13	±11	±5	±5
	7	±9	±7	±7	±7	±6	±15	±16	±15	±15	15	±11		
	8	±9	±7	±7	±6	±6	±15	±16	±15	±15	18	±11		
	9	±9	±7	±7	±6	±6	±15	±16	±15	±15	20	±7		
	10	±7	±4	±4	±4	±4	±15	±16	±15	±15	22	±7		
	11	±7	±4	±4	±4	±4	±12	±15	±13	±13	25			
	13	±4					±12	±15	±13	±13	28			
	15						±12	±15	±13	±13	30			
	20						±12	±15	±13	±13	32			
	23						±5	±10	±5	±5	35			
	25							±10	±5	±5	40			
	26							±5	±5	±5	43			
	28							±5			45			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque

	BIS00YK	BIS0046	BIS00Y5	BIS00Y4	BIS00LC	
	>10	>25	>50	>50	>25	>0
	>60	>100	>200	>200	>100	>100
	0-13	0-40	0-48	0-48	0-25	0-12
	0-13	0-40	0-48	0-48	0-25	0-12
	0	±9	±25	±26	±30	±15 ±10
	5	±9	±25	±26	±30	±15 ±10
	10	±8	±25	±26	±30	±15 ±8
	12	±4	±25	±26	±30	±13 ±2
	13	±4	±25	±26	±30	±13
	15		±25	±26	±30	±13
	18		±25	±26	±30	±13
	20		±25	±26	±30	±13
	25		±23	±24	±25	±5
	30		±20	±24	±25	
	36		±20	±24	±25	
	40		±10	±24	±25	
	45			±5	±10	
	48			±5	±10	
	55					
	60					



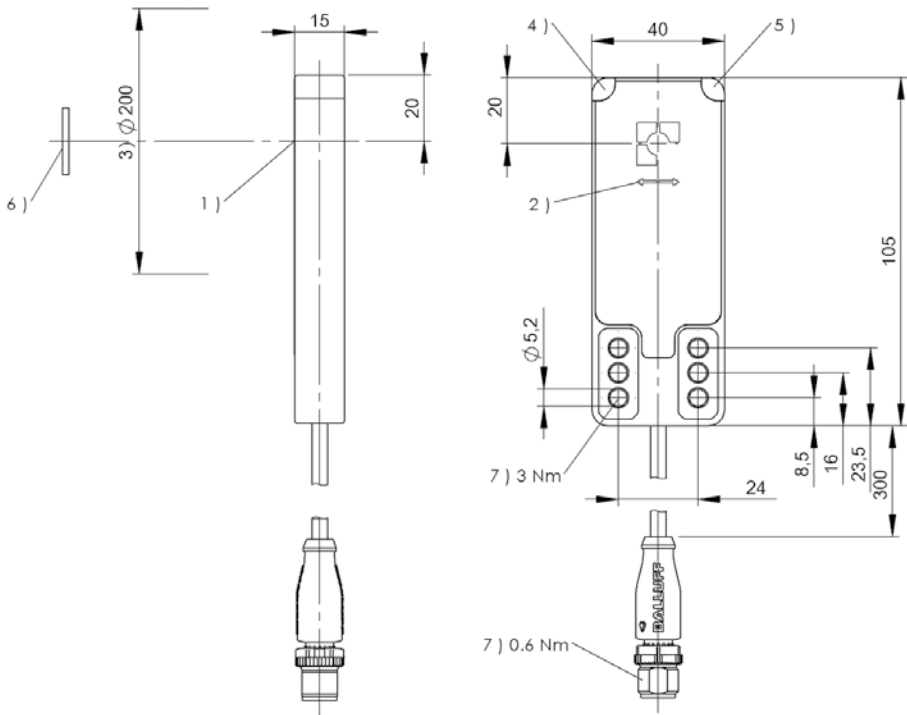
IO-Link, 10 bytes process data length	<b>BIS014K</b> BIS M-458-045-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	40 x 15 x 105 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	Zinc, die-cast
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210

Use with **IO-Link master** only

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2		BIS00P3				BIS00NZ		
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>240	>240	>240	>240	>27	>27	
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>480	>480	>480	>480	>27	>27	
Data carrier clear zone C											>50	>50	>50	>50	>0	>0	
Metallic mounting surface 40 x 22 mm	0-38	0-38			0-38	0-38											
Metallic mounting surface > 200 x 200 mm			0-42	0-42			0-34	0-34									
Working distance for writing	0-38	0-38	0-42	0-42	0-38	0-38	0-34	0-34	0-18	0-18	0-54	0-54	0-54	0-54	0-25	0-25	
Working distance for reading	0-38	0-38	0-42	0-42	0-38	0-38	0-34	0-34	0-18	0-18	0-54	0-54	0-54	0-54	0-25	0-25	
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	
0	±43	±18	±45	±21	±20	±40	±17	±35	0	±22	±12	±60	±30	±60	±30	±30	±20
5	±43	±18	±45	±21	±20	±40	±17	±35	5	±22	±12	±60	±30	±60	±30	±30	±20
10	±43	±18	±45	±21	±20	±40	±17	±35	10	±21	±10	±60	±30	±60	±30	±30	±20
15	±40	±17	±43	±20	±18	±35	±15	±33	15	±16	±8	±55	±27	±55	±27	±25	±15
20	±40	±17	±43	±20	±18	±35	±15	±33	16	±5	±2	±55	±27	±55	±27	±15	±10
30	±35	±15	±40	±18	±15	±30	±13	±28	18	±5	±2	±55	±27	±55	±27	±5	±5
34	±18	±5	±24	±12	±5	±10	±5	±10	30			±55	±27	±55	±27		
38	±18	±5	±24	±12	±5	±10			35			±50	±25	±50	±25		
40			±24	±12					40			±50	±25	±50	±25		
42			±15	±8					45			±35	±17	±35	±17		
50									50			±35	±17	±35	±17		
60									54			±15	±7	±15	±7		

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Data carrier, 7) Tightening torque



IO-Link, 10 bytes process data length	<b>BIS00LK</b> BIS M-401-045-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

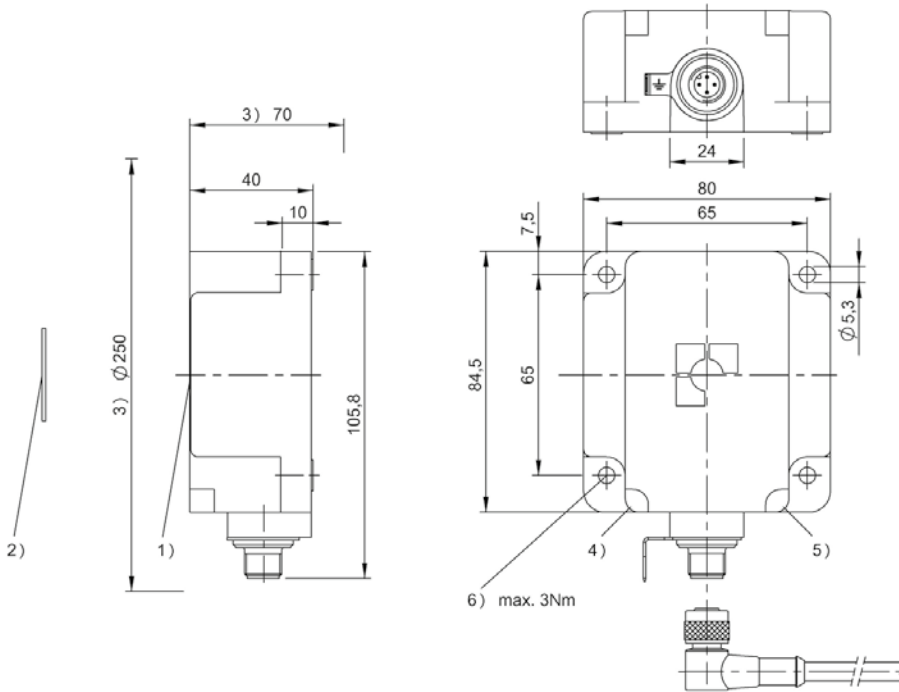
Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0047	BIS0043		BIS0044		BIS0045		BIS0046		
Data carrier distance to metal	>50	>25	>10	>50	>25	>10	>80	>50	>20	>50	>30	>50	>30	>50	>30	
Data carrier clear zone	>200	>150	>150	>200	>150	>150	>250	>200	>60	>200	>100	>200	>100	>200	>100	
Working distance for writing	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Working distance for reading	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Offset at distance																
	0	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	5	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	9	±22	±18	±10	±30	±24	±16	±30	±30	±16	±25	±15	±30	±20	±35	±25
	12	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±15	±25	±20	±35	±25
	15	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±12	±25	±18	±35	±25
	16	±20	±15	±6	±30	±20	±12	±30	±25	±16	±20	±12	±25	±18	±35	±25
	18	±20	±13	±4	±30	±20	±10	±30	±25	±14	±20	±8	±25	±16	±35	±25
	20	±20	±12	±2	±30	±20	±10	±30	±25		±20		±25	±14	±35	±25
	22	±16	±8		±24	±18	±8	±30	±20		±15		±20	±12	±35	±22
	25	±12	±4		±24	±18	±8	±30	±20		±15		±20	±10	±35	±22
	30				±24	±15	±6	±28	±20		±10		±20		±35	±22
	32				±20	±12	±4	±24	±15		±10		±15		±35	±22
	35				±20	±10		±22	±15				±15		±35	±20
	40				±15	±5		±18	±15				±15		±35	
	43				±8			±14							±25	
	45				±5			±12							±25	
	50							±4							±25	
	52														±25	
	60														±25	

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Tightening torque

BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS00YE		BIS00Y4	
>0	>0	>0	>0	>50	>50	>50	>50
>100	>100	>100	>100	>200	>200	>200	>200
0-32	0-16	0-16	0-16	0-50	0-50	0-75	0-75
0-32	0-16	0-16	0-16	0-50	0-50	0-75	0-75
±25	±24	±24	0	±30	±30	±50	±50
±25	±24	±24	5	±30	±30	±50	±50
±25	±20	±20	10	±30	±30	±50	±50
±25	±14	±14	15	±30	±30	±50	±50
±25	±4	±4	20	±30	±30	±50	±50
±25	±4	±4	25	±28	±28	±50	±50
±25			30	±28	±28	±50	±50
±25			35	±28	±28	±50	±50
±20			40	±28	±28	±50	±50
±20			45	±10	±10	±45	±45
±15			50	±10	±10	±45	±45
±15			55			±45	±45
			60			±45	±45
			65			±35	±35
			70			±35	±35
			75			±35	±35
			80				
			85				
			90				



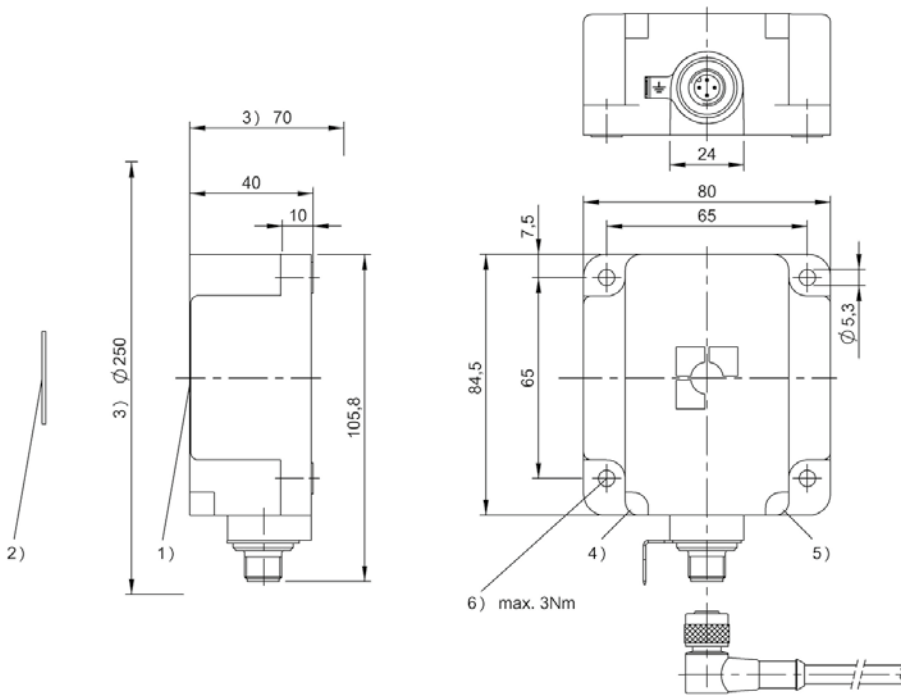
IO-Link, 32 bytes process data length	<b>BIS0102</b> BIS M-401-072-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS003Y			BIS003Z			BIS0047	BIS0043		BIS0044		BIS0045		BIS0046		
Data carrier distance to metal	>50	>25	>10	>50	>25	>10	>80	>50	>20	>50	>30	>50	>30	>50	>30	
Data carrier clear zone	>200	>150	>150	>200	>150	>150	>250	>200	>60	>200	>100	>200	>100	>200	>100	
Working distance for writing	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Working distance for reading	0-28	0-25	0-20	0-45	0-40	0-34	0-50	0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-35	
Offset at distance																
	0	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	5	±22	±18	±12	±30	±24	±16	±30	±30	±16	±25	±18	±30	±20	±35	±25
	9	±22	±18	±10	±30	±24	±16	±30	±30	±16	±25	±15	±30	±20	±35	±25
	12	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±15	±25	±20	±35	±25
	15	±22	±16	±8	±30	±24	±14	±30	±25	±16	±20	±12	±25	±18	±35	±25
	16	±20	±15	±6	±30	±20	±12	±30	±25	±16	±20	±12	±25	±18	±35	±25
	18	±20	±13	±4	±30	±20	±10	±30	±25	±14	±20	±8	±25	±16	±35	±25
	20	±20	±12	±2	±30	±20	±10	±30	±25		±20		±25	±14	±35	±25
	22	±16	±8		±24	±18	±8	±30	±20		±15		±20	±12	±35	±22
	25	±12	±4		±24	±18	±8	±30	±20		±15		±20	±10	±35	±22
	30				±24	±15	±6	±28	±20		±10		±20		±35	±22
	32				±20	±12	±4	±24	±15		±10		±15		±35	±22
	35				±20	±10		±22	±15				±15		±35	±20
	40				±15	±5		±18	±15				±15		±35	
	43				±8			±14							±25	
	45				±5			±12							±25	
	50							±4							±25	
	52														±25	
	60														±25	

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Tightening torque

BIS00M9 BIS00M8		BIS00NU BIS00NW BIS0100		BIS00YE		BIS00Y4	
>0	>0			>50	>50		
>100	>100			>200	>200		
0-32	0-16			0-50	0-75		
0-32	0-16			0-50	0-75		
±25	±24		0	±30	±50		
±25	±24		5	±30	±50		
±25	±20		10	±30	±50		
±25	±14		15	±30	±50		
±25	±4		20	±30	±50		
±25	±4		25	±28	±50		
			30	±28	±50		
			35	±28	±50		
			40	±28	±50		
			45	±10	±45		
			50	±10	±45		
			55		±45		
			60		±45		
			65		±35		
			70		±35		
			75		±35		
			80				
			85				
			90				



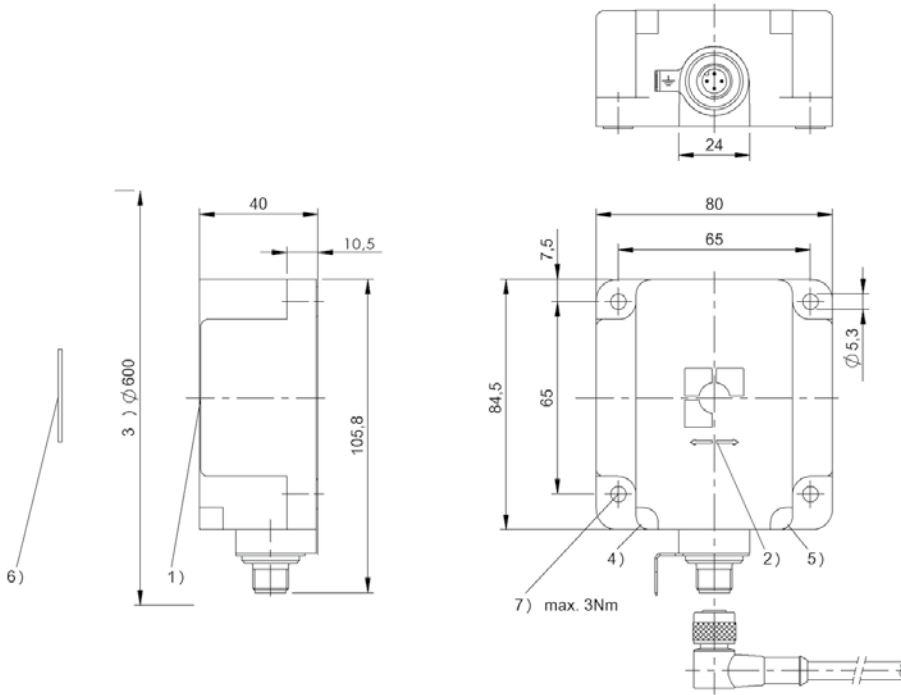
IO-Link, 10 bytes process data length	<b>BIS00LM</b> BIS M-451-045-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2				BIS00P3	
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>10	>10	>240	>240
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>50	>50	>480	>480
Data carrier clear zone C									>50	>50	>2	>2	>50	>50
Metallic mounting surface 40 x 22 mm	0-52	0-52			0-52	0-52								
Metallic mounting surface > 200 x 200 mm			0-65	0-65			0-65	0-65						
Working distance for writing	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Working distance for reading	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
	0 ±60	±25	±65	±26	±25	±60	±26	±65	0 ±35	±20			±60	±20
	5 ±60	±25	±65	±26	±25	±60	±26	±65	5 ±35	±20			±60	±20
	12 ±60	±25	±65	±25	±25	±60	±25	±65	10 ±35	±20			±60	±20
	15 ±60	±25	±65	±25	±25	±60	±25	±65	15 ±35	±20	±35	±15	±60	±20
	18 ±60	±25	±65	±25	±25	±60	±25	±65	20 ±35	±20	±35	±15	±60	±20
	20 ±60	±25	±65	±25	±25	±60	±25	±65	25 ±20	±12	±28	±15	±60	±20
	22 ±60	±25	±65	±25	±25	±60	±25	±65	30 ±20	±12	±28	±15	±60	±20
	25 ±60	±25	±65	±25	±25	±60	±25	±65	35				±60	±20
	30 ±60	±25	±65	±25	±25	±60	±25	±65	40				±60	±20
	32 ±50	±25	±65	±25	±25	±50	±25	±65	45				±60	±20
	35 ±50	±25	±65	±25	±25	±50	±25	±65	50				±60	±20
	40 ±50	±20	±50	±25	±20	±50	±25	±50	60				±60	±20
	45 ±25	±20	±50	±25	±20	±25	±25	±50	70				±60	±20
	50 ±25	±20	±50	±25	±20	±25	±25	±50	80				±60	±20
	52 ±25	±8	±25	±25	±8	±25	±25	±25	90				±40	±20
	60		±25	±10			±10	±25	100				±40	±20
	65		±25	±10			±10	±25						

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Data carrier on steel, 7) Tightening torque



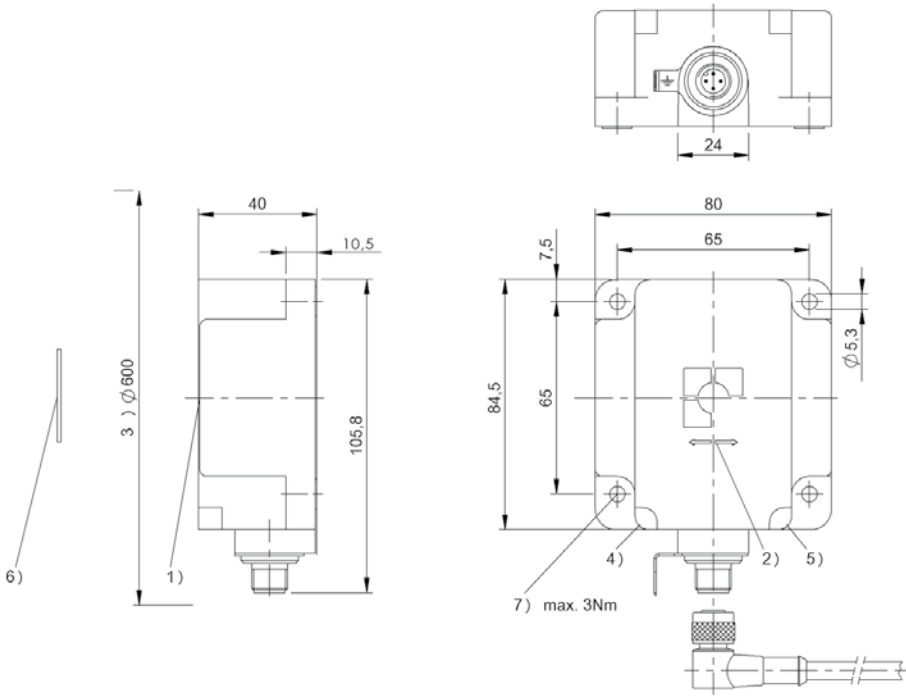
IO-Link, 32 bytes process data length	<b>BIS0103</b> BIS M-451-072-001-07-S4
Product Group	HF (13.56 MHz)
Dimension	80 x 40 x 84.5 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2				BIS00P3	
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>10	>10	>240	>240
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>50	>50	>480	>480
Data carrier clear zone C									>50	>50	>2	>2	>50	>50
Metallic mounting surface 40 x 22 mm	0-52	0-52			0-52	0-52								
Metallic mounting surface > 200 x 200 mm			0-65	0-65			0-65	0-65						
Working distance for writing	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Working distance for reading	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
	0 ±60	±25	±65	±26	±25	±60	±26	±65	0 ±35	±20			±60	±20
	5 ±60	±25	±65	±26	±25	±60	±26	±65	5 ±35	±20			±60	±20
	12 ±60	±25	±65	±25	±25	±60	±25	±65	10 ±35	±20			±60	±20
	15 ±60	±25	±65	±25	±25	±60	±25	±65	15 ±35	±20	±35	±15	±60	±20
	18 ±60	±25	±65	±25	±25	±60	±25	±65	20 ±35	±20	±35	±15	±60	±20
	20 ±60	±25	±65	±25	±25	±60	±25	±65	25 ±20	±12	±28	±15	±60	±20
	22 ±60	±25	±65	±25	±25	±60	±25	±65	30 ±20	±12	±28	±15	±60	±20
	25 ±60	±25	±65	±25	±25	±60	±25	±65	35				±60	±20
	30 ±60	±25	±65	±25	±25	±60	±25	±65	40				±60	±20
	32 ±50	±25	±65	±25	±25	±50	±25	±65	45				±60	±20
	35 ±50	±25	±65	±25	±25	±50	±25	±65	50				±60	±20
	40 ±50	±20	±50	±25	±20	±50	±25	±50	60				±60	±20
	45 ±25	±20	±50	±25	±20	±25	±25	±50	70				±60	±20
	50 ±25	±20	±50	±25	±20	±25	±25	±50	80				±60	±20
	52 ±25	±8	±25	±25	±8	±25	±25	±25	90				±40	±20
	60		±25	±10			±10	±25	100				±40	±20
	65		±25	±10			±10	±25						

Dimensions in mm



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) LED (Power), 5) LED (TP), 6) Data carrier on steel, 7) Tightening torque



IO-Link, 10 bytes process data length	<b>BIS00M1</b> BIS M-402-045-004-07-S4
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

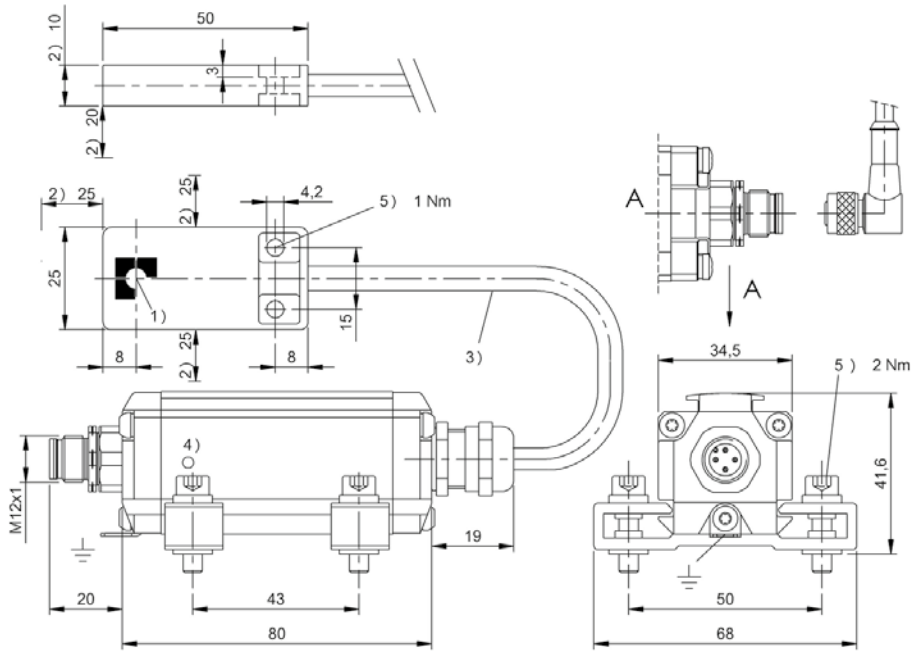
Use with **IO-Link master** only

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS00NU BIS00NW BIS0100		BIS003Y	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0		>0		>25
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0		>100		>100
Working distance for writing	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Working distance for reading	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Offset at distance														
	0	±4	±3	±5	±4	±8		±4	±3	±4	±4	0	±6	±11
	5	±2		±5	±2	±8		±2		±4	±2	5	±6	±11
	9					±6						7	±6	±9
	12					±4						9	±4	±9
	15					±4						12		±9
	16											15		±5

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque



IO-Link, 10 bytes process data length	<b>BISO126</b> BIS M-402-045-007-07-S4
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BISO0UC	BISO0UE
Data carrier distance to metal	>10	
Data carrier clear zone	>60	
Working distance for writing	0-3	
Working distance for reading	0-3	
Offset at distance		
	0	±5
	1	±5
	2	±5
	3	±2
	15	
	16	

Dimensions in mm





IO-Link, 32 bytes process data length	<b>BIS0106</b> BIS M-402-072-004-07-S4
Product Group	HF (13.56 MHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	IO-Link
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS0040		BIS0042		BIS0044		BIS0048		BIS004A		BIS00NU BIS00NW BIS0100		BIS003Y	
Data carrier distance to metal	>10	>0	>10	>0	>25		>10	>0	>10	>0		>0		>25
Data carrier clear zone	>60	>0	>60	>0	>80		>60	>0	>60	>0		>100		>100
Working distance for writing	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Working distance for reading	0-6	0-4	0-8	0-6	0-15		0-5	0-4	0-8	0-5		0-9		0-15
Offset at distance														
	0	±4	±3	±5	±4	±8		±4	±3	±4	±4	0	±6	±11
	5	±2		±5	±2	±8		±2		±4	±2	5	±6	±11
	9					±6						7	±6	±9
	12					±4						9	±4	±9
	15					±4						12		±9
	16											15		±5

Dimensions in mm





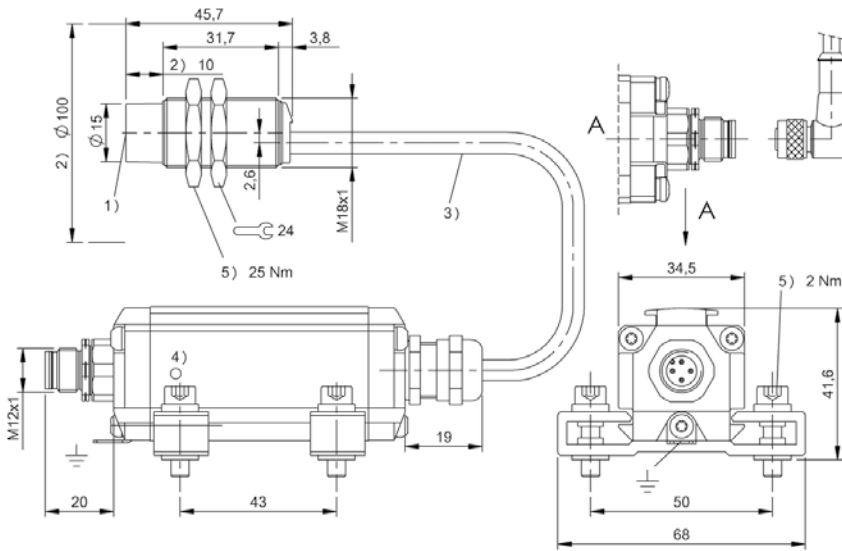
IO-Link, 10 bytes process data length	<b>BIS00LW</b> BIS M-402-045-002-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 45.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface aluminum
Interface	IO-Link 1.1
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	BIS0040		BIS0042		BIS0048		BIS004A		BIS0044			BIS003Y		BIS0045	
Data carrier distance to metal	>10	>0	>10	>0	>10	>0	>10	>0	>25			>25		>25	
Data carrier clear zone	>60	>0	>60	>0	>60	>0	>60	>0	>80			>100		>100	
Working distance for writing	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14		0-18	
Working distance for reading	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14		0-18	
Offset at distance	0	±3	±3	±4	±3	±2	±4	±3	±7			0	±10	±12	
	5	±2		±3	±2	±2		±3	±2	±7		5	±10	±12	
	9								±5			10	±9	±11	
	12								±3			14	±5	±10	
	15								±3			15		±10	
	16											18		±5	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque

BIS00YL	BIS00YK	BIS00YE	BIS00NU BIS00NW BIS0100
>25	>25	>25	>0
>100	>100	>100	>100
0-9	0-9	0-20	0-9
0-9	0-9	0-20	0-9
±6	±6	±12	±6
±6	±6	±12	±6
±5	±5	±12	±6
±1	±1	±12	±4
		±12	
		±10	



IO-Link, 32 bytes process data length	<b>BIS0105</b> BIS M-402-072-002-07-S4
Product Group	HF (13.56 MHz)
Dimension	Ø 18 x 45.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface aluminum
Interface	IO-Link
Operating voltage $U_b$	18...30 VDC Supports only LPS/Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

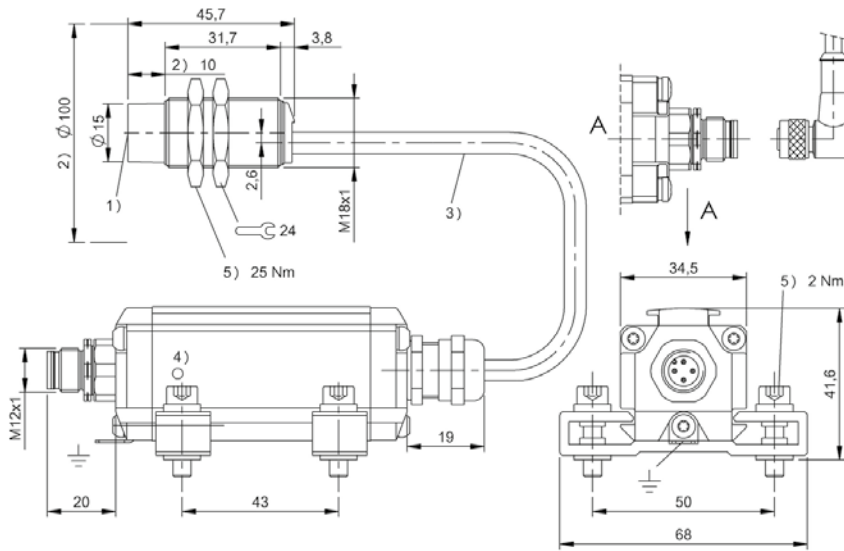
Use with **IO-Link master** only

Appropriate data carrier

	BIS0040		BIS0042		BIS0048		BIS004A		BIS0044			BIS003Y		BIS0045	
Data carrier distance to metal	>10	>0	>10	>0	>10	>0	>10	>0	>25			>25	>25		
Data carrier clear zone	>60	>0	>60	>0	>60	>0	>60	>0	>80			>100	>100		
Working distance for writing	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14	0-18		
Working distance for reading	0-6	0-4	0-8	0-6	0-5	0-4	0-8	0-5	0-15			0-14	0-18		
Offset at distance	0	±3	±3	±4	±3	±2	±4	±3	±7			0	±10	±12	
	5	±2		±3	±2		±3	±2	±7			5	±10	±12	
	9								±5			10	±9	±11	
	12								±3			14	±5	±10	
	15								±3			15		±10	
	16											18		±5	

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) LED function indicator, 5) Tightening torque

BIS00YL	BIS00YK	BIS00YE	BIS00NU BIS00NW BIS0100
>25	>25	>25	>0
>100	>100	>100	>100
0-9	0-9	0-20	0-9
0-9	0-9	0-20	0-9
±6	±6	±12	±6
±6	±6	±12	±6
±5	±5	±12	±6
±1	±1	±12	±4
		±12	
		±10	

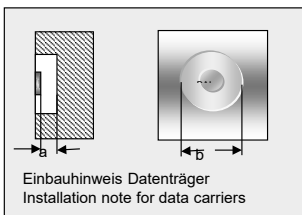


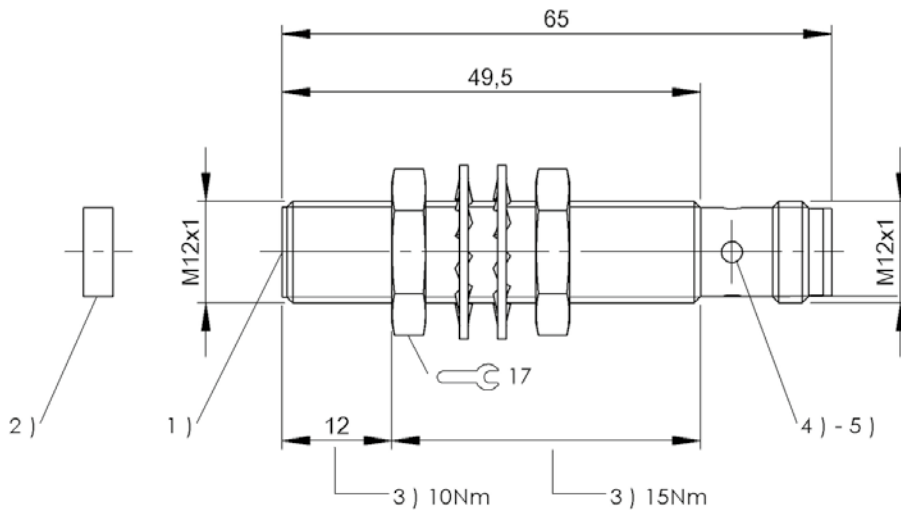
IO-Link, 10 Byte process data length	<b>BIS01E5</b> BIS M-4A3-082-401-07-S4
Product Group	HF (13.56 MHz)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Process data IN	10 bytes
Process data OUT	10 bytes
IP rating	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, WEEE, EAC, cULus

Appropriate data carrier

	BIS00UC			BIS018Y			BIS01A1		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0
Working distance for writing	0-5,5	0-3,5	0-2,5	0-4	0-3,5	0-2	0-5	0-4	
Working distance for reading	0-5,5	0-3,5	0-2,5	0-4	0-3,5	0-2	0-5	0-4	
Offset at distance									
	0	±3,5	±2,5	±2	±2,5	±2,5	±2	±3	±3
	2	±3,5	±2,5	±2	±2,5	±2,5	±1,5	±3	±3
	3	±3,5	±2,5	±1,5	±2	±2		±3	±2,5
	3,5	±3,5	±2,5		±2	±2		±3	±2,5
	4	±3	±2		±1,5			±3	±2
	4,5	±3						±2	
	5,5	±2,5							

Dimensions in mm





1) LED 4x on circumference, 2) Power/Status, 3) Tightening torque, 4) Sensing surface

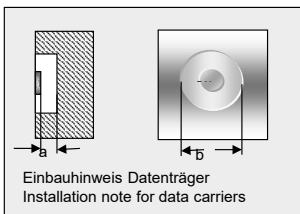


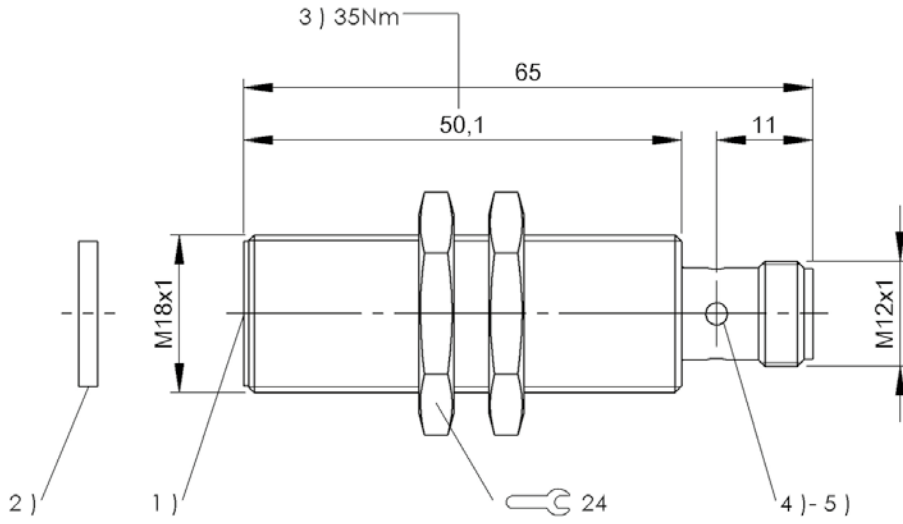
IO-Link, 10 Byte process data length	<b>BIS01E6</b> BIS M-4A6-082-401-07-S4
Product Group	HF (13.56 MHz)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Process data IN	10 bytes
Process data OUT	10 bytes
IP rating	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, WEEE, EAC, cULus

Appropriate data carrier

	BIS01A1			BIS00YE			BIS0044			BIS00UC		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0
Working distance for writing	0-7	0-7,5		0-16			0-17			0-9	0-5,5	0-4
Working distance for reading	0-7	0-7,5		0-16			0-17			0-9	0-5,5	0-4
Offset at distance												
	0	±5	±5	±10			±9			±5	±3	±3,5
	2	±5	±5	±10			±9			±5	±3	±3,5
	3	±5	±5	±10			±9			±5	±3	±3
	4	±5	±5	±10			±9			±5	±2,5	±2,5
	4,5	±5	±5	±10			±9			±5	±2,5	
	5	±4,5	±4,5	±10			±9			±4,5	±2,5	
	5,5	±4,5	±4,5	±10			±9			±4,5	±2	
	6	±4	±4,5	±10			±9			±4,5		
	6,5	±3,5	±4,5	±10			±9			±4,5		
	7		±4	±10			±9			±4,5		
	7,5		±3,5	±10			±9			±4,5		
	9			±10			±9			±3,5		
	10			±9,5			±8,5					
	16			±7,5			±7					

Dimensions in mm





1) LED 4x on circumference, 2) Power/Status, 3) Tightening torque, 4) Sensing surface

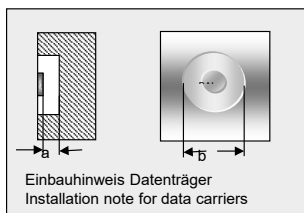


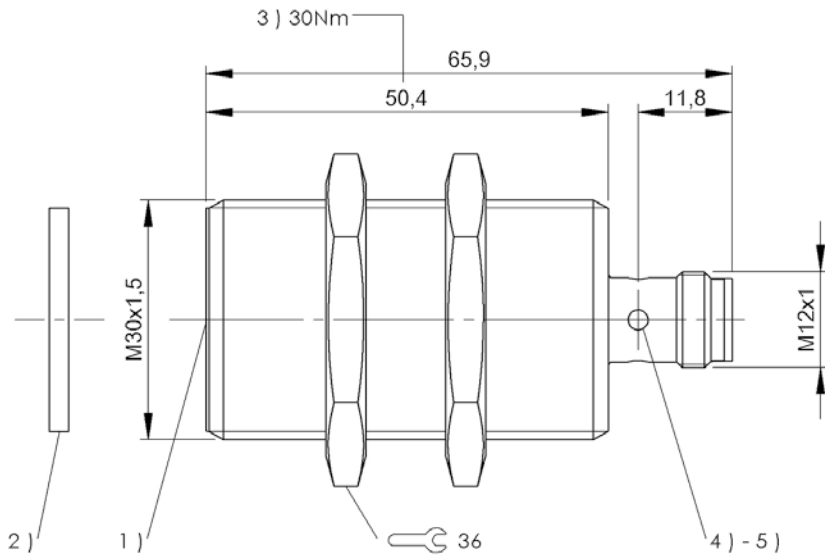
IO-Link, 10 Byte process data length	<b>BIS01E7</b> BIS M-4A7-082-401-07-S4
Product Group	HF (13.56 MHz)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Process data IN	10 bytes
Process data OUT	10 bytes
IP rating	IP67
Approval/Conformity	CE, FCC Part 15, IC RSS-210, WEEE, EAC, cULus

Appropriate data carrier

	BIS01CA			BIS00YE			BIS0044			BIS0045		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0
Working distance for writing	0-11,5	0-10		0-30			0-28			0-36		
Working distance for reading	0-11,5	0-10		0-30			0-28			0-36		
Offset at distance												
	0	±8	±7	±16						±18		
	2	±8	±7	±16			±15			±18		
	3,5	±8	±7	±16			±15			±18		
	4	±8	±7	±16			±15			±18		
	4,5	±8	±7	±16			±15			±18		
	5	±8	±7	±16			±15			±18		
	5,5	±8	±7	±16			±15			±18		
	6	±8	±7	±16			±15			±18		
	6,5	±8	±7	±16			±15			±18		
	7	±8	±7	±16			±15			±18		
	8	±7,5	±6,5	±16			±15			±18		
	9	±7,5	±6,5	±16			±15			±18		
	10	±7,5	±5,5	±16			±15			±18		
	11	±6		±16			±15			±18		
	20			±15			±14			±18		
	28			±15			±11,5			±18		
	30			±13						±16		
										±14		

Dimensions in mm





1) LED 4x on circumference, 2) Power/Status, 3) Tightening torque, 4) Sensing surface

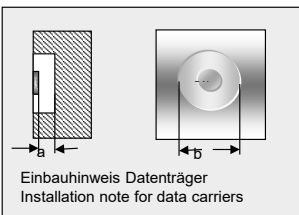


IO-Link, 10 Byte process data length	<b>BIS01E2</b> BIS M-4A9-082-401-07-PU1-0,3
Product Group	HF (13.56 MHz)
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Process data IN	10 bytes
Process data OUT	10 bytes
IP rating	IP68, IP69K
Approval/Conformity	CE, FCC Part 15, IC RSS-210, WEEE, Ecolab

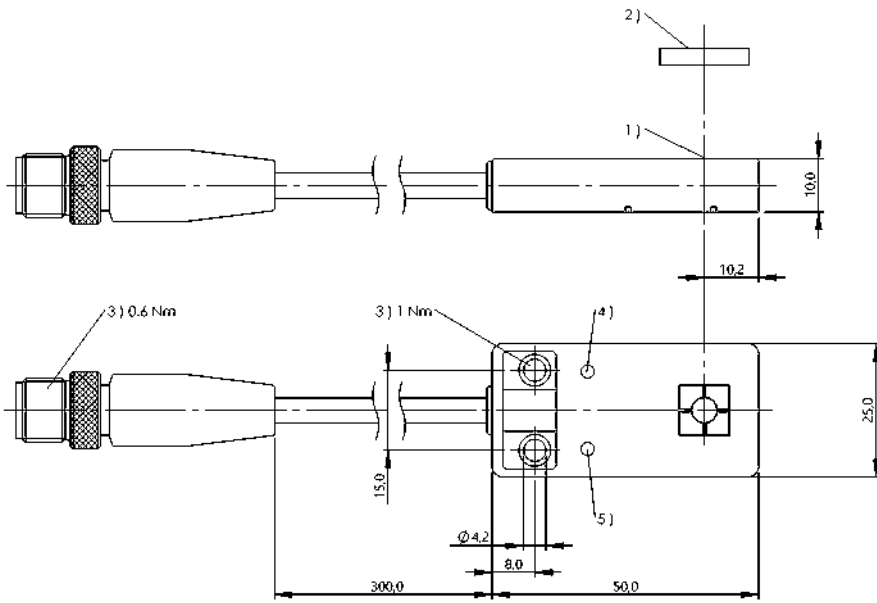
Appropriate data carrier

	BIS01CA			BIS00YE			BIS0044			BIS0045		
Data carrier distance to metal	>20	>0	>0	>20	>0	>0	>20	>0	>0	>20	>0	>0
Data carrier clear zone	>100	>100	>0	>100	>100	>0	>100	>100	>0	>100	>100	>0
Working distance for writing	0-9	0-8,5		0-20			0-20			0-26		
Working distance for reading	0-9	0-8,5		0-20			0-20			0-26		
Offset at distance												
	0	±6,5	±6,5	±12			±11			±13		
	2	±6,5	±6,5	±12			±11			±13		
	3,5	±5,5	±5,5	±12			±11			±13		
	4	±5,5	±5,5	±12			±11			±13		
	4,5	±5,5	±5,5	±12			±11			±13		
	5	±5,5	±5,5	±12			±11			±13		
	5,5	±4	±4	±9			±11			±13		
	6	±4	±4	±9			±11			±13		
	6,5	±4	±4	±9			±11			±13		
	7	±4	±4	±9			±11			±13		
	8,5	±4	±3	±9			±11			±13		
	9	±3		±9			±11			±13		
	10			±9			±11			±13		
	11			±9			±9			±12		
	20			±9			±9			±12		
	26									±10		

Dimensions in mm







1) Sensing surface, 2) Data carrier, 3) Tightening torque, 4) LED function indicator, 5) LED function indicator

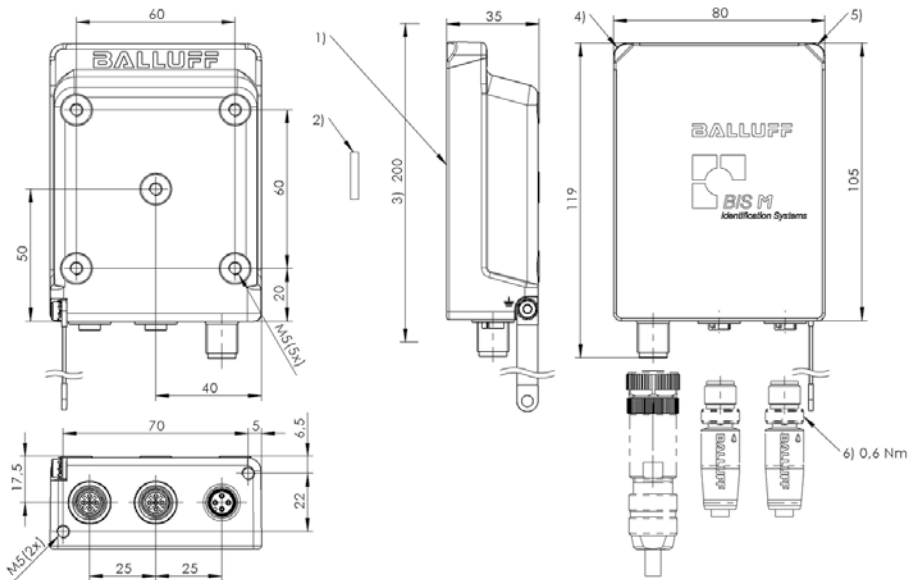


Profinet	<b>BIS0179</b> BIS M-4008-048-001-ST4
Product Group	HF (13.56 MHz)
Dimension	80 x 35 x 119 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	2x M12x1-Female, 4-pole, D-coded M12x1-Male, 4-pole, A-coded
Housing material	Zinc, die-cast
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2 port Switch
Operating voltage $U_b$	24 V DC LPS Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

## Appropriate data carrier

	BIS0043			BIS011F BIS011E BIS011A BIS0139			BIS0045	BIS0046		BIS0119	BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>50	>0	>0	>50	>0	>0	>50	>50		>0	>0	
Data carrier clear zone	>200	>200	>0	>200	>200	>0	>200	>200		>100	>100	
Working distance for writing	0-52	0-32	10-19	0-36	0-28	11-18	0-52	0-80		0-38	0-18	
Working distance for reading	0-52	0-32	10-19	0-36	0-28	11-18	0-52	0-80		0-38	0-18	
Offset at distance												
	0	±32	±25		±27	±22		±32		0	±27	±22
	5	±32	±25		±27	±22		±32		5	±27	±22
	10	±32	±25	±20	±27	±22		±32		10	±27	±20
	11	±32	±22	±20	±25	±20	±18	±32		15	±25	±18
	12	±32	±22	±20	±25	±20	±18	±32		18	±25	±10
	16	±32	±22	±15	±25	±20	±15	±32		20	±25	
	17	±32	±22	±15	±25	±20	±2	±32		25	±22	
	18	±32	±22	±8	±25	±20	±2	±32		30	±22	
	19	±32	±22	±8	±25	±20		±32		35	±10	
	20	±32	±22		±25	±20		±32		38	±10	
	25	±28	±15		±22	±15		±28		40		
	28	±28	±15		±22	±1		±28		45		
	30	±28	±15		±22			±28		50		
	32	±28	±10		±5			±28		55		
	36	±28			±5			±28		60		
	40	±28						±28		65		
	50	±12						±12		70		
	52	±6						±6		75		
	65									80		
	75									85		
	80									90		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque

	BIS00YE	BIS00Y9	BIS00Y4	BIS00Y2
	>50	>50 >0	>50	>50
	>200	>200 >200	>200	>200
	0-60	0-55 0-45	0-90	0-65
	0-60	0-55 0-45	0-90	0-65
	0 ±35	±32 ±27	±50	±36
	10 ±35	±32 ±27	±50	±36
	20 ±35	±32 ±27	±50	±36
	30 ±30	±30 ±25	±50	±33
	40 ±30	±30 ±20	±45	±33
	45 ±20	±24 ±5	±45	±25
	50 ±20	±24	±45	±25
	55 ±20	±10	±45	±25
	60 ±10		±45	±25
	65		±30	±10
	70		±30	
	75		±30	
	80		±30	
	85		±20	
	90		±20	
	100			
	110			
	120			
	130			
	140			
	150			

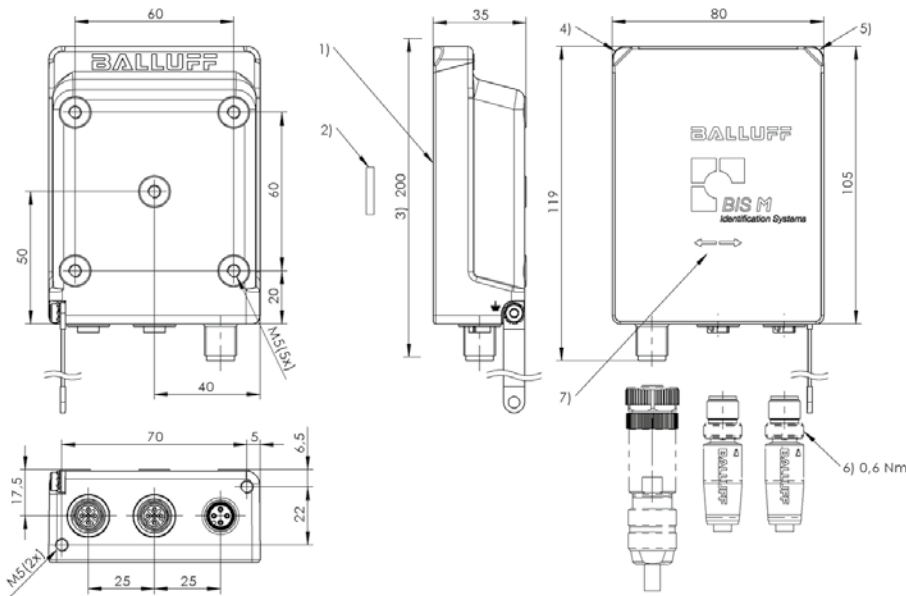


Profinet	<b>BIS017A</b> BIS M-4008-048-002-ST4
Product Group	HF (13.56 MHz)
Dimension	80 x 35 x 119 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	Rod
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	2x M12x1-Female, 4-pole, D-coded M12x1-Male, 4-pole, A-coded
Housing material	Zinc, die-cast
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2 port Switch
Operating voltage U <sub>b</sub>	24 V DC LPS Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2		BIS00P3				BIS011W BIS011Y BIS011U BIS013E				
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>240	>240	>240	>240	>240	>240		
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>240	>240	>240	>240	>240	>240		
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>480	>480	>480	>480	>480	>480		
Data carrier clear zone C										>50	>50	>50	>50	>0	>0	>50	>50		
Metallic mounting surface 40 x 22 mm	0-65	0-65			0-65	0-65													
Metallic mounting surface > 200 x 200 mm			0-60	0-60			0-45	0-45											
Working distance for writing	0-65	0-65	0-60	0-60	0-65	0-65	0-45	0-45		0-35	0-35	0-100	0-100	0-100	0-100	0-55	0-55		
Working distance for reading	0-65	0-65	0-60	0-60	0-65	0-65	0-45	0-45		0-35	0-35	0-100	0-100	0-100	0-100	0-55	0-55		
Offset at distance																			
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y			
	0	±70	±30	±65	±30	±30	±70	±25	±50	0	±44	±22	0	±100	±40	±100	±40	±65	±30
	5	±70	±30	±65	±30	±30	±70	±25	±50	5	±44	±22	5	±100	±40	±100	±40	±65	±30
	10	±70	±30	±65	±30	±30	±70	±25	±50	10	±44	±22	10	±100	±40	±100	±40	±65	±30
	15	±70	±30	±65	±30	±30	±70	±25	±50	15	±40	±20	20	±100	±40	±100	±40	±65	±30
	20	±70	±30	±65	±30	±30	±70	±25	±50	20	±40	±20	25	±100	±40	±100	±40	±60	±25
	25	±65	±25	±60	±25	±25	±65	±20	±40	25	±32	±18	30	±100	±40	±100	±40	±60	±25
	30	±65	±25	±60	±25	±25	±65	±20	±40	30	±32	±18	40	±100	±40	±100	±40	±60	±25
	35	±65	±25	±60	±25	±25	±65	±20	±40	35	±10	±3	50	±80	±35	±80	±35	±30	±20
	40	±65	±25	±60	±25	±25	±65	±15	±30	40			55	±80	±35	±80	±35	±20	±10
	45	±40	±20	±40	±20	±20	±40	±5	±5	45			60	±80	±35	±80	±35		
	50	±40	±20	±40	±20	±20	±40			50			70	±80	±35	±80	±35		
	55	±40	±20	±40	±20	±20	±40			55			75	±80	±35	±80	±35		
	60	±40	±20	±20	±10	±20	±40			60			80	±80	±35	±80	±35		
	65	±20	±10			±10	±20			80			95	±55	±25	±55	±25		
	70									95			100	±30	±10	±30	±10		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque, 7) Read/write axis

	BIS011M BIS011Z BIS011N BIS013C				BIS012J BIS012K BIS012L BIS013F				BIS0117				BIS0112				BIS00NZ					
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	>27	>27		
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	>27	>27		
	0-42	0-42			0-42	0-42			0-68	0-68			0-68	0-68					0-30	0-30		
			0-42	0-42			0-42	0-42			0-68	0-68			0-58	0-58	0-55	0-55				
	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-68	0-68	0-68	0-68	0-68	0-68	0-58	0-58	0-55	0-55	0-30	0-30		
	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-68	0-68	0-68	0-68	0-68	0-68	0-58	0-58	0-55	0-55	0-30	0-30		
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y		
0	±45	±25	±45	±25	±25	±45	±45	±25	0	±75	±32	±75	±32	±75	±32	±60	±28	0	±65	±28	±44	±24
5	±45	±25	±45	±25	±25	±45	±45	±25	5	±75	±32	±75	±32	±75	±32	±60	±28	5	±65	±28	±44	±24
10	±45	±25	±45	±25	±25	±45	±45	±25	10	±75	±32	±75	±32	±75	±32	±60	±28	10	±65	±28	±44	±24
15	±45	±25	±45	±25	±25	±45	±45	±25	15	±75	±32	±75	±32	±75	±32	±60	±28	15	±65	±28	±38	±21
20	±45	±25	±45	±25	±25	±45	±45	±25	20	±75	±32	±75	±32	±75	±32	±60	±28	20	±65	±28	±38	±21
25	±30	±18	±30	±18	±18	±30	±30	±18	25	±70	±28	±70	±28	±70	±28	±55	±25	25	±55	±25	±25	±15
30	±30	±18	±30	±18	±18	±30	±30	±18	30	±70	±28	±70	±28	±70	±28	±55	±25	30	±55	±25	±8	±5
35	±30	±18	±30	±18	±18	±30	±30	±18	35	±70	±28	±70	±28	±70	±28	±55	±25	35	±55	±25		
40	±20	±10	±20	±10	±10	±20	±20	±10	40	±70	±28	±70	±28	±70	±28	±55	±25	40	±55	±25		
42	±10	±5	±10	±5	±5	±10	±10	±5	45	±50	±25	±50	±25	±50	±25	±35	±18	45	±40	±20		
45									50	±50	±25	±50	±25	±50	±25	±35	±18	50	±40	±20		
50									55	±50	±25	±50	±25	±50	±25	±35	±18	55	±5	±5		
55									58	±50	±25	±50	±25	±50	±25	±15	±5	60				
60									65	±50	±25	±50	±25	±50	±25			65				
65									68	±20	±10	±20	±10	±20	±10			70				

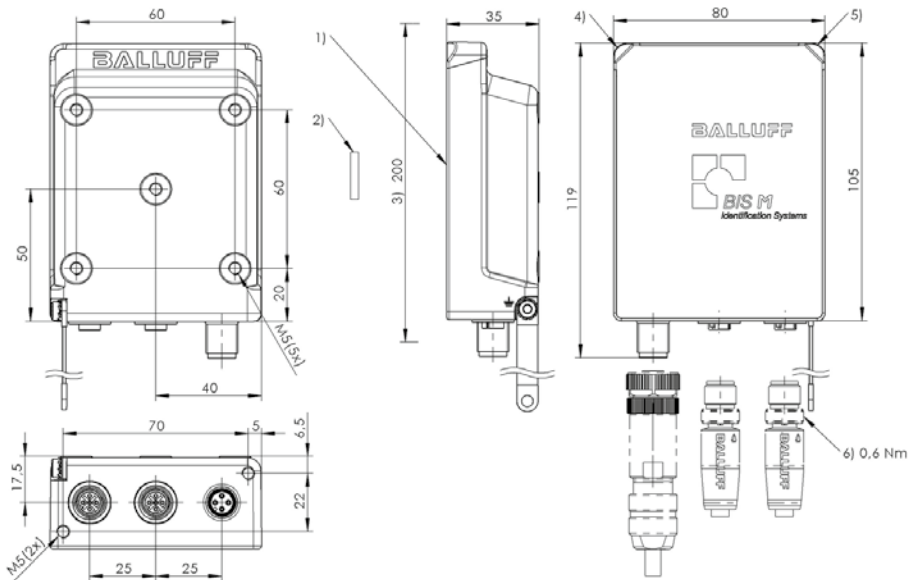


Ethernet/IP	<b>BIS018A</b> BIS M-4006-034-001-ST4
Product Group	HF (13.56 MHz)
Dimension	80 x 35 x 119 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	2x M12x1-Female, 4-pole, D-coded M12x1-Male, 4-pole
Housing material	Zinc, die-cast
Interface	Ethernet/IP, Ethernet/IP 2 port Switch
Operating voltage $U_b$	24 V DC LPS Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0043			BIS011F BIS011E BIS011A BIS0139				BIS0045	BIS0046		BIS0119	BIS00NU BIS00NW BIS0100	
Data carrier distance to metal	>50	>0	>0	>50	>0	>0	>50		>50		>0	>0	
Data carrier clear zone	>200	>200	>0	>200	>200	>0	>200		>200		>100	>100	
Working distance for writing	0-52	0-32	10-19	0-36	0-28	11-18	0-52		0-80		0-38	0-18	
Working distance for reading	0-52	0-32	10-19	0-36	0-28	11-18	0-52		0-80		0-38	0-18	
Offset at distance													
	0	±32	±25		±27	±22		±32		±42	0	±27	±22
	5	±32	±25		±27	±22		±32		±42	5	±27	±22
	10	±32	±25	±20	±27	±22		±32		±42	10	±27	±20
	11	±32	±22	±20	±25	±20	±18	±32		±42	15	±25	±18
	12	±32	±22	±20	±25	±20	±18	±32		±42	18	±25	±10
	16	±32	±22	±15	±25	±20	±15	±32		±42	20	±25	
	17	±32	±22	±15	±25	±20	±2	±32		±42	25	±22	
	18	±32	±22	±8	±25	±20	±2	±32		±42	30	±22	
	19	±32	±22	±8	±25	±20		±32		±42	35	±10	
	20	±32	±22		±25	±20		±32		±42	38	±10	
	25	±28	±15		±22	±15		±28		±42	40		
	28	±28	±15		±22	±1		±28		±42	45		
	30	±28	±15		±22			±28		±42	50		
	32	±28	±10		±5			±28		±38	55		
	36	±28			±5			±28		±38	60		
	40	±28						±28		±38	65		
	50	±12						±12		±38	70		
	52	±6						±6		±38	75		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque

	BIS00YE	BIS00Y9	BIS00Y4	BIS00Y2
	>50	>50	>0	>50
	>200	>200	>200	>200
	0-60	0-55	0-45	0-90
	0-60	0-55	0-45	0-90
	0	±35	±32	±27
	10	±35	±32	±27
	20	±35	±32	±27
	30	±30	±30	±25
	40	±30	±30	±20
	45	±20	±24	±5
	50	±20	±24	
	55	±20	±10	
	60	±10		
	65			
	70			
	75			
	80			
	85			
	90			
	100			
	110			
	120			



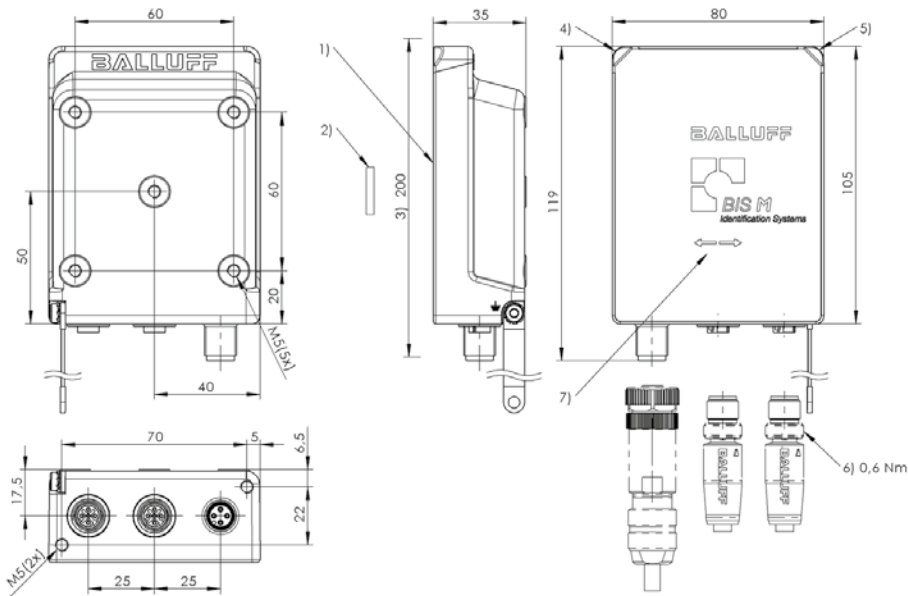
Ethernet/IP	<b>BIS018C</b> BIS M-4006-034-002-ST4
Product Group	HF (13.56 MHz)
Dimension	80 x 35 x 119 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	Rod
Supported data carrier types	DIN ISO 15693, DIN ISO 15693 (High Memory)
Connection	2x M12x1-Female, 4-pole, D-coded M12x1-Male, 4-pole
Housing material	Zinc, die-cast
Interface	Ethernet/IP, Ethernet/IP 2 port Switch
Operating voltage $U_b$	24 V DC LPS Class 2
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS004F				BIS004H				BIS00M2		BIS00P3				BIS011W BIS011Y BIS011U BIS013E				
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>240	>240	>240	>240	>240	>240		
Data carrier clear zone A	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>240	>240	>240	>240	>240	>240		
Data carrier clear zone B	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>480	>480	>480	>480	>480	>480		
Data carrier clear zone C										>50	>50	>50	>50	>0	>0	>50	>50		
Metallic mounting surface 40 x 22 mm	0-65	0-65			0-65	0-65													
Metallic mounting surface > 200 x 200 mm			0-60	0-60				0-45	0-45										
Working distance for writing	0-65	0-65	0-60	0-60	0-65	0-65	0-45	0-45		0-35	0-35	0-100	0-100	0-100	0-100	0-55	0-55		
Working distance for reading	0-65	0-65	0-60	0-60	0-65	0-65	0-45	0-45		0-35	0-35	0-100	0-100	0-100	0-100	0-55	0-55		
Offset at distance	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y			
	0	±70	±30	±65	±30	±30	±70	±25	±50	0	±44	±22	0	±100	±40	±100	±40	±65	±30
	5	±70	±30	±65	±30	±30	±70	±25	±50	5	±44	±22	5	±100	±40	±100	±40	±65	±30
	10	±70	±30	±65	±30	±30	±70	±25	±50	10	±44	±22	10	±100	±40	±100	±40	±65	±30
	15	±70	±30	±65	±30	±30	±70	±25	±50	15	±40	±20	20	±100	±40	±100	±40	±65	±30
	20	±70	±30	±65	±30	±30	±70	±25	±50	20	±40	±20	25	±100	±40	±100	±40	±60	±25
	25	±65	±25	±60	±25	±25	±65	±20	±40	25	±32	±18	30	±100	±40	±100	±40	±60	±25
	30	±65	±25	±60	±25	±25	±65	±20	±40	30	±32	±18	40	±100	±40	±100	±40	±60	±25
	35	±65	±25	±60	±25	±25	±65	±20	±40	35	±10	±3	50	±80	±35	±80	±35	±30	±20
	40	±65	±25	±60	±25	±25	±65	±15	±30	40			55	±80	±35	±80	±35	±20	±10
	45	±40	±20	±40	±20	±20	±40	±5	±5	45			60	±80	±35	±80	±35		
	50	±40	±20	±40	±20	±20	±40			50			70	±80	±35	±80	±35		
	55	±40	±20	±40	±20	±20	±40			55			75	±80	±35	±80	±35		
	60	±40	±20	±20	±10	±20	±40			60			80	±80	±35	±80	±35		
	65	±20	±10			±10	±20			80			95	±55	±25	±55	±25		
	70									95			100	±30	±10	±30	±10		
	75									100			110						
	80									110			120						

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) LED (Power), 5) LED (CP), 6) Tightening torque, 7) Read/write axis

	BIS011M BIS011Z BIS011N BIS013C				BIS012J BIS012K BIS012L BIS013F				BIS0117				BIS0112				BIS00NZ					
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	>27	>27		
	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>200	>27	>27	>27	>27		
	0-42	0-42			0-42	0-42				0-68	0-68			0-68	0-68				0-30	0-30		
	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-68	0-68	0-68	0-68	0-68	0-68	0-58	0-58		0-55	0-55		
	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-42	0-68	0-68	0-68	0-68	0-68	0-68	0-58	0-58		0-55	0-55		
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y		
0	±45	±25	±45	±25	±25	±45	±45	±25	0	±75	±32	±75	±32	±75	±32	±60	±28	0	±65	±28	±44	±24
5	±45	±25	±45	±25	±25	±45	±45	±25	5	±75	±32	±75	±32	±75	±32	±60	±28	5	±65	±28	±44	±24
10	±45	±25	±45	±25	±25	±45	±45	±25	10	±75	±32	±75	±32	±75	±32	±60	±28	10	±65	±28	±44	±24
15	±45	±25	±45	±25	±25	±45	±45	±25	15	±75	±32	±75	±32	±75	±32	±60	±28	15	±65	±28	±38	±21
20	±45	±25	±45	±25	±25	±45	±45	±25	20	±75	±32	±75	±32	±75	±32	±60	±28	20	±65	±28	±38	±21
25	±30	±18	±30	±18	±18	±30	±30	±18	25	±70	±28	±70	±28	±70	±28	±55	±25	25	±55	±25	±25	±15
30	±30	±18	±30	±18	±18	±30	±30	±18	30	±70	±28	±70	±28	±70	±28	±55	±25	30	±55	±25	±8	±5
35	±30	±18	±30	±18	±18	±30	±30	±18	35	±70	±28	±70	±28	±70	±28	±55	±25	35	±55	±25		
40	±20	±10	±20	±10	±10	±20	±20	±10	40	±70	±28	±70	±28	±70	±28	±55	±25	40	±55	±25		
42	±10	±5	±10	±5	±5	±10	±10	±5	45	±50	±25	±50	±25	±50	±25	±35	±18	45	±40	±20		
45									50	±50	±25	±50	±25	±50	±25	±35	±18	50	±40	±20		
50									55	±50	±25	±50	±25	±50	±25	±35	±18	55	±5	±5		
55									58	±50	±25	±50	±25	±50	±25	±15	±5	60				
60									65	±50	±25	±50	±25	±50	±25			65				
65									68	±20	±10	±20	±10	±20	±10			70				
70									75									75				
75									80													

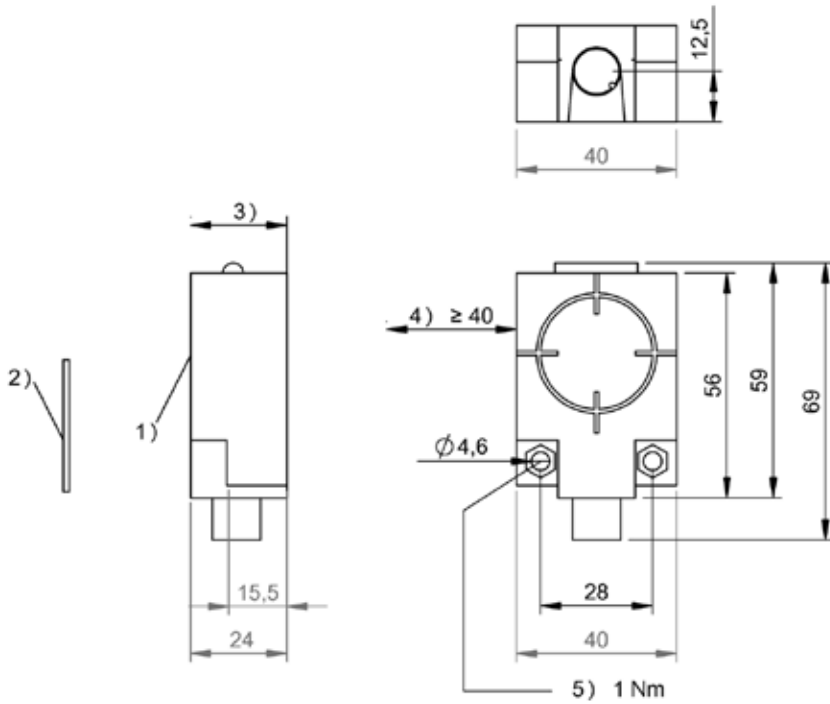


USB	<b>BIS00W4</b> BIS M-410-068-001-09-S72
Product Group	HF (13.56 MHz)
Dimension	40 x 24 x 56 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 5-pin
Housing material	PC, with PU potting
Interface	USB 2.0
Operating voltage $U_b$	5 V DC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YH	BIS00YF	BIS00YE		BIS00YC	BIS00YA	
Data carrier distance to metal	>10	>10	>10	>25	>25		>25	>25	
Data carrier clear zone	>60	>60	>60	>100	>100		>100	>100	
Working distance for writing	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Working distance for reading	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Offset at distance									
	0 ±15	±12	±10	±30	±25		0 ±15	±15	
	2 ±15	±12	±10	±30	±25		5 ±15	±15	
	4 ±15	±12	±7.5	±30	±25		10 ±12	±12	
	5 ±15	±12	±5	±30	±25		15 ±8	±8	
	10 ±14	±10		±30	±25		20		
	12 ±12	±5		±25	±20		25		
	15 ±12			±25	±20		30		
	17 ±7			±25	±20		32		
	20			±25	±20		36		
	25			±25	±20		40		
	30			±25	±20		45		
	35			±20	±12		50		
	40			±20	±12		55		
	45			±12			60		
	48			±12			65		
	75						68		
	80						75		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y9		BIS00Y8		BIS00Y7		BIS00Y6		BIS00Y5		BIS00Y4		BIS00Y3		BIS00Y2		BIS0043	
>25	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>25	>120
>100	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150
0-32	0-32	0-32	0-36	0-36	0-60	0-60	0-68	0-70	0-70	23-46	23-46	23-46	23-46	23-46	23-46	0-40	0-40
0-32	0-32	0-32	0-36	0-36	0-60	0-60	0-68	0-70	0-70	23-46	23-46	23-46	23-46	23-46	23-46	0-40	0-40
±20	±22	±25	±25	±25	0 ±35	±40	±40	±44	±44	±44	±44	±44	±44	±44	±44	0 ±22	0 ±22
±20	±22	±25	±25	±25	5 ±35	±40	±40	±44	±44	±44	±44	±44	±44	±44	±44	5 ±22	5 ±22
±20	±22	±25	±25	±25	10 ±35	±40	±40	±44	±44	±44	±44	±44	±44	±44	±44	10 ±22	10 ±22
±16	±20	±25	±25	±25	15 ±35	±40	±40	±44	±44	±44	±44	±44	±44	±44	±44	15 ±22	15 ±22
±16	±20	±25	±25	±25	20 ±35	±40	±40	±44	±44	±44	±44	±44	±44	±44	±44	20 ±22	20 ±22
±10	±12	±20	±20	±20	23 ±30	±32	±32	±32	±32	±24	±24	±24	±24	±24	±24	25 ±20	25 ±20
±10	±12	±20	±20	±20	30 ±30	±32	±32	±32	±32	±24	±24	±24	±24	±24	±24	30 ±20	30 ±20
±8	±8	±12	±12	±12	32 ±30	±32	±32	±32	±32	±18	±18	±18	±18	±18	±18	35 ±20	35 ±20
		±12	±12	±12	35 ±30	±32	±32	±32	±32	±18	±18	±18	±18	±18	±18	40 ±10	40 ±10
					40 ±30	±32	±32	±32	±32	±18	±18	±18	±18	±18	±18		
					46 ±24	±32	±32	±32	±32	±10	±10	±10	±10	±10	±10		
					50 ±24	±32	±32	±32	±32								
					55 ±16	±24	±24	±25	±25								
					60 ±16	±24	±24	±25	±25								
					65	±15	±15	±15	±15								
					68	±15	±15	±15	±15								
					70			±15	±15								



Subnet 16 (RS485)	<b>BIS00W1</b> BIS M-410-067-001-04-S92
Product Group	HF (13.56 MHz)
Dimension	40 x 24 x 56 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 5-pin
Housing material	PC, with PU potting
Interface	Subnet 16 (RS485)
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

\* Use with **BIS Z-GW-001...** only

Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YH	BIS00YF	BIS00YE		BIS00YC	BIS00YA	
Data carrier distance to metal	>10	>10	>10	>25	>25		>25	>25	
Data carrier clear zone	>60	>60	>60	>100	>100		>100	>100	
Working distance for writing	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Working distance for reading	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Offset at distance									
	0 ±15	±12	±10	±30	±25		0 ±15	±15	
	2 ±15	±12	±10	±30	±25		5 ±15	±15	
	4 ±15	±12	±7,5	±30	±25		10 ±12	±12	
	5 ±15	±12	±5	±30	±25		15 ±8	±8	
	10 ±14	±10		±30	±25		20		
	12 ±12	±5		±25	±20		25		
	15 ±12			±25	±20		30		
	17 ±7			±25	±20		32		
	20			±25	±20		36		
	25			±25	±20		40		
	30			±25	±20		45		
	35			±20	±12		50		
	40			±20	±12		55		
	45			±12			60		
	48			±12			65		
	75						68		
	80						75		

Dimensions in mm



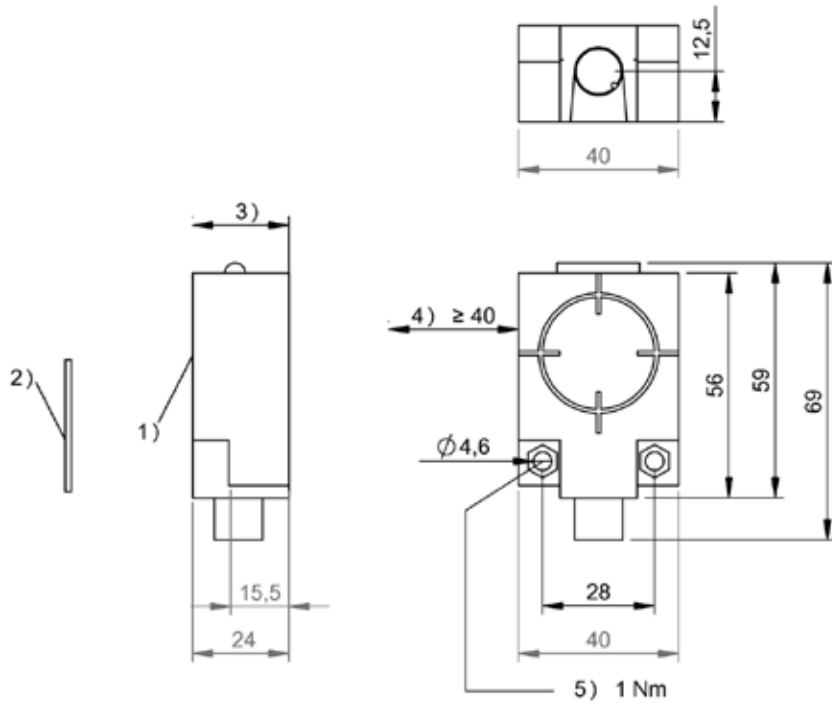


RS422	<b>BIS00W3</b> BIS M-410-068-001-02-S115
Product Group	HF (13.56 MHz)
Dimension	40 x 24 x 56 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PC, with PU potting
Interface	RS422
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YH	BIS00YF	BIS00YE		BIS00YC	BIS00YA	
Data carrier distance to metal	>10	>10	>10	>25	>25		>25	>25	
Data carrier clear zone	>60	>60	>60	>100	>100		>100	>100	
Working distance for writing	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Working distance for reading	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Offset at distance									
	0 ±15	±12	±10	±30	±25		0 ±15	±15	
	2 ±15	±12	±10	±30	±25		5 ±15	±15	
	4 ±15	±12	±7.5	±30	±25		10 ±12	±12	
	5 ±15	±12	±5	±30	±25		15 ±8	±8	
	10 ±14	±10		±30	±25		20		
	12 ±12	±5		±25	±20		25		
	15 ±12			±25	±20		30		
	17 ±7			±25	±20		32		
	20			±25	±20		36		
	25			±25	±20		40		
	30			±25	±20		45		
	35			±20	±12		50		
	40			±20	±12		55		
	45			±12			60		
	48			±12			65		
	75						68		
	80						75		

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y9		BIS00Y8		BIS00Y7		BIS00Y6		BIS00Y5		BIS00Y4		BIS00Y3		BIS00Y2		BIS0043	
>25	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>25	>120
>100	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150	>150
0-32	0-32	0-32	0-36	0-36	0-60	0-60	0-68	0-68	0-70	0-70	23-46	23-46	23-46	23-46	23-46	0-40	0-40
0-32	0-32	0-32	0-36	0-36	0-60	0-60	0-68	0-68	0-70	0-70	23-46	23-46	23-46	23-46	23-46	0-40	0-40
$\pm 20$	$\pm 22$	$\pm 25$	$\pm 25$	$\pm 25$	0 $\pm 35$	0 $\pm 35$	$\pm 40$	$\pm 40$	$\pm 44$	$\pm 44$						0 $\pm 22$	
$\pm 20$	$\pm 22$	$\pm 25$	$\pm 25$	$\pm 25$	5 $\pm 35$	5 $\pm 35$	$\pm 40$	$\pm 40$	$\pm 44$	$\pm 44$						5 $\pm 22$	
$\pm 20$	$\pm 22$	$\pm 25$	$\pm 25$	$\pm 25$	10 $\pm 35$	10 $\pm 35$	$\pm 40$	$\pm 40$	$\pm 44$	$\pm 44$						10 $\pm 22$	
$\pm 16$	$\pm 20$	$\pm 25$	$\pm 25$	$\pm 25$	15 $\pm 35$	15 $\pm 35$	$\pm 40$	$\pm 40$	$\pm 44$	$\pm 44$						15 $\pm 22$	
$\pm 16$	$\pm 20$	$\pm 25$	$\pm 25$	$\pm 25$	20 $\pm 35$	20 $\pm 35$	$\pm 40$	$\pm 40$	$\pm 44$	$\pm 44$						20 $\pm 22$	
$\pm 10$	$\pm 12$	$\pm 20$	$\pm 20$	$\pm 20$	23 $\pm 30$	23 $\pm 30$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 24$	$\pm 24$	$\pm 24$	$\pm 24$	$\pm 24$	25 $\pm 20$	
$\pm 10$	$\pm 12$	$\pm 20$	$\pm 20$	$\pm 20$	30 $\pm 30$	30 $\pm 30$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 24$	$\pm 24$	$\pm 24$	$\pm 24$	$\pm 24$	30 $\pm 20$	
$\pm 8$	$\pm 8$	$\pm 12$	$\pm 12$	$\pm 12$	32 $\pm 30$	32 $\pm 30$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$	35 $\pm 20$	
		$\pm 12$	$\pm 12$	$\pm 12$	35 $\pm 30$	35 $\pm 30$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$	40 $\pm 10$	
					40 $\pm 30$	40 $\pm 30$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$	$\pm 18$		
					46 $\pm 24$	46 $\pm 24$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 10$	$\pm 10$	$\pm 10$	$\pm 10$	$\pm 10$		
					50 $\pm 24$	50 $\pm 24$	$\pm 32$	$\pm 32$	$\pm 32$	$\pm 32$							
					55 $\pm 16$	55 $\pm 16$	$\pm 24$	$\pm 24$	$\pm 25$	$\pm 25$							
					60 $\pm 16$	60 $\pm 16$	$\pm 24$	$\pm 25$	$\pm 25$	$\pm 25$							
					65	65	$\pm 15$	$\pm 15$	$\pm 15$	$\pm 15$							
					68	68	$\pm 15$	$\pm 15$	$\pm 15$	$\pm 15$							
					70	70		$\pm 15$	$\pm 15$	$\pm 15$							



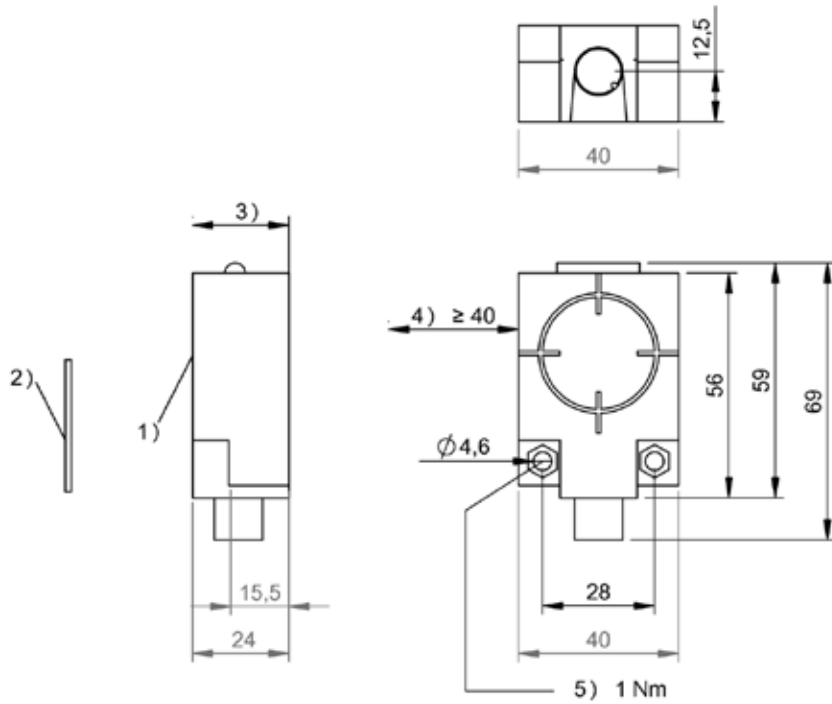
RS232	<b>BIS00W2</b> BIS M-410-068-001-00-S115
Product Group	HF (13.56 MHz)
Dimension	40 x 24 x 56 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PC, with PU potting
Interface	RS232
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YH	BIS00YF	BIS00YE		BIS00YC	BIS00YA	
Data carrier distance to metal	>10	>10	>10	>25	>25		>25	>25	
Data carrier clear zone	>60	>60	>60	>100	>100		>100	>100	
Working distance for writing	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Working distance for reading	0-17	0-12	0-5	0-48	0-40		0-15	0-15	
Offset at distance									
	0 ±15	±12	±10	±30	±25		0 ±15	±15	
	2 ±15	±12	±10	±30	±25		5 ±15	±15	
	4 ±15	±12	±7.5	±30	±25		10 ±12	±12	
	5 ±15	±12	±5	±30	±25		15 ±8	±8	
	10 ±14	±10		±30	±25		20		
	12 ±12	±5		±25	±20		25		
	15 ±12			±25	±20		30		
	17 ±7			±25	±20		32		
	20			±25	±20		36		
	25			±25	±20		40		
	30			±25	±20		45		
	35			±20	±12		50		
	40			±20	±12		55		
	45			±12			60		
	48			±12			65		
	75						68		
	80						75		

Dimensions in mm





1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y9		BIS00Y8		BIS00Y7		BIS00Y6		BIS00Y5		BIS00Y4		BIS00Y3		BIS00Y2		BIS0043	
>25		>50		>50		>50		>50		>50		>50		>50		>25	
>100		>150		>150		>150		>150		>150		>150		>150		>120	
0-32		0-32		0-36		0-60		0-68		0-70		23-46		23-46		0-40	
0-32		0-32		0-36		0-60		0-68		0-70		23-46		23-46		0-40	
±20		±22		±25		0 ±35		±40		±44						0 ±22	
±20		±22		±25		5 ±35		±40		±44						5 ±22	
±20		±22		±25		10 ±35		±40		±44						10 ±22	
±16		±20		±25		15 ±35		±40		±44						15 ±22	
±16		±20		±25		20 ±35		±40		±44						20 ±22	
±10		±12		±20		23 ±30		±32		±32		±24		±24		25 ±20	
±10		±12		±20		30 ±30		±32		±32		±24		±24		30 ±20	
±8		±8		±12		32 ±30		±32		±32		±18		±18		35 ±20	
				±12		35 ±30		±32		±32		±18		±18		40 ±10	
						40 ±30		±32		±32		±18		±18			
						46 ±24		±32		±32		±10		±10			
						50 ±24		±32		±32							
						55 ±16		±24		±25							
						60 ±16		±24		±25							
						65		±15		±15							
						68		±15		±15							
						70				±15							

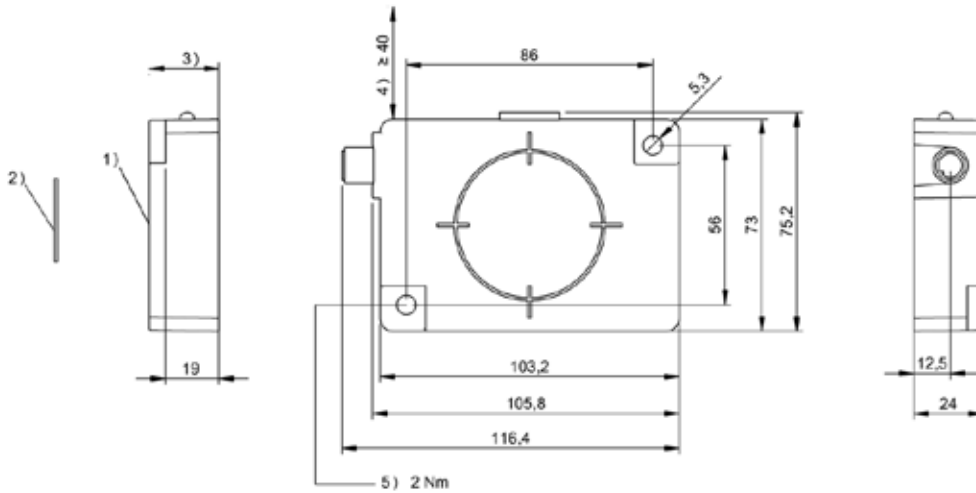


USB	<b>BIS00W8</b> BIS M-411-068-001-09-S72
Product Group	HF (13.56 MHz)
Dimension	75 x 24 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 5-pin
Housing material	PC, with PU potting
Interface	USB 2.0
Operating voltage $U_b$	5 V DC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YF	BIS00YE		BIS00YC	BIS00YA	BIS00Y9	
Data carrier distance to metal	>10	>10	>25	>25		>25	>25	>25	
Data carrier clear zone	>60	>60	>100	>100		>100	>100	>100	
Working distance for writing	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Working distance for reading	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Offset at distance									
	0 ±22	±22	±50	±42		0 ±20	±20		
	5 ±22	±22	±50	±42		5 ±20	±20		
	9 ±19	±20	±50	±42		10 ±20	±20		
	12 ±19	±12	±50	±42		15 ±20	±20		
	13 ±19	±5	±50	±42		20 ±15	±15		
	15 ±19		±50	±42		22 ±15	±10		
	20 ±14		±50	±42		26 ±15			
	22		±40	±39		30			
	26		±40	±39		38		±25	
	30		±40	±39		40		±25	
	35		±40	±39		45		±25	
	40		±40	±39		50		±25	
	45		±35	±36		52		±25	
	50		±35	±36		56			
	60		±35	±36		60			
	65		±30	±28		70			
	70		±30	±28		80			
	75		±30			90			
	80		±30			100			
	90					110			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y8	BIS00Y7	BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y3	BIS00Y2	BIS0044	BIS0045
>50	>50	>50	>50	>50	>50	>50	>25	>25
>150	>150	>150	>150	>150	>150	>150	>100	>100
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
±35	±32	0 ±50	±62	±65			0 ±30	±40
±35	±32	5 ±50	±62	±65			5 ±30	±40
±35	±32	11 ±50	±62	±65	±52	±50	10 ±30	±40
±35	±32	15 ±50	±62	±65	±52	±50	15 ±28	±40
±35	±32	20 ±50	±62	±65	±52	±50	20 ±28	±40
±30	±30	25 ±50	±62	±65	±52	±50	25 ±28	±38
±30	±30	30 ±50	±62	±65	±52	±50	30 ±28	±38
±30	±30	35 ±50	±58	±65	±48	±42	35 ±25	±38
±30	±30	40 ±50	±58	±65	±48	±42	40 ±25	±38
±30	±30	45 ±50	±58	±62	±48	±42	45 ±10	±35
±30	±25	50 ±50	±58	±62	±48	±42	50	±35
±25	±25	55 ±50	±58	±62	±48	±42	55	±35
±25	±20	60 ±50	±58	±62	±48	±35	60	±35
±25	±20	75 ±45	±52	±62	±44	±35	67	±10
	±20	85 ±45	±52	±58	±44		70	
		95 ±45	±52	±58	±40		75	
		100 ±45	±52	±58			80	
		110	±48	±58			85	
		120		±58			90	
		125		±50			95	



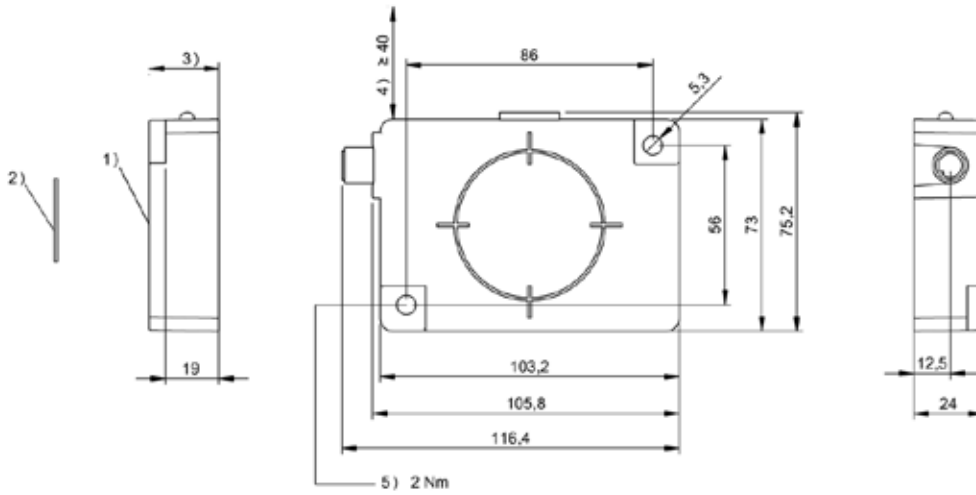
Subnet 16 (RS485)	<b>BIS00W5</b> BIS M-411-067-001-04-S92
Product Group	HF (13.56 MHz)
Dimension	75 x 24 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 5-pin
Housing material	PC, with PU potting
Interface	Subnet 16 (RS485)
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

\* Use with **BIS Z-GW-001...** only

Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YF	BIS00YE		BIS00YC	BIS00YA	BIS00Y9	
Data carrier distance to metal	>10	>10	>25	>25		>25	>25	>25	
Data carrier clear zone	>60	>60	>100	>100		>100	>100	>100	
Working distance for writing	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Working distance for reading	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Offset at distance									
	0 ±22	±22	±50	±42		0 ±20	±20		
	5 ±22	±22	±50	±42		5 ±20	±20		
	9 ±19	±20	±50	±42		10 ±20	±20		
	12 ±19	±12	±50	±42		15 ±20	±20		
	13 ±19	±5	±50	±42		20 ±15	±15		
	15 ±19		±50	±42		22 ±15	±10		
	20 ±14		±50	±42		26 ±15			
			±40	±39		30			
			±40	±39		38		±25	
			±40	±39		40		±25	
			±40	±39		45		±25	
			±40	±39		50		±25	
			±35	±36		52		±25	
			±35	±36		56			
			±35	±36		60			
			±30	±28		70			
			±30	±28		80			
			±30			90			
			±30			100			
						110			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y8	BIS00Y7	BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y3	BIS00Y2	BIS0044	BIS0045
>50	>50	>50	>50	>50	>50	>50	>25	>25
>150	>150	>150	>150	>150	>150	>150	>100	>100
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
±35	±32	0 ±50	±62	±65			0 ±30	±40
±35	±32	5 ±50	±62	±65			5 ±30	±40
±35	±32	11 ±50	±62	±65	±52	±50	10 ±30	±40
±35	±32	15 ±50	±62	±65	±52	±50	15 ±28	±40
±35	±32	20 ±50	±62	±65	±52	±50	20 ±28	±40
±30	±30	25 ±50	±62	±65	±52	±50	25 ±28	±38
±30	±30	30 ±50	±62	±65	±52	±50	30 ±28	±38
±30	±30	35 ±50	±58	±65	±48	±42	35 ±25	±38
±30	±30	40 ±50	±58	±65	±48	±42	40 ±25	±38
±30	±30	45 ±50	±58	±62	±48	±42	45 ±10	±35
±30	±25	50 ±50	±58	±62	±48	±42	50	±35
±25	±25	55 ±50	±58	±62	±48	±42	55	±35
±25	±20	60 ±50	±58	±62	±48	±35	60	±35
±25	±20	75 ±45	±52	±62	±44	±35	67	±10
	±20	85 ±45	±52	±58	±44		70	
		95 ±45	±52	±58	±40		75	
		100 ±45	±52	±58			80	
		110	±48	±58			85	
		120		±58			90	
		125		±50			95	

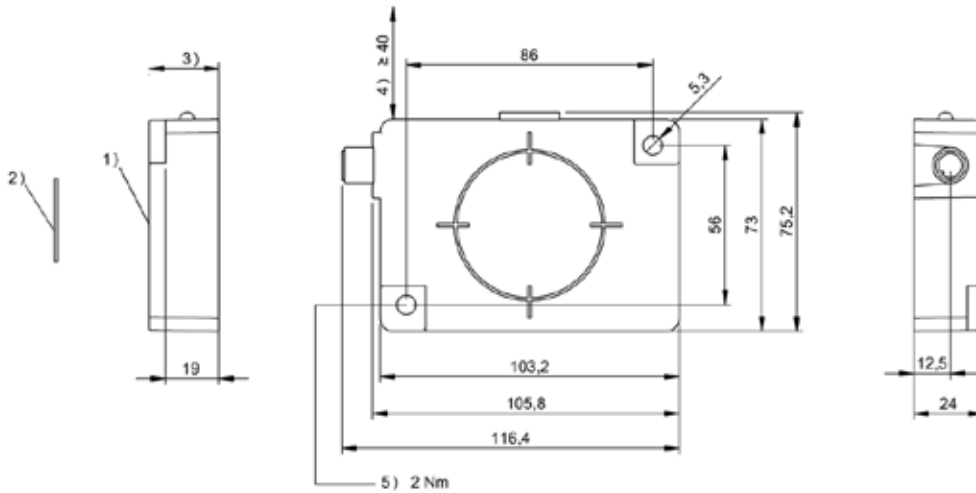


RS422	<b>BIS00W7</b> BIS M-411-068-001-02-S115
Product Group	HF (13.56 MHz)
Dimension	75 x 24 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PC, with PU potting
Interface	RS422
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YF	BIS00YE		BIS00YC	BIS00YA	BIS00Y9	
Data carrier distance to metal	>10	>10	>25	>25		>25	>25	>25	
Data carrier clear zone	>60	>60	>100	>100		>100	>100	>100	
Working distance for writing	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Working distance for reading	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Offset at distance									
	0 ±22	±22	±50	±42		0 ±20	±20		
	5 ±22	±22	±50	±42		5 ±20	±20		
	9 ±19	±20	±50	±42		10 ±20	±20		
	12 ±19	±12	±50	±42		15 ±20	±20		
	13 ±19	±5	±50	±42		20 ±15	±15		
	15 ±19		±50	±42		22 ±15	±10		
	20 ±14		±50	±42		26 ±15			
	22		±40	±39		30			
	26		±40	±39		38		±25	
	30		±40	±39		40		±25	
	35		±40	±39		45		±25	
	40		±40	±39		50		±25	
	45		±35	±36		52		±25	
	50		±35	±36		56			
	60		±35	±36		60			
	65		±30	±28		70			
	70		±30	±28		80			
	75		±30			90			
	80		±30			100			
	90					110			

Dimensions in mm



1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y8	BIS00Y7	BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y3	BIS00Y2	BIS0044	BIS0045
>50	>50	>50	>50	>50	>50	>50	>25	>25
>150	>150	>150	>150	>150	>150	>150	>100	>100
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
±35	±32	0 ±50	±62	±65			0 ±30	±40
±35	±32	5 ±50	±62	±65			5 ±30	±40
±35	±32	11 ±50	±62	±65	±52	±50	10 ±30	±40
±35	±32	15 ±50	±62	±65	±52	±50	15 ±28	±40
±35	±32	20 ±50	±62	±65	±52	±50	20 ±28	±40
±30	±30	25 ±50	±62	±65	±52	±50	25 ±28	±38
±30	±30	30 ±50	±62	±65	±52	±50	30 ±28	±38
±30	±30	35 ±50	±58	±65	±48	±42	35 ±25	±38
±30	±30	40 ±50	±58	±65	±48	±42	40 ±25	±38
±30	±30	45 ±50	±58	±62	±48	±42	45 ±10	±35
±30	±25	50 ±50	±58	±62	±48	±42	50	±35
±25	±25	55 ±50	±58	±62	±48	±42	55	±35
±25	±20	60 ±50	±58	±62	±48	±35	60	±35
±25	±20	75 ±45	±52	±62	±44	±35	67	±10
	±20	85 ±45	±52	±58	±44		70	
		95 ±45	±52	±58	±40		75	
		100 ±45	±52	±58			80	
		110	±48	±58			85	
		120		±58			90	
		125		±50			95	



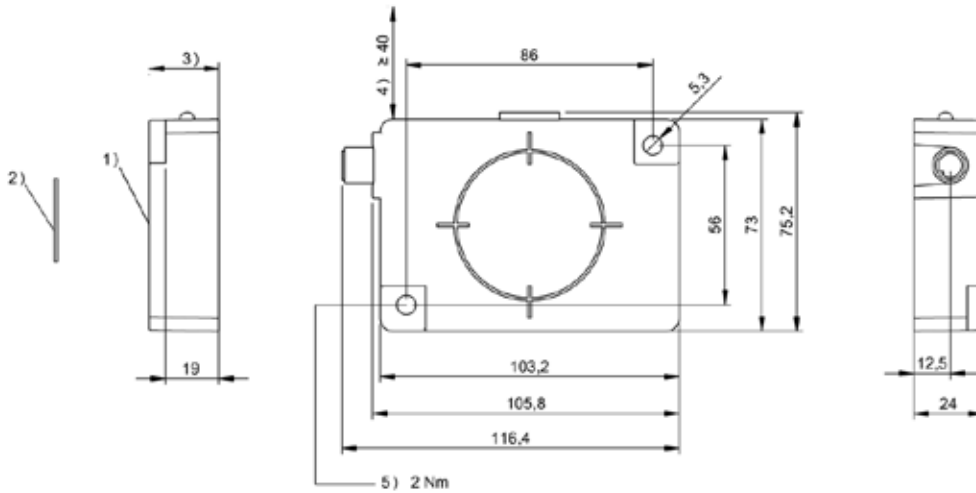
RS232	<b>BIS00W6</b> BIS M-411-068-001-00-S115
Product Group	HF (13.56 MHz)
Dimension	75 x 24 x 105 mm
Installation	metal-free (clear zone)
Antenna type	round
Supported data carrier types	DIN ISO 14443, DIN ISO 15693
Connection	Connector, M12x1 connector, 8-pin
Housing material	PC, with PU potting
Interface	RS232
Operating voltage $U_b$	10...30 VDC
Ambient temperature	-20...50 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	BIS00YL	BIS00YK	BIS00YF	BIS00YE		BIS00YC	BIS00YA	BIS00Y9	
Data carrier distance to metal	>10	>10	>25	>25		>25	>25	>25	
Data carrier clear zone	>60	>60	>100	>100		>100	>100	>100	
Working distance for writing	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Working distance for reading	0-20	0-13	0-80	0-70		0-26	0-22	38-52	
Offset at distance									
	0 ±22	±22	±50	±42		0 ±20	±20		
	5 ±22	±22	±50	±42		5 ±20	±20		
	9 ±19	±20	±50	±42		10 ±20	±20		
	12 ±19	±12	±50	±42		15 ±20	±20		
	13 ±19	±5	±50	±42		20 ±15	±15		
	15 ±19		±50	±42		22 ±15	±10		
	20 ±14		±50	±42		26 ±15			
	22		±40	±39		30			
	26		±40	±39		38		±25	
	30		±40	±39		40		±25	
	35		±40	±39		45		±25	
	40		±40	±39		50		±25	
	45		±35	±36		52		±25	
	50		±35	±36		56			
	60		±35	±36		60			
	65		±30	±28		70			
	70		±30	±28		80			
	75		±30			90			
	80		±30			100			
	90					110			

Dimensions in mm



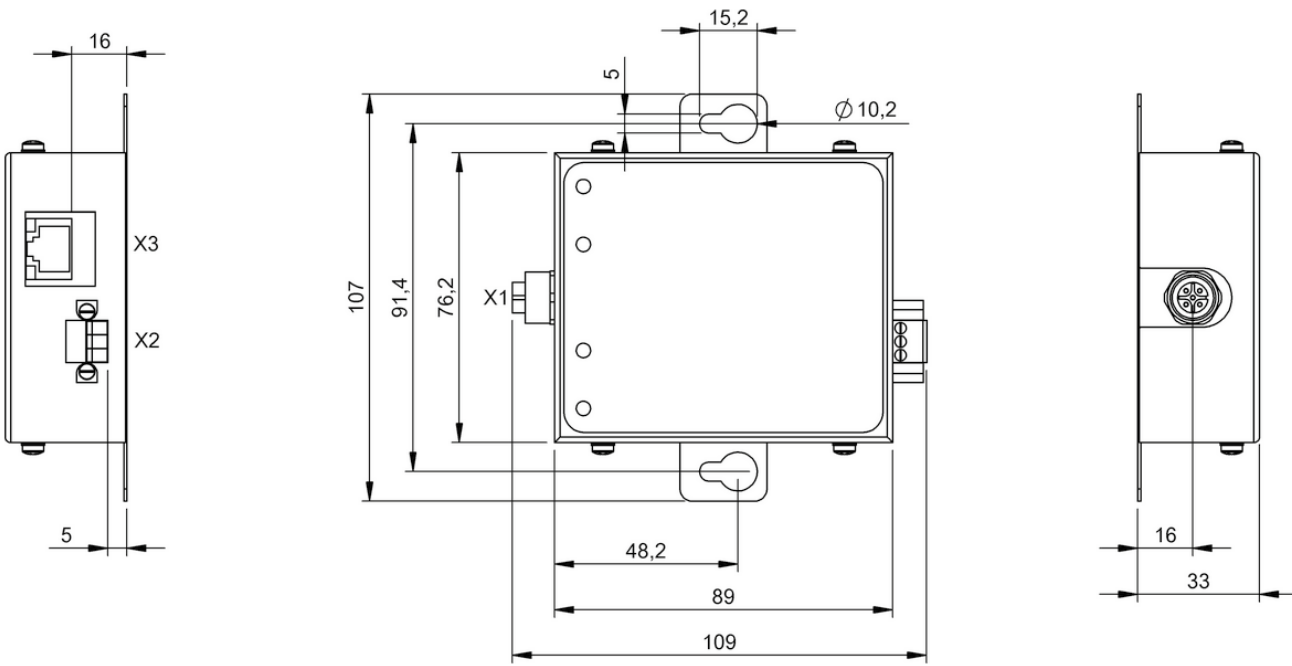


1) Sensing surface, 2) Data carrier, 3) Clear zone, 4) Clear zone surrounding, 5) Tightening torque

BIS00Y8	BIS00Y7	BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y3	BIS00Y2	BIS0044	BIS0045
>50	>50	>50	>50	>50	>50	>50	>25	>25
>150	>150	>150	>150	>150	>150	>150	>100	>100
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
0-56	0-60	0-100	0-110	0-125	11-95	11-75	0-45	0-67
±35	±32	0 ±50	±62	±65			0 ±30	±40
±35	±32	5 ±50	±62	±65			5 ±30	±40
±35	±32	11 ±50	±62	±65	±52	±50	10 ±30	±40
±35	±32	15 ±50	±62	±65	±52	±50	15 ±28	±40
±35	±32	20 ±50	±62	±65	±52	±50	20 ±28	±40
±30	±30	25 ±50	±62	±65	±52	±50	25 ±28	±38
±30	±30	30 ±50	±62	±65	±52	±50	30 ±28	±38
±30	±30	35 ±50	±58	±65	±48	±42	35 ±25	±38
±30	±30	40 ±50	±58	±65	±48	±42	40 ±25	±38
±30	±30	45 ±50	±58	±62	±48	±42	45 ±10	±35
±30	±25	50 ±50	±58	±62	±48	±42	50	±35
±25	±25	55 ±50	±58	±62	±48	±42	55	±35
±25	±20	60 ±50	±58	±62	±48	±35	60	±35
±25	±20	75 ±45	±52	±62	±44	±35	67	±10
	±20	85 ±45	±52	±58	±44		70	
		95 ±45	±52	±58	±40		75	
		100 ±45	±52	±58			80	
		110	±48	±58			85	
		120		±58			90	
		125		±50			95	



	<b>BAE00JJ</b> BIS Z-GW-001-IND
Dimension	107 x 33 x 109 mm
Interface	Industrial Ethernet / MODBUS TCP
Auxiliary interfaces	Subnet 16 (RS485)
Housing material	Aluminum, die-cast
Ambient temperature	-20...50 °C
Protection degree	IP30
Approval/Conformity	CE, FCC Part 15
Productview	Page 307





Tool identification even at short ranges

# RFID SYSTEM LF (70/455 KHZ) BIS C

Especially high-performing and flexible are the BIS C low-frequency RFID systems with reliable tool identification in coolant- and lubricant-heavy machining centers. Exact positioning is not always necessary: Many data carriers can be dynamically read and described in passing.

The LF RFID system (70/455 kHz) is also the first choice for tool identification over short ranges. Other areas of use are tool transport with conveyor systems, FTS and pallet transport systems as well as assembly technology and resource organization.

## Features

- Great variety of data carriers and read/write heads for very diverse applications and difficult operating conditions
- Wear-free, maintenance-free and insensitive to dirt
- High noise immunity and assured data transfer with special checking software in the processor units
- All bus systems commonly used on a global basis available
- Memory capacity up to 8 kB



	<b>BIS000T</b> BIS C-121-04/L	
Product Group	LF (70/455 kHz)	
Dimension	Ø 9 x 4.5 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	511 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	0...70 °C	
Housing material	Epoxy-resin/fiberglass	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 330	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)
BIS C-300	0-2		0-3
BIS C-302	0-1.5		0-2.5
BIS C-305	0-2		0-3
BIS C-306	0-2		0-3
BIS C-322	0-2		0-3
BIS C-325	0-2		0-3

Dimensions in mm

\* Installation on request



	<b>BIS0011</b> BIS C-122-04/L	<b>BIS015W</b> BIS C-122-05/L	<b>BIS0015</b> BIS C-122-11/L
	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
	Ø 10 x 4.5 mm	Ø 10 x 4.5 mm	Ø 10 x 4.5 mm
	round	round	round
	EEPROM	EEPROM	EEPROM
	511 Byte	1023 Byte	2047 Byte
	-30...85 °C	-30...85 °C	-30...85 °C
	—	—	120 °C
	0...70 °C	0...70 °C	-30...70 °C
	Epoxy-resin/fiberglass	Epoxy-resin/fiberglass	Epoxy-resin/fiberglass
	IP68	IP68	IP68
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
	Page 330	Page 330	Page 330

	flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)
	0-2.5		0-3	0-2.5		0-3	0-2.5		0-3
	0-2		0-2.5	0-2		0-2.5	0-2		0-2.5
	0-2.5		0-3	0-2.5		0-3	0-2.5		0-3
	0-2.5		0-3	0-2.5		0-3	0-2.5		0-3
	0-2.5		0-3	0-2.5		0-3	0-2.5		0-3
	0-4.5		0-5	0-4.5		0-5	0-4.5		0-5



	<b>BIS0004</b> BIS C-103-05/A	
Product Group	LF (70/455 kHz)	
Dimension	Ø 12 x 8 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	1023 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	120 °C	
Ambient temperature	-30...70 °C	
Housing material	Epoxy-resin/fiberglass	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 330	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)	
BIS C-300	0-3.5		0-4	
BIS C-302	0-3		0-3.5	
BIS C-305	0-5		0-6	
BIS C-306	0-3.5		0-4	
BIS C-310				
BIS C-315				
BIS C-319				
BIS C-322	0-5		0-6	
BIS C-323				
BIS C-324				
BIS C-325	0-4.5		0-5	
BIS C-326				

Dimensions in mm

\* Installation on request





BIS0009 BIS C-105-05/A	BIS001E BIS C-130-05/L	BIS0002 BIS C-100-05/A
LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
Ø 12 x 6 mm	Ø 15.98 x 7 mm	Ø 16 x 10.5 mm
round	round	round
EEPROM	EEPROM	EEPROM
1023 Byte	1023 Byte	1023 Byte
-30...85 °C	-30...85 °C	-20...85 °C
120 °C	—	—
-30...70 °C	-30...70 °C	0...70 °C
Epoxy-resin/fiberglass	Epoxy-resin/fiberglass	PA 6.6
IP68	IP68	IP68
metal-free (clear zone) on metal flush in metal	metal-free (clear zone)	metal-free (clear zone) on metal flush in metal
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
Page 330	Page 330	Page 330

flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)
0-3.5		0-4	0-4		0-4	0-4		0-4
0-3		0-3.5	0-3.5		0-4	0-4		0-4
0-5		0-6			0-7	0-4		0-4
0-3.5		0-4	0-4		0-4	0-4		0-4
					0-11			
					0-18			
			0-6		0-13			
0-5		0-6			0-7	0-4		0-4
					0-11			
					0-11			
0-5		0-6	0-4		0-4	0-4		0-4
					0-13			



	<b>BIS0019</b> BIS C-128-05/L	
Product Group	LF (70/455 kHz)	
Dimension	Ø 26 x 6 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	1023 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	120 °C	
Ambient temperature	-30...70 °C	
Housing material	Epoxy-resin/fiberglass	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 330	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)
BIS C-305			0-6
BIS C-310	0-8		0-13
BIS C-315			0-18
BIS C-322			0-6
BIS C-323	0-8		0-13
BIS C-324	0-8		0-13
BIS C-326			0-15

Dimensions in mm

\* Installation on request



	<b>BIS001C</b> BIS C-128-11/L	<b>BIS0006</b> BIS C-104-11/A	<b>BIS0007</b> BIS C-104-32/A
	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
	Ø 26 x 6 mm	Ø 30 x 35 mm	Ø 30 x 35 mm
	round	round	round
	EEPROM	EEPROM	EEPROM
	2047 Byte	2047 Byte	8192 Byte
	-30...85 °C	-30...85 °C	-30...85 °C
	120 °C	—	—
	-30...70 °C	-30...70 °C	-30...70 °C
	Epoxy-resin/fiberglass	Brass	Brass
	IP68	IP67	IP67
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
	Page 330	Page 330	Page 330

	flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)*	flush in metal	on metal	metal-free (clear zone)*
			0-6						
	0-8		0-13	1-11	0-12		1-11	0-12	
			0-18	1-13	0-14		1-13	0-14	
			0-6						
	0-8		0-13	1-11	0-12		1-11	0-12	
	0-8		0-13	1-11	0-12		1-11	0-12	
			0-15						



	<b>BIS000M</b> BIS C-117-05/A	
Product Group	LF (70/455 kHz)	
Dimension	Ø 30 x 16 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	1023 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	-30...70 °C	
Housing material	PBT	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 331	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)
BIS C-300			
BIS C-305	1-8		0-10
BIS C-306			
BIS C-310	1-12		0-13
BIS C-315	0-15		0-22
BIS C-319	0-13		0-16
BIS C-322	1-8		0-10
BIS C-323	1-12		0-13
BIS C-324			0-13
BIS C-325			
BIS C-326			

Dimensions in mm

\* Installation on request



Use in vacuum



Use in vacuum

BIS000N BIS C-117-05/L	BIS00J4 BIS C-140-05/L-M6	BIS00J2 BIS C-140-05/L-M8
LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
Ø 30 x 16 mm	Ø 22 x 21 mm	Ø 22 x 21 mm
round	round	round
EEPROM	EEPROM	EEPROM
1023 Byte	1023 Byte	1023 Byte
-30...85 °C	-25...95 °C	-25...95 °C
—	—	—
-30...70 °C	-25...70 °C	-25...70 °C
PBT	Steel, PA 12, GF30	Steel, PA 12, GF30
IP68	—	—
metal-free (clear zone)	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
Page 331	Page 331	Page 331

flush in metal	on metal*	metal-free (clear zone)	flush in metal	on metal*	metal-free (clear zone)*	flush in metal	on metal*	metal-free (clear zone)*
			0-3			0-3		
		0-7	0-4.5			0-4.5		
		0-13	0-3			0-3		
		0-18	0-7			0-7		
0-8		0-15						
		0-7						
		0-13	0-7			0-7		
		0-13	0-7			0-7		
			0-5			0-5		
		0-18						



Use in vacuum

	<b>BIS00L9</b> BIS C-140-11/L-M10	
Product Group	LF (70/455 kHz)	
Dimension	Ø 22 x 21 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	2047 Byte	
Storage temperature	-25...95 °C	
Storage temperature temporary	—	
Ambient temperature	-25...70 °C	
Housing material	Steel, PA 12, GF30	
Protection degree	—	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 331	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)*	
BIS C-300	0-3			
BIS C-305	0-4.5			
BIS C-306	0-3			
BIS C-310	0-7			
BIS C-315				
BIS C-319				
BIS C-322				
BIS C-323	0-7			
BIS C-324	0-7			
BIS C-325	0-5			
BIS C-327				

Dimensions in mm

\* Installation on request



Use in vacuum



BIS00J1 BIS C-140-11/L-M8	BIS000C BIS C-108-05/L	BIS000H BIS C-108-11/L
LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
Ø 22 x 21 mm	32 x 11 x 52 mm	32 x 11 x 52 mm
round	round	round
EEPROM	EEPROM	EEPROM
2047 Byte	1023 Byte	2047 Byte
-25...95 °C	-30...85 °C	-30...85 °C
—	—	—
-25...70 °C	-30...70 °C	-30...70 °C
Steel, PA 12, GF30	PBT	PBT
—	IP68	IP68
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
Page 331	Page 331	Page 331

flush in metal	on metal*	metal-free (clear zone)*	flush in metal	on metal*	metal-free (clear zone)			
0-3								
0-4.5					0-6			0-6
0-3								
0-7			0-5		0-12	0-5		0-12
			0-10		2-16	0-10		2-16
			0-11		0-14	0-11		0-14
					0-6			0-6
0-7					0-12			0-12
0-7					0-12			0-12
0-5								
					0-8			0-8



	<b>BIS000K</b> BIS C-108-32/L	
Product Group	LF (70/455 kHz)	
Dimension	32 x 11 x 52 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	8192 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	-30...70 °C	
Housing material	PBT	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 331	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal*	metal-free (clear zone)	
BIS C-305			0-6	
BIS C-310	0-5		0-12	
BIS C-315	0-10		2-16	
BIS C-319	0-11		0-14	
BIS C-322			0-6	
BIS C-323			0-12	
BIS C-324			0-12	
BIS C-327			0-8	

Dimensions in mm

\* Installation on request





<b>BIS0017</b> BIS C-127-05/L			
LF (70/455 kHz)			
53 x 4.8 x 85 mm			
round			
EEPROM			
1023 Byte			
-20...60 °C			
—			
0...60 °C			
ABS			
IP65			
metal-free (clear zone)			
CE, UL-FILE E227256, Vol.X1, BIS			
Page 331			

flush in metal*	on metal*	metal-free (clear zone)						
		10-30						



	<b>BIS0028</b> BIS C-150-05/A	
Product Group	LF (70/455 kHz)	
Dimension	40 x 22 x 80 mm	
Antenna type	Rod	
Memory type	EEPROM	
User data, read/write	1023 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	-30...70 °C	
Housing material	POM	
Protection degree	IP68	
Installation	on metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 331	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)	
BIS C-300				
BIS C-305				
BIS C-306				
BIS C-310				
BIS C-315				
BIS C-319				
BIS C-322				
BIS C-323				
BIS C-324				
BIS C-325				
BIS C-326				
BIS C-351		0-45		

Dimensions in mm

\* Installation on request



	<b>BIS002A</b> BIS C-150-11/A	<b>BIS002E</b> BIS C-150-32/A	<b>BIS0021</b> BIS C-134-11/L
	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
	40 x 22 x 80 mm	40 x 22 x 80 mm	25 x 11 x 25 mm
	Rod	Rod	round
	EEPROM	EEPROM	EEPROM
	2047 Byte	8192 Byte	2047 Byte
	-30...85 °C	-30...85 °C	-30...85 °C
	—	—	—
	-30...70 °C	-30...70 °C	-30...70 °C
	POM	POM	PA 6.6, GF30, PU potting
	IP68	IP68	IP68
	on metal	on metal	metal-free (clear zone) flush in metal
	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS
	Page 331	Page 331	Page 332

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
							0-3		
							0-3		0-6
									0-10
									0-16
									0-12
									0-6
									0-10
									0-10
									0-4
									0-12
		0-45			0-45				

Sensors

RFID

Machine Vision and  
Optical Identification

Human Machine  
Interfaces

Safety

Industrial Networking

Software and  
System Solutions

Power Supply

Connectivity

Accessories



	<b>BIS002K</b> BIS C-190-05/L	
Product Group	LF (70/455 kHz)	
Dimension	34 x 35 x 34 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	1023 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	-30...70 °C	
Housing material	PBT	
Protection degree	IP68	
Installation	metal-free (clear zone)	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 354	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)	
BIS C-300				
BIS C-302				
BIS C-306				
BIS C-310			0-11	
BIS C-315			0-20	
BIS C-319				
BIS C-323			0-11	
BIS C-324			0-11	
BIS C-325				
BIS C-326			0-18	
BIS C-327				

Dimensions in mm

\* Installation on request



BIS002N BIS C-190-32/L	BIS002P BIS C-191-05/L	
LF (70/455 kHz)	LF (70/455 kHz)	
34 x 35 x 34 mm	24 x 21 x 24 mm	
round	round	
EEPROM	EEPROM	
8192 Byte	1023 Byte	
-30...85 °C	-30...85 °C	
—	—	
-30...70 °C	-30...70 °C	
PBT	PBT	
IP68	IP68	
metal-free (clear zone)	metal-free (clear zone)	
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	
Page 354	Page 354	

flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
					0-3.5			
					0-3			
					0-3.5			
		0-11			0-10			
		0-20						
					0-11			
		0-11			0-9			
		0-11			0-10			
					0-3.5			
		0-18						
		0-8						



	<b>BIS002Y</b> BIS C-122-04/L-ZC1	
Product Group	LF (70/455 kHz)	
Dimension	Ø 15 x 50 mm	
Antenna type	round	
Memory type	EEPROM	
User data, read/write	511 Byte	
Storage temperature	-30...85 °C	
Storage temperature temporary	—	
Ambient temperature	0...70 °C	
Housing material	POM, EP	
Protection degree	IP68	
Installation	metal-free (clear zone) on metal flush in metal	
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS	
Productview	Page 354	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)*
BIS C-300			
BIS C-302			
BIS C-305			
BIS C-306			
BIS C-310			
BIS C-315			
BIS C-319			
BIS C-322	0-2.5		
BIS C-323			
BIS C-324			
BIS C-325	0-2.5		
BIS C-326			

Dimensions in mm

\* Installation on request



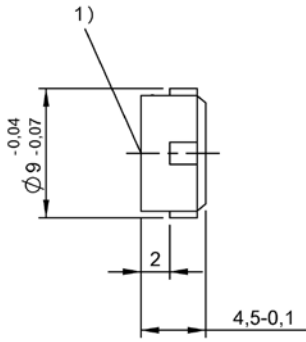
Use in vacuum



<b>BIS001H</b> BIS C-130-05/L-SA1	<b>BIS001Y</b> BIS C-131-05/L	
LF (70/455 kHz)	LF (70/455 kHz)	
Ø 15.5 x 7 mm	Ø 125 x 7 mm	
round	round	
EEPROM	EEPROM	
1023 Byte	1023 Byte	
-30...85 °C	-30...85 °C	
—	—	
-30...70 °C	-30...70 °C	
PBT	POM	
IP68	IP67	
metal-free (clear zone)	metal-free (clear zone)	
CE, UL-FILE E227256, Vol.X1, BIS	CE, UL-FILE E227256, Vol.X1, BIS	
Page 354	Page 354	

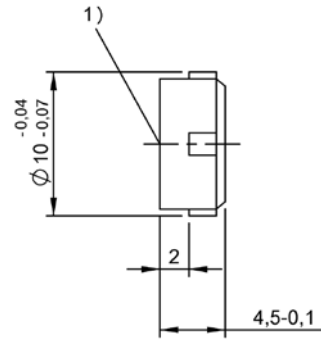
flush in metal	on metal*	metal-free (clear zone)*	flush in metal	on metal*	metal-free (clear zone)	flush in metal*	on metal*	metal-free (clear zone)*
0-4		0-4						
		0-4						
0-6		0-7						
0-4		0-4						
0-8		0-8						
		0-8						
0-7		0-13						
		0-7						
0-8								
0-8								
0-4		0-8						
		0-12						

330 | RFID | LF (70/455 kHz)



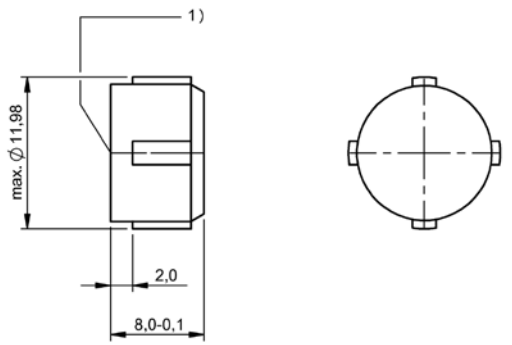
1) Sensing surface

**BISO00T**



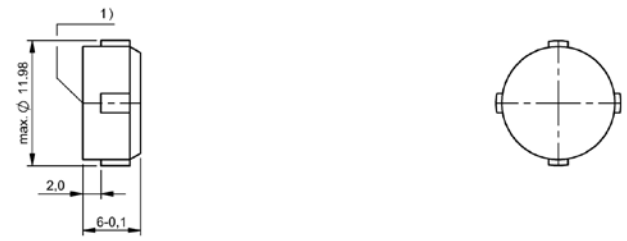
1) Sensing surface

**BISO011, BISO15W, BISO015**



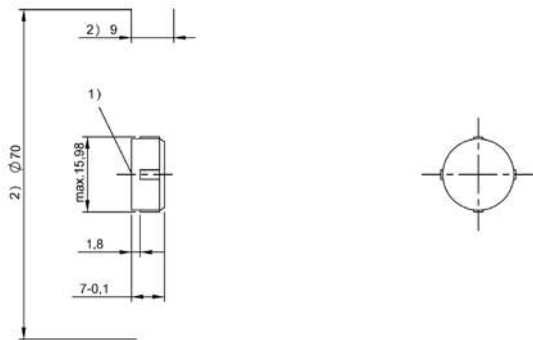
1) Sensing surface

**BISO004**



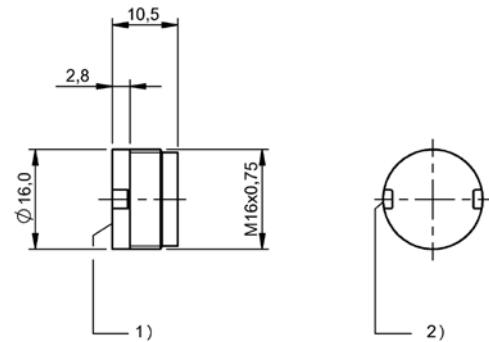
1) Sensing surface

**BISO009**



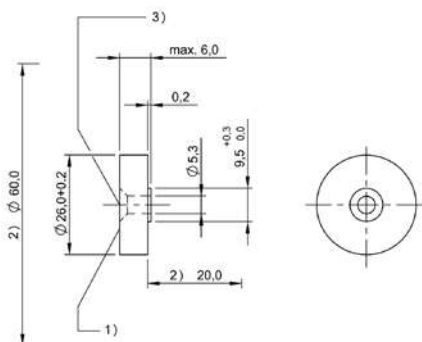
1) Sensing surface, 2) Clear zone

**BISO01E**



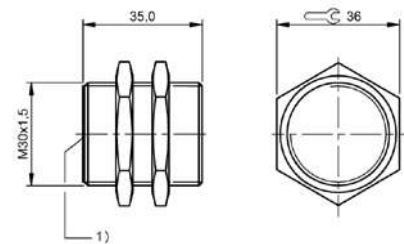
1) Sensing surface, 2) For mounting key 710691

**BISO002**



1) Sensing surface, 2) Clear zone, 3) Tightening torque max. 2.5 Nm

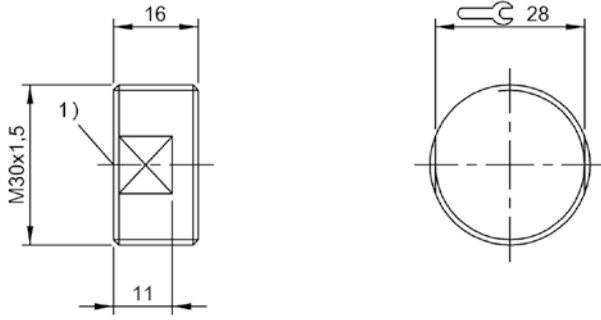
**BISO019, BISO01C**



1) Sensing surface

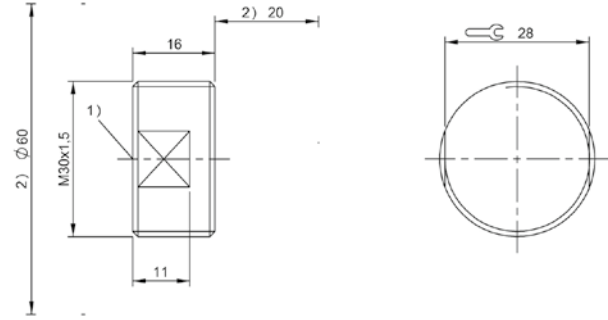
**BISO006, BISO007**





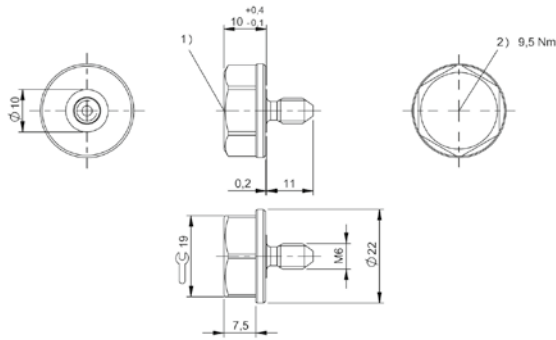
1) Sensing surface

**BISO00M**



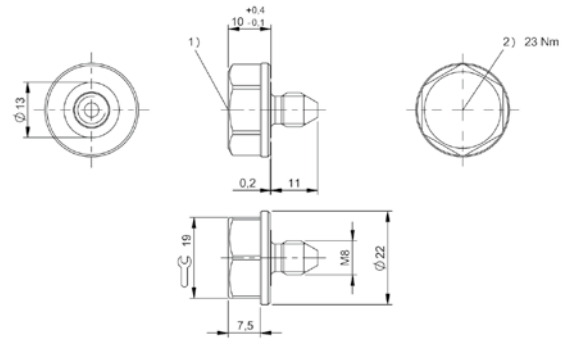
1) Sensing surface, 2) Clear zone

**BISO00N**



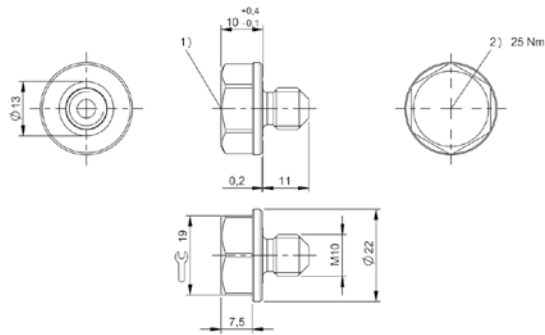
1) Sensing surface, 2) Tightening torque

**BISO0J4**



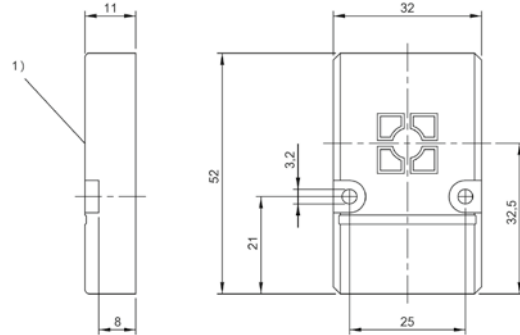
1) Sensing surface, 2) Tightening torque

**BISO0J2, BISO0J1**



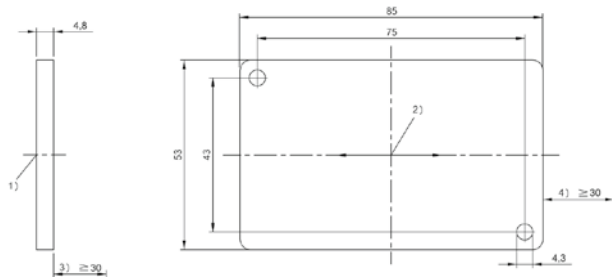
1) Sensing surface, 2) Tightening torque

**BISO0L9**



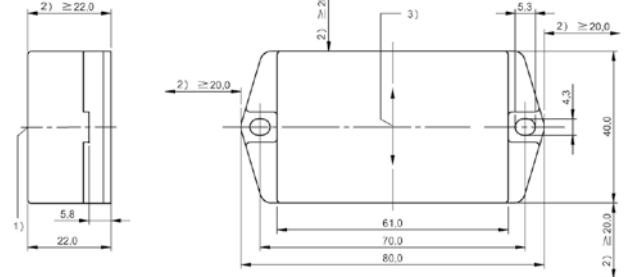
1) Sensing surface

**BISO00C, BISO00H, BISO00K**



1) Sensing surface, 2) Read/write axis, 3) Clear zone, 4) Clear zone surrounding

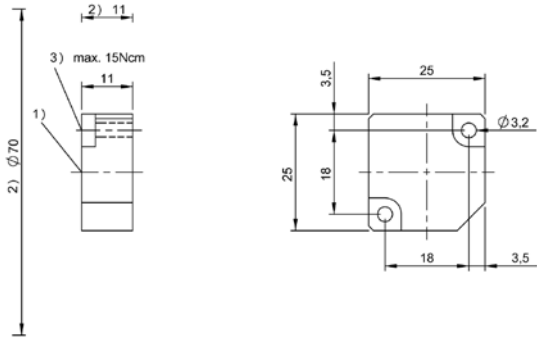
**BISO017**



1) Sensing surface, 2) Clear zone, 3) Read/write axis

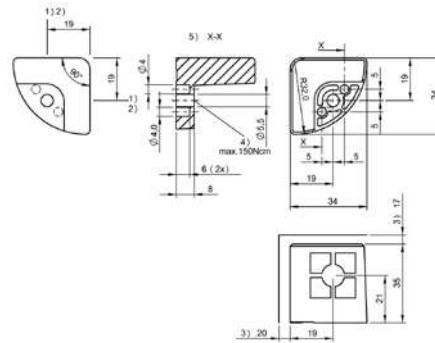
**BISO028, BISO02A, BISO02E**

332 | RFID | LF (70/455 kHz)



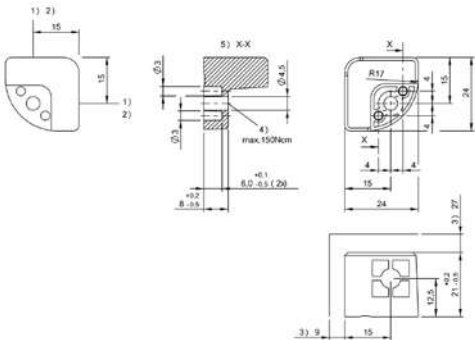
1) Sensing surface, 2) Clear zone, 3) Tightening torque

BISO021



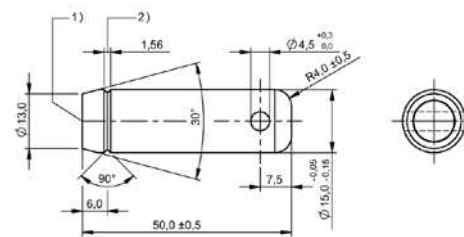
1) Sensing surface, 2) Do not use at same time, 3) Clear zone, 4) Tightening torque, 5) Cut-out

BISO02K, BISO02N



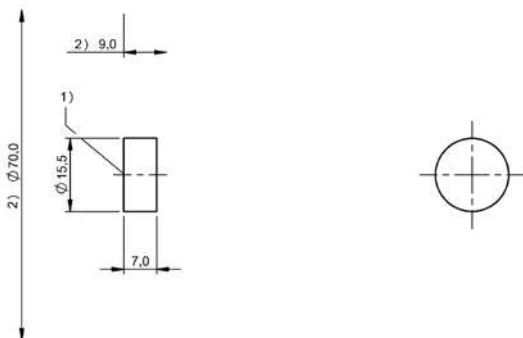
1) Sensing surface, 2) Do not use at same time, 3) Clear zone, 4) Tightening torque, 5) Cut-out

BISO02P



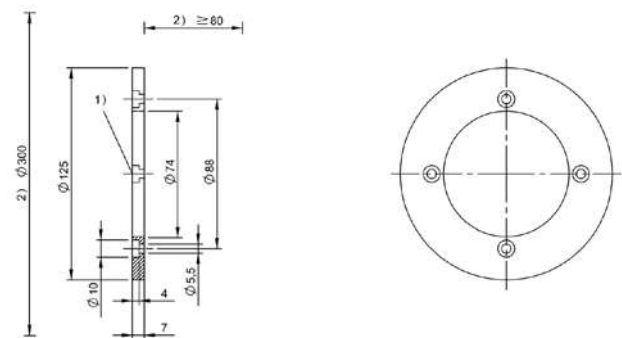
1) Sensing surface, 2) Notch

BISO02Y



1) Sensing surface, 2) Clear zone

BISO01H



1) Sensing surface, 2) Clear zone

BISO01Y



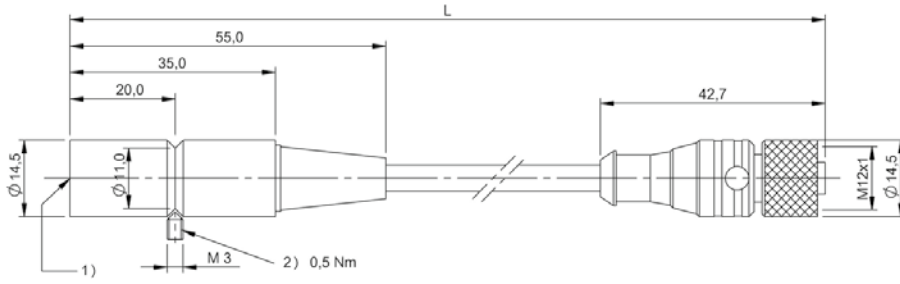


1 m cable PU	<b>BIS00P5</b> BIS C-300-PU1-01
2 m cable PU	<b>BIS0138</b> BIS C-300-PU1-02
5 m cable PU	<b>BIS005Z</b> BIS C-300-PU1-05
10 m cable PU	<b>BIS00P6</b> BIS C-300-PU1-10
Product Group	LF (70/455 kHz)
Dimension	Ø 14.5 x 35 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	Brass
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0004	BIS0009	BIS000T	BIS0011	BIS001E	BIS0021	BIS001H	BIS002P
Data carrier distance to metal	flush	flush	flush	flush	flush	flush metal-free	flush	metal-free	metal-free
Working distance for writing	0-4	0-3.5	0-3.5	0-2	0-2.5	0-4 0-4	0-3	0-4	0-3.5
Working distance for reading	0-4	0-3.5	0-3.5	0-2	0-2.5	0-4 0-4	0-3	0-4	0-3.5
Offset at distance									
	1 ±3	±3	±3	±2	±2.5	±3.5 ±5	±4	±5	±4
	3 ±2	±2	±2			±3 ±4		±4	±3

Dimensions in mm



1) Sensing surface, 2) Tightening torque

	BIS00J4	BIS00J2	BIS00L9	BIS00J1
	metal-free	metal-free	metal-free	metal-free
	0-3	0-3	0-3	0-3
	0-3	0-3	0-3	0-3
	±3.5	±3.5	±3.5	±3.5
	±2	±2	±2	±2

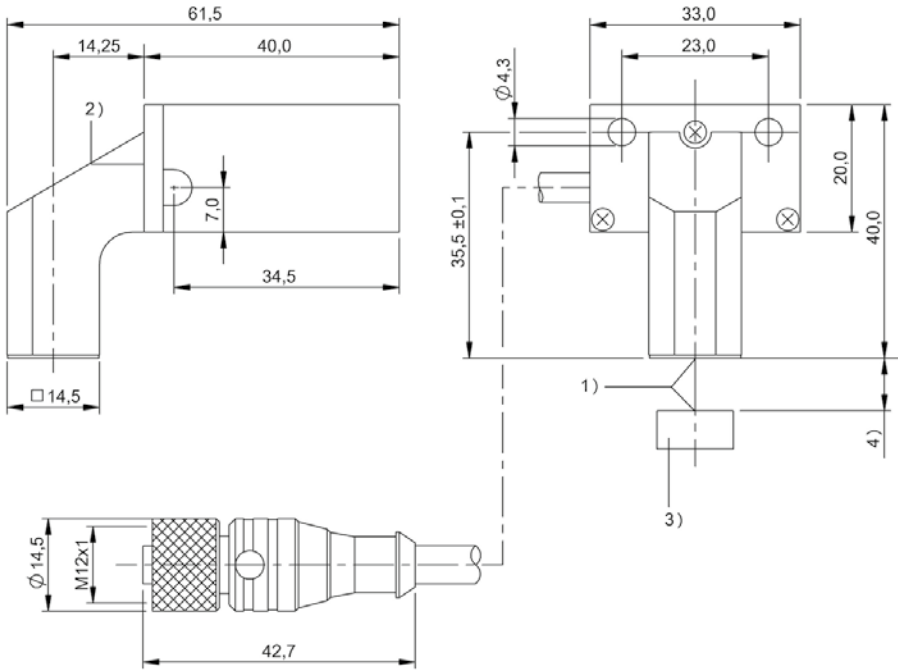


5 m cable PU	<b>BIS00PA</b> BIS C-302-PU1-05
10 m cable PU	<b>BIS00P9</b> BIS C-302-PU1-10
Product Group	LF (70/455 kHz)
Dimension	40 x 33 x 61.5 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	Aluminum, PA 6.6
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0004	BIS0009	BIS000T	BIS0011	BIS001E	BIS001H	BIS002P
Data carrier distance to metal	flush	flush	flush	flush	flush	flush metal-free	metal-free	metal-free
Working distance for writing	0-4	0-3	0-3	0-1.5	0-2	0-3.5 0-4	0-4	0-3
Working distance for reading	0-4	0-3	0-3	0-1.5	0-2	0-3.5 0-4	0-4	0-3
Offset at distance	1 ±3	±3	±3	±1.5	±2	±3 ±5	±5	±4
	3 ±2	±1.5	±1.5			±2 ±3	±3	±2

Dimensions in mm



1) Sensing surface, 2) Mounting surface, 3) Data carrier, 4) Read range

BIS00J4	BIS00J2	BIS00L9	BIS00J1
metal-free	metal-free	metal-free	metal-free
0-3	0-3	0-3	0-3
0-3	0-3	0-3	0-3
±3.5	±3.5	±3.5	±3.5
±2	±2	±2	±2



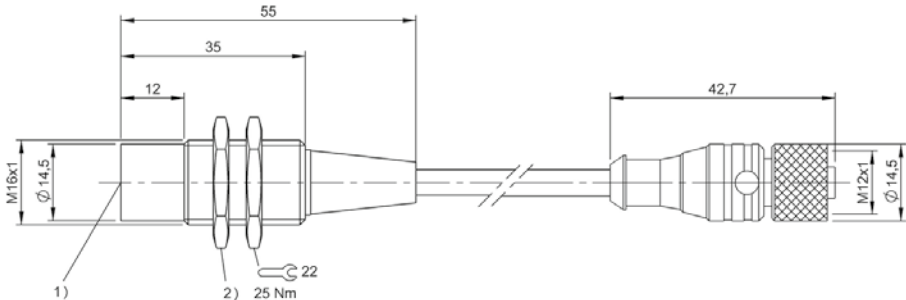
1 m cable PU	<b>BIS00PC</b> BIS C-306-PU1-01
10 m cable PU	<b>BIS00PE</b> BIS C-306-PU1-10
Product Group	LF (70/455 kHz)
Dimension	Ø 16 x 35 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	Brass
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0004	BIS0009	BIS000T	BIS0011	BIS001E	BIS0021	BIS001H	BIS002P		
Data carrier distance to metal	flush	flush	flush	flush	flush	flush	flush	metal-free	flush	metal-free	metal-free
Working distance for writing	0-4	0-3.5	0-3.5	0-2	0-2.5	0-4	0-4	0-3	0-4	0-3.5	
Working distance for reading	0-4	0-3.5	0-3.5	0-2	0-2.5	0-4	0-4	0-3	0-4	0-3.5	
Offset at distance											
	1 ±3	±3	±3	±2	±2.5	±3.5	±5	±4	±5	±4	
	3 ±2	±2	±2			±3	±4		±4	±3	

Dimensions in mm





1) Sensing surface, 2) Tightening torque

	BIS00J4	BIS00J2	BIS00L9	BIS00J1
	metal-free	metal-free	metal-free	metal-free
	0-3	0-3	0-3	0-3
	0-3	0-3	0-3	0-3
	±3.5	±3.5	±3.5	±3.5
	±2	±2	±2	±2

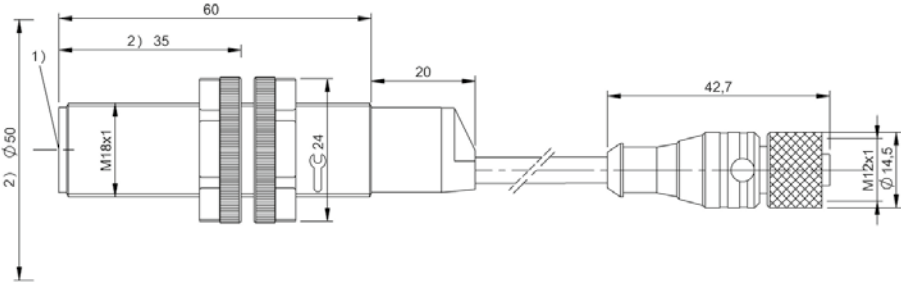


1 m cable PU	<b>BIS0077</b> BIS C-319-PU1-01
5 m cable PU	<b>BIS0078</b> BIS C-319-PU1-05
10 m cable PU	<b>BIS0079</b> BIS C-319-PU1-10
Product Group	LF (70/455 kHz)
Dimension	Ø 18 x 80 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Female
Housing material	PBT, blue, nuts PA 6.6 black
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS000C BIS000H BIS000K	BIS000N	BIS001E BIS001H	BIS0021	BIS002P
Data carrier distance to metal	metal-free	metal-free	metal-free	metal-free	metal-free
Working distance for writing	0-14	0-15	0-13	0-12	0-11
Working distance for reading	0-14	0-15	0-13	0-12	0-11
Offset at distance					
	1 ±12	±13	±9	±9	±9
	3 ±12	±12	±9	±9	±9
	5 ±11	±12	±9	±9	±9
	7 ±11	±11	±8.5	±8.5	±8
	10 ±9	±10	±7.5	±7.5	

Dimensions in mm



1) Sensing surface, 2) Clear zone

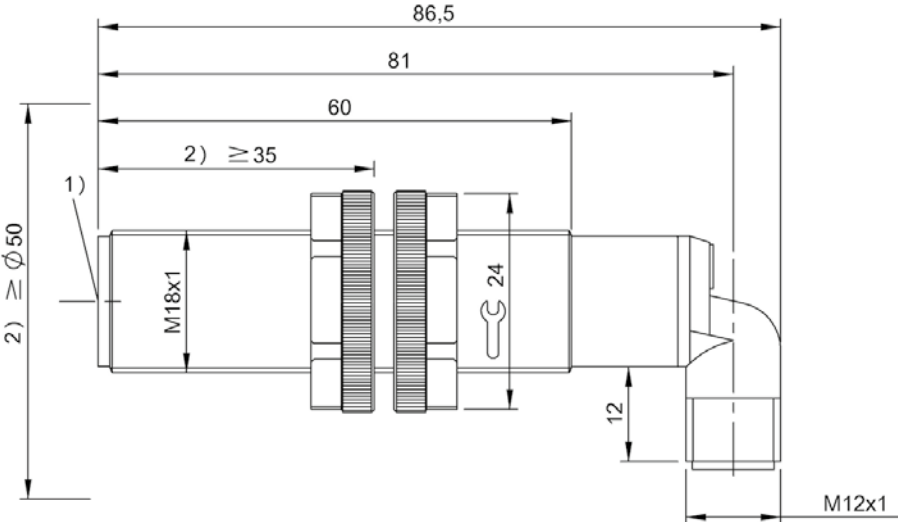


For 5 m cable	<b>BIS007A</b> BIS C-319/05-S4
For 10 m cable	<b>BIS007C</b> BIS C-319/10-S4
Product Group	LF (70/455 kHz)
Dimension	Ø 18 x 86.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 male
Housing material	PBT, blue, nuts PA 6.6 black
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	<b>BIS000C</b> <b>BIS000H</b> <b>BIS000K</b>	<b>BIS000N</b>	<b>BIS001E</b> <b>BIS001H</b>	<b>BIS0021</b>	<b>BIS002P</b>
Data carrier distance to metal	metal-free	metal-free	metal-free	metal-free	metal-free
Working distance for writing	0-14	0-15	0-13	0-12	0-11
Working distance for reading	0-14	0-15	0-13	0-12	0-11
Offset at distance					
	1 ±12	±13	±9	±9	±9
	3 ±12	±12	±9	±9	±9
	5 ±11	±12	±9	±9	±9
	7 ±11	±11	±8.5	±8.5	±8
	10 ±9	±10	±7.5	±7.5	

Dimensions in mm



1) Sensing surface, 2) Clear zone

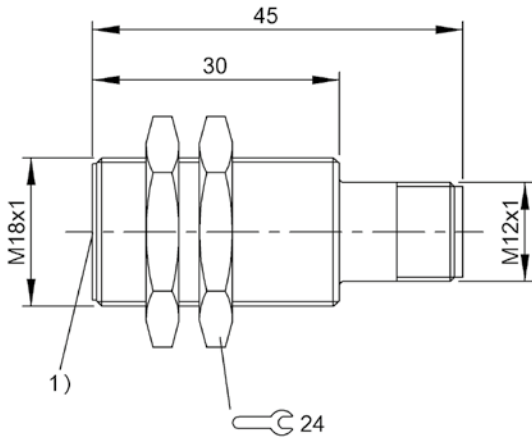


For 1 m cable	<b>BIS007P</b> BIS C-325/01-S4
For 5 m cable	<b>BIS007R</b> BIS C-325/05-S4
For 10 m cable	<b>BIS007T</b> BIS C-325/10-S4
Product Group	LF (70/455 kHz)
Dimension	Ø 18 x 45 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1 male
Housing material	Stainless steel (1.4571), stainless steel (1.4571)
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0011 BIS002Y BIS015W BIS0015	BIS001E	BIS001H	BIS0021	BIS002P	BIS00J2
Data carrier distance to metal	flush	flush	metal-free	metal-free	metal-free	metal-free	auf Metall
Working distance for writing	0-4	0-2.5	0-4	0-3	0-4	0-3	0-5
Working distance for reading	0-4	0-2.5	0-4	0-8	0-4	0-3.5	0-5
Offset at distance							
	1 ±3.5	±2.5	±4	±4	±4	±4	
	2						±3
	3 ±3		±2	±2	±2	±2	
	4						±2

Dimensions in mm



1) Sensing surface



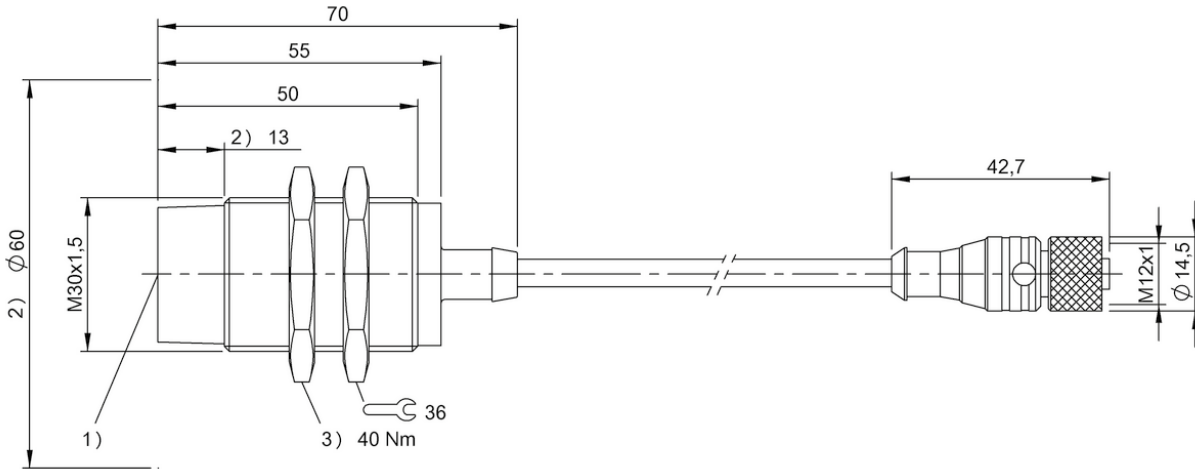
1 m cable PU	<b>BIS00PF</b> BIS C-310-PU1-01
5 m cable PU	<b>BIS00PH</b> BIS C-310-PU1-05
10 m cable PU	<b>BIS00PJ</b> BIS C-310-PU1-10
Product Group	LF (70/455 kHz)
Dimension	Ø 30 x 70 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Female
Housing material	Brass
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0006		BIS0007		BIS000C BIS000H BIS000K		BIS000M		BIS000N		BIS0019		BIS001C		BIS001E	
Data carrier distance to metal	flush	metal-free	flush	metal-free	metal-free		flush		metal-free		flush	metal-free	flush	metal-free	metal-free	
Working distance for writing	1-11	0-12	1-11	0-12	0-12		1-12		0-13		0-8	0-13	0-8	0-13	0-11	
Working distance for reading	1-11	0-12	1-11	0-12	0-12		1-12		0-13		0-8	0-13	0-8	0-13	0-11	
Offset at distance																
	1	±7.5	±7.5	±7.5	±7.5	±10	±7.5		±11		±8	±10	±8	±10	±9	
	3	±7	±7	±7	±7	±9	±7.5		±10		±7	±10	±7	±10	±8	
	5	±7	±7	±7	±7	±9	±7		±10		±6.5	±9	±6.5	±9	±7	
	7	±7	±7	±7	±7	±8.5	±6.5		±9.5		±5.5	±9	±5.5	±9	±5	
	10															

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Tightening torque

	BIS001H	BIS0021	BIS002K BIS002N	BIS002P
	metal-free	metal-free	metal-free	metal-free
	0-8	0-10	0-11	0-10
	0-8	0-10	0-11	0-10
	±6.5	±9	±10	±8
	±6	±8	±9	±7.5
	±5.5	±7	±9	±7
		±4	±8	±6.5
			±6.5	

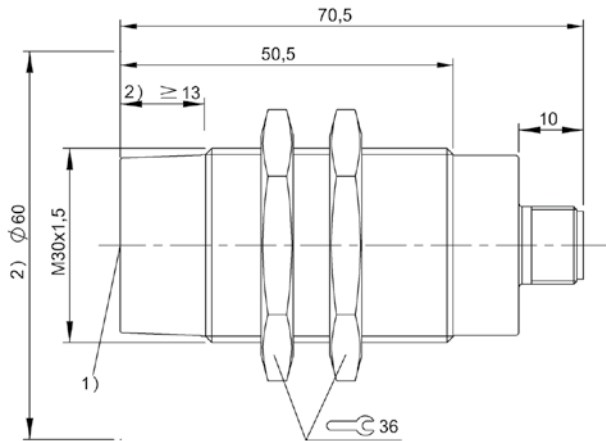


For 1 m cable	<b>BIS007J</b> BIS C-323/01-S4
For 5 m cable	<b>BIS007K</b> BIS C-323/05-S4
For 10 m cable	<b>BIS007L</b> BIS C-323/10-S4
Product Group	LF (70/455 kHz)
Dimension	Ø 30 x 70.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 male
Housing material	1.4305 stainless steel
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0006 BIS0007		BIS000C BIS000H BIS000K		BIS000M		BIS000N		BIS0019 BIS001C		BIS001E		BIS001H		BIS0021	
Data carrier distance to metal	flush	metal-free	metal-free		flush	metal-free		flush	metal-free	flush	metal-free		flush	metal-free		
Working distance for writing	1-11	0-12	0-12		1-12	0-13		0-8	0-13	0-11	0-8		0-8	0-10		
Working distance for reading	1-11	0-12	0-12		1-12	0-13		0-8	0-13	0-11	0-8		0-8	0-10		
Offset at distance																
	1	±7.5	±7.5	±10	±7.5	±11		±8	±10	±9	±6.5		±6.5	±9		
	3	±7	±7	±9	±7.5	±10		±7	±10	±8	±6		±6	±8		
	5	±7	±7	±9	±7	±10		±6.5	±9	±7	±5.5		±5.5	±7		
	7	±7	±7	±8.5	±6.5	±9.5		±5.5	±9	±5	±5		±5	±4		
	10															

Dimensions in mm



1) Sensing surface, 2) Clear zone

	BIS0026	BIS002K BIS002N	BIS002P
	metal-free	metal-free	metal-free
	0-9	0-11	0-9
	0-9	0-11	0-9
	±8	±10	±8
	±7	±9	±7.5
	±5	±9	±7
		±8	±6.5
		±6.5	

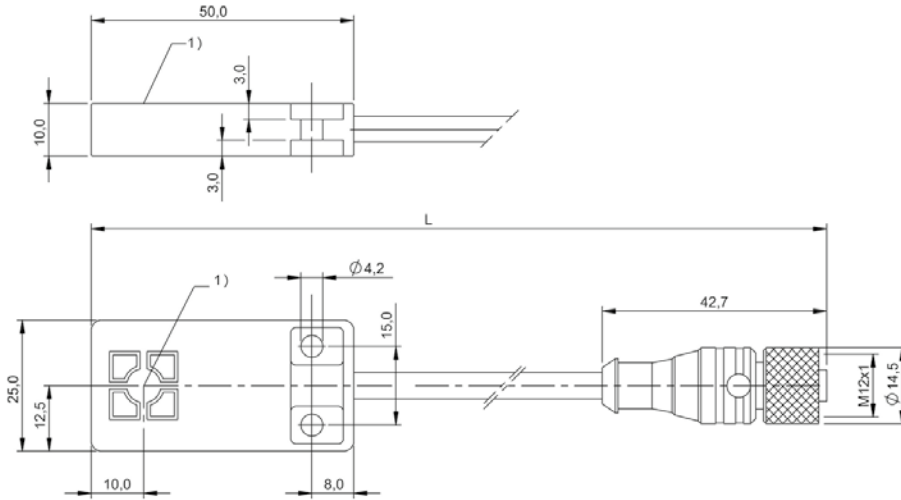


1 m cable PU	<b>BIS0066</b> BIS C-305-PU1-01
5 m cable PU	<b>BIS0067</b> BIS C-305-PU1-05
10 m cable PU	<b>BIS0068</b> BIS C-305-PU1-10
Product Group	LF (70/455 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	ABS, GF16
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0004 BIS0009	BIS000C BIS000H BIS000K	BIS000M		BIS000N	BIS000T	BIS0011	BIS0019
Data carrier distance to metal	flush	flush	metal-free	flush	metal-free	metal-free	flush	flush	metal-free
Freizone Datenträger									
Working distance for writing	0-4	0-5	0-6	1-8	0-10	0-7	0-2	0-2.5	0-6
Working distance for reading	0-4	0-5	0-6	1-8	0-10	0-7	0-2	0-2.5	0-6
Offset at distance									
	1 ±3	±4	±8	±5	±6	±8.5	±2	±3	±8
	3 ±2	±3	±7	±4	±6	±7.5		±2	±7
	5		±5	±5	±6	±6			±5
	7			±2	±5	±4			
	10				±3				

Dimensions in mm



1) Sensing surface

	BIS001E BIS001H	BIS0021	BIS00J4 BIS00J2
	metal-free	metal-free	metal-free
	0-7	0-6	0-4.5
	0-7	0-6	0-4.5
	±5	±5	±4.5
	±5	±5	±3.5
	±4	±4	
	±2		

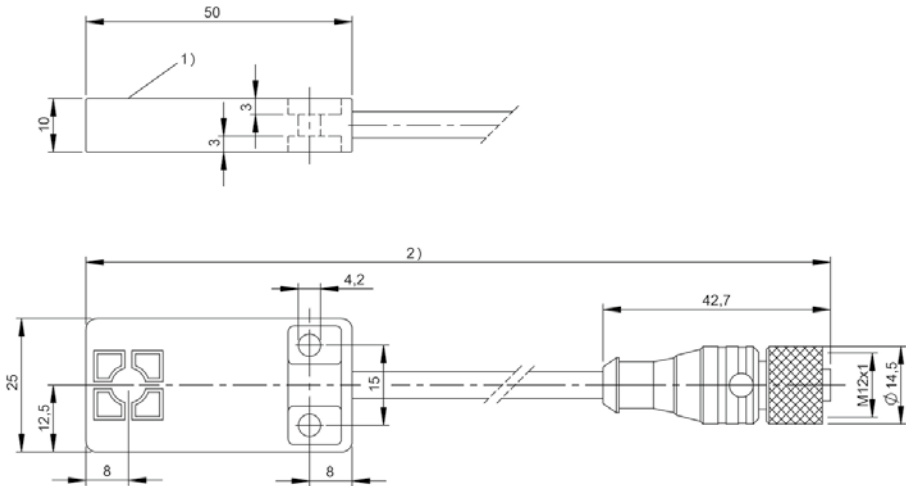


5 m cable PU	<b>BIS007H</b> BIS C-322-PU1-05
Product Group	LF (70/455 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	ABS, GF16
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0002	BIS0004 BIS0009	BIS000C BIS000H BIS000J BIS000K	BIS000M	BIS000N	BIS000T	BIS0011	BIS002Y	
Data carrier distance to metal	flush	flush	metal-free	flush	metal-free	metal-free	flush	flush	flush
Working distance for writing	0-4	0-5	0-6	1-8	0-10	0-7	0-2	0-2.5	0-2.5
Working distance for reading	0-4	0-5	0-6	1-8	0-10	0-7	0-2	0-2.5	0-2.5
Offset at distance	0.7								
	1 ±3	±4	±8	±5	±6	±8.5	±2	±3	±3
	3 ±2	±3	±7	±4	±6	±7.5		±2	±2
	4 ±2								
	5		±5	±3	±6	±6			
	7				±5	±4			
	10				±3				

Dimensions in mm



1) Sensing surface, 2) Cable length see text

	BIS0019	BIS001E BIS001H	BIS0021
	metal-free	metal-free	metal-free
	0-6	0-7	0-6
	0-6	0-7	0-6
	±8	±5	±5
	±7	±5	±5
	±5	±4	±4
		±2	



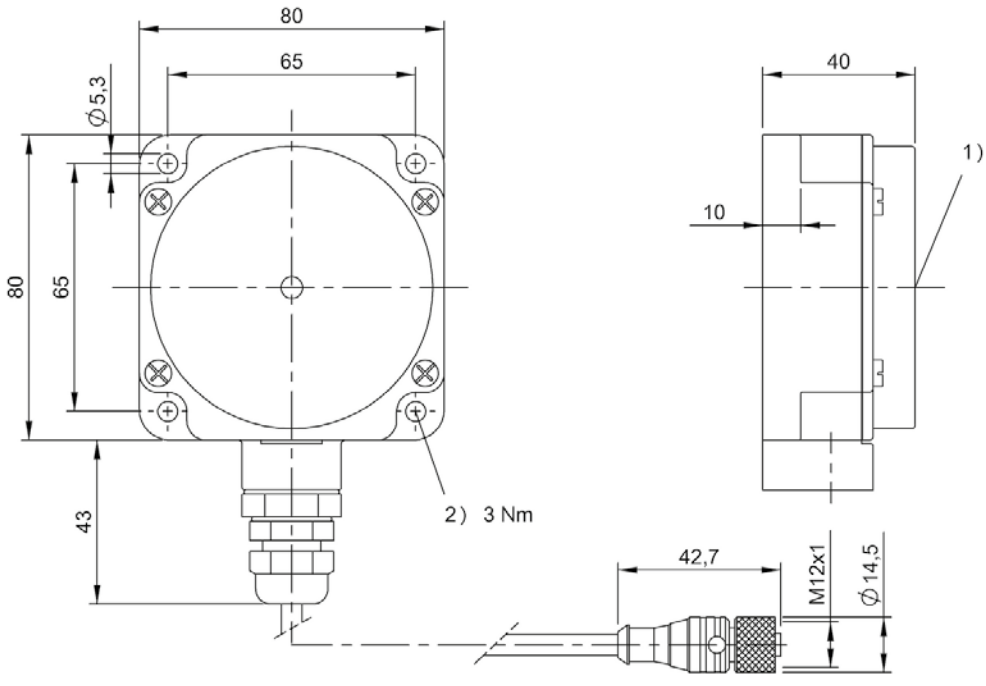
1 m cable PU	<b>BIS00PK</b> BIS C-315-PU1-01
5 m cable PU	<b>BIS00PL</b> BIS C-315-PU1-05
10 m cable PU	<b>BIS00PM</b> BIS C-315-PU1-10
Product Group	LF (70/455 kHz)
Dimension	80 x 40 x 80 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1-Female
Housing material	Brass
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0006 BIS0007	BIS000C BIS000H BIS000K	BIS000M	BIS000N	BIS0017	BIS0019 BIS001C	BIS001E	BIS001H	
Data carrier distance to metal	flush	metal-free	flush	metal-free	metal-free	metal-free	metal-free	metal-free	
Freizone Datenträger									
Working distance for writing	1-13	2-16	0-15	0-18	10-30	0-18	0-18	0-8	
Working distance for reading	1-13	2-16	0-15	0-18	10-30	0-18	0-18	0-8	
Offset at distance									
	1 ±15		±15	±17		±17	±16	±6.5	
	2	±15							
	3 ±14	±14	±15	±17		±17	±16	±6	
	5 ±11	±12	±14	±17		±17	±16	±5.5	
	7 ±10	±11	±12	±15		±15	±14		
	10 ±8	±8	±12	±15	±30	±15	±14		
	15			±14	±27	±14	±11		
	20				±20				

Dimensions in mm





1) Sensing surface, 2) Tightening torque

	BIS0021	BIS002K BIS002N
	metal-free	metal-free
	0-16	0-20
	0-16	0-20
	$\pm 16$	$\pm 18$
	$\pm 16$	$\pm 18$
	$\pm 16$	$\pm 18$
	$\pm 14$	$\pm 18$
	$\pm 12$	$\pm 18$
		$\pm 16$

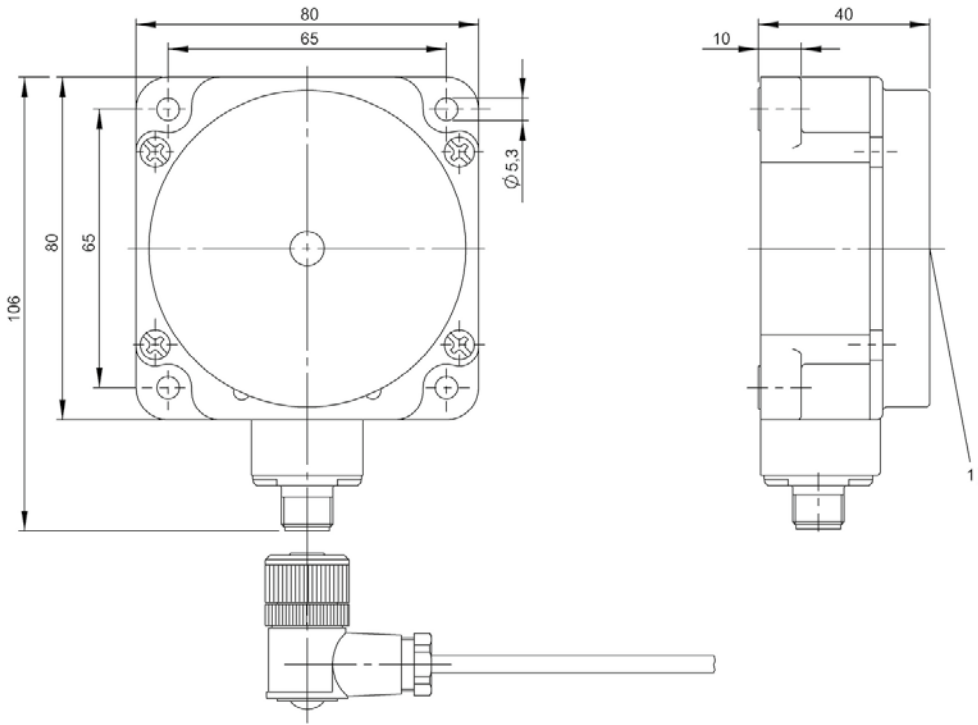


For 5 m cable	<b>BIS006Y</b> BIS C-315/05-S4
For 10 m cable	<b>BIS006Z</b> BIS C-315/10-S4
Product Group	LF (70/455 kHz)
Dimension	80 x 40 x 80 mm
Installation	metal-free (clear zone) on metal flush in metal
Antenna type	round
Connection	M12x1 male
Housing material	PBT
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS0006 BIS0007	BIS000C BIS000H BIS000K	BIS000M	BIS000N	BIS0017	BIS0019 BIS001C	BIS001E	BIS001H
Data carrier distance to metal	flush	metal-free	flush	metal-free	metal-free	metal-free	metal-free	metal-free
Working distance for writing	1-13	2-16	0-15	0-18	10-30	0-18	0-18	0-8
Working distance for reading	1-13	2-16	0-15	0-18	10-30	0-18	0-18	0-8
Offset at distance								
	1 ±15		±15	±17		±17	±16	±6.5
	2	±15						
	3 ±14	±14	±15	±17		±17	±16	±6
	5 ±11	±12	±14	±17		±17	±16	±5.5
	7 ±10	±11	±12	±15		±15	±14	
	10 ±8	±8	±12	±15	±30	±15	±14	
	15			±14	±27	±14	±11	
	20				±20			

Dimensions in mm



1) Sensing surface

	BIS0021	BIS002K BIS002N
	metal-free	metal-free
	0-16	0-20
	0-16	0-20
	±16	±18
	±16	±18
	±16	±18
	±14	±18
	±12	±18
		±16

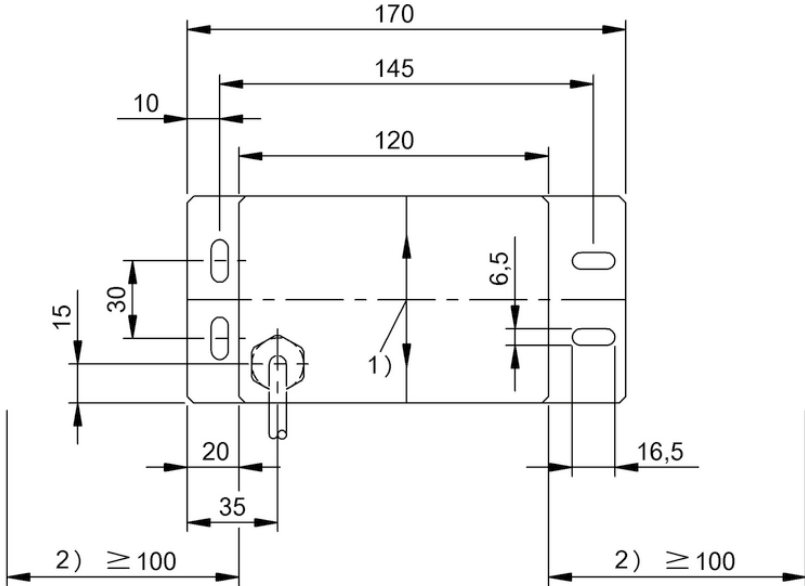
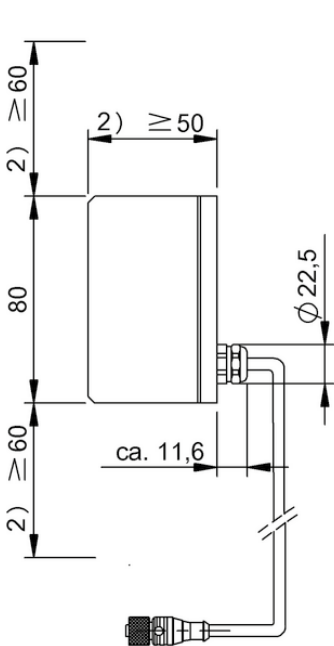


5 m cable PU	<b>BIS00PN</b> BIS C-351-PU1-05
10 m cable PU	<b>BIS00PP</b> BIS C-351-PU1-10
Product Group	LF (70/455 kHz)
Dimension	80 x 50 x 170 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Connection	M12x1-Female
Housing material	POM, mounting plate aluminum
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	<b>BIS0028</b>	<b>BIS002A</b>	<b>BIS002E</b>
Data carrier distance to metal	metal-free		
Working distance for writing	0-45		
Working distance for reading	0-45		
Offset at distance			
	1	±15	
	2	±15	
	3	±15	
	4	±15	
	5	±15	
	6	±15	
	10	±15	
	20	±15	

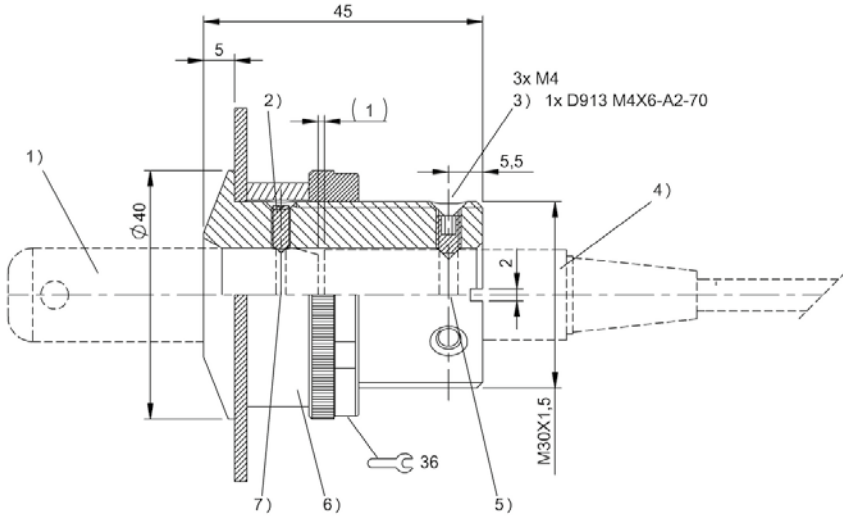
Dimensions in mm



1) Sensing surface, 2) Clear zone



	<b>BAM012C</b> BIS C-300-ZA1
Product Group	LF (70/455 kHz)
Dimension	Ø 40 x 45 mm
Installation	—
Antenna type	—
Connection	—
Housing material	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	—
Approval/Conformity	CE



1) Data carrier, 2) Spring-loaded compression piece, 3) Threaded pin, 4) Read/write head, 5) Notch in read/write head, 6) Spacer ring, 7) Notch in data carrier



0.7 m cable	<b>BIS00JA</b> BIS C-380-01/10-00,7	
1 m cable		
1,5 m cable		
5 m cable		
Style 1	M12x1	
Style 2	M30x1.5	
Antenna type	round	
Storage temperature	-20...85 °C	
Ambient temperature	0...70 °C	
Housing material	Brass, nuts nickel plated brass	
Protection degree	IP67	
Installation	metal-free (clear zone)	
Approval/Conformity	CE	
Productview	Page 364	

Appropriate data carrier

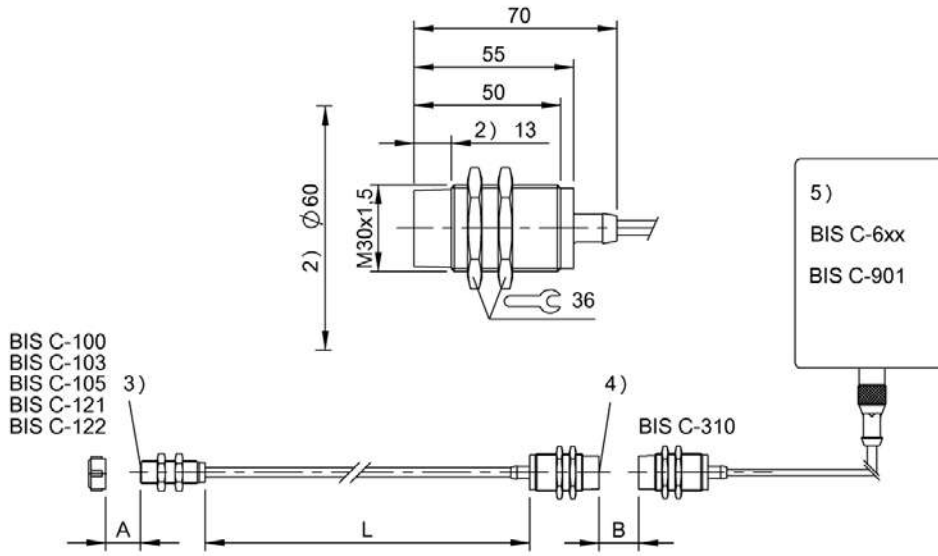
	<b>BIS0002</b> <b>BIS0004</b> <b>BIS0009</b> <b>BIS000T</b> <b>BIS0011</b>	
Installation	flush	
Appropriate read/write head	BIS00P5 BIS005Z BIS00P6	



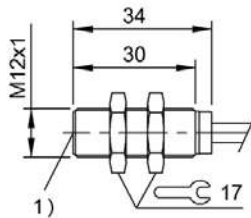


	<b>BIS00JJ</b> BIS C-380-06/06-01	<b>BIS00JP</b> BIS C-380-10/10-01
	<b>BIS00JK</b> BIS C-380-06/06-01,5	
	<b>BIS00N9</b> BIS C-380-06/06-05	<b>BIS00JR</b> BIS C-380-10/10-05
	M16x1	M30x1.5
	M16x1	M30x1.5
	round	round
	-20...85 °C	-20...85 °C
	0...70 °C	0...70 °C
	Brass, nuts nickel plated brass	Brass, nuts nickel plated brass
	IP67	IP67
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone)
	CE	CE
	Page 364	Page 365

	<b>BIS0002</b> <b>BIS0004</b> <b>BIS0009</b> <b>BIS000T</b> <b>BIS0011</b>	<b>BIS000N</b> <b>BIS001E</b> <b>BIS C-104-xx/A</b> <b>BIS C-108-xx/L</b> <b>BIS C-128-xx/L</b>
	flush	metal-free
	BIS00P5	BIS00PF
	BIS005Z	BIS00PH
	BIS00P6	BIS00PJ

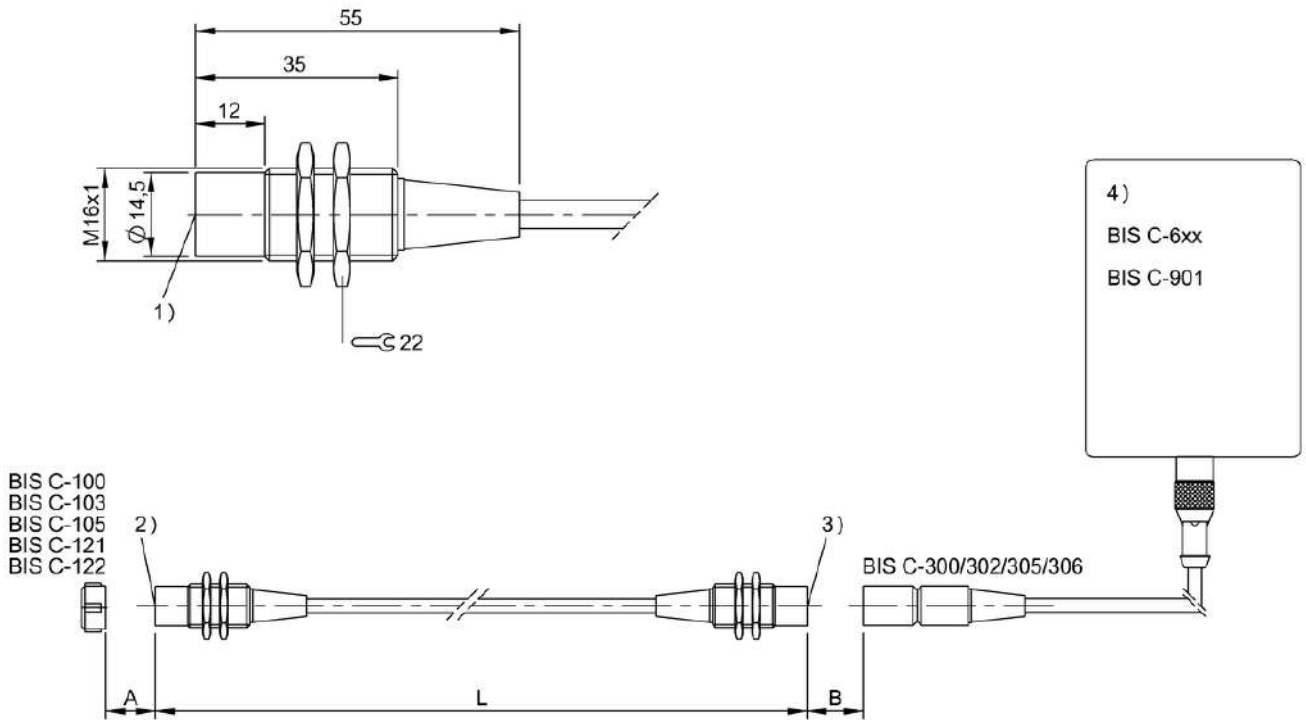


6)



1) Sensing surface, 2) Clear zone, 3) Active surface data carrier, 4) Active surface R/W head, 5) Processor or converter, 6) see remarks

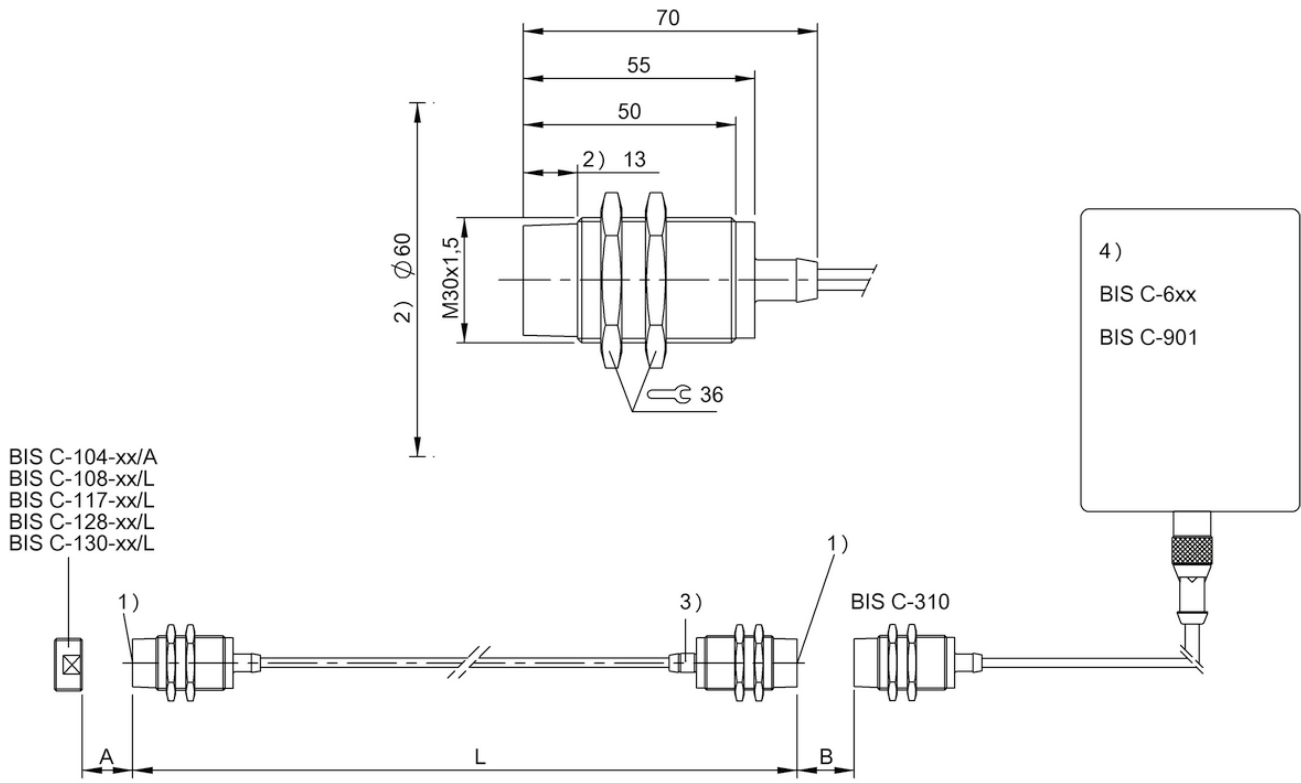
**BIS00JA**



5)

1) Sensing surface, 2) Active surface data carrier, 3) Active surface R/W head, 4) Processor or converter, 5) see remarks

**BIS00JJ, BIS00JK, BIS00N9**



5)

1) Sensing surface, 2) Clear zone, 3) Yellow marking, 4) Processor or converter, 5) see remarks

**BIS00JP, BIS00JR**



	<b>BIS013W</b> BIS V-6108-048-C102	
Product Group	Multi-Frequency Processor	
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	
Supported RFID technologies	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 378	



	<b>BIS012E</b> BIS V-6102-019-C101	<b>BIS0187</b> BIS V-6107-039-C105	<b>BIS018K</b> BIS V-6107-039-C106
	Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
	Profibus DP Slave galvanically isolated	Ethernet TCP/IP, USB	Ethernet TCP/IP, USB
	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)
	4	4	4
	24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
	Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
	0...60 °C	0...60 °C	0...60 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
	M12x1-Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 4-pin
	Page 378	Page 379	Page 379



	<b>BIS014C</b> BIS V-6106-034-C102	
Product Group	Multi-Frequency Processor	
Interface	Ethernet/IP	
Supported RFID technologies	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage Ub	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 380	



	<b>BIS0146</b> BIS V-6106-034-C104	<b>BIS0147</b> BIS V-6110-063-C102	<b>BIS014E</b> BIS V-6111-073-C103
	Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
	Ethernet/IP	EtherCAT	CC-Link
	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860/960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM)
	4	4	4
	24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
	Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
	0...60 °C	0...60 °C	0...60 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 4-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	M12x1-Male, 5-pin, A-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin
	Page 380	Page 381	Page 381



	<b>BIS008U</b> BIS C-600-007-650-00-KL1	
Product Group	LF (70/455 kHz)	
Interface	RS232	
Supported RFID technologies	LF 70/455 kHz (BIS C )	
Number of connectable R/W heads / antennas	2	
Operating voltage U <sub>b</sub>	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
IP rating	IP65 with read/write head	
Approval/Conformity	CE, cULus, EAC, WEEE	
Connection	Terminal strip, 19-pin	
Productview	Page 382	





	<b>BIS00K3</b> BIS C-6008-048-650-06-ST23	<b>BIS00K4</b> BIS C-6028-048-050-06-ST22	<b>BIS00TU</b> BIS C-6028-048-050-06-ST28
	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet	Profinet
	LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )
	2	2	2
	19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
	ABS	Aluminum, Die casting	Aluminum, Die casting
	0...60 °C	0...60 °C	0...60 °C
	IP65, with connector	IP65, with connector	IP65, with connector
	CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE
	Female, 4-pin, D-coded M12x1-Female, 4-pin, D-coded Male, 5-pin	2x RJ45-Female, 8-pin Male, 5-pin	Female, 4-pin, D-coded M12x1-Female, 4-pin, D-coded Male, 5-pin
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	<b>BIS009F</b> BIS C-6002-019-654-03-ST11	
Product Group	LF (70/455 kHz)	
Interface	Profinet DP Slave galvanically isolated	
Supported RFID technologies	LF 70/455 kHz (BIS C )	
Number of connectable R/W heads / antennas	1	
Operating voltage $U_b$	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
IP rating	IP65 with read/write head	
Approval/Conformity	CE, cULus, EAC, WEEE	
Connection	Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded Male, 5-pin	
Productview	Page 384	



<b>BIS009L</b> BIS C-6002-028-650-03-KL2	<b>BIS0099</b> BIS C-6002-019-650-03-KL2	<b>BIS009A</b> BIS C-6002-019-650-03-ST11
LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
Profibus DP Slave galvanically isolated	Profibus DP Slave galvanically isolated	Profibus DP Slave galvanically isolated
LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )
1	2	2
19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
ABS	ABS	ABS
0...60 °C	0...60 °C	0...60 °C
IP65 with read/write head	IP65 with read/write head	IP65 with read/write head
CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE
Terminal strip, 19-pin	Terminal strip, 19-pin	Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded Male, 5-pin
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	<b>BIS009J</b> BIS C-6002-019-655-03-ST11	
Product Group	LF (70/455 kHz)	
Interface	Profibus DP Slave galvanically isolated	
Supported RFID technologies	LF 70/455 kHz (BIS C )	
Number of connectable R/W heads / antennas	2	
Operating voltage $U_b$	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
IP rating	IP65 with read/write head	
Approval/Conformity	CE, cULus, EAC, WEEE	
Connection	Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded Male, 5-pin	
Productview	Page 385	



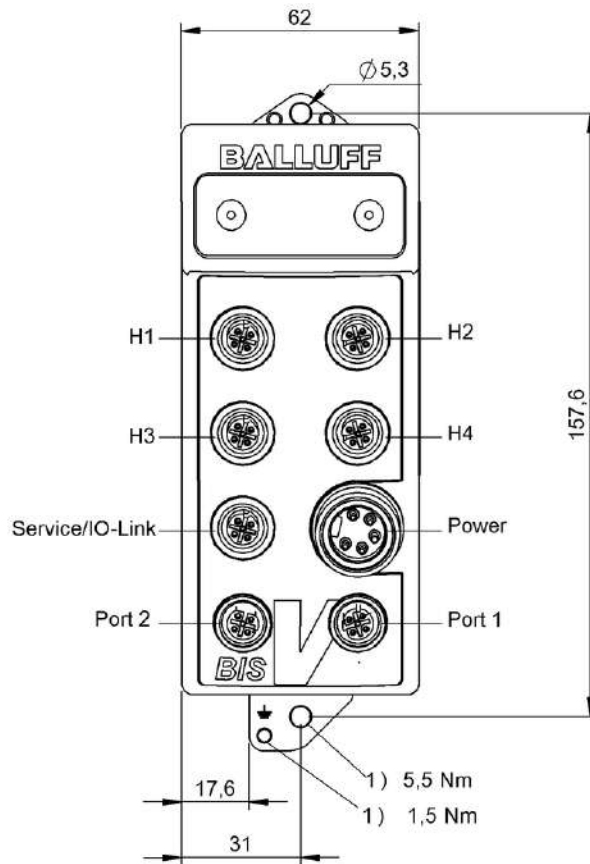
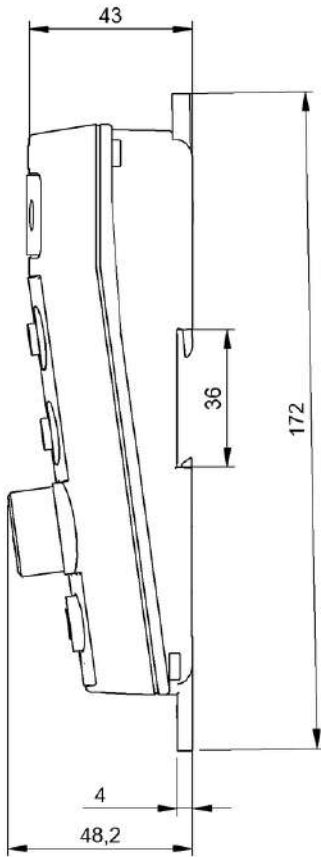
<b>BIS009M</b> BIS C-6002-028-650-03-ST11	<b>BIS00A4</b> BIS C-602-019-650-03-KL2	<b>BIS00AL</b> BIS C-6022-019-050-03-ST10
LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
Profibus DP Slave galvanically isolated	Profibus DP Slave galvanically isolated	Profibus DP Slave galvanically isolated
LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )
2	2	2
19.2...28.8 VDC	19.2...28.8 VDC	19.2...28.8 VDC
ABS	ABS	Aluminum, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65 with read/write head	IP65 with read/write head	IP65, with connector
CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE
Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded Male, 5-pin	Terminal strip, 19-pin	2x Female, 12-pin Male, 5-pin
Page 385	Page 384	Page 386



	<b>BIS00AM</b> BIS C-6022-019-050-03-ST14	
Product Group	LF (70/455 kHz)	
Interface	Profibus DP Slave galvanically isolated	
Supported RFID technologies	LF 70/455 kHz (BIS C )	
Number of connectable R/W heads / antennas	2	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Aluminum, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, cULus, EAC, WEEE	
Connection	Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded Male, 5-pin	
Productview	Page 386	

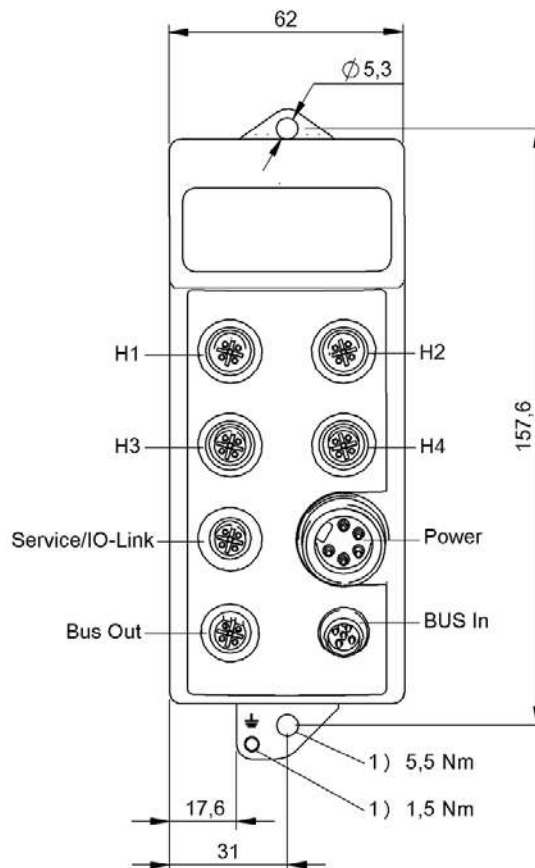
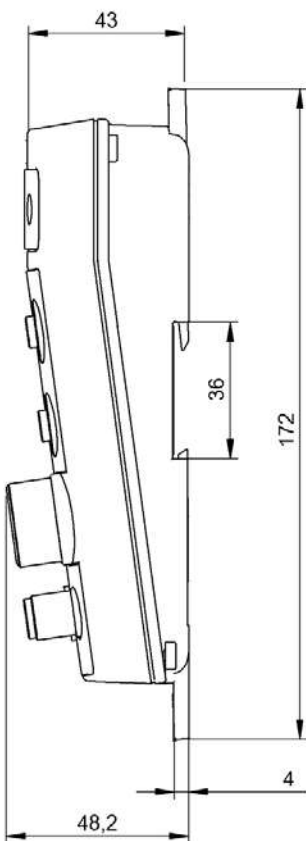


<b>BIS00AY</b> BIS C-6027-039-050-06-ST19	<b>BIS00AU</b> BIS C-6026-034-050-06-ST19	
LF (70/455 kHz)	LF (70/455 kHz)	
Ethernet TCP/IP	Ethernet/IP	
LF 70/455 kHz (BIS C )	LF 70/455 kHz (BIS C )	
2	2	
19.2...28.8 VDC	19.2...28.8 VDC	
Aluminum, Die casting	Aluminum, Die casting	
0...60 °C	0...60 °C	
IP65, with connector	IP65, with connector	
CE, cULus, EAC, WEEE	CE, cULus, EAC, WEEE	
Female, 4-pin, D-coded Male, 5-pin	Female, 4-pin, D-coded Male, 5-pin	
Page 387	Page 387	



1) Tightening torque

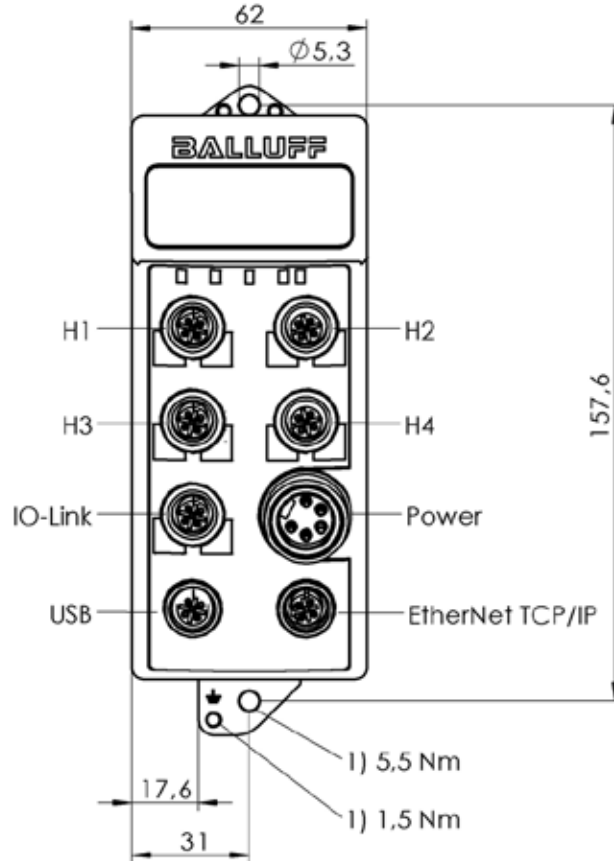
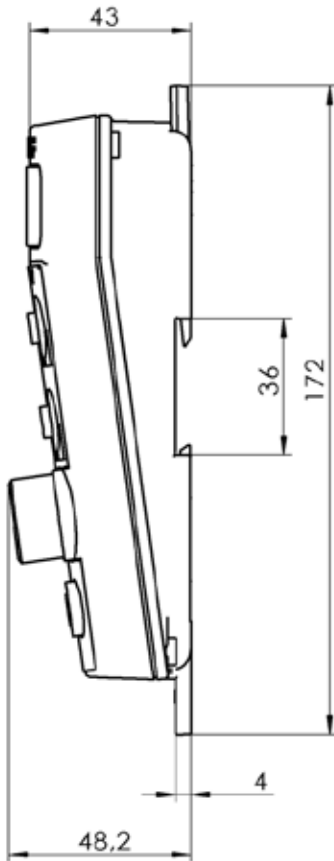
**BIS013W**



1) Tightening torque

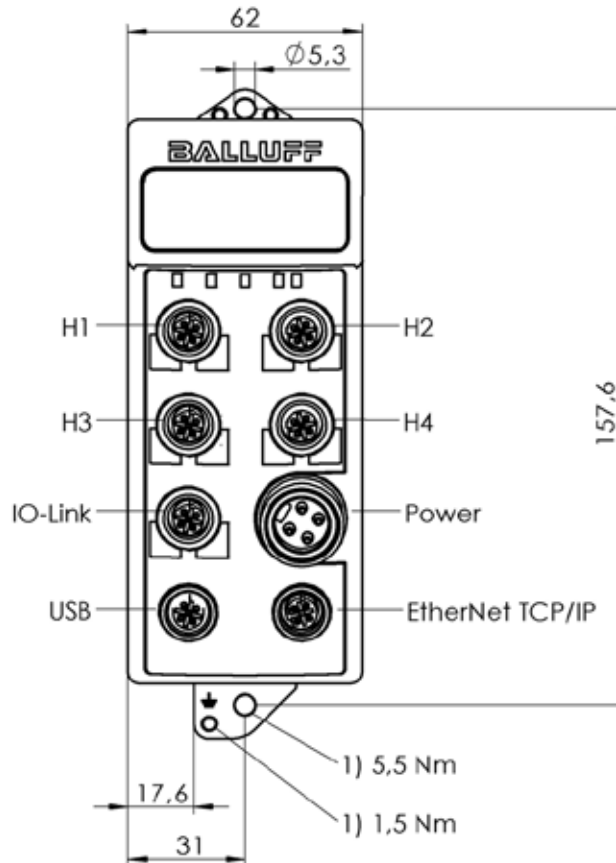
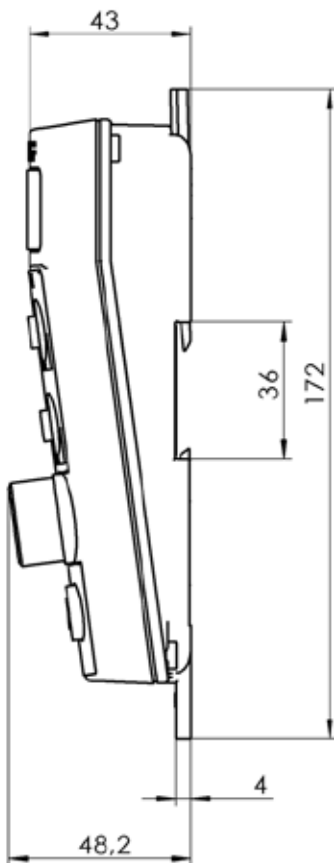
**BIS012E**





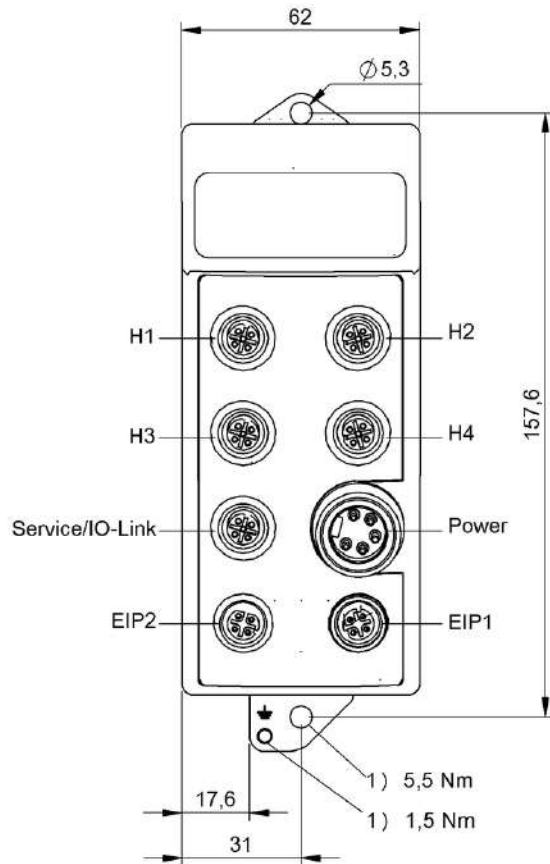
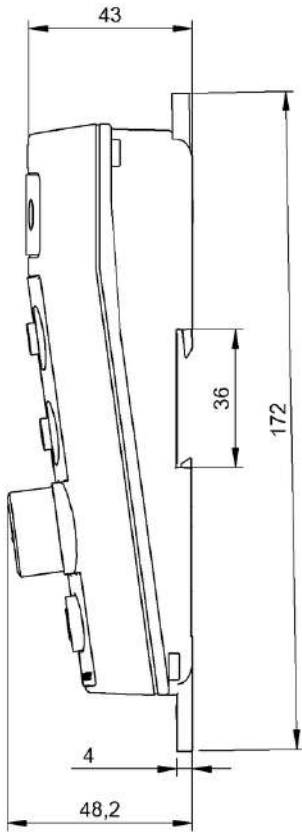
1) Tightening torque

**BIS0187**



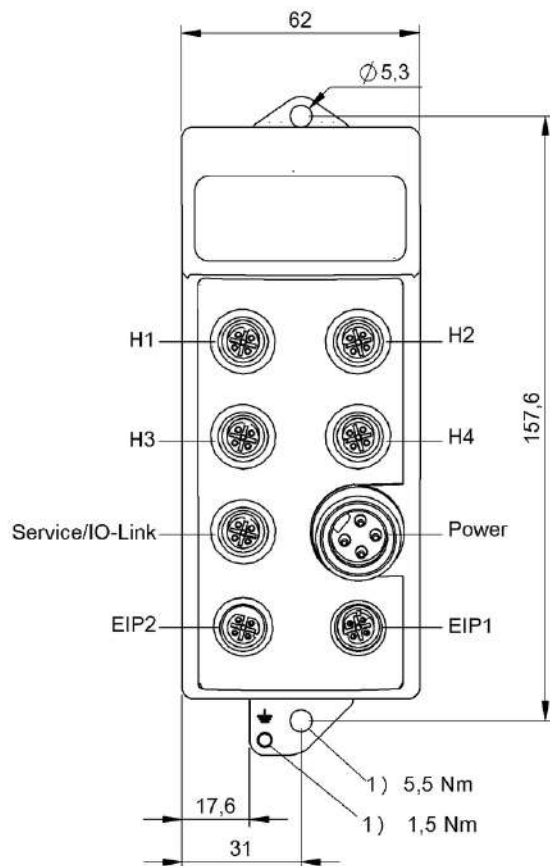
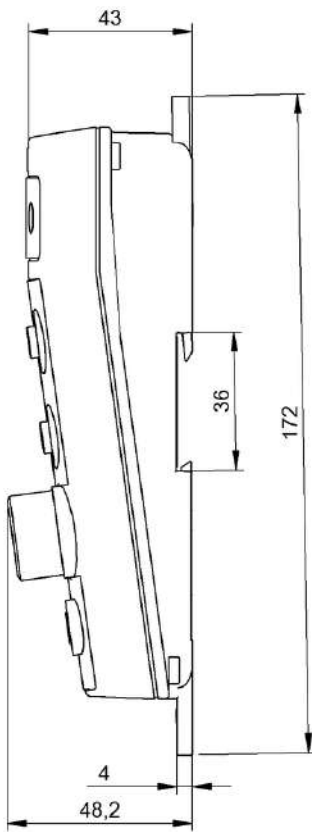
1) Tightening torque

**BIS018K**



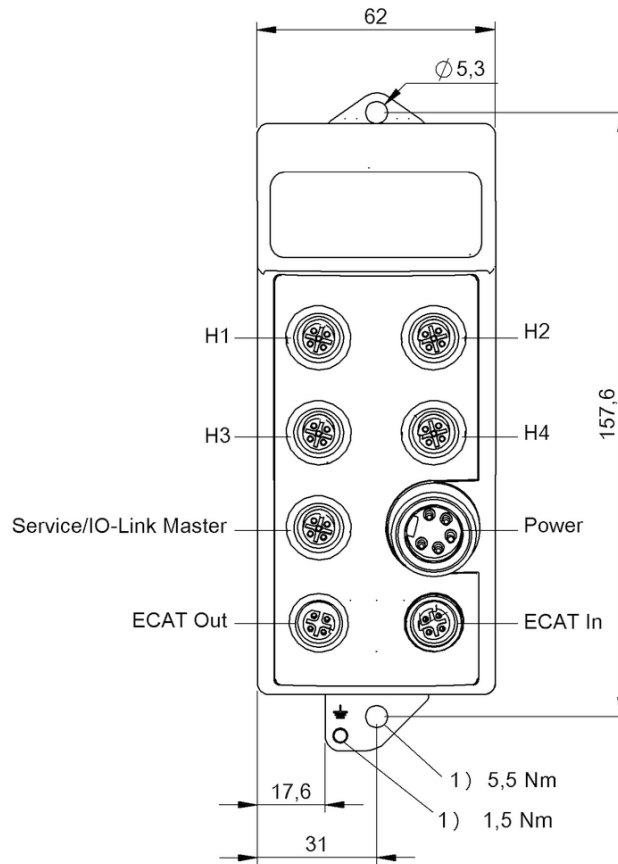
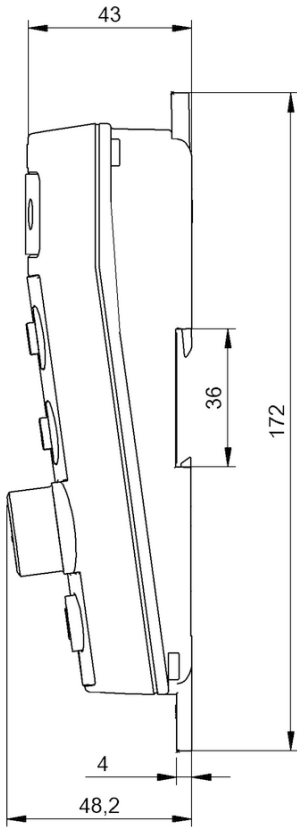
1) Tightening torque

**BIS014C**



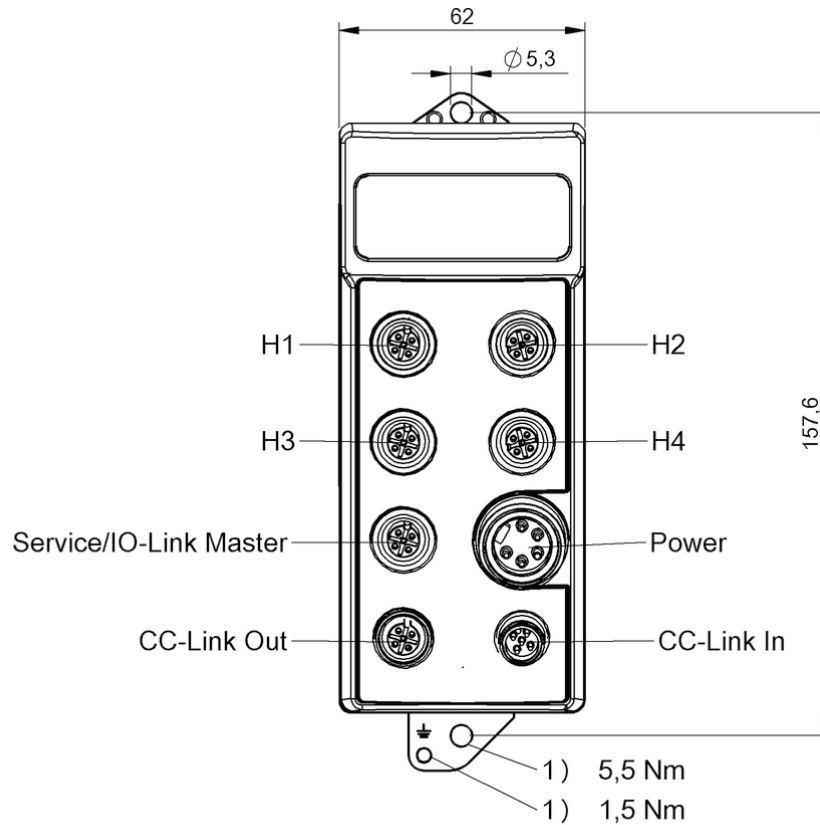
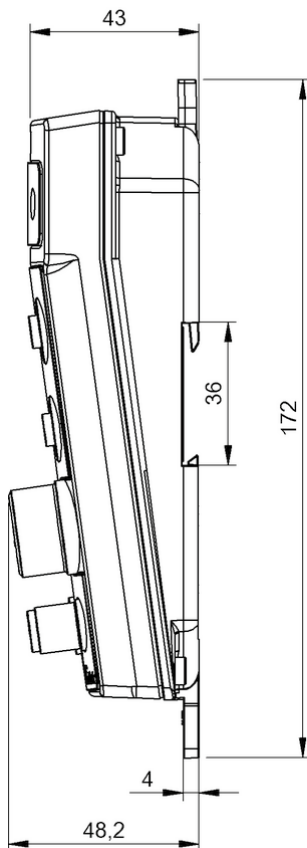
1) Tightening torque

**BIS0146**



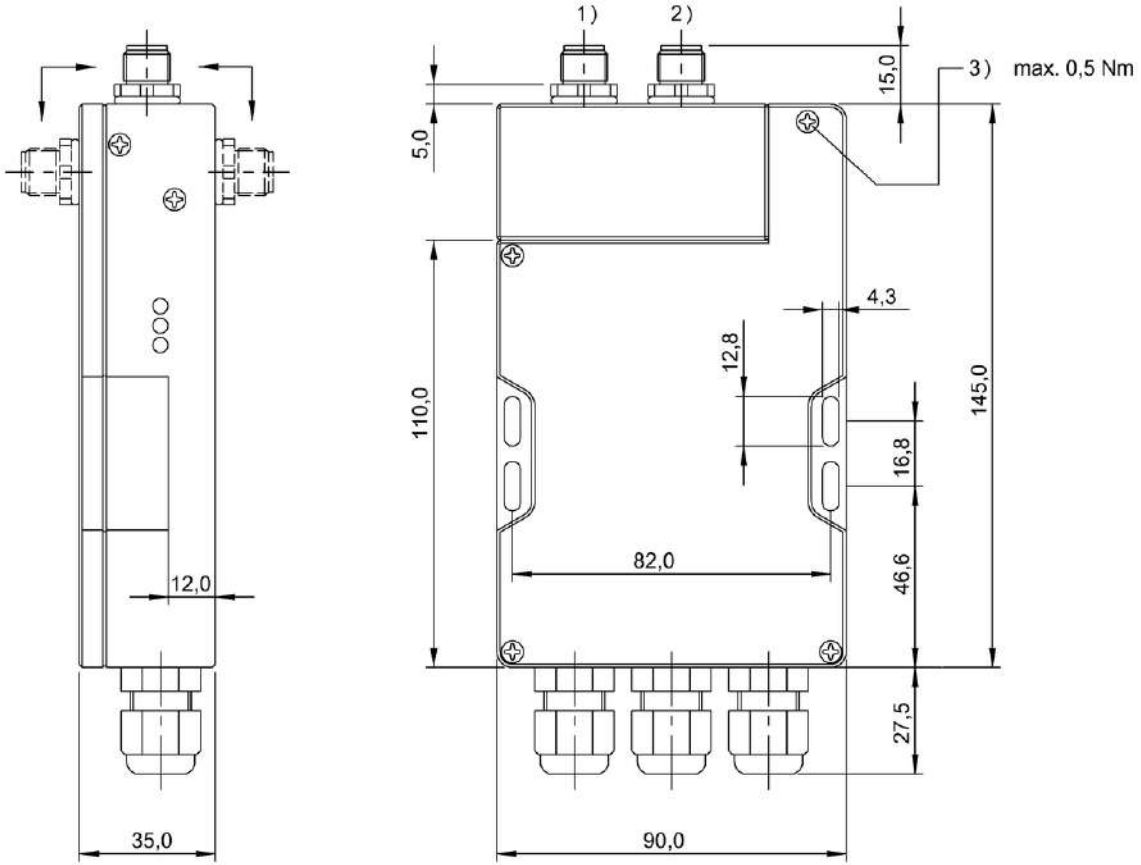
1) Tightening torque

**BISO147**



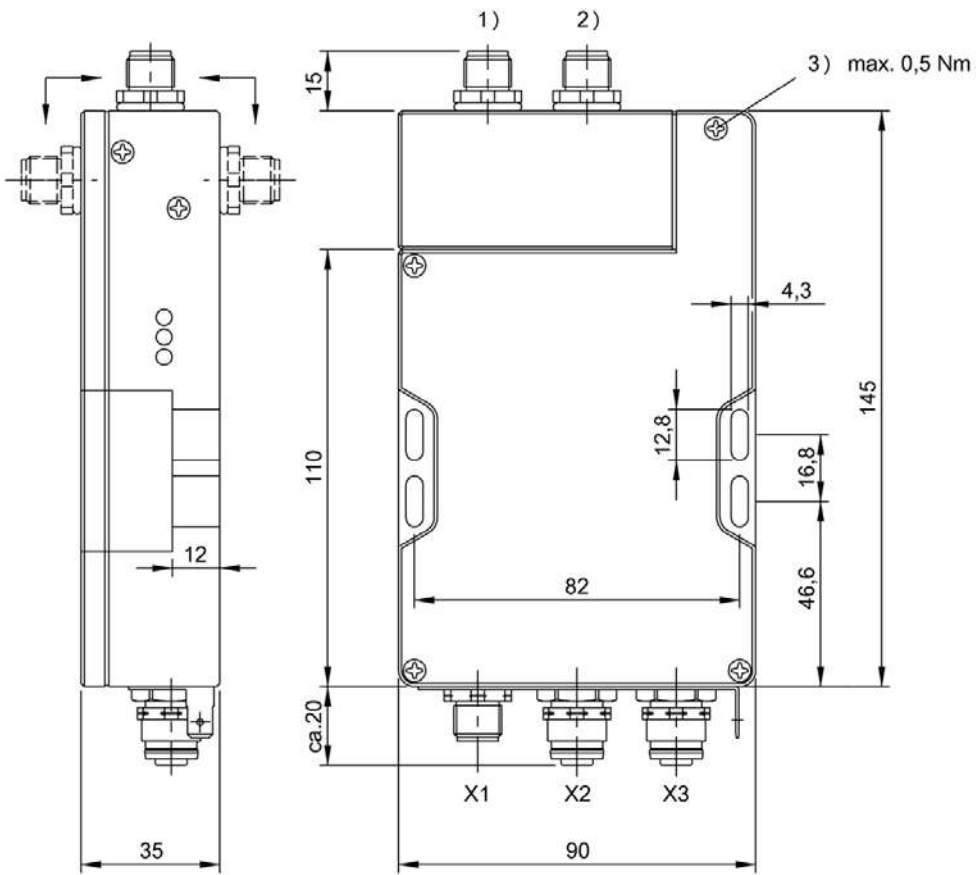
1) Tightening torque

**BISO14E**



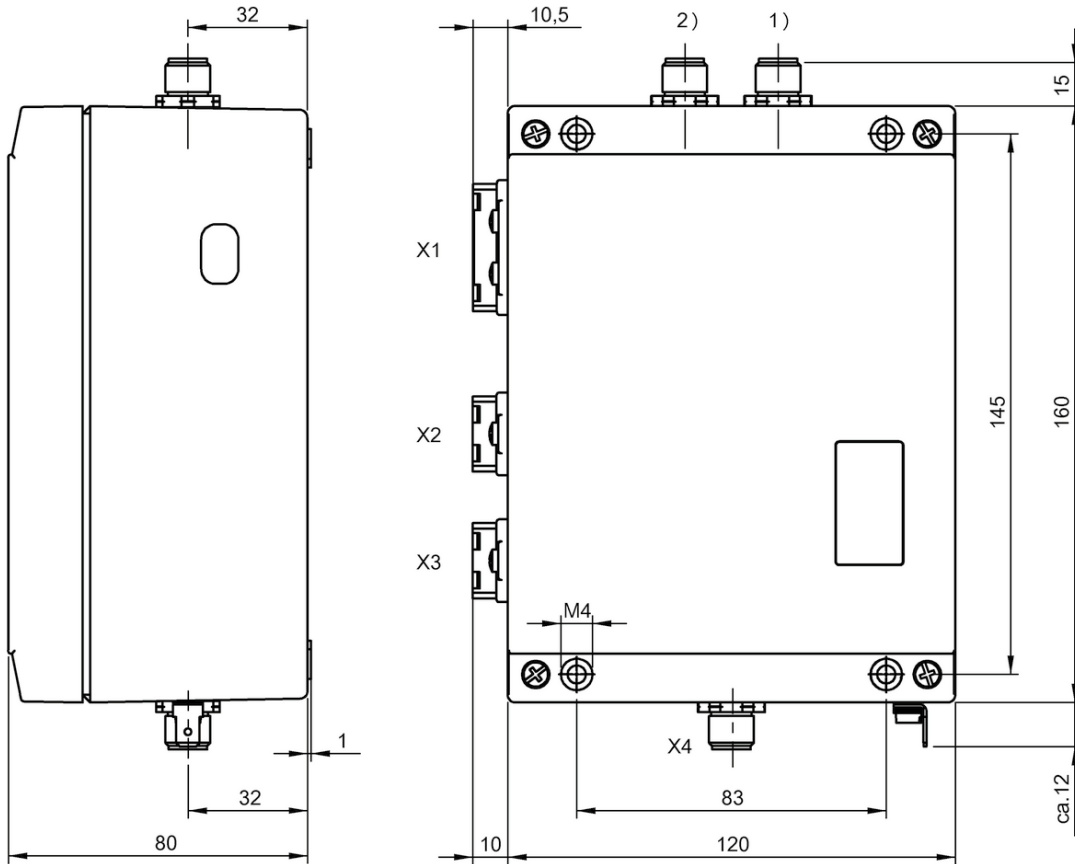
1) Head 1, 2) Head 2, 3) Tightening torque

**BIS008U**



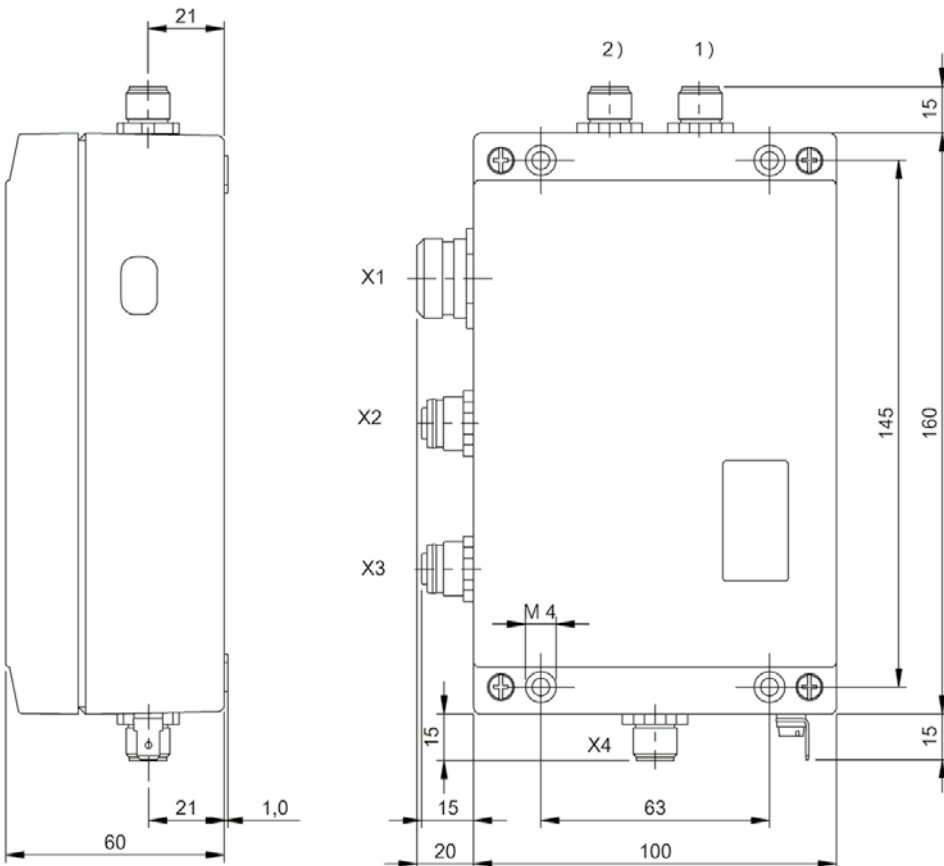
1) Head 1, 2) Head 2, 3) Tightening torque

**BIS00K3**



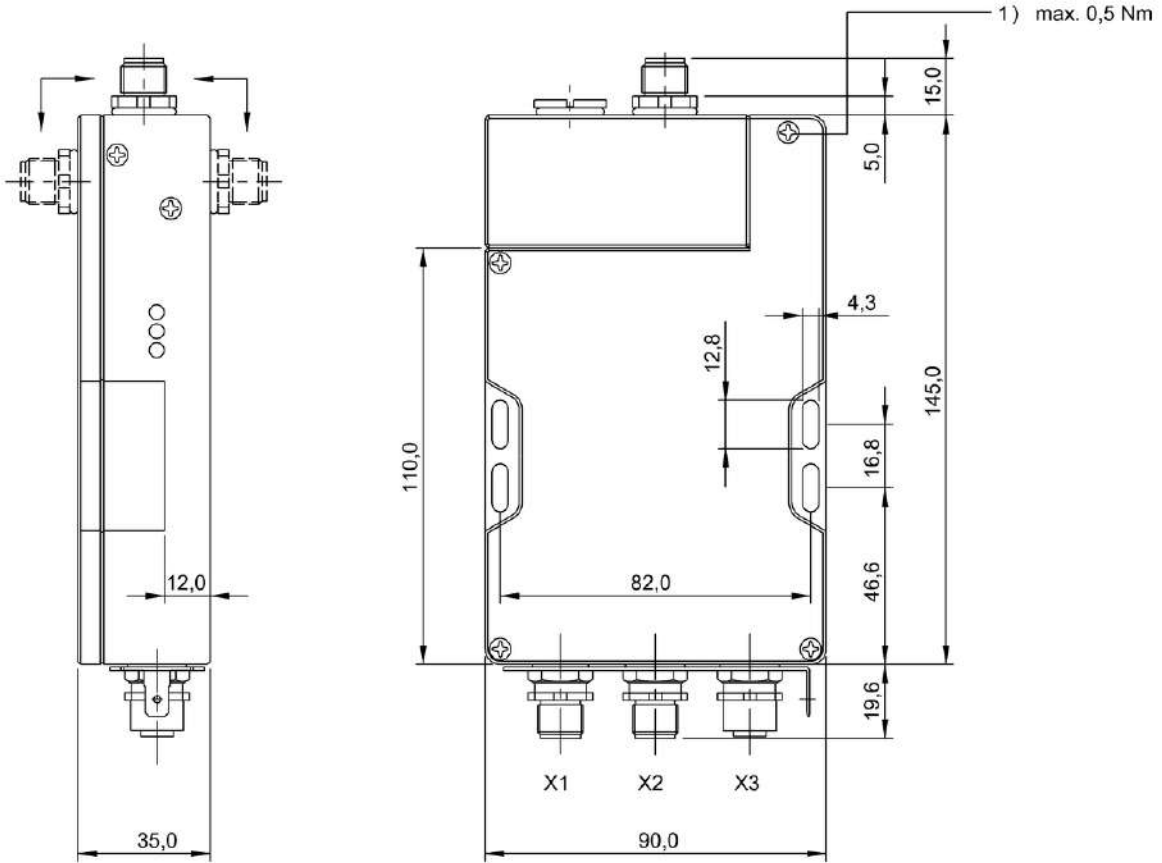
1) Head 1, 2) Head 2

**BISO0K4**



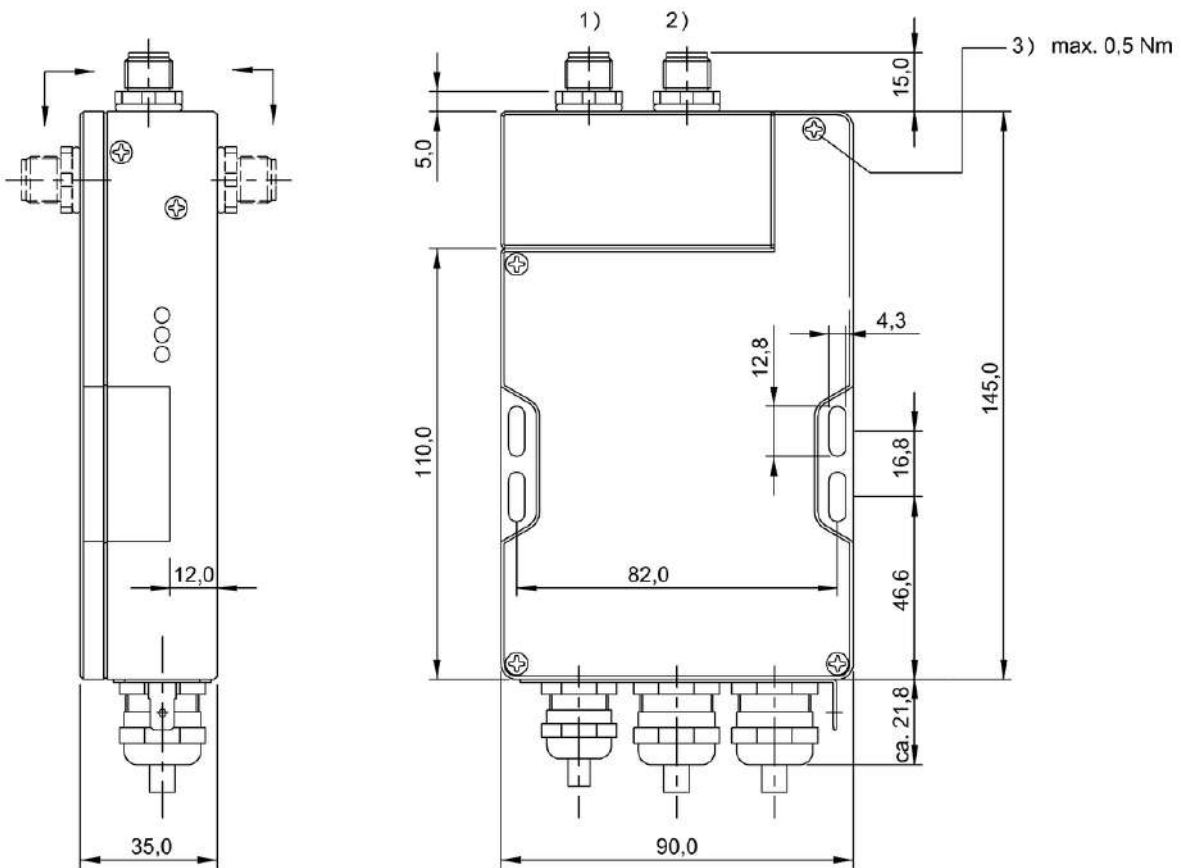
1) Head 1, 2) Head 2

**BISO0TU**



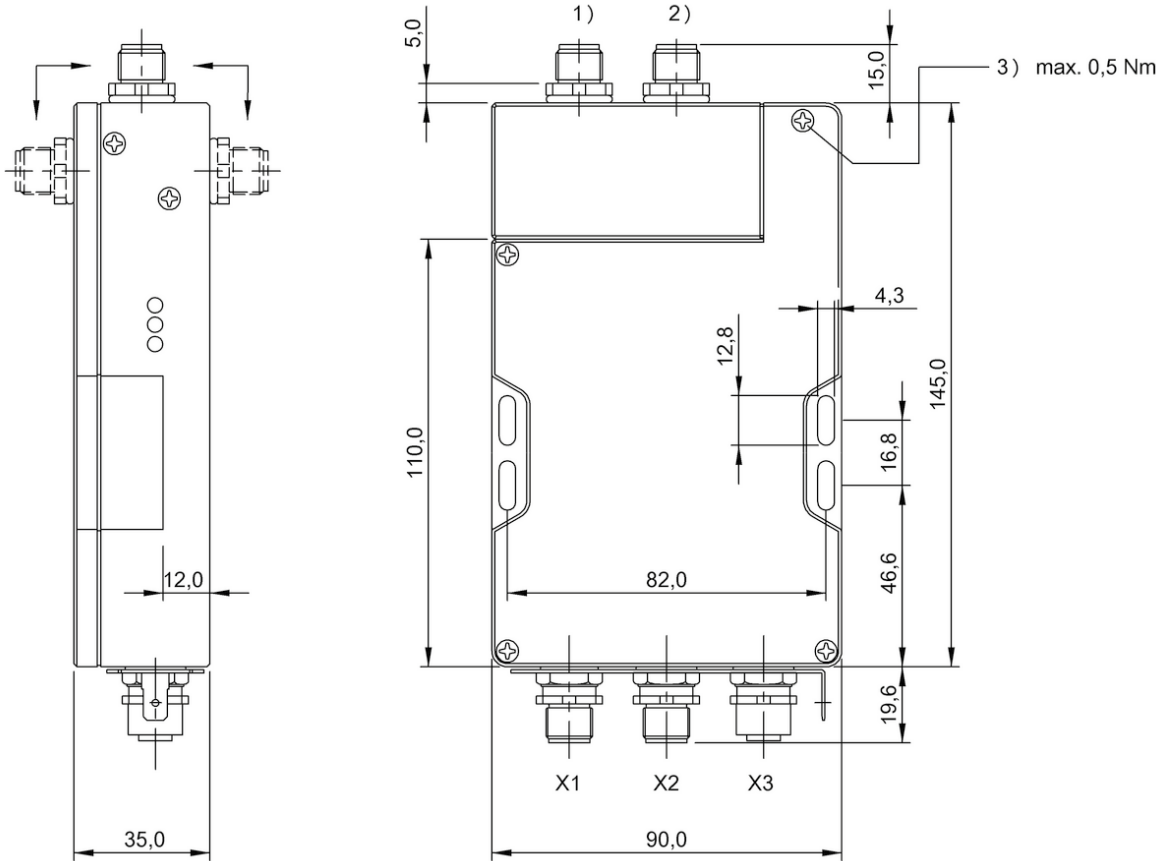
1) Tightening torque

**BIS009F**



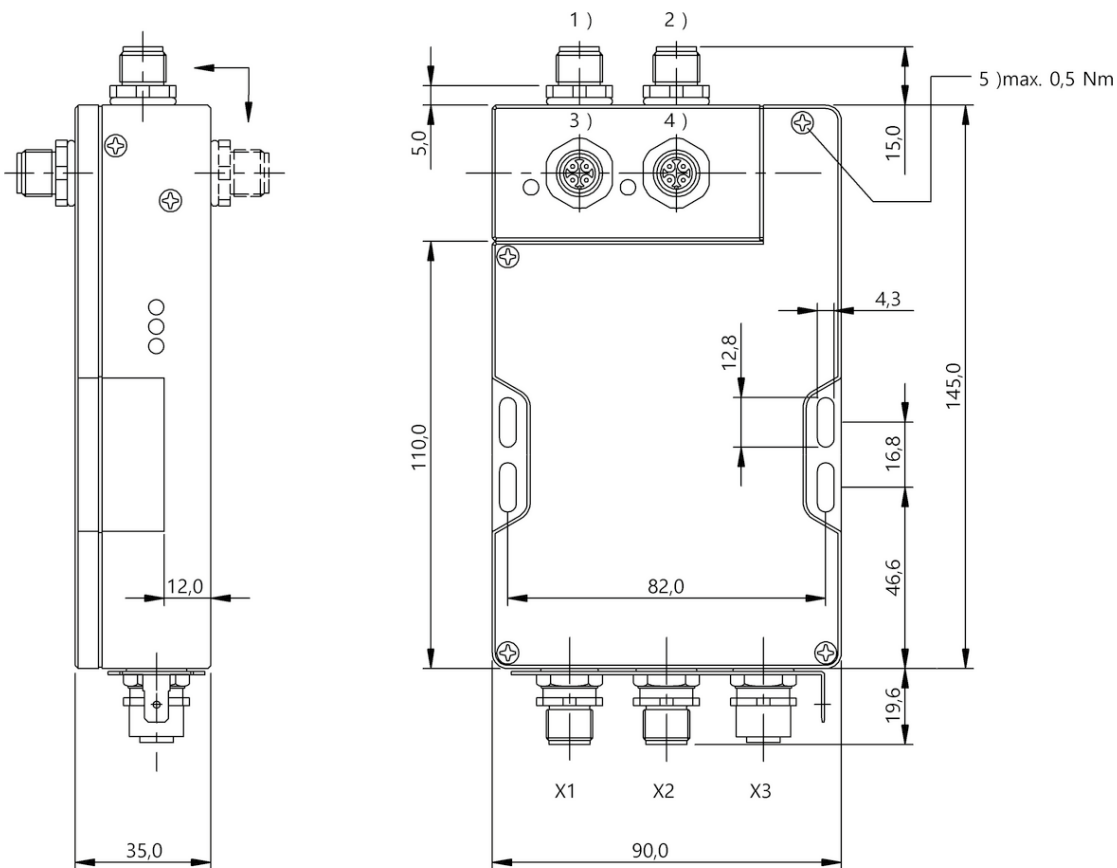
1) Head 1, 2) Head 2, 3) Tightening torque

**BIS009L, BIS0099, BIS00A4**



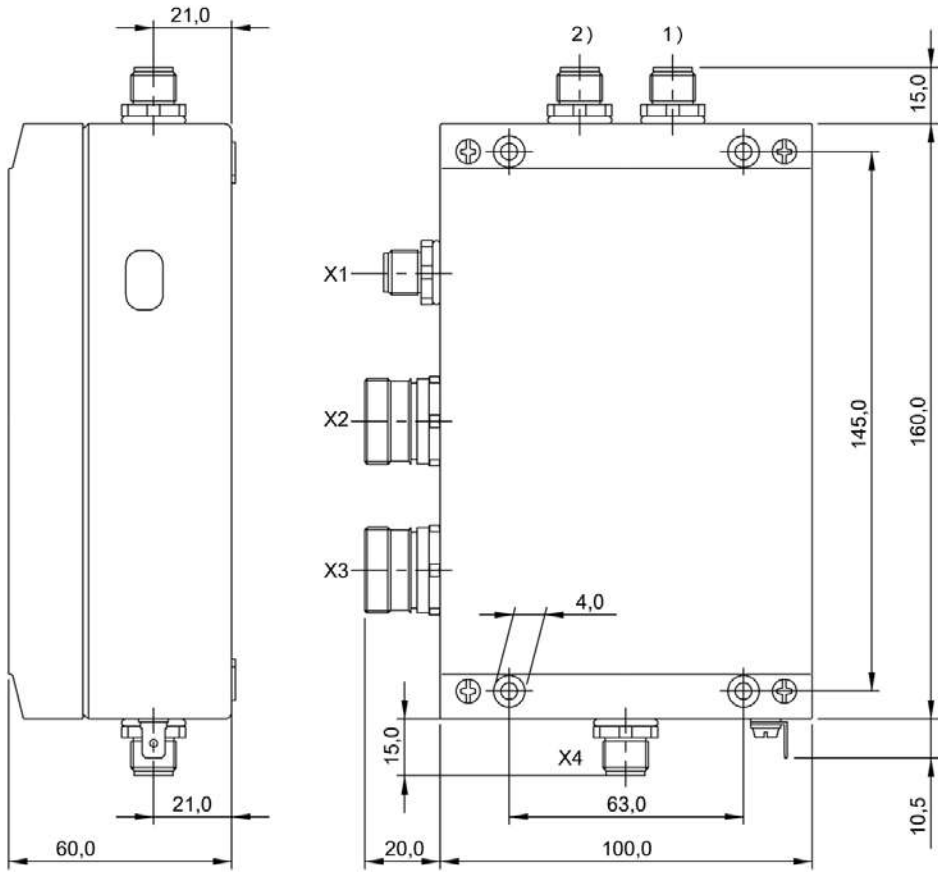
1) Head 1, 2) Head 2, 3) Tightening torque

**BISO09A, BISO09M**



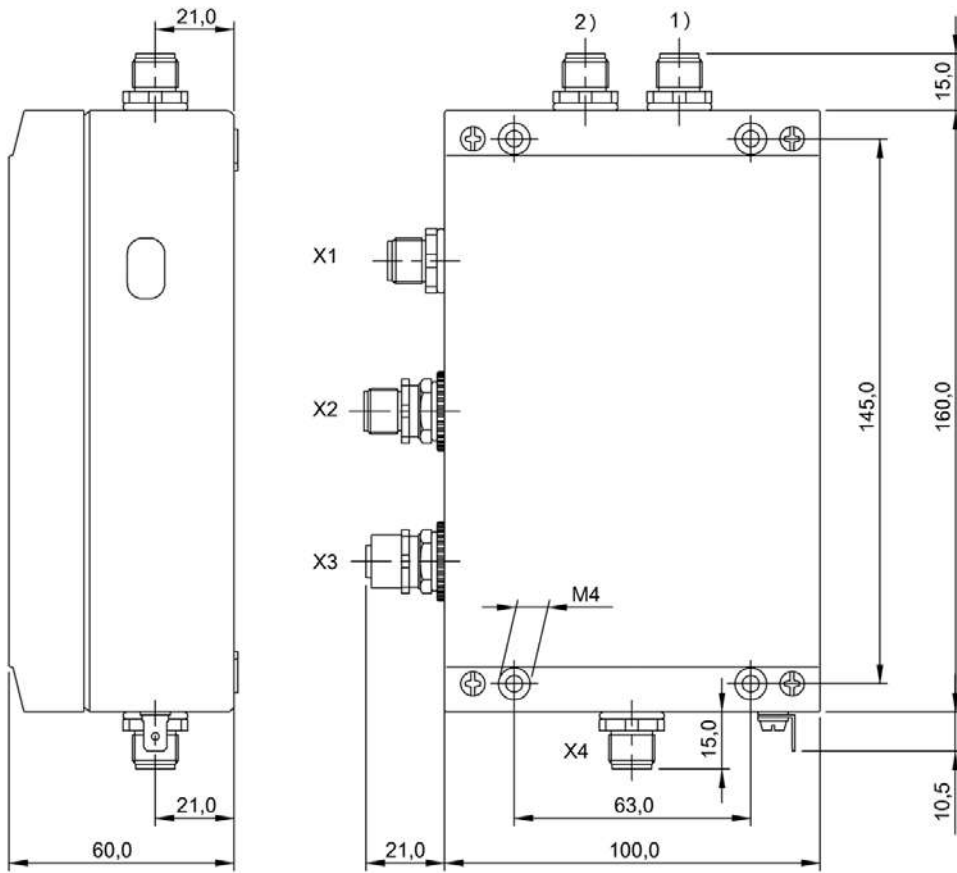
1) Head 1.1, 2) Head 2.1, 3) Head 1.2, 4) Head 2.2, 5) Tightening torque

**BISO09J**



1) Head 1, 2) Head 2

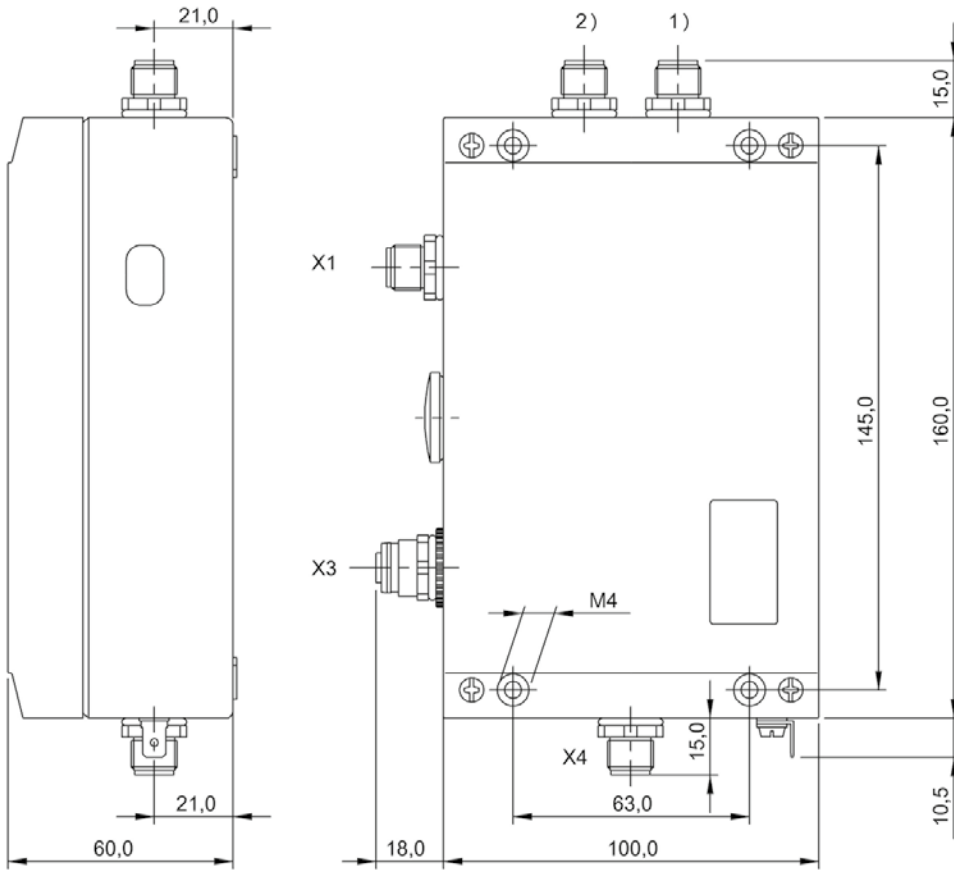
**BIS00AL**



1) Head 1, 2) Head 2

**BIS00AM**





1) Head 1, 2) Head 2

**BIS00AY, BIS00AU**

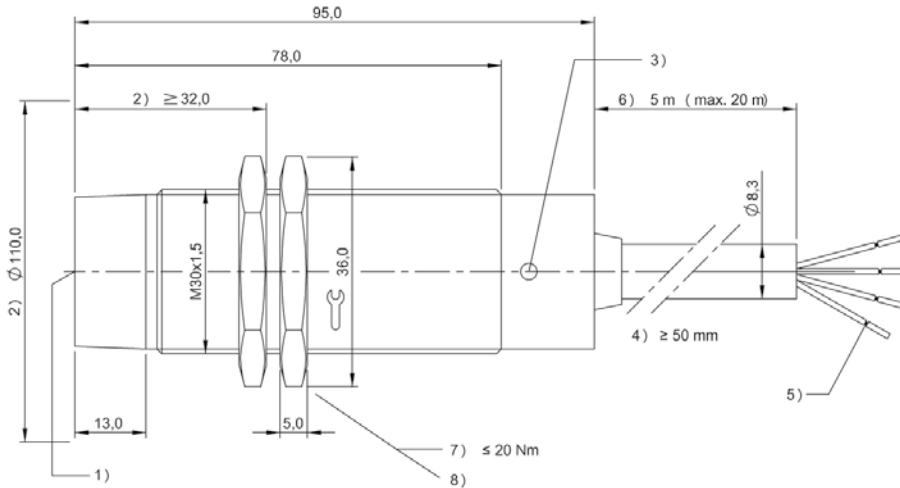


5 m cable PU	<b>BIS00H6</b> BIS C-60R-001-08P-PU-05
10 m cable PU	<b>BIS00H7</b> BIS C-60R-001-08P-PU-10
20 m cable PU	<b>BIS00H8</b> BIS C-60R-001-08P-PU-20
Product Group	LF (70/455 kHz)
Dimension	Ø 30 x 95 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Cable (shielded), 11-pin
Housing material	Brass
Interface	8 Bit parallel
Ambient temperature	0...50 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS000T		BIS0011		BIS0004		BIS001E		BIS0002		BIS0019		BIS000M		BIS000N	
Data carrier distance to metal	flush	metal-free	metal-free		flush	metal-free	flush	metal-free	flush	metal-free	metal-free		flush		metal-free	
Working distance for reading	0-3	0-5	1-5		0-4	1-5	0-5	1-8	0-5	1-6	3-12		1-8		1-8	
Offset at distance																
	1	±2	±3	±3		±4	±2.5	±3	±4	±2.5	±3		±5		±7	
	3	±2	±3	±3		±2.5	±2.5	±3	±5	±3	±3	±7	±5		±7	
	5		±3	±3			±2.5	±3	±5	±3	±3	±6	±5		±7	
	7							±5			±5		±5		±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) data valid, 4) Cable bending radius, 5) strip, 6) standard length, 7) Tightening torque, 8) see remarks

BIS000C		BIS0006	
flush	metal-free	flush	
0-6	1-8	1-8	
±7	±7	±4	
±7	±7	±4	
±6	±7	±4	
	±6	±4	



	<b>BAE004C</b> BIS C-720-01-03	<b>BAE0088</b> BIS C-810-0-003	
Product Group	LF (70/455 kHz)	LF (70/455 kHz)	
Product name	Read / write gun	Standard	
Dimension	90 x 85 x 200 mm	97 x 55 x 232 mm	
Antenna type	—	—	
Use	for all C-85x with jack plug Ø6.3 mm	for all C-85x with jack plug Ø6.3 mm	
Display	—	LCD display 20 characters/4 lines	
Keypad	—	32 keys, alphanumeric (4x8)	
Operating voltage U <sub>b</sub>	—	2.4 V DC rechargeable battery pack NiMH	
Storage temperature	-20...70 °C	—	
Ambient temperature	0...50 °C	0...50 °C	
Protection degree	IP40	IP40	
Approval/Conformity	CE	CE	
Productview	Page 394	Page 394	

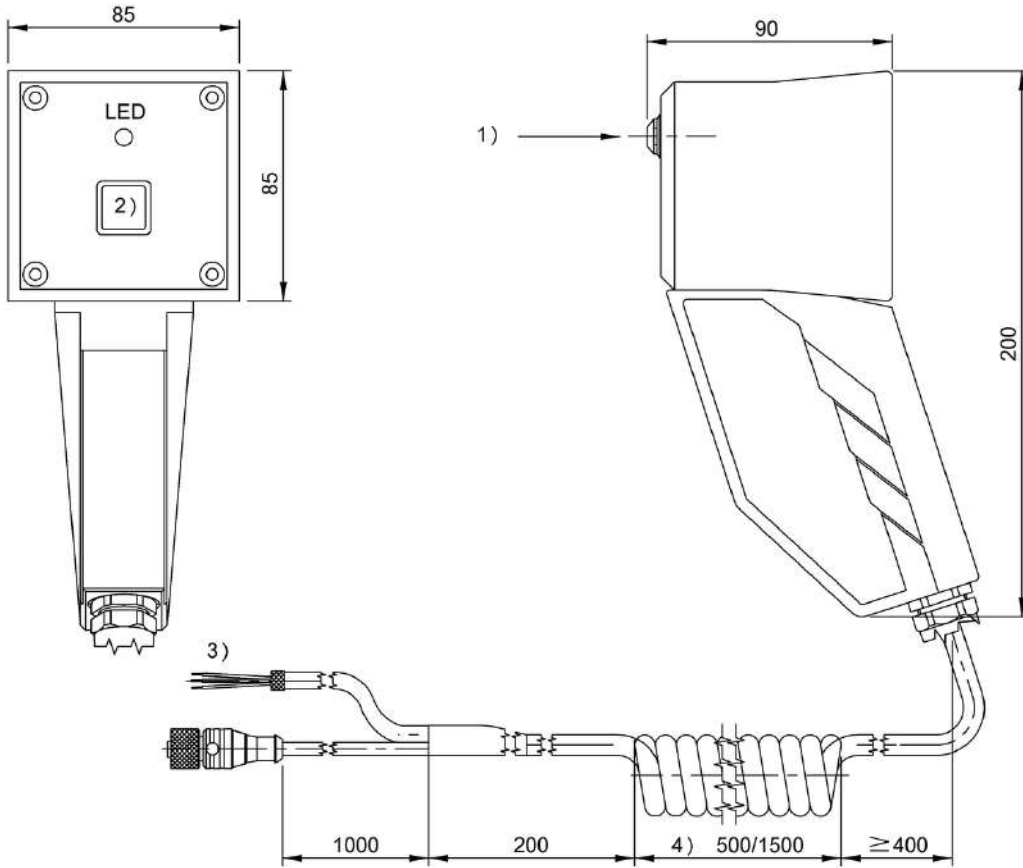


	<b>BAE0094</b> BIS C-850	<b>BAE0095</b> BIS C-851	<b>BAE0096</b> BIS C-852	<b>BAE0097</b> BIS C-853
	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)	LF (70/455 kHz)
	Read / write heads	Read / write heads	Read / write heads	Read / write heads
	—	Ø 14.5 x 94 mm	Ø 30 x 97 mm	27 x 27 x 72 mm
	—	round	round	Rod
	—	—	—	—
	—	—	—	—
	—	—	—	—
	—	-20...85 °C	-20...85 °C	-20...60 °C
	—	0...70 °C	0...70 °C	0...60 °C
	IP67	IP67	IP67	IP67
	CE	CE	CE	CE
	Seite 395	Page 395	Page 395	Page 395



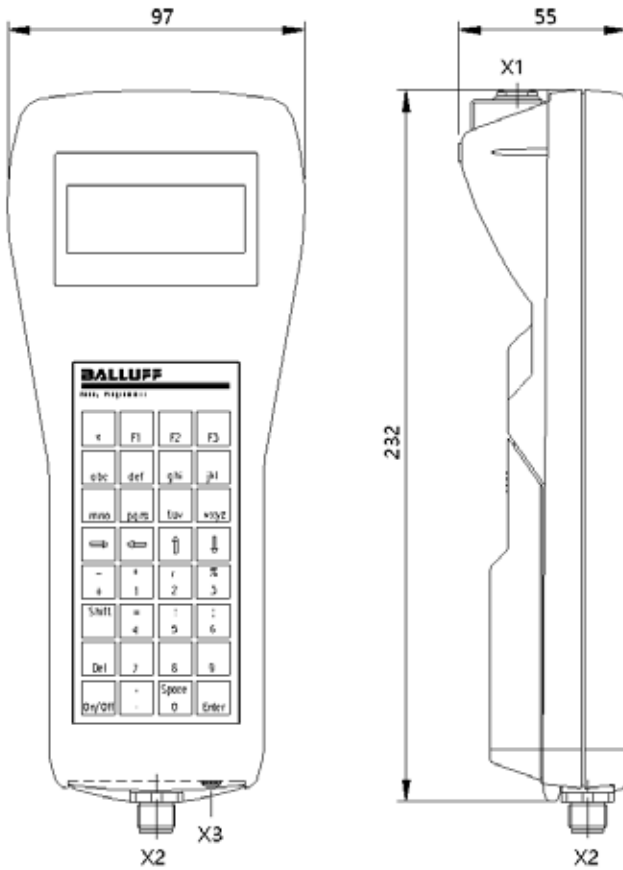
# PORTABLE LF READ/WRITE UNITS (70/455KHZ)

provides you with product-specific information,  
including technical drawings, data sheets, user  
guides and more for each individual product.  
All items are available for download.



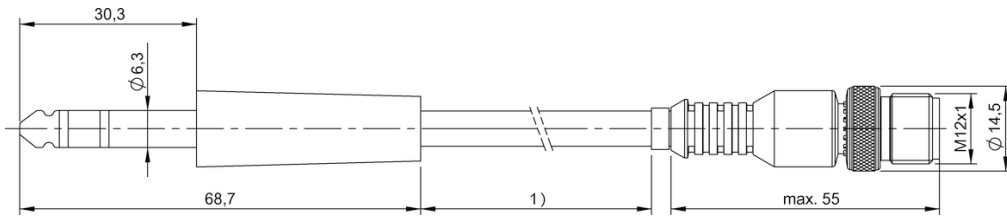
1) see remarks, 2) Button, 3) see connection diagram, 4) Spiral length retracted/extended

**BAE004C**



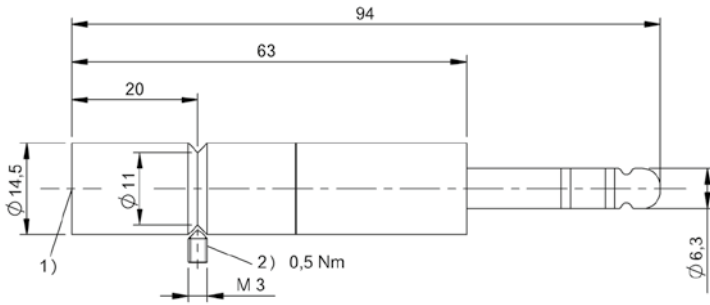
**BAE0088**





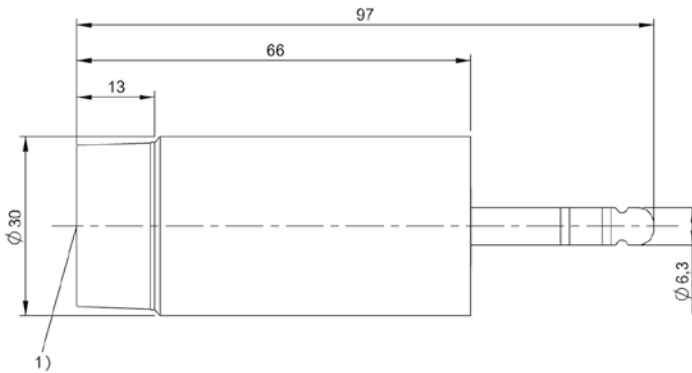
1) Cable length see text

**BAE0094**



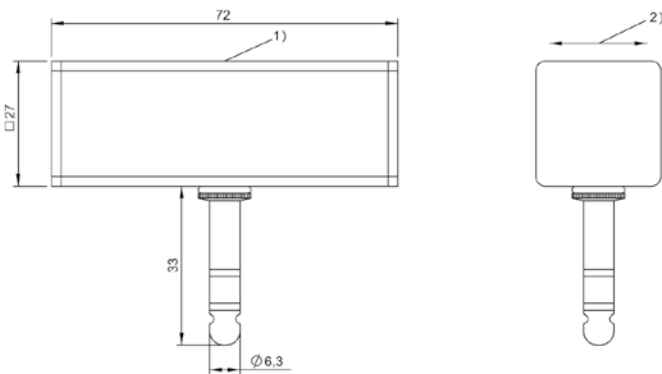
1) Sensing surface, 2) Tightening torque

**BAE0095**



1) Sensing surface

**BAE0096**



1) Sensing surface, 2) Read/write axis

**BAE0097**



Cost-effective solution  
for simple identification tasks

# RFID-SYSTEM LF (125 KHZ) BIS L



Our low-frequency RFID systems BIS L are suitable for applications that involve only the identification and require less data processing. For example, often only a (read-only) code is required for tracing. The 125-kHz systems function reliably up to ranges of 100 mm and are relatively neutral with respect to materials such as water, textiles, wood and aluminum.

#### Features

- Data carrier memory limited to 192 bytes
- For sending smaller quantities of data
- Wide range of data carriers
- Unique ID with 5 bytes, read-only
- Read-only data carriers available (protection against manipulation)



	<b>BIS0038</b> BIS L-101-05/L-R0	
Product Group	LF (125 kHz)	
Dimension	Ø 30 x 1.6 mm	
UID serial number, read-only	5 Byte	
User data, read/write	—	
Memory type	EEPROM	
Antenna type	round	
Installation	metal-free (clear zone) on metal flush in metal	
Storage temperature	-40...95 °C	
Storage temperature temporary	—	
Ambient temperature	-25...85 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Approval/Conformity	CE	
Productview	Page 407	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS L-40x-xxx-001	0-18	0-24	0-40
BIS L-40x-xxx-002			0-27
BIS L-40x-xxx-003			
BIS L-40x-xxx-004			0-27
BIS VL-300	10-30	10-35	0-50
BIS VL-301	20-40	20-45	0-70
BIS VL-302	10-20	10-20	0-30
BIS VL-304	10-20	10-20	0-30
BIS VL-306			

Dimensions in mm

\* Installation on request



BIS003C BIS L-102-05/L-R0	BIS003F BIS L-103-05/L-R0	
LF (125 kHz)	LF (125 kHz)	
Ø 50 x 1.6 mm	Ø 12.4 x 2 mm	
5 Byte	5 Byte	
—	—	
EEPROM	EEPROM	
round	round	
metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	
-40...95 °C	—	
—	-40...130 °C 1x1000 h	
-25...85 °C	-25...85 °C	
Epoxy resin-glass fiber, GF	PPS, EP	
IP67	IP68	
CE	CE	
Page 407	Page 407	

flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)			
0-28	0-32	0-55			0-20			
					0-16			
					0-11			
					0-16			
15-40	15-45	0-70	3-10	3-12	0-25			
25-55	25-60	0-100						
10-20	10-25	0-40	3-8	4-10	0-15			
10-20	10-25	0-40	3-8	4-10	0-15			
					0-7			



	<b>BIS003R</b> BIS L-200-03/L	
Product Group	LF (125 kHz)	
Dimension	Ø 20 x 1.6 mm	
UID serial number, read-only	5 Byte	
User data, read/write	—	
Memory type	PROM	
Antenna type	round	
Installation	metal-free (clear zone) on metal flush in metal	
Storage temperature	-40...95 °C	
Storage temperature temporary	—	
Ambient temperature	-40...85 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Approval/Conformity	CE	
Supported data carrier types	EM4_02	
Productview	Page 407	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS L-40x-xxx-001	5-12	0-15	0-30
BIS L-40x-xxx-002			0-23
BIS L-40x-xxx-003			
BIS L-40x-xxx-004			0-23
BIS VL-300	10-20	10-25	0-40
BIS VL-301	20-50	20-50	0-70
BIS VL-302	8-15	8-15	0-25
BIS VL-304	8-15	8-15	0-25
BIS VL-306			

Dimensions in mm

\* Installation on request



	<b>BIS003T</b> BIS L-201-03/L	<b>BIS003U</b> BIS L-202-03/L	<b>BIS003W</b> BIS L-203-03/L
	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
	Ø 30 x 1.6 mm	Ø 50 x 1.6 mm	Ø 12.4 x 2 mm
	5 Byte	5 Byte	5 Byte
	—	—	—
	PROM	PROM	PROM
	round	round	round
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
	-40...95 °C	-40...95 °C	—
	—	—	-40...130 °C 1x1000 h
	-40...85 °C	-40...85 °C	-25...85 °C
	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF	PPS, EP
	IP67	IP67	IP68
	CE	CE	CE
	EM4_02	EM4_02	EM4_02
	Page 407	Page 407	Page 407

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)
	0-18	0-24	0-40 0-23	0-28	0-32	0-55			0-20 0-16 0-11 0-16
			0-27						0-25
	10-30	10-35	0-50	15-40	15-45	0-70	3-10	3-12	
	20-40	20-45	0-70	25-55	25-60	0-100			
	10-20	10-20	0-30	10-20	10-25	0-40	3-8	4-10	0-15
	10-20	10-20	0-30	10-20	10-25	0-40	3-8	4-10	0-15
									0-7



	<b>BIS0033</b> BIS L-100-01/L	
Product Group	LF (125 kHz)	
Dimension	Ø 20 x 1.6 mm	
UID serial number, read-only	4 Byte	
User data, read/write	192 Byte	
Memory type	EEPROM	
Antenna type	round	
Installation	metal-free (clear zone) on metal flush in metal	
Storage temperature	-40...95 °C	
Storage temperature temporary	—	
Ambient temperature	-25...85 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Approval/Conformity	CE	
Supported data carrier types	Hitag1	
Productview	Page 407	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS VL-300	10-20	10-20	0-30
BIS VL-301	15-25	15-30	0-40
BIS VL-302	8-15	8-15	0-20
BIS VL-304	8-15	8-15	0-20
BIS VL-306			

Dimensions in mm

\* Installation on request





	<b>BIS0034</b> BIS L-100-05/L	<b>BIS0036</b> BIS L-101-01/L	<b>BIS0037</b> BIS L-101-05/L
	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
	Ø 20 x 1.6 mm	Ø 30 x 1.6 mm	Ø 30 x 1.6 mm
	4 Byte	4 Byte	4 Byte
	192 Byte	192 Byte	192 Byte
	EEPROM	EEPROM	EEPROM
	round	round	round
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
	-40...95 °C	-40...95 °C	-40...95 °C
	—	—	—
	-25...85 °C	-25...85 °C	-25...85 °C
	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF
	IP67	IP67	IP67
	CE	CE	CE
	HitagS	Hitag1	HitagS
	Page 407	Page 407	Page 407

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal*	on metal*	metal-free (clear zone)*
				10-30	10-30	0-40			
				15-35	15-40	0-55			
				10-20	10-20	0-25			
				10-20	10-20	0-25			
			0-12						

Sensors

RFID

Machine Vision and  
Optical Identification

Human Machine  
Interfaces

Safety

Industrial Networking

Software and  
System Solutions

Power Supply

Connectivity

Accessories



	<b>BIS0039</b> BIS L-102-01/L	
Product Group	LF (125 kHz)	
Dimension	Ø 50 x 1.6 mm	
UID serial number, read-only	4 Byte	
User data, read/write	192 Byte	
Memory type	EEPROM	
Antenna type	round	
Installation	metal-free (clear zone) on metal flush in metal	
Storage temperature	-40...95 °C	
Storage temperature temporary	—	
Ambient temperature	-25...85 °C	
Housing material	Epoxy resin-glass fiber, GF	
Protection degree	IP67	
Approval/Conformity	CE	
Supported data carrier types	Hitag1	
Productview	Page 407	

Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS VL-300	15-40	15-40	0-55
BIS VL-301	20-50	20-50	0-70
BIS VL-302	10-20	10-25	0-30
BIS VL-304	10-20	10-25	0-30
BIS VL-306			

Dimensions in mm

\* Installation on request



	<b>BIS003A</b> BIS L-102-05/L	<b>BIS003E</b> BIS L-103-05/L	<b>BIS00KR</b> BIS L-140-05/L-M8
	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
	Ø 50 x 1.6 mm	Ø 12.4 x 2 mm	Ø 22 x 21 mm
	4 Byte	4 Byte	4 Byte
	192 Byte	192 Byte	192 Byte
	EEPROM	EEPROM	PROM
	round	round	round
	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal	metal-free (clear zone) on metal flush in metal
	-40...95 °C	—	-25...95 °C
	—	-40...130 °C 1x1000 h	—
	-25...85 °C	-25...85 °C	-25...85 °C
	Epoxy resin-glass fiber, GF	PPS, EP	Steel, PA 12, GF30
	IP67	IP68	—
	CE	CE	CE
	HitagS	HitagS	HitagS
	Page 407	Page 407	Page 407

	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal*	on metal*	metal-free (clear zone)*
	15-40	15-45	0-70						
	25-55	25-60	0-100						
	10-20	10-25	0-40						
	10-20	10-25	0-40						
						0-7			

Sensors

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Industrial Networking

Software and  
System Solutions

Power Supply

Connectivity

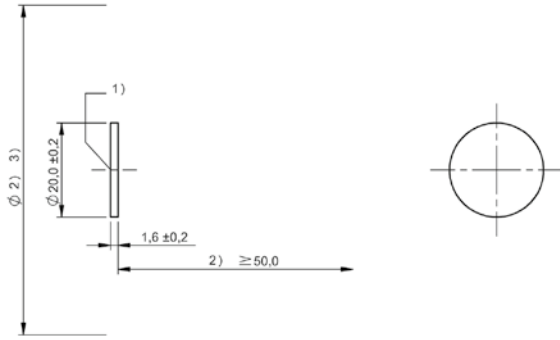
Accessories



	<b>BIS003N</b> BIS L-150-05/A
Product Group	LF (125 kHz)
Dimension	Ø 3.15 x 13.3 mm
UID serial number, read-only	4 Byte
User data, read/write	192 Byte
Memory type	EEPROM
Antenna type	Rod
Installation	metal-free (clear zone) on metal flush in metal
Storage temperature	—
Storage temperature temporary	-40...90 °C 1x1000 h
Ambient temperature	-40...85 °C
Housing material	Glass, transparent
Protection degree	IP68
Approval/Conformity	CE
Supported data carrier types	HitagS
Productview	Page 407

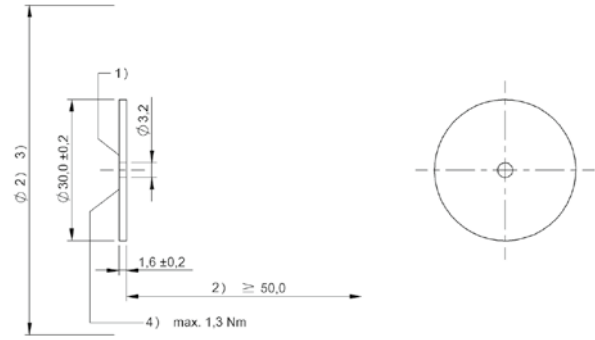
Suitable read/write head with max. read/write working distance

Installation	flush in metal	on metal	metal-free (clear zone)
BIS VL-301			0-32
BIS VL-350	0-24	0-24	0-17
Dimensions in mm			



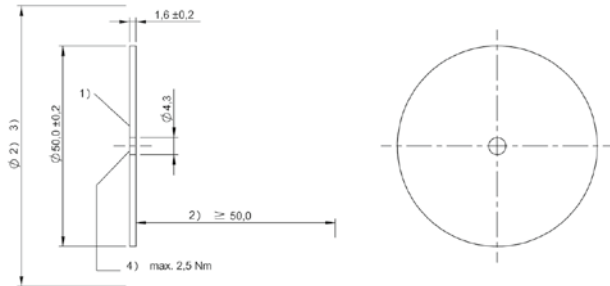
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO03R, BISO033, BISO034**



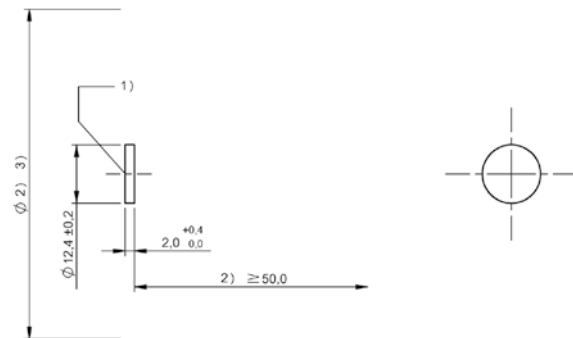
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

**BISO038, BISO03T, BISO036, BISO037**



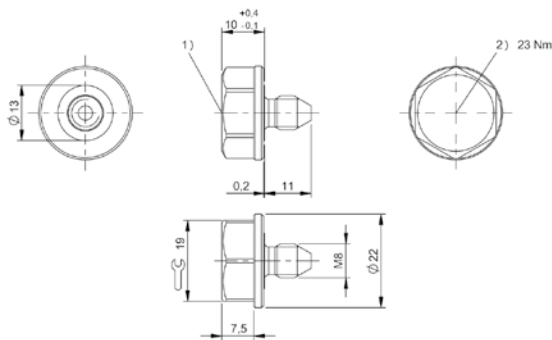
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

**BISO03C, BISO03U, BISO039, BISO03A**



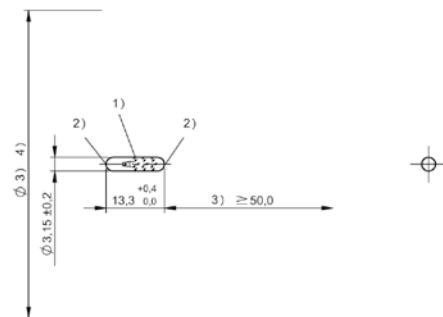
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

**BISO03F, BISO03W, BISO03E**



1) Sensing surface, 2) Tightening torque

**BISO0KR**



1) Sensing surface parallel, 2) Sensing surface axial, 3) Clear zone, 4) see corresponding R/W head

**BISO03N**

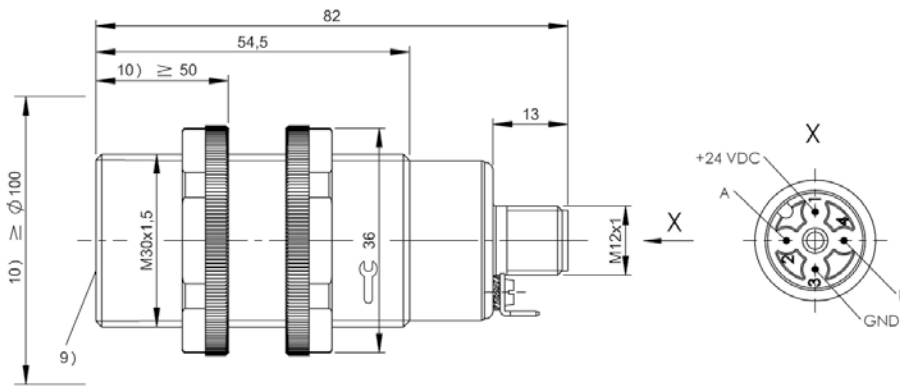


	<b>BIS00UL</b> BIS VL-300-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 30 x 82 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 connector, 4-pin
Housing material	PVDF, nuts PA 6.6
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039			BIS003R			BIS003T BIS0038			
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	
Data carrier clear zone																
Working distance for writing	0-30	10-20	10-20	0-40	10-30	10-30	0-55	15-40	15-40							
Working distance for reading	0-30	10-20	10-20	0-40	10-30	10-30	0-55	15-40	15-40	0-40	10-25	10-20	0-50	10-35	10-30	
Offset at distance	0	±18		±28			±30			±20			±28			
	3	±18		±28			±30			±20			±28			
	7	±18		±28			±30			±20			±28			
	8	±18		±28			±30			±20			±28			
	10	±18	±8	±8	±28	±15	±13	±30		±20	±15	±10	±28	±20	±17	
	12	±18	±8	±8	±28	±15	±13	±30		±20	±15	±10	±28	±20	±17	
	15	±18	±5	±5	±28	±15	±10	±30	±20	±20	±20	±10	±10	±28	±20	±17
	18	±18	±2	±2	±28	±15	±10	±30	±20	±18	±20	±10	±10	±28	±20	±17
	20	±18	±0	±0	±28	±15	±10	±30	±20	±15	±20	±10	±0	±28	±20	±17
	25	±18			±28	±10	±5	±30	±15	±15	±20	±0		±28	±20	±15
	30	±18			±28	±0	±0	±30	±15	±10	±20			±28	±15	±0
	35				±28			±30	±15	±0	±20			±28	±0	
	40				±28			±30	±0		±20			±28		
	45							±30						±28		
	50							±30						±28		
	55							±0								
	60															
	70															

Dimensions in mm



9) Sensing surface, 10) Clear zone

BIS003U BIS003C			BIS003W BIS003F		
metal-free	on metal	flush in metal	metal-free	on metal	flush in metal
0-70	15-45	15-40	0-25	3-12	3-10
±35			±15		
±35			±15	±12	±9
±35			±15	±12	±8
±35			±15	±12	±8
±35			±15	±9	±7
±35			±15	±0	
±35	±25	±20	±15		
±35	±25	±20	±15		
±35	±25	±20	±15		
±35	±20	±20	±13		
±35	±20	±20			
±35	±15	±15			
±35	±12	±0			
±35	±0				
±35					
±35					
±35					
±35					



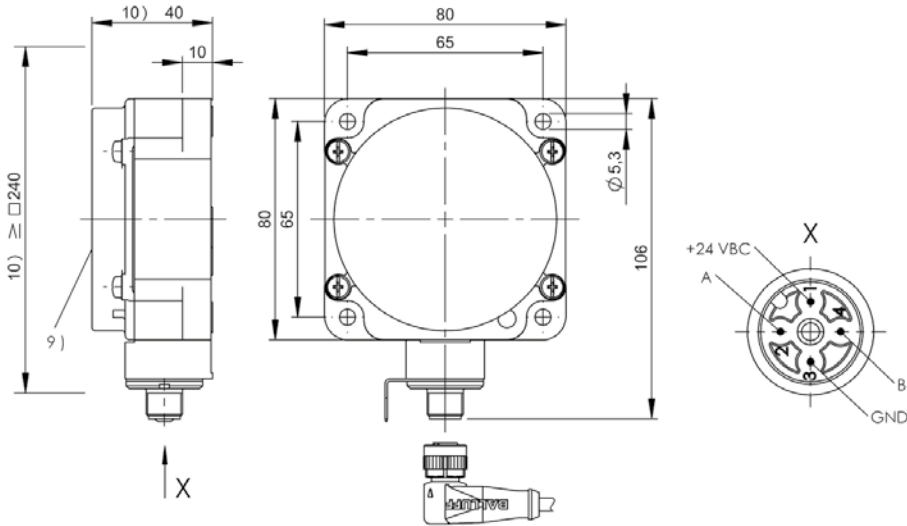
	<b>BIS00U6</b> BIS VL-301-001-S4
Product Group	LF (125 kHz)
Dimension	80 x 80 x 40 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 connector, 4-pin
Housing material	PBT
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039			BIS003N BIS017H	BIS003R			
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	metal-free	on metal	flush in metal	
Data carrier clear zone														
Working distance for writing	0-40	15-30	15-25	0-55	15-40	15-35	0-70	20-50	20-50	0-32		0-70	20-50	20-50
Working distance for reading	0-40	15-30	15-25	0-55	15-40	15-35	0-70	20-50	20-50	0-32				
Offset at distance														
	0	±30		±35			±40			±24		±40		
	3	±30		±35			±40			±24		±40		
	7	±30		±35			±40			±24		±40		
	8	±30		±35			±40			±24		±40		
	10	±30		±35			±40			±24		±40		
	12	±30		±35			±40			±24		±40		
	15	±30	±20	±15	±35	±20	±20	±40		±24		±40		
	18	±30	±15	±10	±35	±20	±20	±40		±24		±40		
	20	±30	±15	±10	±35	±20	±20	±40	±25	±22	±24	±40	±25	±22
	25	±30	±10	±0	±35	±20	±15	±40	±25	±22	±24	±40	±25	±22
	30	±30	±0		±35	±20	±15	±40	±25	±22	±24	±40	±25	±22
	35	±30			±35	±15	±0	±40	±20	±15		±40	±20	±15
	40	±30			±35	±0		±40	±15	±15		±40	±15	±15
	45				±35			±40	±15	±10		±40	±15	±10
	50				±35			±40	±0	±0		±40	±0	±0
	55				±35			±40				±40		
	60							±40				±40		
	70							±40				±40		

Dimensions in mm





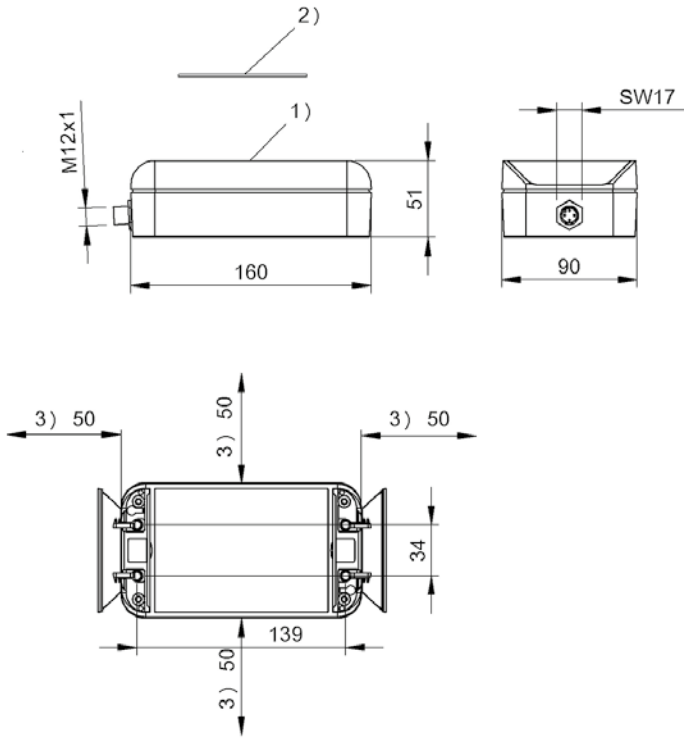
9) Sensing surface, 10) Clear zone

BIS003T BIS0038			BIS003U BIS003C		
metal-free	on metal	flush in metal	metal-free	on metal	flush in metal
0-70	20-45	20-40	0-100	25-60	25-55
±40			±45		
±40			±45		
±40			±45		
±40			±45		
±40			±45		
±40			±45		
±40			±45		
±40	±24	±20	±45	±30	±30
±40	±24	±20	±45	±30	±30
±40	±20	±20	±45	±30	±25
±40	±20	±15	±45	±30	±25
±40	±18	±0	±45	±25	±20
±40	±0		±45	±20	±20
±40			±45	±10	±0
±40			±45	±0	
±40			±45		
±40			±45		



	<b>BIS015U</b> BIS VL-308-001-S4
Product Group	LF (125 kHz)
Dimension	90 x 51 x 160 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 connector, 4-pin
Housing material	ABS
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Suitable data carriers on request



1) Sensing surface, 2) Data carrier, 3) Clear zone

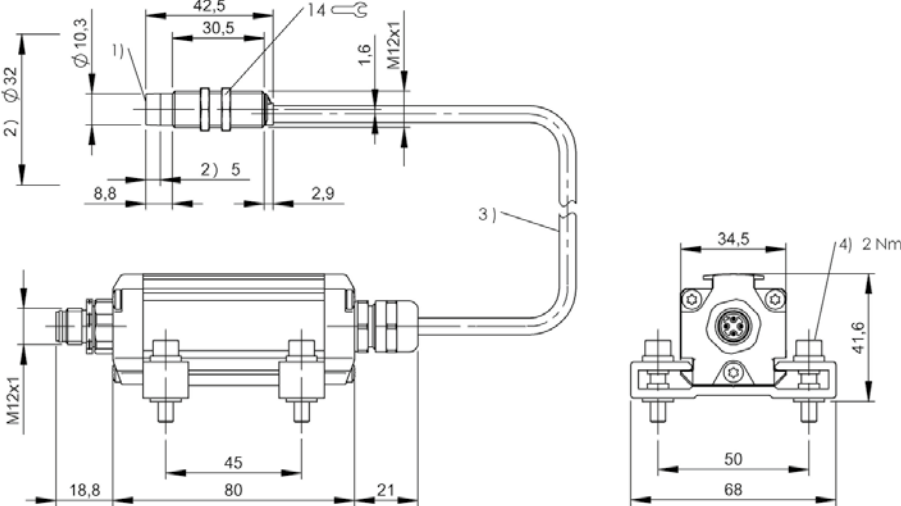


	<b>BISO00J</b> BIS VL-306-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 12 x 42.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PU1
Housing material	Brass, interface aluminum
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BISO034	BISO03E	BISO03W BISO03F
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing	0-12	0-7	
Working distance for reading	0-12	0-7	0-7
Offset at distance			
	0 ±7	±4	±4
	3 ±7	±4	±4
	7 ±7	±4	±2
	8 ±7		
	10 ±7		
	12 ±7		
	15		
	18		
	20		
	25		
	30		
	35		
	40		

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length see text, 4) Tightening torque

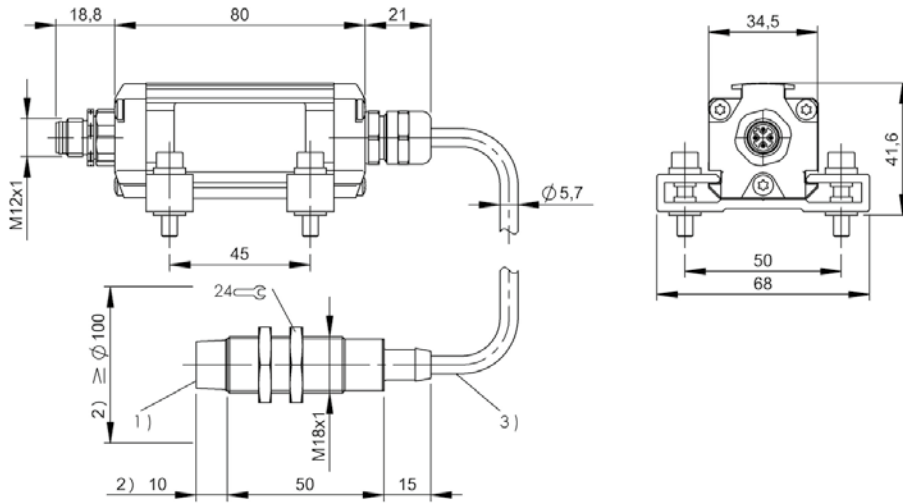


	<b>BIS00UF</b> BIS VL-302-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PVC
Housing material	Brass, interface aluminum
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039				BIS003R			BIS003T BIS0038			
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal		metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	
Data carrier clear zone																	
Working distance for writing	0-20	8-15	8-15	0-25	10-20	10-20	0-30	10-25	10-20								
Working distance for reading	0-20	8-15	8-15	0-25	10-20	10-20	0-30	10-25	10-20		0-25	8-15	8-15	0-30	10-20	10-20	
Offset at distance																	
	0	±10		±12			±15				0	±13		±15			
	3	±10		±12			±15				3	±13		±15			
	7	±10		±12			±15				4	±13		±15			
	8	±10	±6	±6	±12		±15				8	±13	±8	±6	±15		
	10	±10	±5	±5	±12	±10	±8	±15	±15	±10	10	±13	±8	±6	±15	±10	±10
	12	±10	±4	±4	±12	±10	±8	±15	±15	±10	12	±13	±8	±6	±15	±10	±10
	15	±10	±0	±0	±12	±5	±5	±15	±15	±5	15	±13	±0	±0	±15	±10	±8
	18	±10			±12	±0	±0	±15	±10	±0	18	±13			±15	±0	±0
	20	±10			±12	±0	±0	±15	±10	±0	20	±13			±15	±0	±0
	25				±12			±15	±0		25	±13			±15		
	30							±15			30				±15		
	35										35						
	40										40						

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Cable length

BIS003U BIS003C			BIS003W BIS003F		
metal-free	on metal	flush in metal	metal-free	on metal	flush in metal
0-40	10-25	10-20	0-15	4-10	3-8
±20			±6		
±20			±6		±5
±20			±6	±7	±4
±20			±6	±6	±3
±20	±15	±8	±6	±5	
±20	±15	±8	±6		
±20	±15	±6	±6		
±20	±10	±0			
±20	±10	±0			
±20	±0				
±20					
±20					
±20					



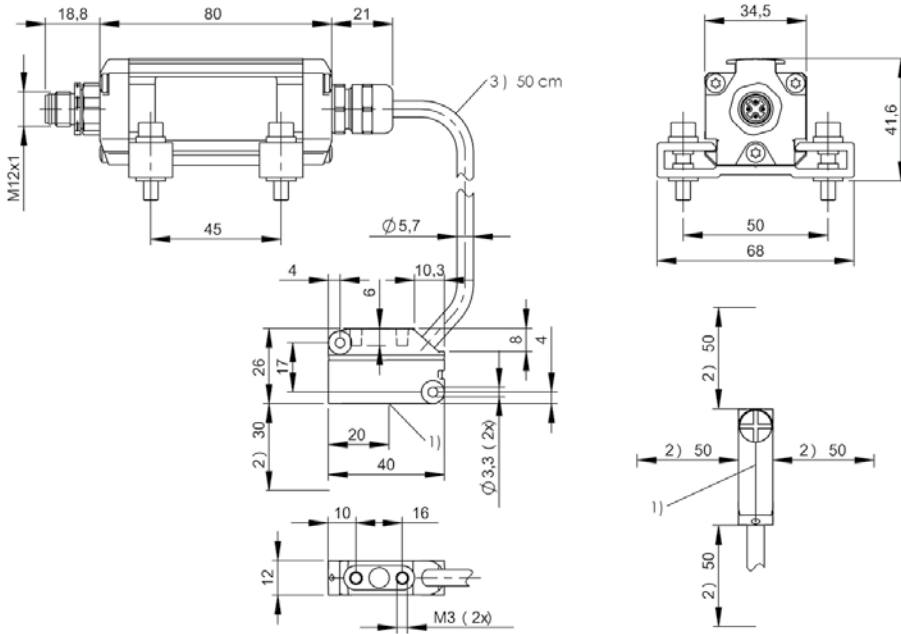
		<b>BIS00UK</b> BIS VL-350-001-S4
Product Group	LF (125 kHz)	
Dimension	12 x 26 x 40 mm	
Installation	metal-free (clear zone)	
Antenna type	Rod	
Connection	M12x1-Male, 4-pole, 0.50 m, PU	
Housing material	ABS, GF16, interface aluminum	
Interface	—	
Operating voltage U <sub>b</sub>	—	
Storage temperature	-20...85 °C	
Ambient temperature	0...70 °C	
Protection degree	IP67	
Approval/Conformity	CE	

Appropriate data carrier

Data carrier distance to metal	<b>BIS003N</b>		
	metal-free	on metal	flush in metal
Data carrier clear zone			
Working distance for writing	0-17	0-24	0-24
Working distance for reading	0-17	0-24	0-24
Offset at distance			
	0 ±18	±20	±20
	3 ±18	±20	±20
	7 ±18	±20	±20
	8 ±18	±20	±20
	10 ±18	±20	±20
	12 ±10	±20	±20
	15 ±10	±20	±20
	18	±14	±14
	20	±14	±14
	25	±14	±14

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Cable length

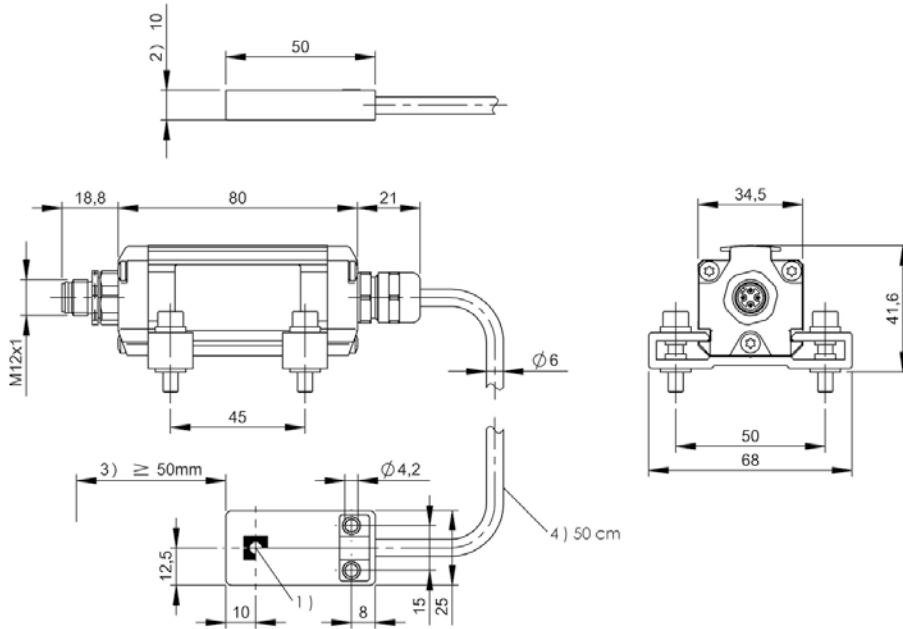


	<b>BIS00UH</b> BIS VL-304-001-S4
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	—
Operating voltage $U_b$	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039			BIS003R			BIS003T BIS0038				
	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal		
Data carrier distance to metal																	
Data carrier clear zone																	
Working distance for writing	0-20	8-15	8-15	0-25	10-20	10-20	0-30	10-25	10-20								
Working distance for reading	0-20	8-15	8-15	0-25	10-20	10-20	0-30	10-25	10-20	0-25	8-15	8-15	0-30	10-20	10-20		
Offset at distance																	
	0	±10		±12			±15			0	±13		±15				
	3	±10		±12			±15			3	±13		±15				
	7	±10		±12			±15			4	±13		±15				
	8	±10	±6	±6	±12		±15			8	±13	±8	±6	±15			
	10	±10	±5	±5	±12	±10	±8	±15	±15	±10	10	±13	±8	±6	±15	±10	±10
	12	±10	±3	±3	±12	±10	±8	±15	±15	±10	12	±13	±8	±6	±15	±10	±10
	15	±10	±0	±0	±12	±5	±5	±15	±15	±5	15	±13	±0	±0	±15	±10	±8
	18	±10			±12	±0	±0	±15	±10	±0	18	±13			±15	±0	±0
	20	±10			±12	±0	±0	±15	±10	±0	20	±13			±15	±0	±0
	25				±12			±15	±0		25	±13			±15		
	30							±15			30				±15		
	35										35						
	40										40						

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding, 4) Cable length

BIS003U BIS003C			BIS003W BIS003F		
metal-free	on metal	flush in metal	metal-free	on metal	flush in metal
0-40	10-25	10-20	0-15	4-10	3-8
±20			±6		
±20			±6		±5
±20			±6	±7	±3
±20			±6	±6	±3
±20	±15	±8	±6	±5	
±20	±15	±8	±6		
±20	±15	±6	±6		
±20	±10	±0			
±20	±10	±0			
±20	±0				
±20					
±20					
±20					



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS013U</b> BIS V-6108-048-C002	
Product Group	Multi-Frequency Processor	
Interface	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 472	

\* Use adapter **BIS0FCK** to connect read/write heads **BIS C (LF 70/455 kHz)**.



BIS01AE BIS V-6108-048-C007	BIS013W * BIS V-6108-048-C102	BIS01AF * BIS V-6108-048-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch	Profinet I/O (IRT), Profinet I/O (IRT) 2-port switch
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded M12x1-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded M12x1-Male, 5-pin
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For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS00T3</b> BIS V-6102-019-C001	
Product Group	Multi-Frequency Processor	
Interface	Profibus DP Slave galvanically isolated	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	M12x1-Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded 7/8"-Male, 5-pin	
Productview	Page 472	

\* Use adapter **BISOFC** to connect read/write heads **BIS C (LF 70/455 kHz)**.



<b>BIS012E *</b> BIS V-6102-019-C101	<b>BIS01AA</b> BIS V-6107-039-C007	<b>BIS01AC *</b> BIS V-6107-039-C107
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Profibus DP Slave galvanically isolated	TCP/IP, USB	TCP/IP, USB
max. 500 mA	max. 1.700 mA	max. 1.700 mA
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
M12x1-Male, 5-pin, B-coded M12x1-Female, 5-pin, B-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded M12x1-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded M12x1-Male, 5-pin
Page 472	Page 210	Page 210



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS0186</b> BIS V-6107-039-C005	
Product Group	Multi-Frequency Processor	
Interface	Ethernet TCP/IP, USB	
IO-Link-Master-Port	max. 1.700 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	
Productview	Page 473	

\* Use adapter **BISOFC** to connect read/write heads **BIS C (LF 70/455 kHz)**.





<b>BIS018J</b> BIS V-6107-039-C006	<b>BIS0187 *</b> BIS V-6107-039-C105	<b>BIS018K *</b> BIS V-6107-039-C106
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Ethernet TCP/IP, USB	Ethernet TCP/IP, USB	Ethernet TCP/IP, USB
max. 1.700 mA	max. 1.700 mA	max. 1.700 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 4-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	M12x1-Female, 4-pin, D-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 4-pin
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For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS012F</b> BIS V-6106-034-C002	
Product Group	Multi-Frequency Processor	
Interface	Ethernet/IP	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 436	

\* Use adapter **BISOFC** to connect read/write heads **BIS C (LF 70/455 kHz)**.



<b>BIS0122</b> BIS V-6106-034-C004	<b>BIS014C *</b> BIS V-6106-034-C102	<b>BIS0146</b> BIS V-6106-034-C104
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
Ethernet/IP	Ethernet/IP	Ethernet/IP
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 4-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 4-pin
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For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860...960 MHz)	<b>BIS00U9</b> BIS V-6110-063-C002	
Product Group	Multi-Frequency Processor	
Interface	EtherCAT	
IO-Link-Master-Port	max. 500 mA	
Supported RFID technologies	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	
Number of connectable R/W heads / antennas	4	
Operating voltage $U_b$	24 V DC LPS Class 2	
Housing material	Zinc, Die casting	
Ambient temperature	0...60 °C	
IP rating	IP65, with connector	
Approval/Conformity	CE, EAC, cULus, WEEE	
Connection	2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	
Productview	Page 437	

\* Use adapter **BIS0FCK** to connect read/write heads **BIS C (LF 70/455 kHz)**.

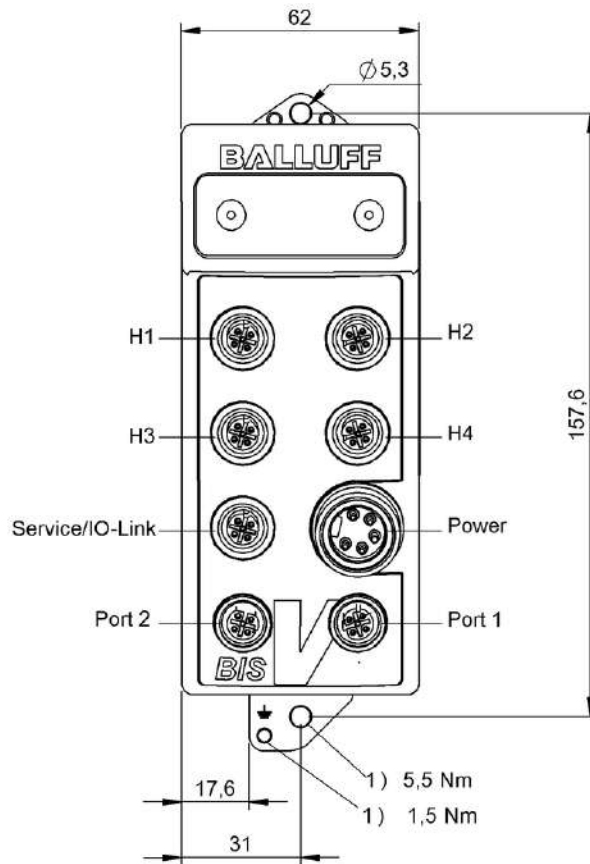
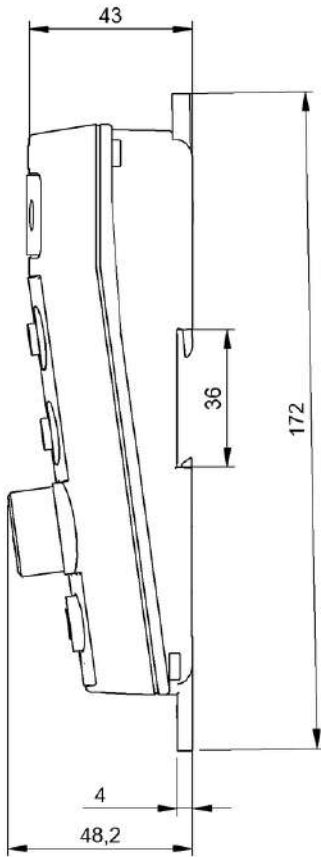


<b>BIS0147</b> BIS V-6110-063-C102	<b>BIS010P</b> BIS V-6111-073-C003	<b>BIS014E *</b> BIS V-6111-073-C103
Multi-Frequency Processor	Multi-Frequency Processor	Multi-Frequency Processor
EtherCAT	CC-Link	CC-Link
max. 500 mA	max. 500 mA	max. 500 mA
LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM), UHF 860...960 MHz (BIS VU)	LF 125 kHz (BIS VL), HF 13.56 MHz (BIS VM)	LF 125 kHz (BIS VL), LF 70/455 kHz (BIS C ), HF 13.56 MHz (BIS VM)
4	4	4
24 V DC LPS Class 2	24 V DC LPS Class 2	24 V DC LPS Class 2
Zinc, Die casting	Zinc, Die casting	Zinc, Die casting
0...60 °C	0...60 °C	0...60 °C
IP65, with connector	IP65, with connector	IP65, with connector
CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE	CE, EAC, cULus, WEEE
2x M12x1-Female, 4-pin, D-coded 7/8"-Male, 5-pin	M12x1-Male, 5-pin, A-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin	M12x1-Male, 5-pin, A-coded M12x1-Female, 5-pin, A-coded 7/8"-Male, 5-pin
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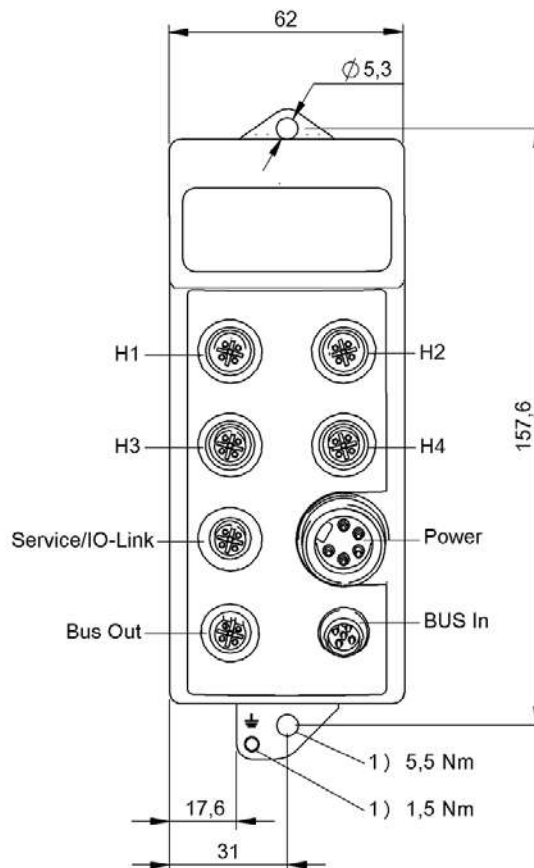
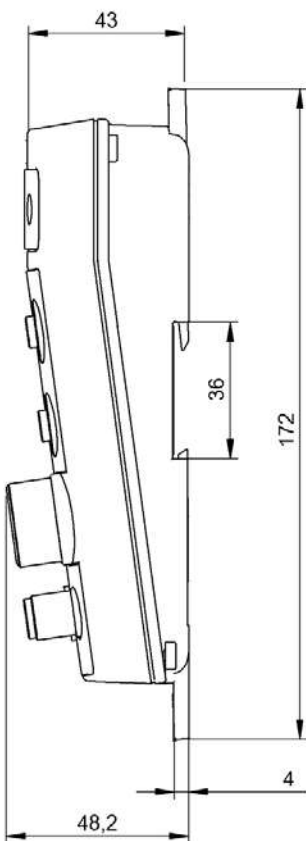
For read/write heads BIS L-400-043...	<b>BAE003U</b> BIS Z-EL-001-ETHERNET	
Product Group	LF (125 kHz)	
Interface	Ethernet TCP/IP	
Supported RFID technologies	LF 125 kHz (BIS L, Easy Loop)	
Number of connectable R/W heads / antennas	16	
Operating voltage $U_b$	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE	
Connection	Female, 4-pole, D-coded Male, 5-pole	
Productview	Page 438	





1) Tightening torque

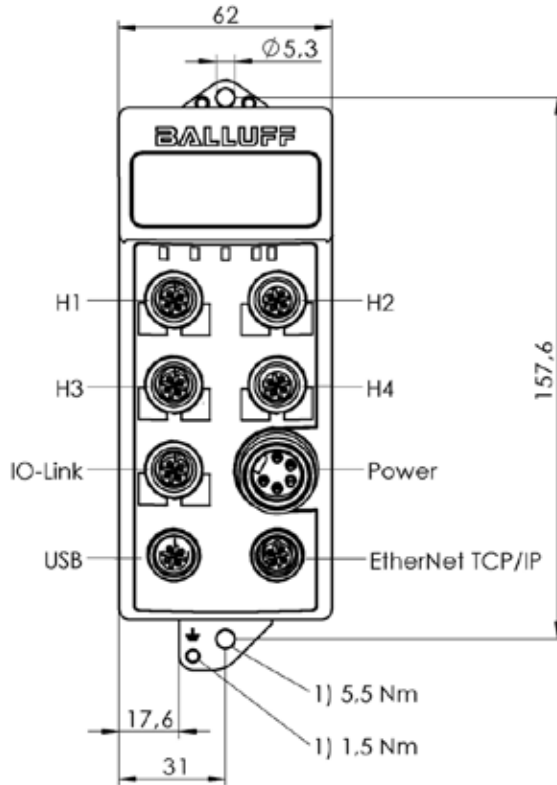
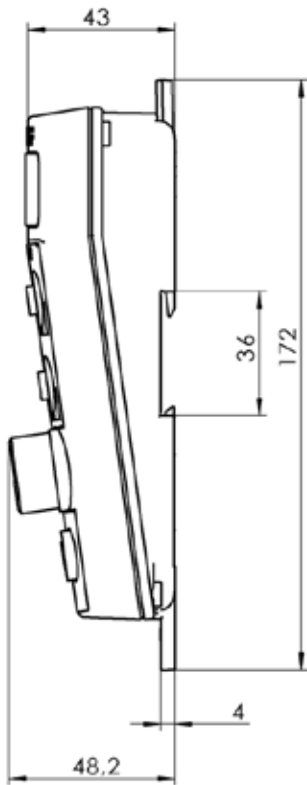
**BIS013U, BIS013W**



1) Tightening torque

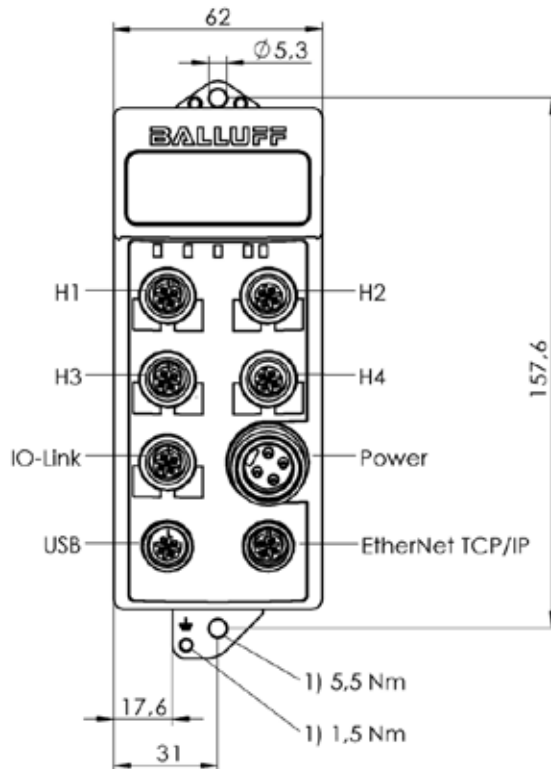
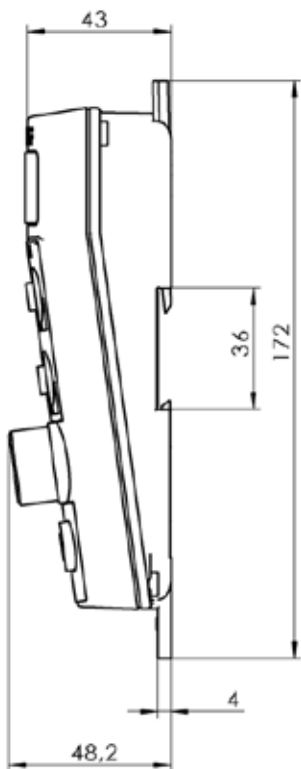
**BIS00T3, BIS012E**





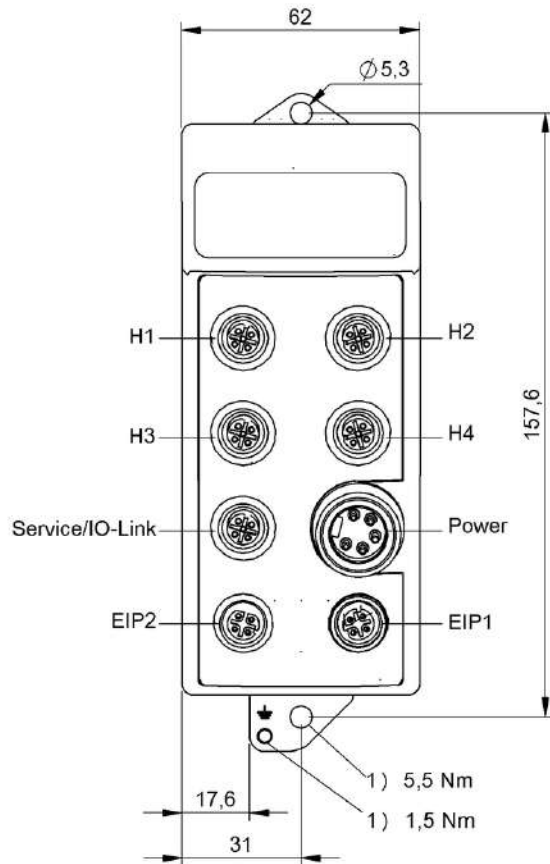
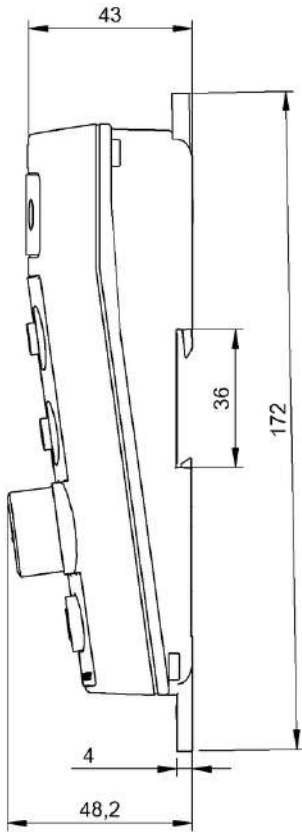
1) Tightening torque

**BIS0186, BIS0187**



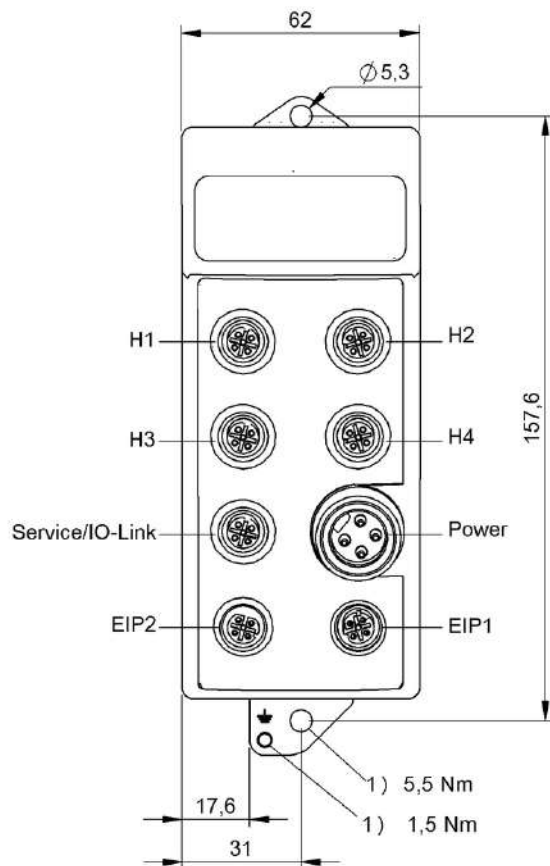
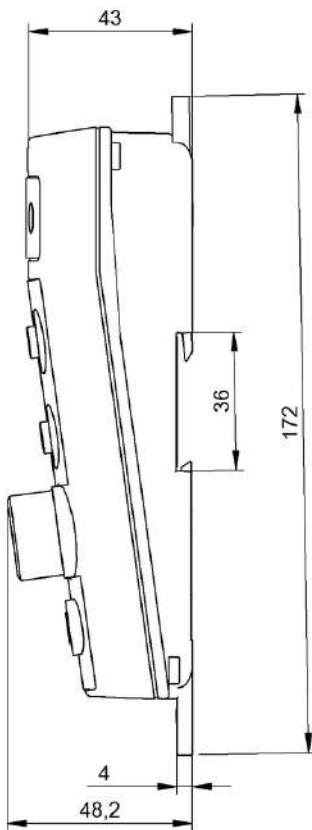
1) Tightening torque

**BIS018J, BIS018K**



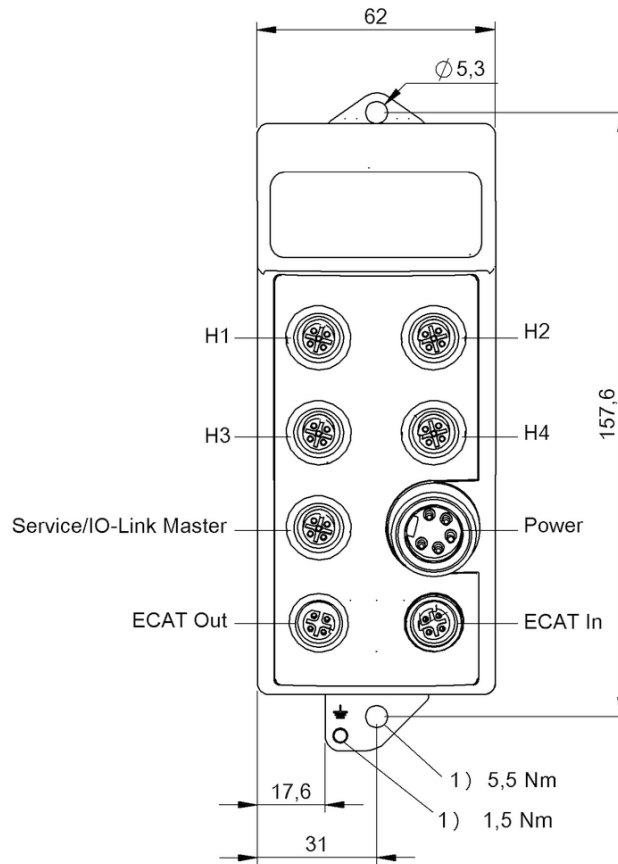
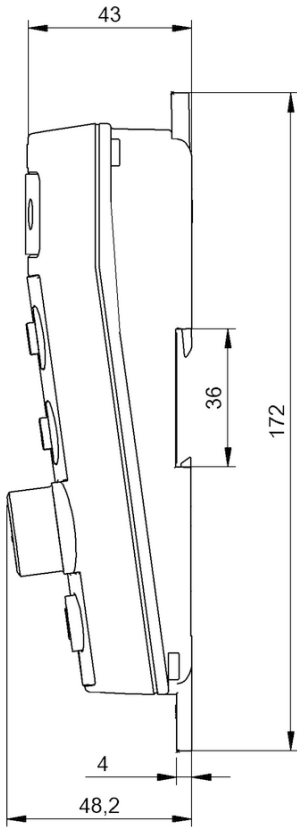
1) Tightening torque

**BIS012F, BIS014C**



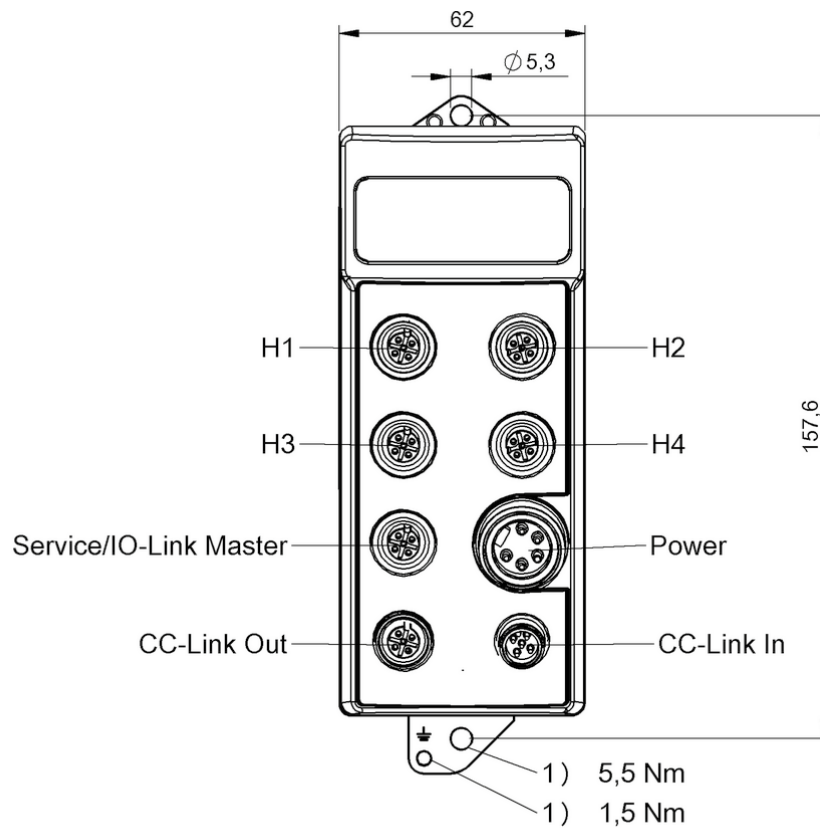
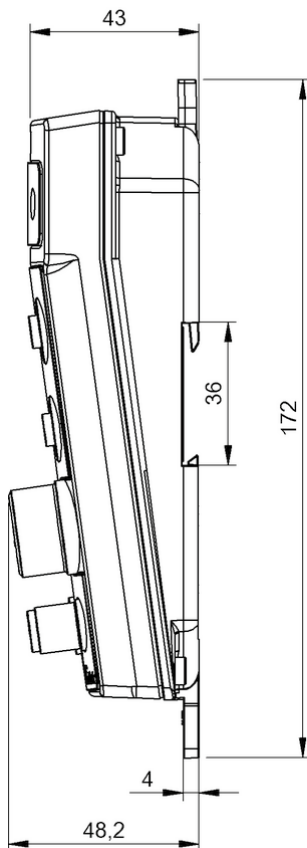
1) Tightening torque

**BIS0122, BIS0146**



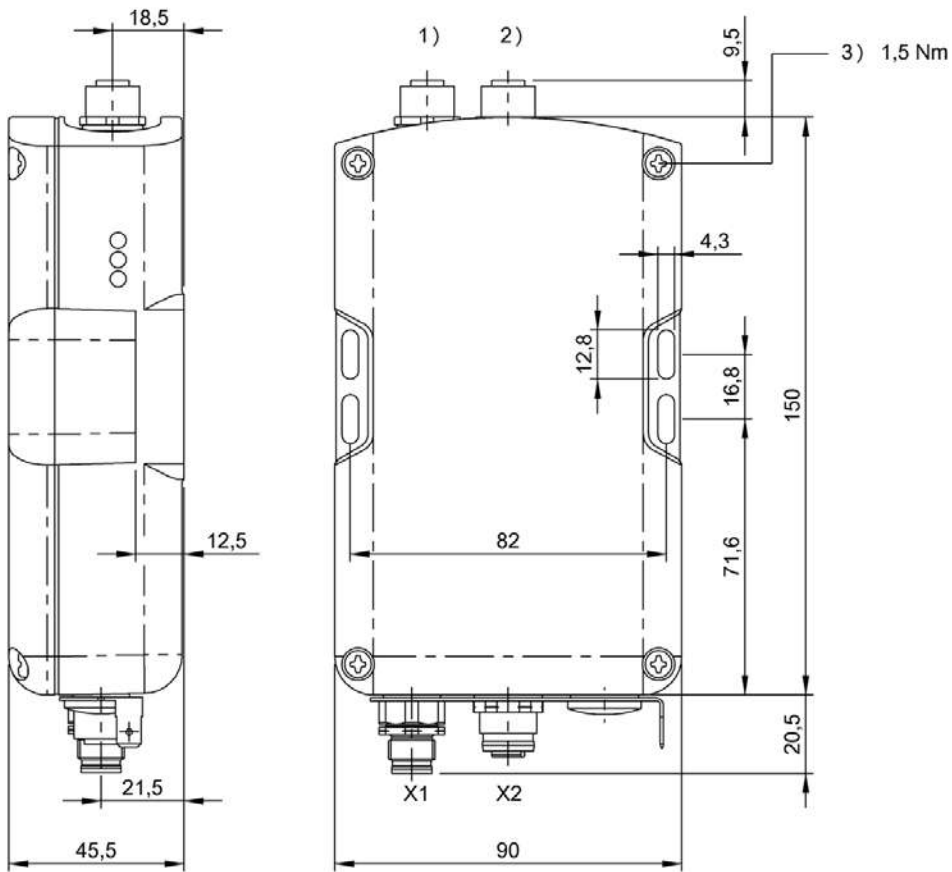
1) Tightening torque

**BISO0U9, BISO147**



1) Tightening torque

**BISO10P, BISO14E**



1) Line 1, 2) Line 2, 3) Tightening torque

**BAE003U**



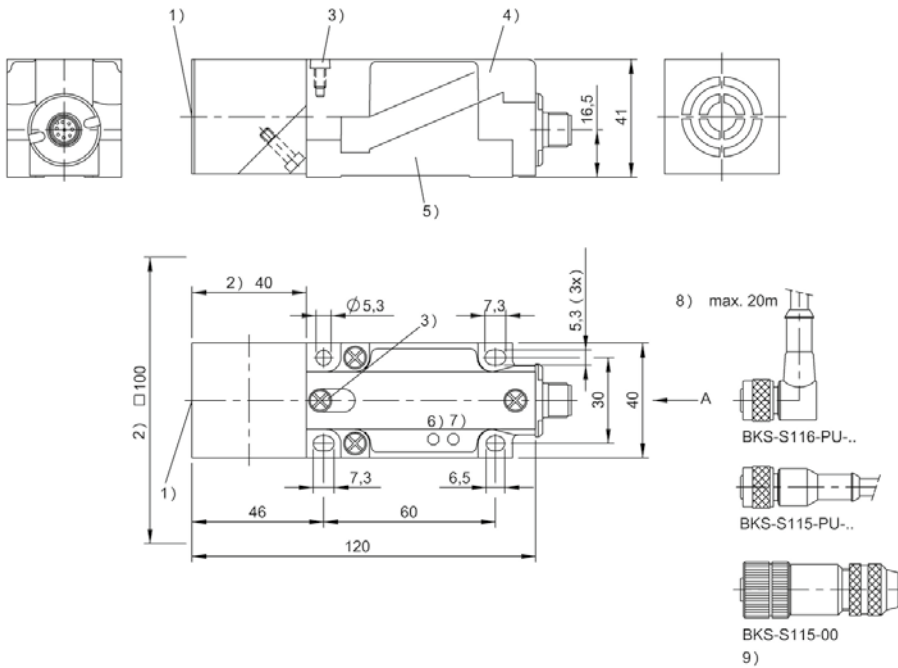


	<b>BIS00C5</b> BIS L-400-035-001-00-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Power, 7) Tag present, 8) Cable length, 9) no cable



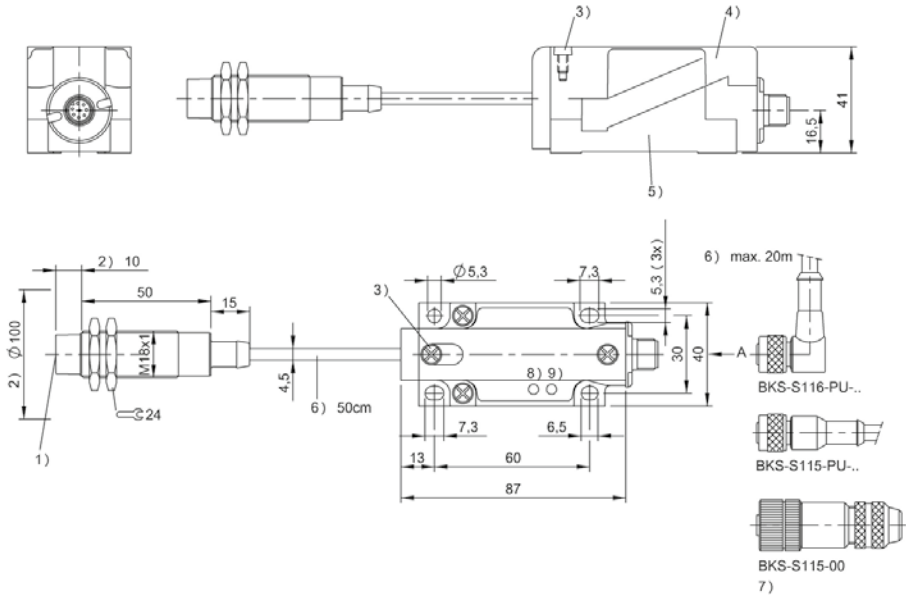
	<b>BIS00C7</b> BIS L-400-035-002-00-S115
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	BIS003R BIS0035	BIS003T BIS0038	BIS003W BIS003F
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18	±15	
	20	±15	
	25	±6	

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) no cable, 8) Power, 9) Tag present

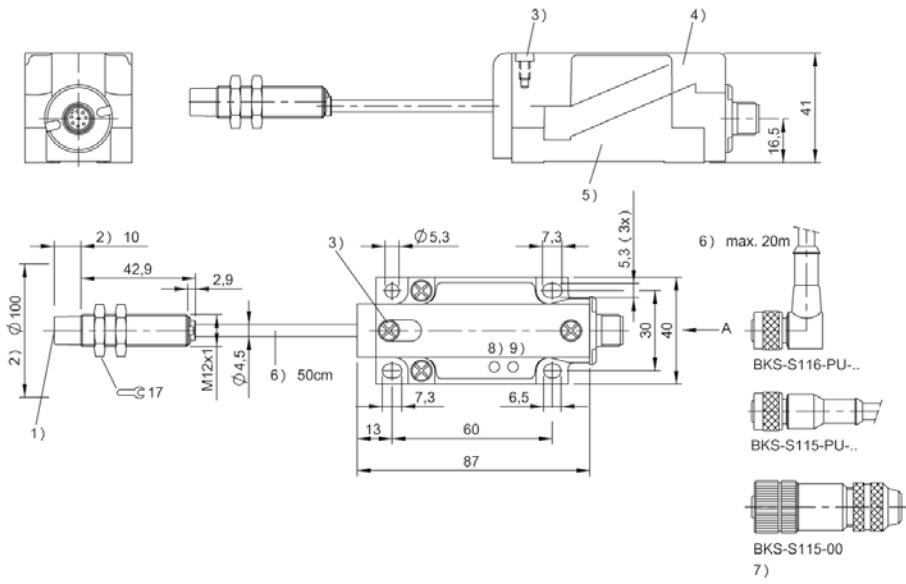


	<b>BIS00C9</b> BIS L-400-035-003-00-S115
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	<b>BIS003W</b>	<b>BIS003F</b>
Data carrier distance to metal	metal-free	
Data carrier clear zone		
Working distance for writing		
Working distance for reading	0-11	
Offset at distance		
	0	±6
	3	±6
	7	±4
	8	±4
	10	±2

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) no cable, 8) Power, 9) Tag present



<b>BIS00CC</b> BIS L-400-035-004-00-S115	
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	RS232
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	BIS003R BIS0035	BIS003T BIS0038	BIS003W BIS003F
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18 ±8	±15	
	20 ±8	±15	
	25	±6	

Dimensions in mm





	<b>BIS00C6</b> BIS L-400-035-001-02-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS422
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

Dimensions in mm





IO-Link, 10 Bytes process data length	<b>BIS00CZ</b> BIS L-409-045-001-07-S4
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link
Operating voltage $U_b$	18...30 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Nur mit **IO-Link-Master** verwenden

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
Data carrier distance to metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

Dimensions in mm







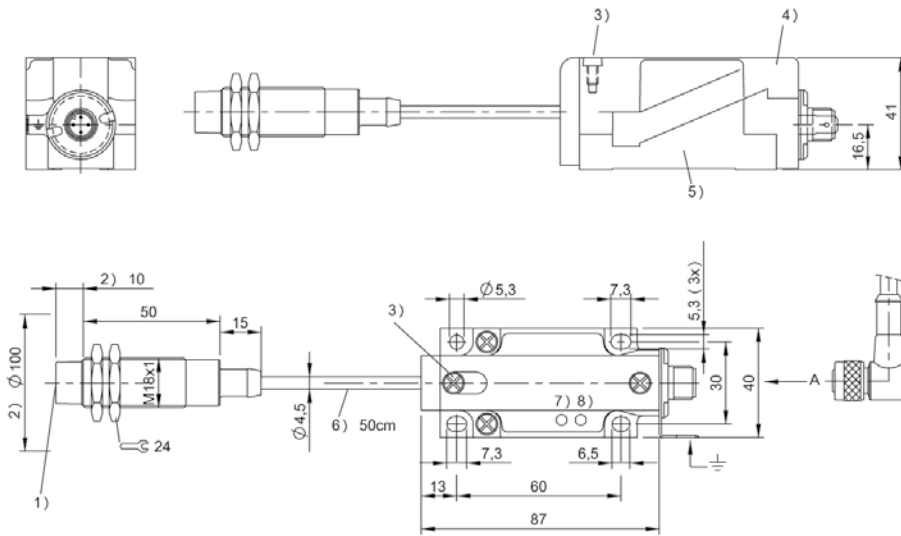
IO-Link, 10 Bytes process data length	<b>BIS00E0</b> BIS L-409-045-002-07-S4
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	IO-Link
Operating voltage $U_b$	18...30 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	<b>BIS003R</b> <b>BIS0035</b>	<b>BIS003T</b> <b>BIS0038</b>	<b>BIS003W</b> <b>BIS003F</b>
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18	±15	
	20	±15	
	25	±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) Power, 8) Tag present



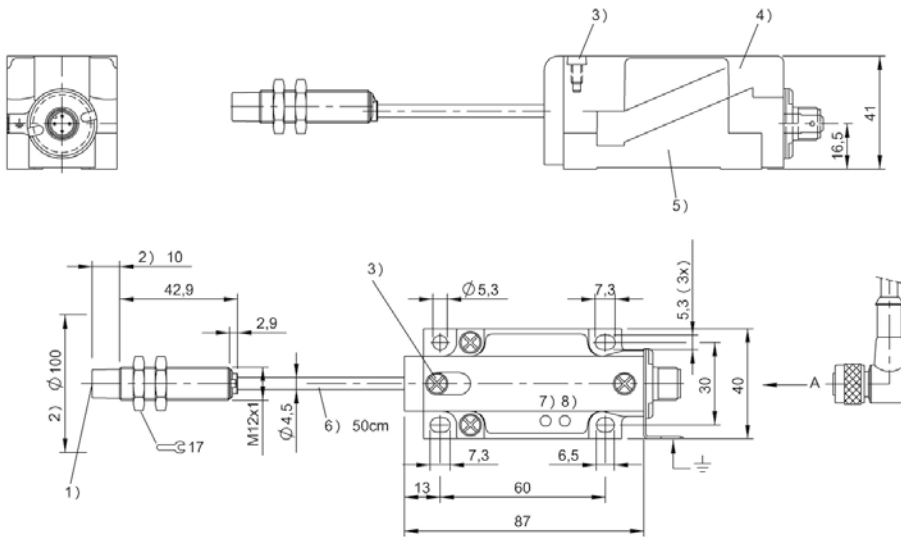
IO-Link, 10 Bytes process data length	<b>BIS00E1</b> BIS L-409-045-003-07-S4
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	IO-Link
Operating voltage U <sub>b</sub>	18...30 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	<b>BIS003W</b>	<b>BIS003F</b>
Data carrier distance to metal	metal-free	
Data carrier clear zone		
Working distance for writing		
Working distance for reading	0-11	
Offset at distance		
	0	±6
	3	±6
	7	±4
	8	±4
	10	±2

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) Power, 8) Tag present



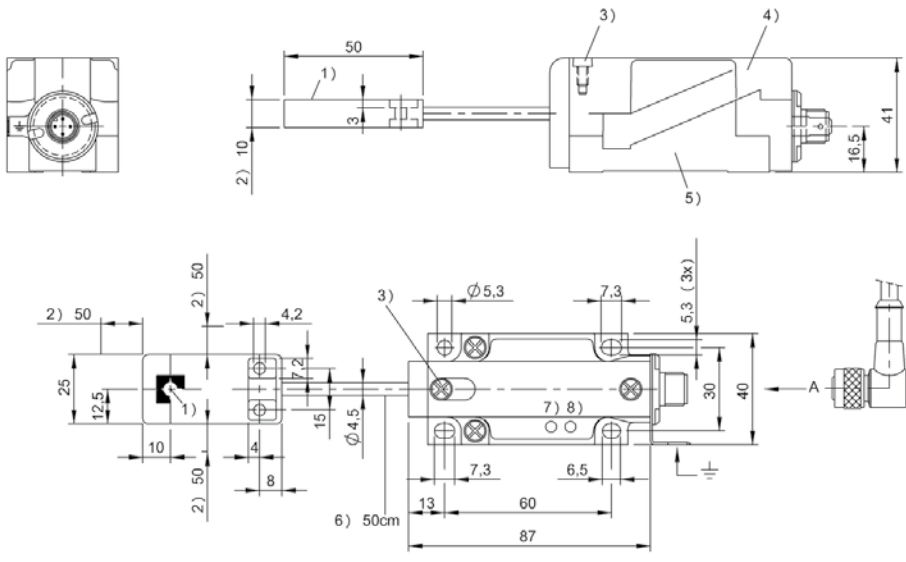
IO-Link, 10 Bytes process data length	<b>BIS00E2</b> BIS L-409-045-004-07-S4
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	IO-Link
Operating voltage $U_b$	18...30 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Use with **IO-Link master** only

Appropriate data carrier

	<b>BIS003R</b> <b>BIS0035</b>	<b>BIS003T</b> <b>BIS0038</b>	<b>BIS003W</b> <b>BIS003F</b>
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18 ±8	±15	
	20 ±8	±15	
	25	±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) Power, 8) Tag present



	<b>BIS00CM</b> BIS L-405-033-001-05-MU
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	—
Housing material	PBT
Interface	parallel
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

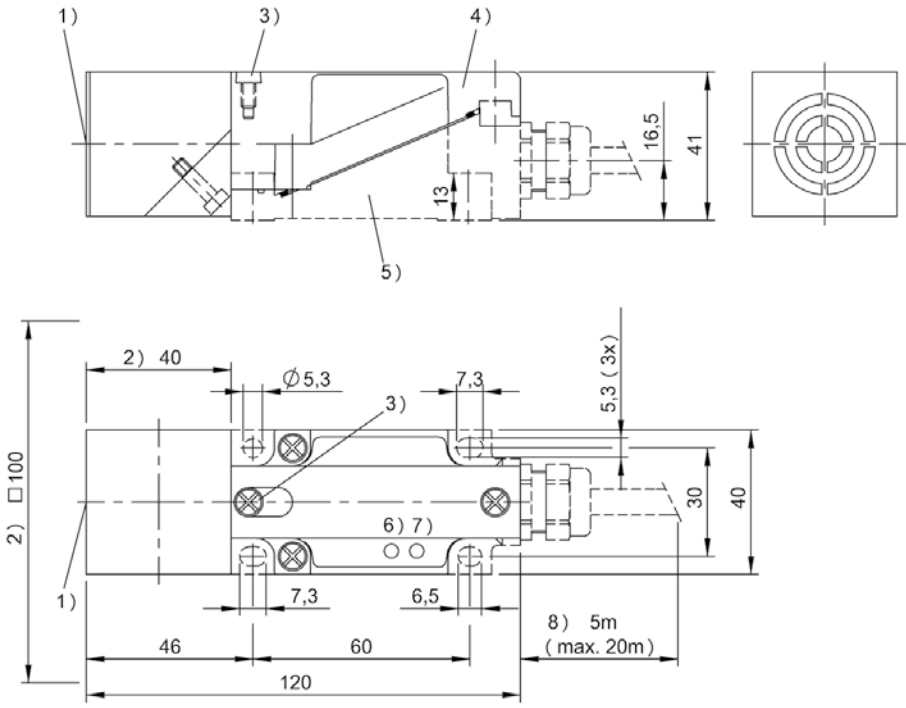
Use with **IO-Link master** only

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier distance to metal											
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Power, 7) Tag present, 8) standard length

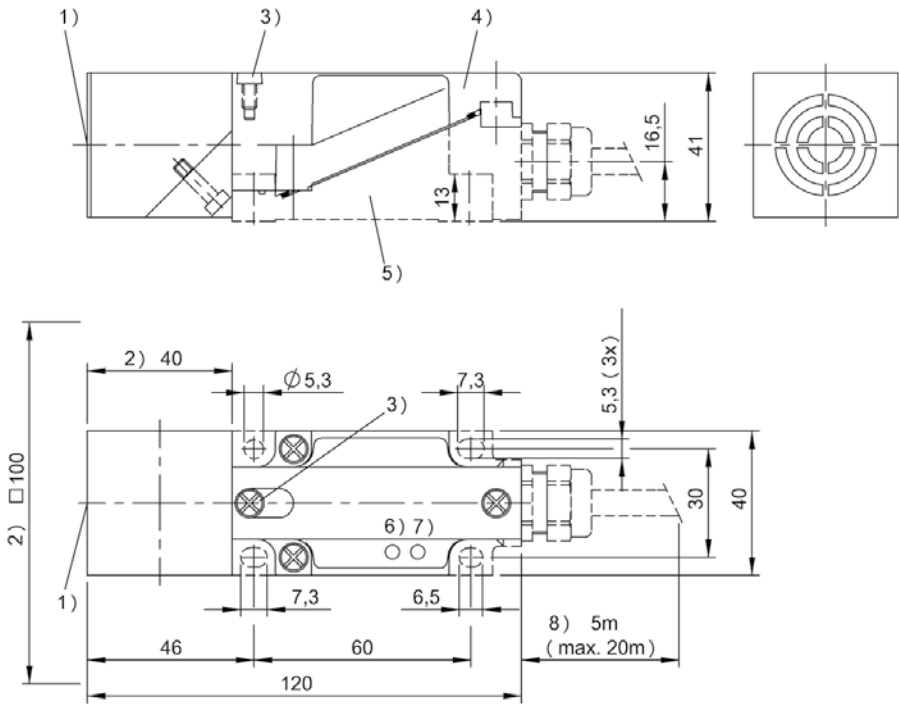


	<b>BIS00CT</b> BIS L-405-037-001-05-MU
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	—
Housing material	PBT
Interface	parallel
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier distance to metal											
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

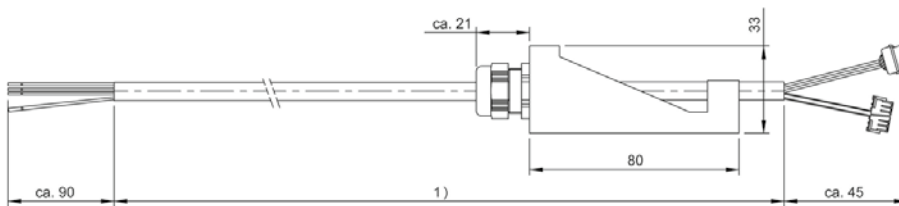
Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Power, 7) Tag present, 8) standard length



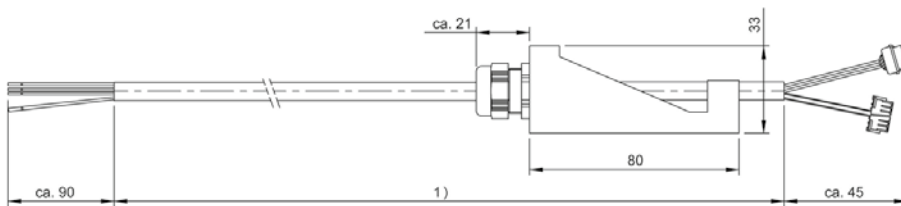
	<b>BCC00R2</b> BIS L-503-PU1-05
Product Group	LF (125 kHz)
Dimension	—
Installation	—
Antenna type	—
Connection	Cable with connector housing, 5.00 m, PU
Housing material	PBT
Interface	parallel
Operating voltage $U_b$	—
Ambient temperature	—
Protection degree	IP65
Approval/Conformity	CE



1) Cable length see text



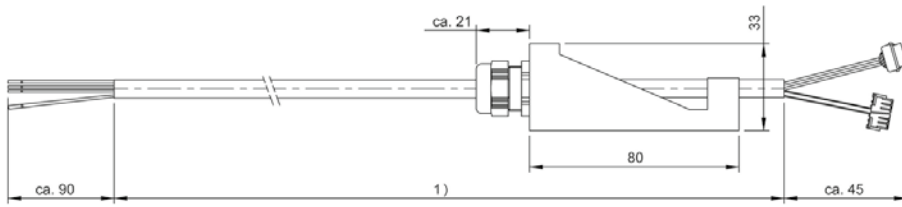
	<b>BCC00R3</b> BIS L-503-PU1-10
Produktgruppe	LF (125 kHz)
Abmessung	—
Einbau	—
Antennenform	—
Anschluss	Cable with connector housing, 10.00 m, PU
Gehäusematerial	PBT
Schnittstelle	parallel
Betriebsspannung Ub	—
Umgebungstemperatur	—
Schutzart	IP67
Zulassung/Konformität	CE



1) Cable length see text



	<b>BCC00R4</b> BIS L-503-PU1-15
Product Group	LF (125 kHz)
Dimension	—
Installation	—
Antenna type	—
Connection	Cable with connector housing, 15.00 m, PU
Housing material	PBT
Interface	parallel
Operating voltage $U_b$	—
Ambient temperature	—
Protection degree	IP65
Approval/Conformity	CE



1) Cable length see text



	<b>BIS00CN</b> BIS L-405-033-002-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	<b>BIS003R</b> <b>BIS0035</b>	<b>BIS003T</b> <b>BIS0038</b>	<b>BIS003W</b> <b>BIS003F</b>
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18	±15	
	20	±15	
	25	±6	

Dimensions in mm







		<b>BIS00CP</b> BIS L-405-033-003-05-MU
Product Group		LF (125 kHz)
Dimension		Ø 12 x 53 mm
Installation		metal-free (clear zone)
Antenna type		round
Connection		0.50 m, PU
Housing material		Brass, interface PBT
Interface		parallel
Operating voltage $U_b$		19.2...26.4 VDC
Ambient temperature		0...70 °C
Protection degree		IP67
Approval/Conformity		CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	<b>BIS003W</b>	<b>BIS003F</b>
Data carrier distance to metal		metal-free
Data carrier clear zone		
Working distance for writing		
Working distance for reading	0-11	
Offset at distance		
	0 ±6	
	3 ±6	
	7 ±4	
	8 ±4	
	10 ±2	

Dimensions in mm



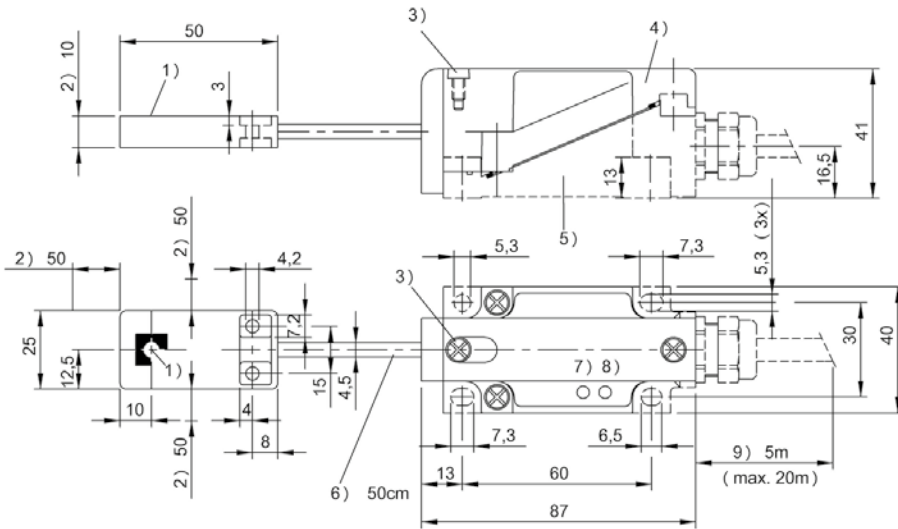


	<b>BIS00CR</b> BIS L-405-033-004-05-MU
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	ABS, interface PBT
Interface	parallel
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035	BIS003T BIS0038	BIS003W BIS003F
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18 ±8	±15	
	20 ±8	±15	
	25	±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) Power, 8) Tag present, 9) standard length

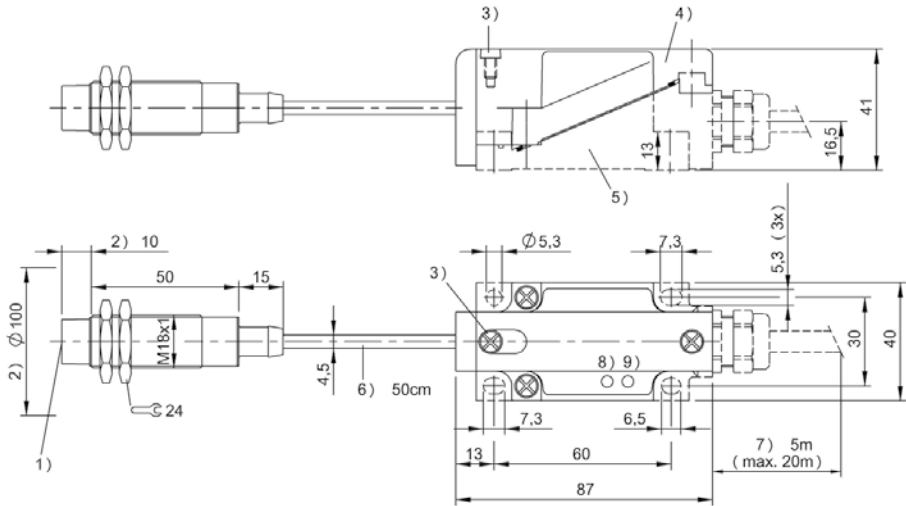


	<b>BIS00CU</b> BIS L-405-037-002-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

## Appropriate data carrier

	<b>BIS003R</b> <b>BIS0035</b>	<b>BIS003T</b> <b>BIS0038</b>	<b>BIS003W</b> <b>BIS003F</b>
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18	±15	
	20	±15	
	25	±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) standard length, 8) Power, 9) Tag present



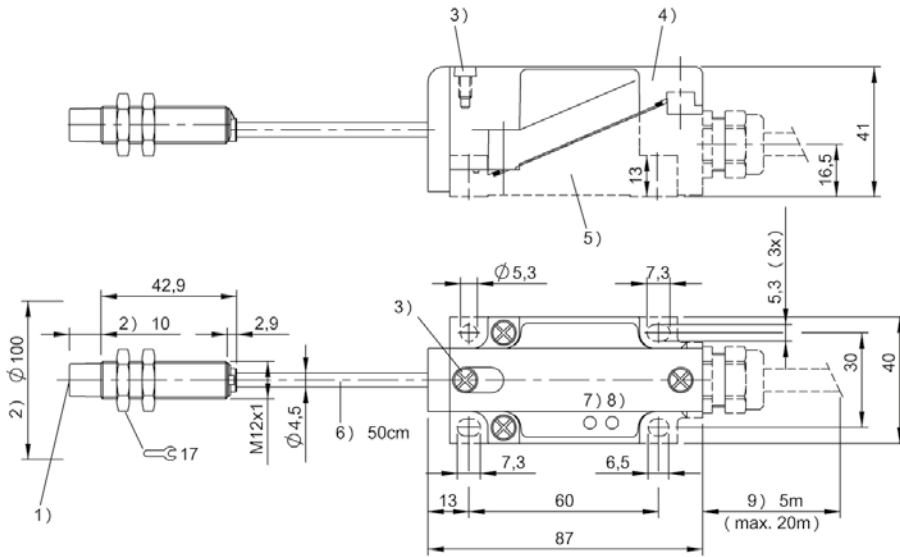
		<b>BIS00CW</b> BIS L-405-037-003-05-MU
Product Group		LF (125 kHz)
Dimension		Ø 12 x 53 mm
Installation		metal-free (clear zone)
Antenna type		round
Connection		0.50 m, PU
Housing material		Brass, interface PBT
Interface		parallel
Operating voltage $U_b$		19.2...26.4 VDC
Ambient temperature		0...70 °C
Protection degree		IP67
Approval/Conformity		CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	<b>BIS003W</b> <b>BIS003F</b>	
Data carrier distance to metal	metal-free	
Data carrier clear zone		
Working distance for writing		
Working distance for reading	0-11	
Offset at distance		
	0	±6
	3	±6
	7	±4
	8	±4
	10	±2

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) Power, 8) Tag present, 9) standard length

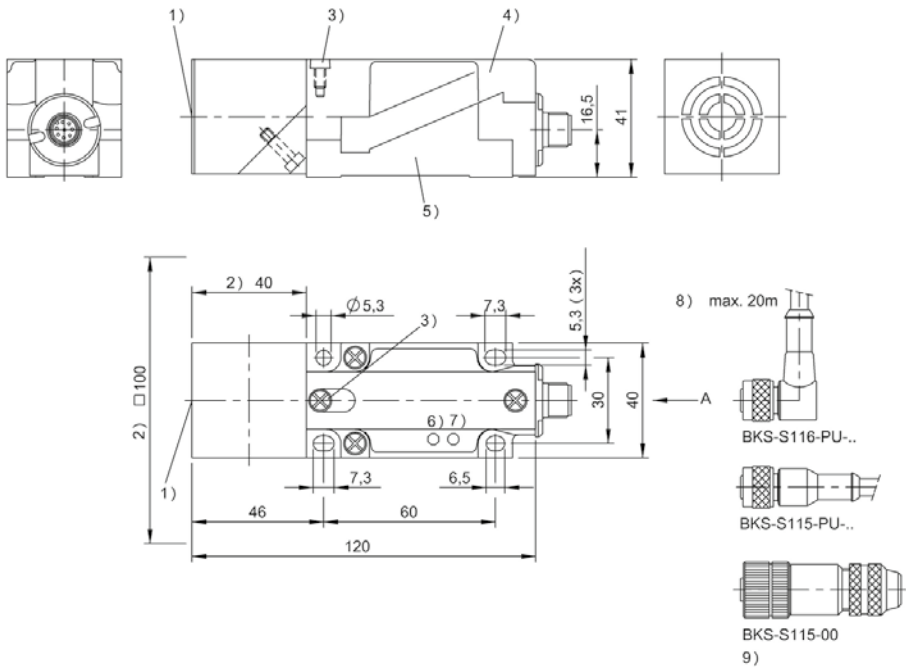


For processor units BAE003W and BAE003U (Easy Loop)	<b>BIS00CH</b> BIS L-400-043-001-02-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS422 (Easy Loop)
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035			BIS003T BIS0038			BIS003U BIS003C			BIS003W BIS003F	
	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	
Data carrier distance to metal											
Data carrier clear zone											
Working distance for writing											
Working distance for reading	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Offset at distance											
	0	±15	±10		±20	±12	±10	±30	±20	±18	±10
	3	±15	±10		±20	±12	±10	±30	±20	±18	±10
	5	±15	±10	±10	±20	±12	±10	±30	±20	±18	±10
	8	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	10	±15	±10	±7	±20	±12	±10	±30	±20	±18	±10
	12	±15	±8	±7	±20	±12	±10	±30	±20	±18	±10
	15	±15	±8		±20	±12	±10	±30	±20	±18	±10
	18	±15			±20	±12	±10	±30	±20	±14	
	20	±15			±20	±12		±30	±20	±14	
	24	±15			±20	±10		±30	±20	±12	
	28				±20			±30	±14	±12	
	30				±20			±30	±14		
	32				±20			±30	±14		
	35				±20			±30			
	40							±30			

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Power, 7) Tag present, 8) Cable length, 9) no cable

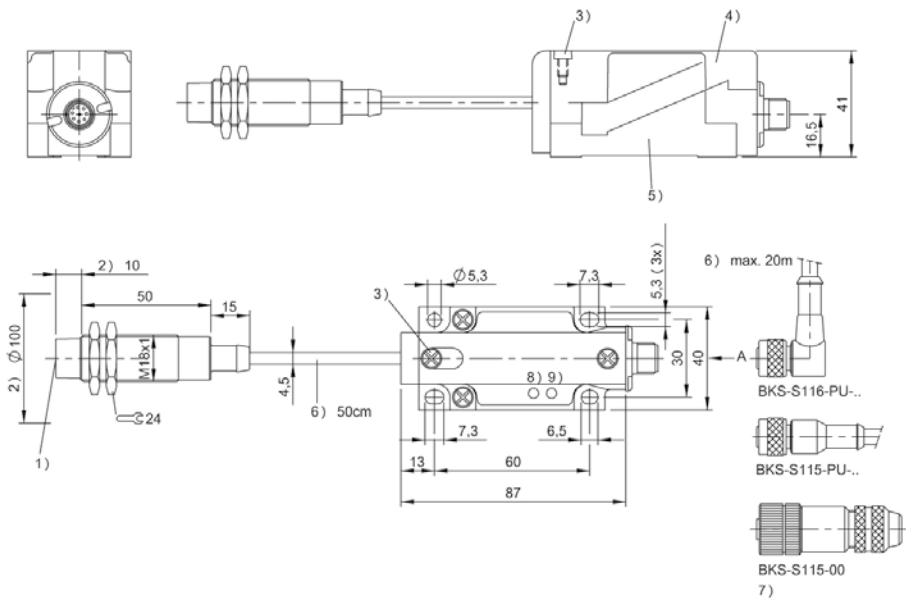


For processor units BAE003W and BAE003U (Easy Loop)	<b>BIS00CJ</b> BIS L-400-043-002-02-S115
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS422 (Easy Loop)
Operating voltage U <sub>b</sub>	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003R BIS0035	BIS003T BIS0038	BIS003W BIS003F
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18	±15	
	20	±15	
	25	±6	

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) no cable, 8) Power, 9) Tag present

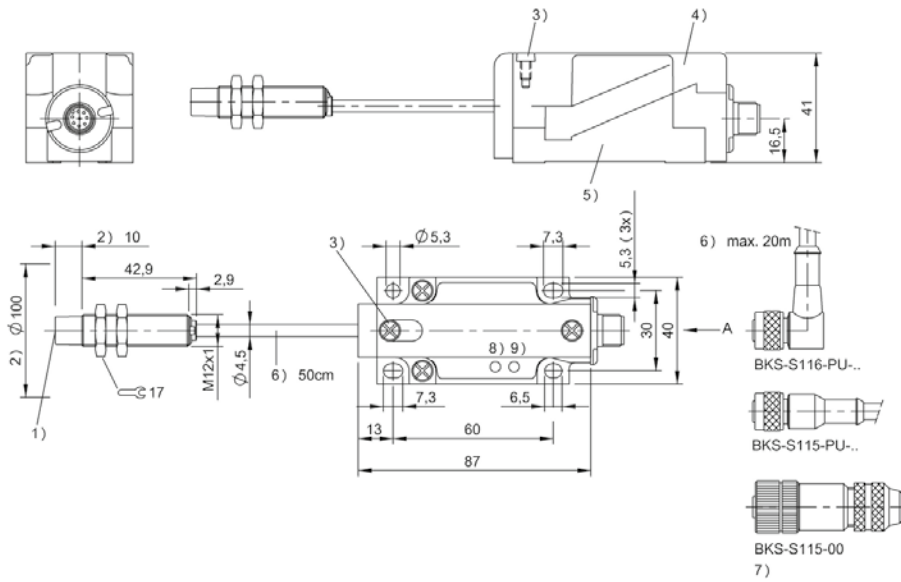


For processor units BAE003W and BAE003U (Easy Loop)	<b>BIS00CK</b> BIS L-400-043-003-02-S115
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS422 (Easy Loop)
Operating voltage U <sub>b</sub>	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BIS003W	BIS003F
Data carrier distance to metal	metal-free	
Data carrier clear zone		
Working distance for writing		
Working distance for reading	0-11	
Offset at distance		
	0	±6
	3	±6
	7	±4
	8	±4
	10	±2

Dimensions in mm



1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) no cable, 8) Power, 9) Tag present



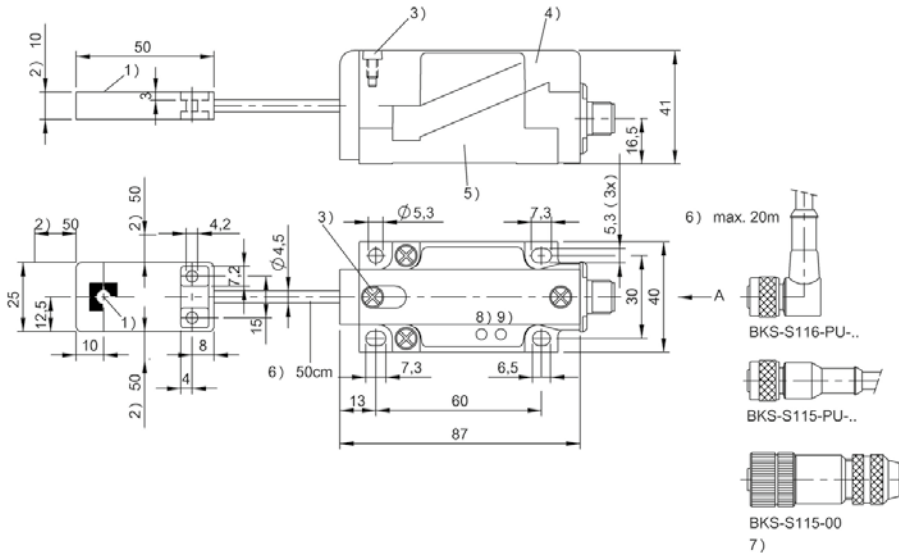
For processor units BAE003W and BAE003U (Easy Loop)	<b>BIS00CL</b> BIS L-400-043-004-02-S115
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	RS422 (Easy Loop)
Operating voltage $U_b$	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	<b>BIS003R</b> <b>BIS0035</b>	<b>BIS003T</b> <b>BIS0038</b>	<b>BIS003W</b> <b>BIS003F</b>
Data carrier distance to metal	metal-free	metal-free	metal-free
Data carrier clear zone			
Working distance for writing			
Working distance for reading	0-23	0-27	0-16
Offset at distance			
	0 ±12	±15	±8
	3 ±12	±15	±8
	7 ±12	±15	±8
	8 ±12	±15	±8
	10 ±12	±15	±8
	12 ±12	±15	±4
	15 ±12	±15	±4
	18 ±8	±15	
	20 ±8	±15	
	25	±6	

Dimensions in mm





1) Sensing surface, 2) Clear zone, 3) Locking screw, 4) Module unit, 5) Mounting base, 6) Cable length, 7) no cable, 8) Power, 9) Tag present

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