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		**BIS013P** BIS U-142-06/CA-M8-GY	
America/Asia: 902-928 MHz	**BIS0178** BIS U-142-A0/C1M-GY		
worldwide: 860-960 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	902…928 MHz	865…868 MHz	
Dimension	Ø 17.2 x 14 mm	Ø 22 x 26 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	
TID memory, read-only	64 Bit	64 Bit	
Antenna type	Dipol	Dipol	
Installation	on metal	on metal	
Storage temperature	-25...95 °C	-25...95 °C	
Storage temperature temporary	–	–	
Ambient temperature	-25...85 °C	-25...85 °C	
Housing material	PA 12, GF30	Steel, data carrier: PA 12-GF30 gray	
Protection degree	IP68	IP68	
Approval/Conformity	CE	CE	
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		BIS00NL BIS U-100-01/CA		
	BIS013R BIS U-142-07/CA-M8-GY		**BIS00RC** BIS U-100-02/CA	
				BIS00WH BIS U-101-04/CA
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	902…928 MHz	840…960 MHz	840…960 MHz	860…960 MHz
	Ø 22 x 26 mm	37.2 x 7 x 127 mm	37.2 x 7 x 127 mm	51.5 x 6.4 x 51.5 mm
	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	512 Bit	512 Bit	512 Bit
	96 Bit	96 Bit	96 Bit	240 Bit
	64 Bit	64 Bit	64 Bit	64 Bit
	Dipol	Dipol	Dipol	Dipol
	on metal	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
	-25...95 °C	-40...85 °C	-40...85 °C	-40...85 °C
	–	–	–	–
	-25...85 °C	-40...85 °C	-40...85 °C	-20...85 °C
	Steel, data carrier: PA 12-GF30 gray	PA 12, GF30	PA 12, GF30	ABS
	IP68	IP67	IP67	IP68
	CE	CE	CE	CE
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Do you need more details? Our Product Finder at www.balluff.com 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.

Europe: 865-868 MHz		**BIS016N** BIS U-104-A0/C0M	
America/Asia: 902-928 MHz			
worldwide: 860-960 MHz	**BIS00WE** BIS U-102-05/CA		
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	860…960 MHz	866…868 MHz	
Dimension	52 x 11.5 x 128 mm	6.1 x 2.6 x 8.6 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	
EPC memory, read/write	240 Bit	96 Bit	
TID memory, read-only	64 Bit	64 Bit	
Antenna type	Dipol	Dipol	
Installation	metal-free (clear zone)	on metal	
Storage temperature	-40...85 °C	-20...85 °C	
Storage temperature temporary	–	–	
Ambient temperature	-20...85 °C	-20...85 °C	
Housing material	ABS	Oxide ceramics	
Protection degree	IP68	IP68	
Approval/Conformity	CE	CE, RoHS	
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	BIS016P BIS U-104-A0/C1M	**BIS016R** BIS U-105-A0/C0M	**BIS016T** BIS U-105-A0/C1M	
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	
	902…928 MHz	866…868 MHz	902…928 MHz	
	6.1 x 2.6 x 8.6 mm	7.1 x 3.1 x 13.1 mm	7.1 x 3.1 x 13.1 mm	
	EEPROM	EEPROM	EEPROM	
	512 Bit	512 Bit	512 Bit	
	96 Bit	96 Bit	96 Bit	
	64 Bit	64 Bit	64 Bit	
	Dipol	Dipol	Dipol	
	on metal	on metal	on metal	
	-20...85 °C	-20...85 °C	-20...85 °C	
	–	–	–	
	-20...85 °C	-20...85 °C	-20...85 °C	
	Oxide ceramics	Oxide ceramics	Oxide ceramics	
	IP68	IP68	IP68	
	CE, RoHS	CE, RoHS	CE, RoHS	
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Europe: 865-868 MHz	**BIS016Y** BIS U-106-A0/C0M		
America/Asia: 902-928 MHz		**BIS016Z** BIS U-106-A0/C1M	
worldwide: 860-960 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	866…868 MHz	902…928 MHz	
Dimension	9.75 x 3.6 x 63 mm	9.75 x 3.6 x 63 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	
TID memory, read-only	64 Bit	64 Bit	
Antenna type	Dipol	Dipol	
Installation	on metal	on metal	
Storage temperature	-40...105 °C	-40...105 °C	
Storage temperature temporary	–	–	
Ambient temperature	-40...85 °C	-40...85 °C	
Housing material	Thermoplast Plastic	Thermoplast Plastic	
Protection degree	IP68	IP68	
Approval/Conformity	CE, RoHS	CE, RoHS	
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	BIS0170 BIS U-107-A0/C0M			
		BIS0171 BIS U-107-A0/C1M		
			BIS0174 BIS U-103-M2/CAM	**BIS0172** BIS U-108-M2/CAM
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	865…868 MHz	902…928 MHz	860…940 MHz	860…940 MHz
	38 x 9.5 x 48.5 mm	38 x 9.5 x 48.5 mm	25 x 12.85 x 110 mm	15 x 12.5 x 80 mm
	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	512 Bit	512 Bit	512 Bit
	96 Bit	96 Bit	128 Bit	128 Bit
	64 Bit	64 Bit	96 Bit	96 Bit
	Dipol	Dipol	Dipol	Dipol
	on metal	on metal	on metal	on metal
	-40...85 °C	-40...85 °C	-40...85 °C	-40...85 °C
	–	–	–	–
	-40...85 °C	-40...85 °C	-40...85 °C	-40...85 °C
	Thermoplast Plastic	Thermoplast Plastic	ABS	ABS
	IP68	IP68	IP68	IP68
	CE, RoHS	CE, RoHS	CE, RoHS	CE, RoHS
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Europe: 865-868 MHz			
America/Asia: 902-928 MHz			
worldwide: 860-960 MHz	**BIS0173** BIS U-109-M2/CAM	**BIS018F** BIS U-112-M4/CAA	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	860…930 MHz	860…960 MHz	
Dimension	48 x 12.6 x 51 mm	29.3 x 19.2 x 66.2 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	0 Bit	
EPC memory, read/write	128 Bit	96 Bit	
TID memory, read-only	96 Bit	48 Bit	
Antenna type	Dipol	Dipol	
Installation	on metal	metal-free (clear zone)	
Storage temperature	-40...85 °C	-40...85 °C	
Storage temperature temporary	–	–	
Ambient temperature	-40...85 °C	-40...85 °C	
Housing material	ABS	PVDF, PA 12, GF30	
Protection degree	IP68	IP67	
Approval/Conformity	CE, RoHS	CE	
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			BIS016K BIS U-110-A0/C0A	
				BIS016L BIS U-110-A0/C1A
	BIS018H BIS U-113-M4/CAA	**BIS00U4** BIS U-100-01/CA-SA1		
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	860…960 MHz	840…960 MHz	865…868 MHz	902…928 MHz
	38.1 x 19 x 51.3 mm	37.4 x 24.8 x 130.2 mm	12 x 1.6 x 60 mm	12 x 1.6 x 60 mm
	EEPROM	EEPROM	EEPROM	EEPROM
	0 Bit	512 Bit	512 Bit	512 Bit
	96 Bit	96 Bit	96 Bit	96 Bit
	48 Bit	64 Bit	64 Bit	64 Bit
	Dipol	Dipol	Dipol	Dipol
	metal-free (clear zone)	on metal	metal-free (clear zone)	metal-free (clear zone)
	-40...85 °C	-40...85 °C	-40...55 °C	-40...55 °C
	–	–	–	–
	-40...85 °C	-40...85 °C	-20...55 °C	-20...55 °C
	PVDF, PA 12, GF30	PA 12, GF30	Silicone	Silicone
	IP67	IP67	IP68	IP68
	CE	CE	CE	CE
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Europe: 865-868 MHz	**BIS016U** BIS U-180-A0/C0M		
America/Asia: 902-928 MHz		**BIS016W** BIS U-180-A0/C1M	
worldwide: 860-960 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	866…868 MHz	902…928 MHz	
Dimension	5.95 x 1.3 x 57.1 mm	5.95 x 1.3 x 57.1 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	
TID memory, read-only	64 Bit	64 Bit	
Antenna type	Dipol	Dipol	
Installation	on metal	on metal	
Storage temperature	-40...120 °C	-40...120 °C	
Storage temperature temporary	—	—	
Ambient temperature	-40...85 °C	-40...85 °C	
Housing material	Epoxy resin-glass fiber, flame-retardant	Epoxy resin-glass fiber, flame-retardant	
Protection degree	IP68	IP68	
Approval/Conformity	CE, RoHS	CE, RoHS	
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	BIS016M BIS U-111-M2/CAA	**BIS00WF** BIS U-101-04/CA-HT	**BIS00WC** BIS U-102-05/CA-HT	**BIS0163** BIS U-150-N4/CAA
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	860…960 MHz	860…960 MHz	860…960 MHz	860…960 MHz
	54 x 0.84 x 85.7 mm	51.5 x 6.4 x 51.5 mm	52 x 11.5 x 128 mm	20 x 44.45 mm
	EEPROM	EEPROM	EEPROM	EEPROM
	512 Bit	512 Bit	512 Bit	0 Bit
	128 Bit	240 Bit	240 Bit	128 Bit
	96 Bit	64 Bit	64 Bit	64 Bit
	Dipol	Dipol	Dipol	Dipol
	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
	-25...50 °C	-40...85 °C	-40...85 °C	-20...80 °C
	—	220 °C 1 x 1000 h, 1500 x 30 min	220 °C 1 x 1000 h, 1500 x 30 min	—
	-25...50 °C	-40...85 °C	-40...85 °C	-20...80 °C
	PVC	PPS	PPS	Paper
	IP68	IP68	IP68	—
	CE	CE	CE	CE
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Europe: 865-868 MHz			
America/Asia: 902-928 MHz			
worldwide: 860-960 MHz	**BIS0165** BIS U-152-M3/CAA	**BIS0166** BIS U-153-M0/CAA	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	860…960 MHz	860…960 MHz	
Dimension	17 × 73 mm	9 × 113 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	32 Bit	32 Bit	
EPC memory, read/write	128 Bit	128 Bit	
TID memory, read-only	96 Bit	96 Bit	
Antenna type	Dipol	Dipol	
Installation	metal-free (clear zone)	metal-free (clear zone)	
Storage temperature	-20...80 °C	-20...80 °C	
Storage temperature temporary	–	–	
Ambient temperature	-20...80 °C	-20...80 °C	
Housing material	Paper	Paper	
Protection degree	–	–	
Approval/Conformity	CE	CE	
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			BIS016A BIS U-157-A0/C0M	
				BIS016C BIS U-157-A0/C1M
	BIS0167 BIS U-154-M0/CAA	**BIS0169** BIS U-156-M0/CAA		
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	860…960 MHz	860…960 MHz	865…868 MHz	902…928 MHz
	15 × 97 mm	53 × 53 mm	22.5 x 1.65 x 50 mm	22.5 x 1.65 x 50 mm
	EEPROM	EEPROM	EEPROM	EEPROM
	32 Bit	32 Bit	512 Bit	512 Bit
	128 Bit	128 Bit	96 Bit	96 Bit
	96 Bit	96 Bit	64 Bit	64 Bit
	Dipol	Dipol	Dipol	Dipol
	metal-free (clear zone)	metal-free (clear zone)	on metal	on metal
	-40...85 °C	-40...85 °C	-25...95 °C	-25...95 °C
	–	–	–	–
	-40...85 °C	-40...85 °C	-20...85 °C	-20...85 °C
	Paper	Paper	PET	PET
	–	–	IP67	IP67
	CE	CE	CE, REACH regulation (EU), RoHS	CE, REACH regulation (EU), RoHS
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Europe: 865-868 MHz	**BIS016E** BIS U-158-A0/C0M-HT		
America/Asia: 902-928 MHz		**BIS016F** BIS U-158-A0/C1M-HT	
worldwide: 860-960 MHz			
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	865…868 MHz	902…928 MHz	
Dimension	25 x 1.65 x 88 mm	25 x 1.65 x 88 mm	
Memory type	EEPROM	EEPROM	
User data, read/write	512 Bit	512 Bit	
EPC memory, read/write	96 Bit	96 Bit	
TID memory, read-only	64 Bit	64 Bit	
Antenna type	Dipol	Dipol	
Installation	on metal	on metal	
Storage temperature	-25...95 °C	-25...95 °C	
Storage temperature temporary	160 °C 3 x 30 min	160 °C 3 x 30 min	
Ambient temperature	-30...70 °C	-30...70 °C	
Housing material	PEN	PEN	
Protection degree	IP67	IP67	
Approval/Conformity	CE, REACH regulation (EU), RoHS	CE, REACH regulation (EU), RoHS	
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	BIS016J BIS U-160-A0/CAG	**BIS0164** BIS U-151-M2/CAA	**BIS0168** BIS U-155-M2/CAA	**BIS016H** BIS U-159-M2/CAA
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
Working frequency	860…960 MHz	860…960 MHz	860…960 MHz	850…960 MHz
Dimension	25.4 x 0.18 x 80 mm	54 × 34 mm	27 × 97 mm	23 x 1 x 100 mm
Memory type	EEPROM	EEPROM	EEPROM	EEPROM
User data, read/write	512 Bit	512 Bit	512 Bit	512 Bit
EPC memory, read/write	96 Bit	128 Bit	128 Bit	128 Bit
TID memory, read-only	64 Bit	96 Bit	96 Bit	96 Bit
Antenna type	Dipol	Dipol	Dipol	Dipol
Installation	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)	metal-free (clear zone)
Storage temperature	-50...85 °C	-40...85 °C	-40...85 °C	-40...85 °C
Storage temperature temporary	—	—	—	—
Ambient temperature	-50...85 °C	-40...85 °C	-40...85 °C	-25...70 °C
Housing material	PET	Paper	Paper	PET
Protection degree	IP67	—	—	IP68
Approval/Conformity	CE, REACH regulation (EU), RoHS	CE	CE	CE, REACH regulation (EU), RoHS
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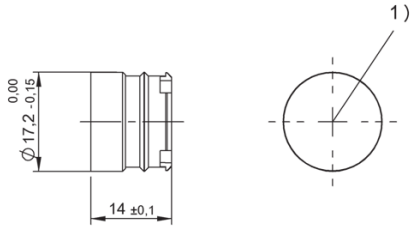
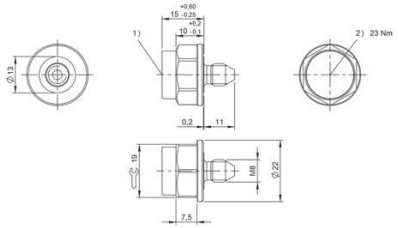


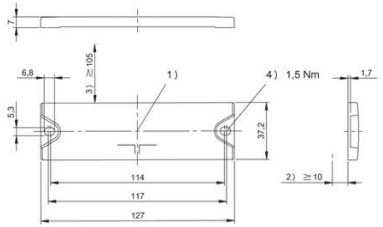
1) Sensing surface

BIS0178



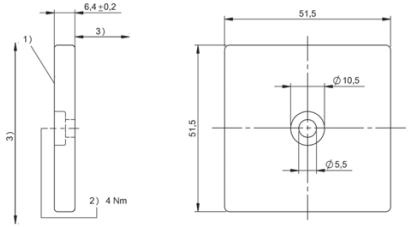
1) Sensing surface, 2) Tightening torque

BIS013P, BIS013R



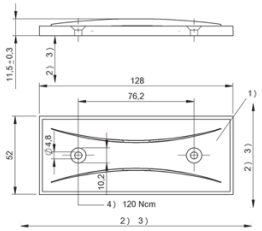
1) Sensing surface, 2) Clear zone, 3) Clear zone surrounding, 4) Tightening torque

BIS00NL, BIS00RC



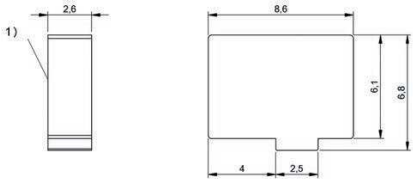
1) Sensing surface, 2) Tightening torque, 3) see R/W head table

BIS00WH, BIS00WF



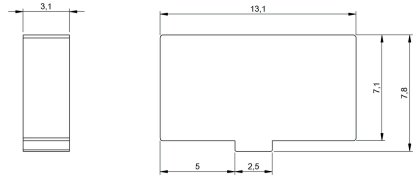
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head, 4) Tightening torque

BIS00WE, BIS00WC



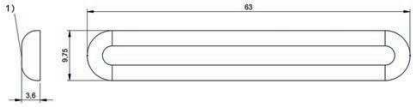
1) Sensing surface

BIS016N, BIS016P



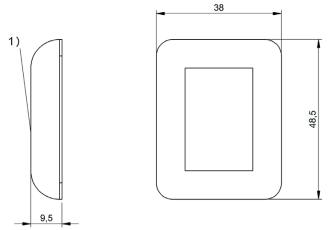
1) Sensing surface

BIS016R, BIS016T



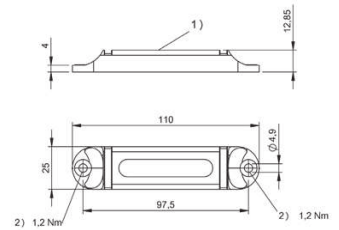
1) Sensing surface

BIS016Y, BIS016Z



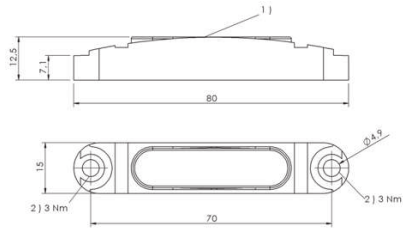
1) Sensing surface

BIS0170, BIS0171



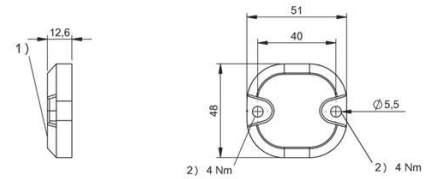
1) Sensing surface, 2) Tightening torque

BIS0174



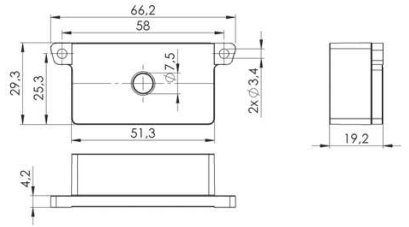
1) Sensing surface, 2) Tightening torque

BIS0172

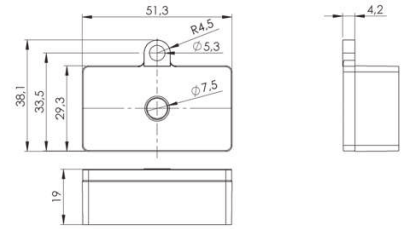


1) Sensing surface, 2) Tightening torque

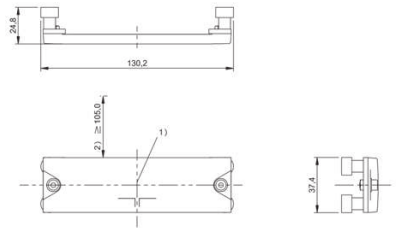
BIS0173



BIS018F

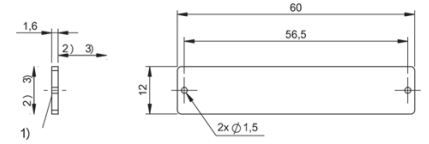


BIS018H



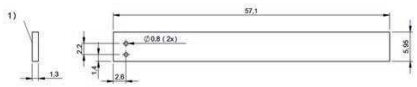
1) Sensing surface, 2) Clear zone surrounding

BIS00U4



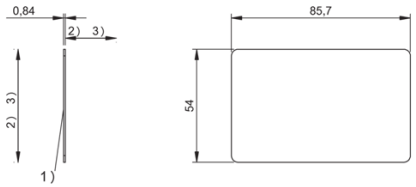
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016K, BIS016L



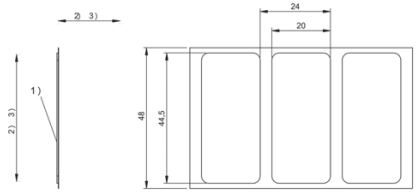
1) Sensing surface

BIS016U, BIS016W



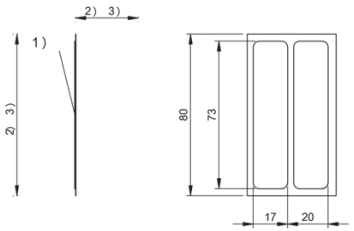
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016M



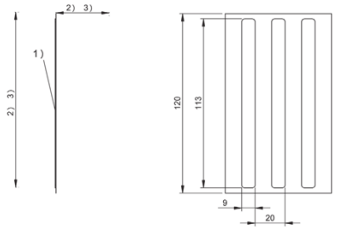
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0163



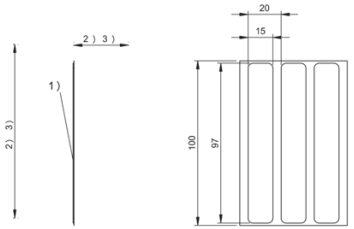
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0165



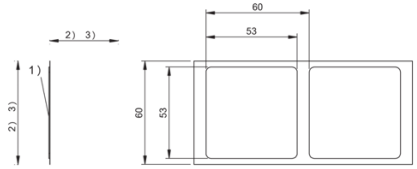
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0166



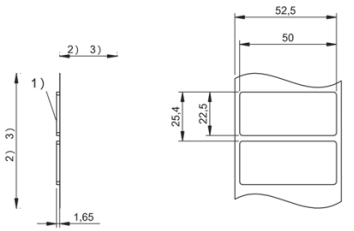
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0167



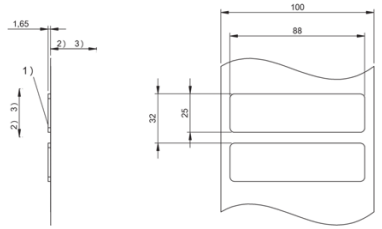
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0169



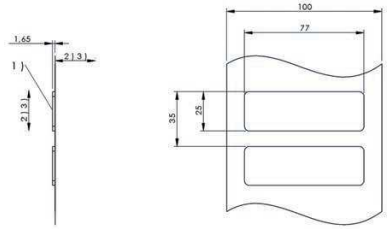
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016A, BIS016C



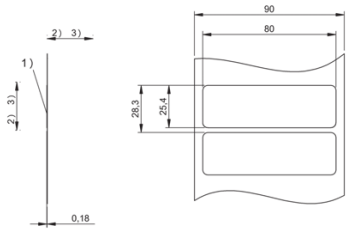
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016E



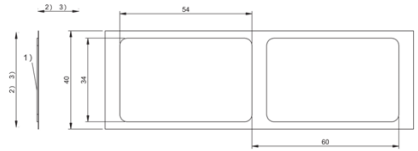
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016F



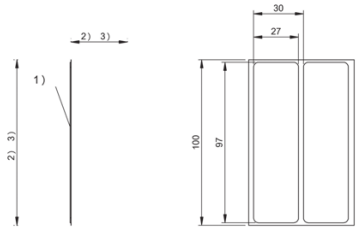
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS016J



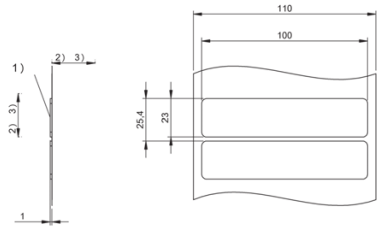
1) Sensing surface, 2) Clear zone, 3) see corresponding R/W head

BIS0164



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

BIS0168



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

BIS016H

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Europe: 865...868 MHz	**BIS015Z** BIS VU-320-C0-S4		
USA/Canada/Mexico: 902...928 MHz		**BIS015Y** 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	
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	BIS018Z BIS VU-320-C2-S4			
		BIS0190 BIS VU-320-C4-S4		
			BIS0191 BIS VU-320-C5-S4	
				BIS0192 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
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Europe: 865...868 MHz	**BIS00P0** BIS U-301-C0-TNCB		
America/Asia: 902...928 MHz		**BIS00TY** BIS U-301-C1-TNCB	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Working frequency	865…868 MHz	902…928 MHz	
Radio license	–	–	
Dimension	133 x 18.4 x 133 mm	133 x 18.4 x 133 mm	
Antenna type	Patch	Patch	
Polarization	circular	circular	
Output power adjustable	–	–	
Connection	–	–	
Housing material	PC	PC	
Interface	–	–	
Operating voltage Ub	–	–	
Ambient temperature	-30...70 °C	-30...70 °C	
Protection degree	IP67	IP67	
Approval/Conformity	–	–	
Productview	Page 36	Page 36	

	BIS00TZ BIS U-302-C0-TNCB			
		BIS00U0 BIS U-302-C1-TNCB		
	UHF (860...960 MHz)	UHF (860...960 MHz)		
	865…868 MHz	902…928 MHz		
	–	–		
	271 x 42.5 x 271 mm	271 x 42.5 x 271 mm		
	Patch	Patch		
	circular	circular		
	–	–		
	–	–		
	Aluminum, antenna hood: polymer blend	Aluminum, antenna hood: polymer blend		
	–	–		
	–	–		
	-20...55 °C	-20...55 °C		
	IP65	IP65		
	–	–		
	Page 37	Page 37		

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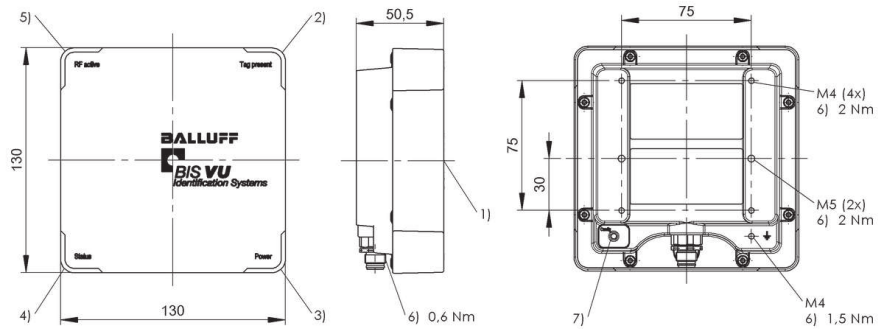
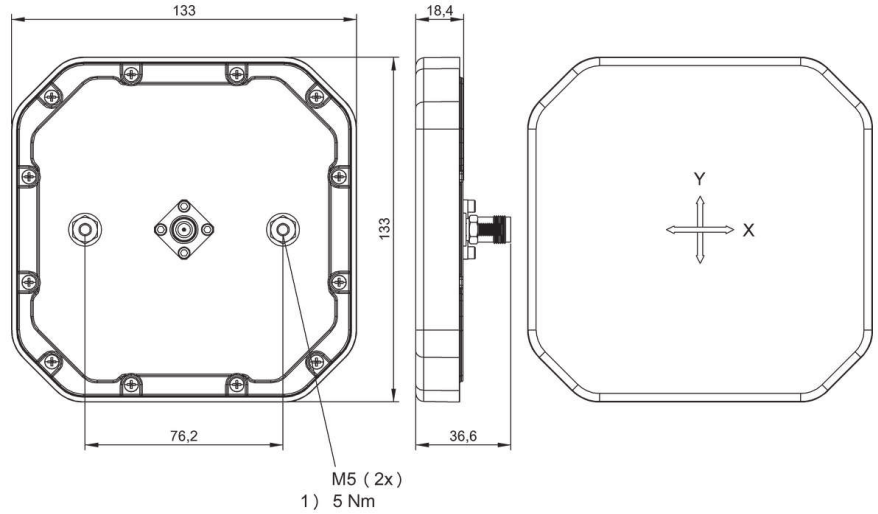


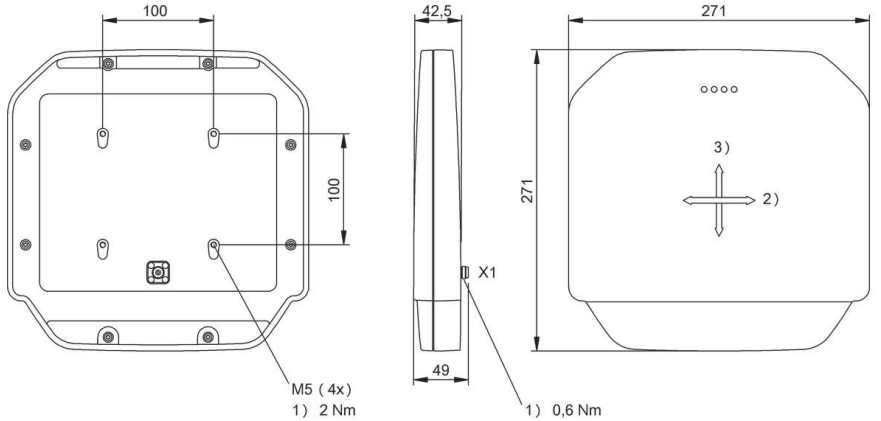
1) Sensing surface, 2) LED (Tag present), 3) LED (Power), 4) LED (Status), 5) LED (RF active), 6) Tightening torque, 7) Button (Config)

BIS015Z, BIS015Y, BIS018Z, BIS0190, BIS0191, BIS0192



1) Tightening torque

BIS00P0, BIS00TY



1) Tightening torque, 2) horizontal, 3) vertical

BIS00TZ, BIS00U0

Profibus DP Slave, galvanically isolated	**BIS00T3** BIS V-6102-019-C001	
Ethernet/IP		
Product Group	Multi-Frequency Processors (BIS V)	
Working frequency	–	
Radio license	–	
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 Ub	24 V DC LPS Class 2	
Housing material	Zinc, die-cast	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL Listed	
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	BIS012E BIS V-6102-019-C101		
		BIS012F BIS V-6106-034-C002	**BIS014C** BIS V-6106-034-C102
	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
	–	–	–
	–	–	–
	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), 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-cast	Zinc, die-cast	Zinc, die-cast
	0...60 °C	0...60 °C	0...60 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, UL Listed	CE, UL Listed	CE, UL Listed
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Ethernet/IP	**BIS0122** BIS V-6106-034-C004	
Ethernet TCP/IP, USB		
Product Group	Multi-Frequency Processors (BIS V)	
Working frequency	–	
Radio license	–	
Interface	Ethernet/IP	
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-cast	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL Listed	
Productview	Page 63	

	BIS0146 BIS V-6106-034-C104		
		BIS0186 BIS V-6107-039-C005	**BIS0187** BIS V-6107-039-C105
	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
	–	–	–
	–	–	–
	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), 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-cast	Zinc, die-cast	Zinc, die-cast
	0...60 °C	0...60 °C	0...60 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, UL Listed	CE, UL Listed	CE, UL Listed
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Ethernet TCP/IP, USB	**BIS018J** BIS V-6107-039-C006	
Profinet I/O (IRT), Profinet I/O (IRT), 2 port Switch		
Product Group	Multi-Frequency Processors (BIS V)	
Working frequency	–	
Radio license	–	
Interface	Ethernet 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 Ub	24 V DC LPS Class 2	
Housing material	Zinc, die-cast	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL Listed	
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	BIS018K BIS V-6107-039-C106		
		BIS013U BIS V-6108-048-C002	**BIS013W** BIS V-6108-048-C102
	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
	–	–	–
	–	–	–
	Ethernet TCP/IP, USB	Profinet I/O (IRT), 2 port Switch	Profinet I/O (IRT), 2 port Switch
	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-cast	Zinc, die-cast	Zinc, die-cast
	0...60 °C	0...60 °C	0...60 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, UL Listed	CE, UL Listed	CE, UL Listed
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EtherCAT	**BIS00U9** BIS V-6110-063-C002	
Product Group	Multi-Frequency Processors (BIS V)	
Working frequency	–	
Radio license	–	
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-cast	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, UL Listed	
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	BIS0147 BIS V-6110-063-C102		
	Multi-Frequency Processors (BIS V)		
	–		
	–		
	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-cast		
	0...60 °C		
	IP65 with connector		
	CE, UL Listed		
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Europe: 865...868 MHz	**BIS00M7** BIS U-6020-053-104-00-ST26	
USA/Canada/Mexico: 902...928 MHz		
Brazil: 915...928 MHz		
Product Group	UHF (860...960 MHz)	
Radio license	Europe	
Interface	RS232	
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	
Ambient temperature	-20...55 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, ETSI EN 302 208	
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	BIS00R2 BIS U-6020-059-114-00-ST26		**BIS013J** BIS U-6026-034-114-06-ST35
		BIS00UM BIS U-6020-059-134-00-ST26	
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	USA, Canada, Mexico	Brazil	USA, Canada
	RS232	RS232	Ethernet/IP, 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…30 dBm (50 mW…1 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	Steel, aluminum	Steel, aluminum
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	FCC Part 15, IC RSS-210, SCT NOM-121-SCT1-2009	Anatel 442/2006, Anatel 506/2008	FCC Part 15, IC RSS-210
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Europe: 865...868 MHz		
USA/Canada/Mexico: 902...928 MHz		
China: 920.5...924.5 MHz	**BIS018N** BIS U-6026-034-124-06-ST35	
Product Group	UHF (860...960 MHz)	
Radio license	China	
Interface	Ethernet/IP, galvanically isolated	
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	
Ambient temperature	-20...55 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CMIIT-Radio Transmiss. Equipm.	
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	BIS00NA BIS U-6027-054-104-06-ST27		
		BIS00R1 BIS U-6027-060-114-06-ST27	
			BIS012R BIS U-6027-060-124-06-ST27
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	Europe	USA, Canada, Mexico, Argentina	China
	Ethernet TCP/IP	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)	17 dBm…30 dBm (50 mW…1 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	Steel, aluminum	Steel, aluminum
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, ETSI EN 302 208	CNC, FCC Part 15, IC RSS-210, SCT NOM-121-SCT1-2009	CMIIT-Radio Transmiss. Equipm.
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Brazil: 915...928 MHz	**BIS00UN** BIS U-6027-060-134-06-ST27
South Korea: 917...921 MHz	
Japan: 916.8...92.4 MHz	
Australia: 920.25...925.75 MHz	
Product Group	UHF (860...960 MHz)
Radio license	Brazil
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
Ambient temperature	-20...55 °C
Protection degree	IP65 with connector
Approval/Conformity	Anatel 442/2006, Anatel 506/2008
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	BIS00UR BIS U-6027-060-144-06-ST27		
		BIS012T BIS U-6027-060-154-06-ST27	
			BIS014H BIS U-6027-060-174-06-ST27
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	South Korea	Japan	Australia
	Ethernet TCP/IP	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)	17 dBm…30 dBm (50 mW…1 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	Steel, aluminum	Steel, aluminum
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	KC	ARIB T106, MIC Specified Radio Equipment	AS/NZS 4268
	Page 67	Page 67	Page 67

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Europe: 865...868 MHz	**BIS012Y** BIS U-6028-048-104-06-ST22	
USA/Canada: 902...928 MHz		
China: 920.5...924.5 MHz		
Product Group	UHF (860...960 MHz)	
Radio license	Europe	
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…33 dBm (50 mW…2 W)	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Steel, aluminum	
Ambient temperature	-20...55 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, ETSI EN 302 208	
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	BIS00ZU BIS U-6028-048-104-06-ST28		
		BIS00ZW BIS U-6028-048-114-06-ST28	
			BIS017J BIS U-6028-048-124-06-ST28
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	Europe	USA, Canada	China
	Profinet, galvanically isolated	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…33 dBm (50 mW…2 W)	17 dBm…30 dBm (50 mW…1 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	Steel, aluminum	Steel, aluminum
	-20...55 °C	-20...55 °C	-20...55 °C
	IP65 with connector	IP65 with connector	IP65 with connector
	CE, ETSI EN 302 208	FCC Part 15, IC RSS-210	CMIIT-Radio Transmiss. Equipm.
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Brazil: 915...928 MHz	**BIS0152** BIS U-6028-048-134-06-ST28	
Product Group	UHF (860...960 MHz)	
Radio license	Brazil	
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…30 dBm (50 mW...1 W)	
Operating voltage Ub	19.2...28.8 VDC	
Housing material	Steel, aluminum	
Ambient temperature	-20...55 °C	
Protection degree	IP65 with connector	
Approval/Conformity	Anatel 442/2006, Anatel 506/2008	
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Europe: 865...868 MHz	**BIS00Z9** BIS U-620-067-101-04-S92	
USA: 902...928 MHz		
Product Group	UHF (860...960 MHz)	
Radio license	Europe	
Interface	RS485	
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 Ub	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, ETSI EN 302 208	
Productview	Page 68	

	BIS00Z8 BIS U-620-067-101-04-ST30		
		BIS00Z7 BIS U-620-067-111-04-S92	**BIS00Z6** BIS U-620-067-111-04-ST30
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	Europe	USA	USA
	RS485	RS485	RS485
	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	FCC Part 15	FCC Part 15
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Europe: 865...868 MHz	**BIS00Z5** BIS U-620-068-101-00-S115	
USA: 902...928 MHz		
Product Group	UHF (860...960 MHz)	
Radio license	Europe	
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 Ub	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, ETSI EN 302 208	
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	BIS00Z4 BIS U-620-068-101-00-ST29		
		BIS00Z3 BIS U-620-068-111-00-S115	**BIS00Z2** BIS U-620-068-111-00-ST29
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	Europe	USA	USA
	RS232	RS232	RS232
	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	FCC Part 15	FCC Part 15
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Europe: 865...868 MHz	**BIS00Z1** BIS U-626-069-101-06-ST31	
USA: 902...928 MHz		
Product Group	UHF (860...960 MHz)	
Radio license	Europe	
Interface	Industrial Ethernet/ Ethernet TCP/IP/MODBUS TCP	
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 Ub	19.2...28.8 VDC	
Housing material	Aluminum	
Ambient temperature	-20...50 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE, ETSI EN 302 208	
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	BIS00Z0 BIS U-626-069-101-06-ST32		
		BIS00YZ BIS U-626-069-111-06-ST31	**BIS00YY** BIS U-626-069-111-06-ST32
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	Europe	USA	USA
	Industrial Ethernet/ Ethernet TCP/IP/MODBUS TCP	Industrial Ethernet/ Ethernet TCP/IP/MODBUS TCP	Industrial Ethernet/ Ethernet TCP/IP/MODBUS 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	FCC Part 15	FCC Part 15
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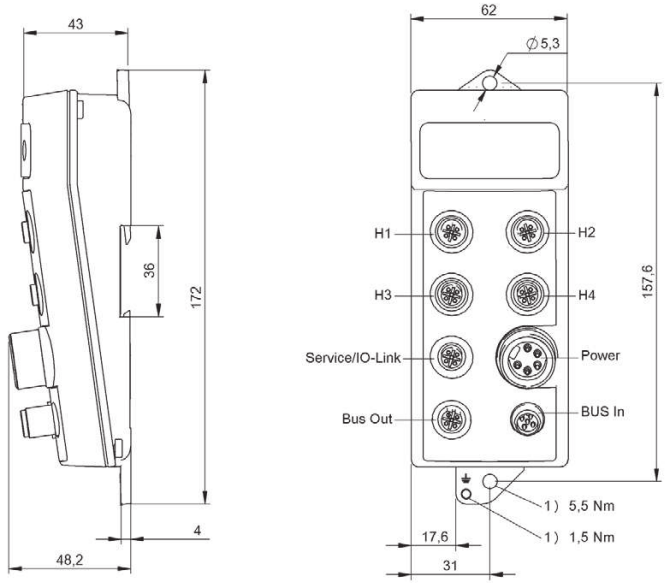
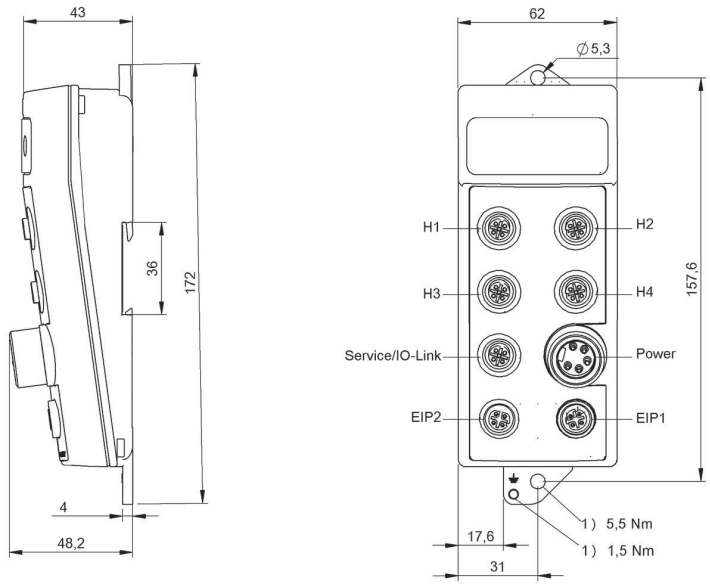


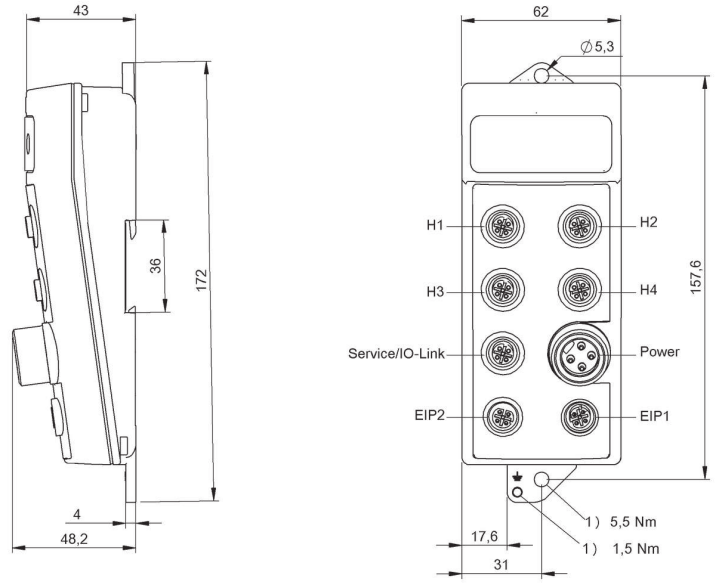
1) Tightening torque

BIS00T3, BIS012E



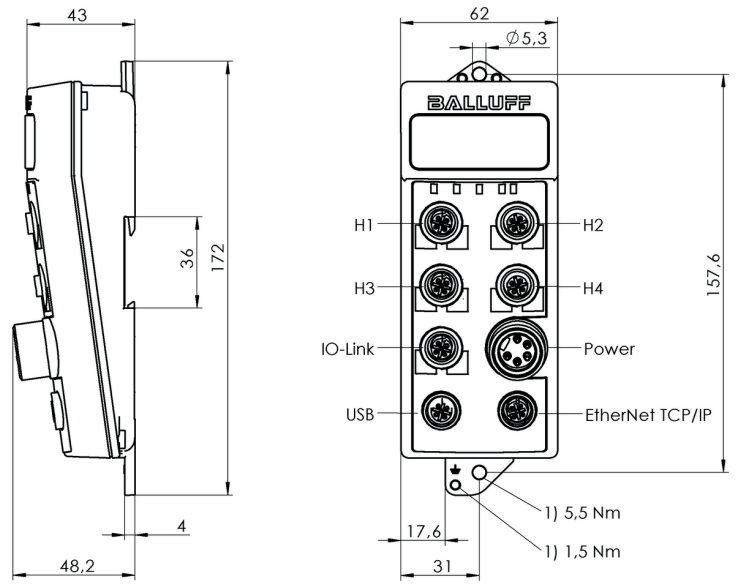
1) Tightening torque

BIS012F, BIS014C



1) Tightening torque

BIS0122, BIS0146



1) Tightening torque

BIS0186, BIS0187

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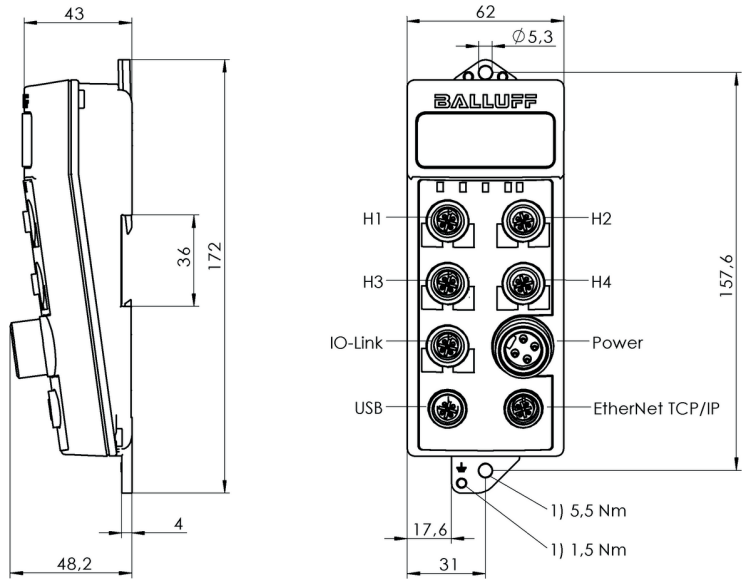
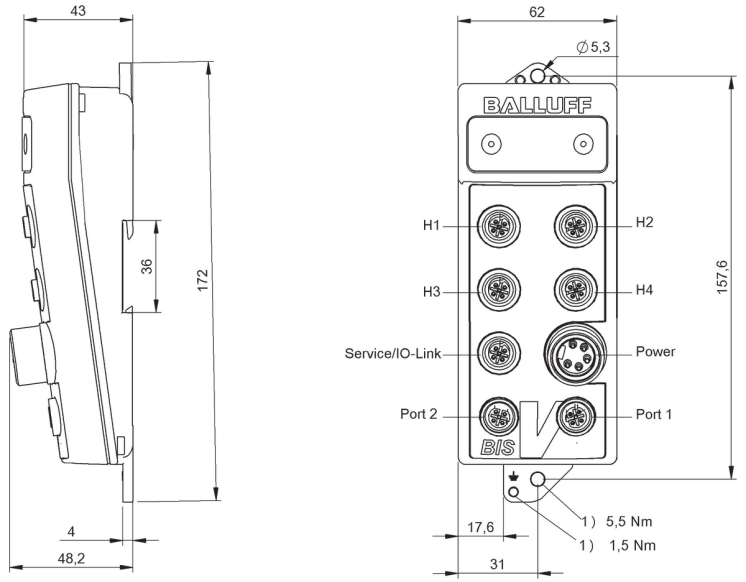


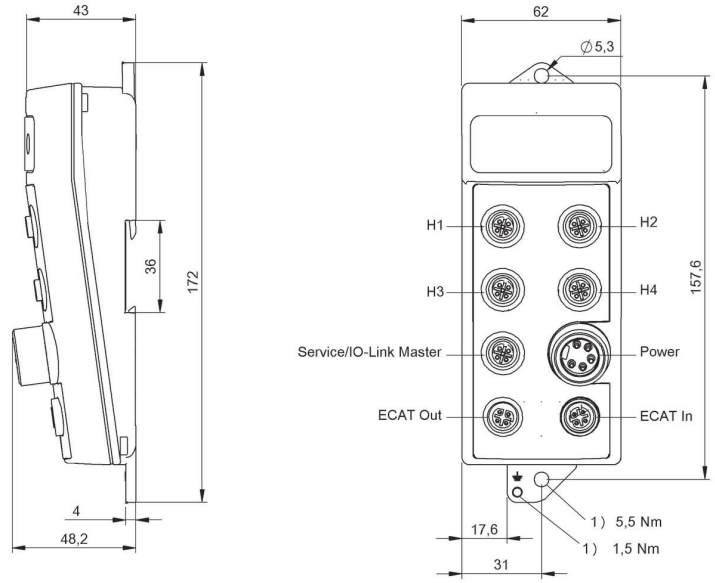
1) Tightening torque

BIS018J, BIS018K



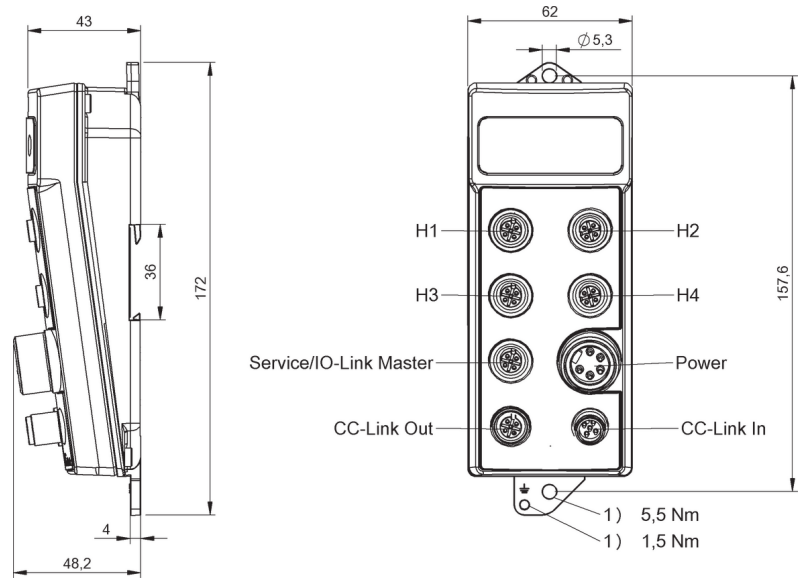
1) Tightening torque

BIS013U, BIS013W



1) Tightening torque

BIS00U9, BIS0147



1) Tightening torque

BIS010P, BIS014E

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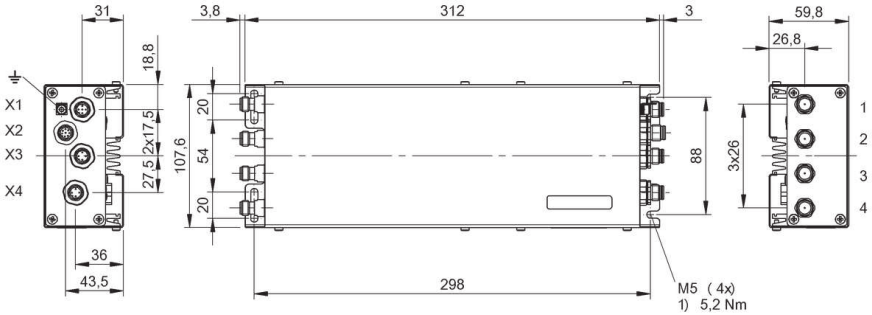
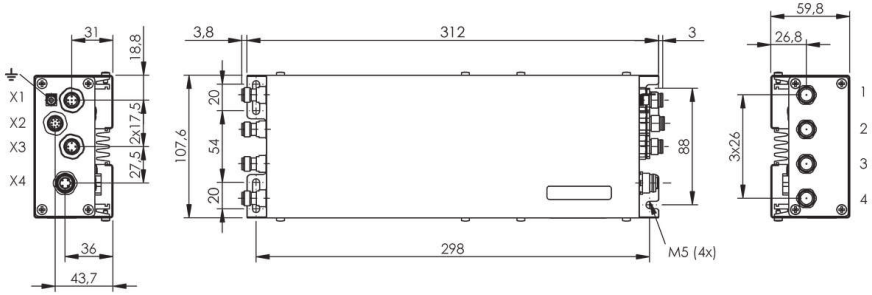
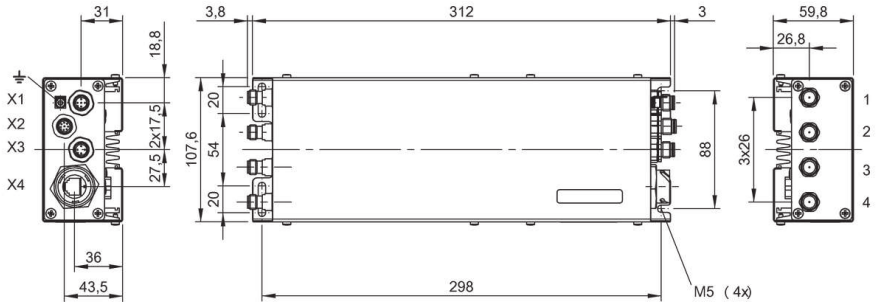


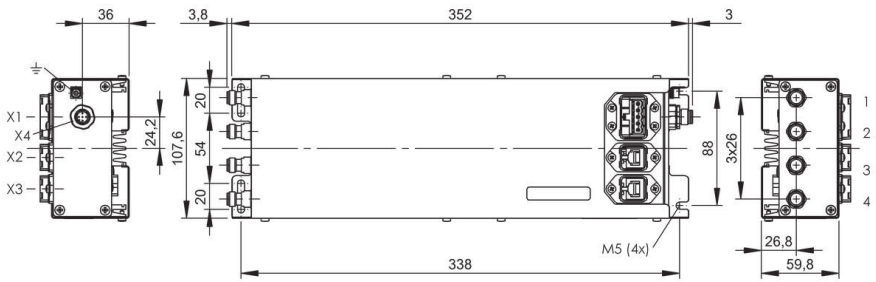
BIS00M7, BIS00R2, BIS00UM



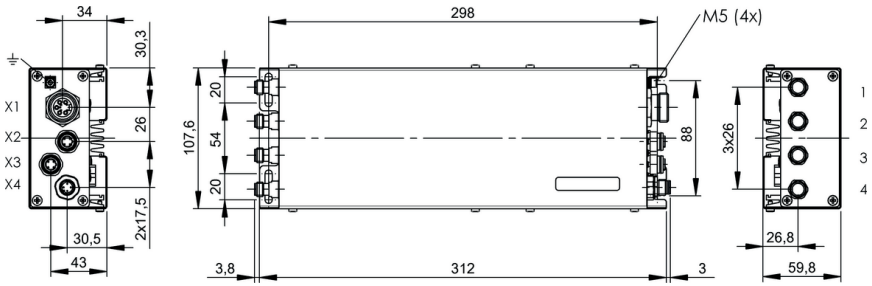
BIS013J, BIS018N



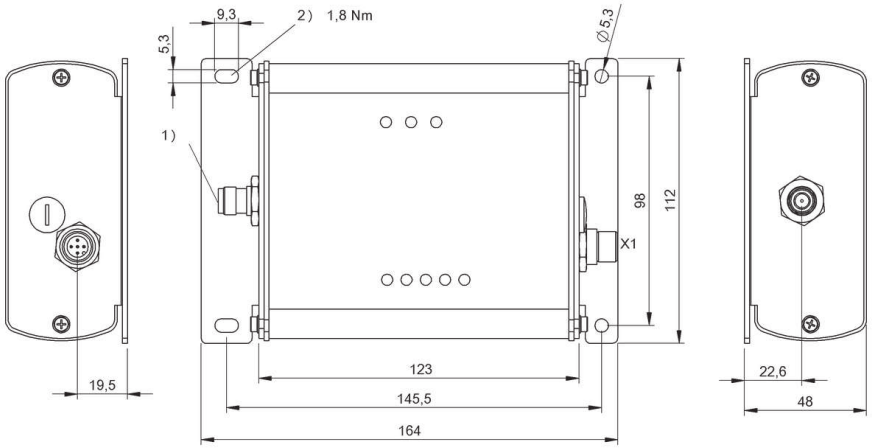
BIS00NA, BIS00R1, BIS012R, BIS00UN, BIS00UR, BIS012T, BIS014H



BIS012Y

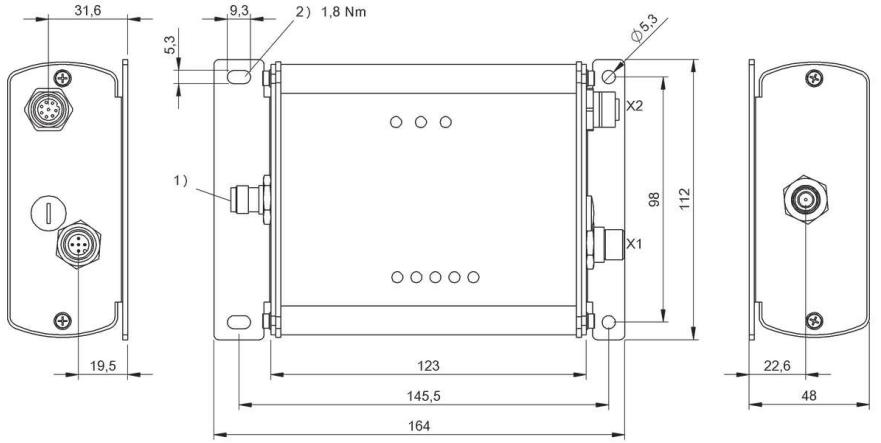


BIS00ZU, BIS00ZW, BIS017J, BIS0152



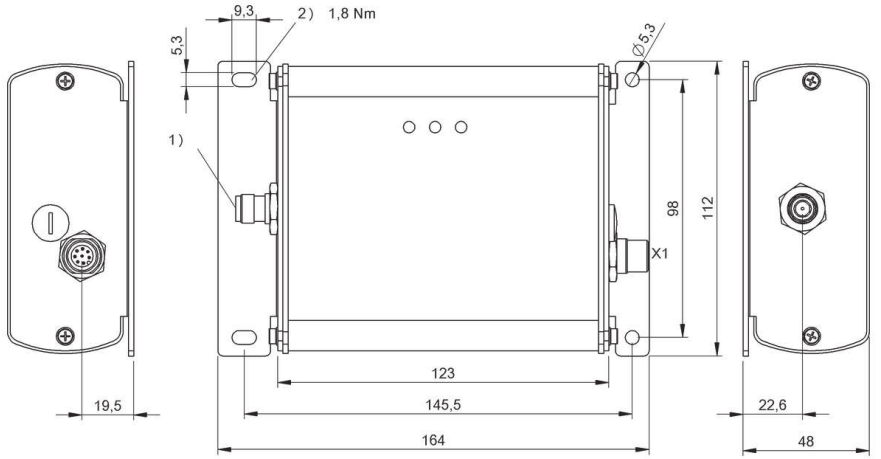
1) Antenna, 2) Tightening torque

BIS00Z9, BIS00Z7



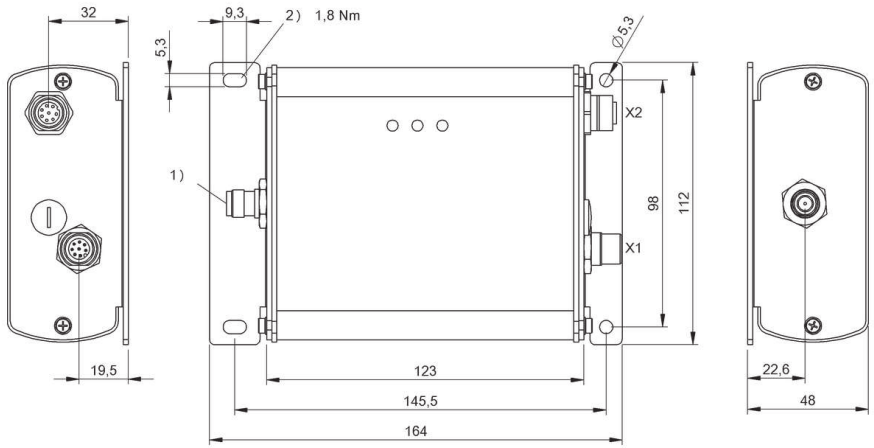
1) Antenna, 2) Tightening torque

BIS00Z8, BIS00Z6



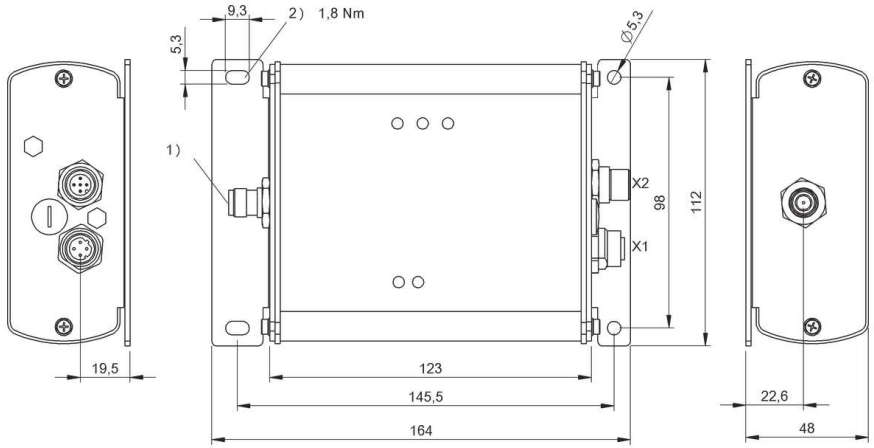
1) Antenna, 2) Tightening torque

BIS00Z5, BIS00Z3



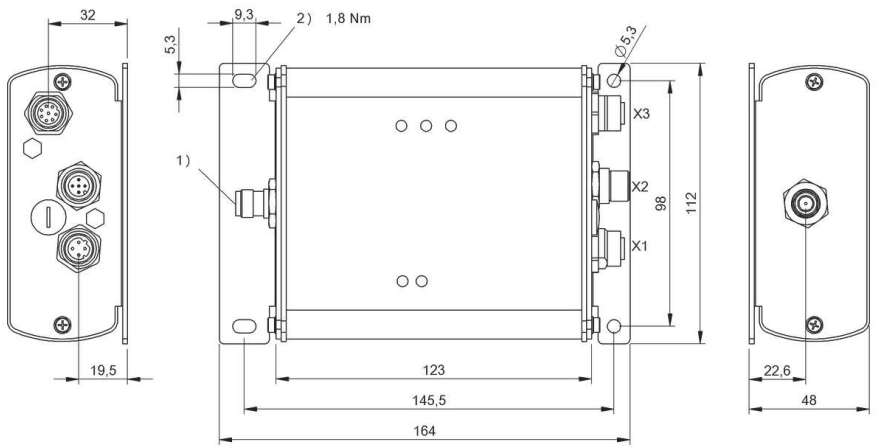
1) Antenna, 2) Tightening torque

BIS00Z4, BIS00Z2



1) Antenna, 2) Tightening torque

BIS00Z1, BIS00YZ



1) Antenna, 2) Tightening torque

BIS00Z0, BIS00YY

	BAE0100 BIS U-890-2-020-X-005	BAE0101 BIS U-890-2-020-X-005-1	
Product Group	UHF (860...960 MHz)	UHF (860...960 MHz)	
Radio license	Europe	USA, Canada	
Product name	WLAN + 2D	WLAN + 2D	
Dimension	91 x 196 x 135 mm	91 x 196 x 135 mm	
Antenna type	Cross dipole	Cross dipole	
Display	4.3" Touchscreen display (color): 800x480 VGA resolution 262,000 colors	4.3" Touchscreen display (color): 800x480 VGA resolution 262,000 colors	
Keypad	5 buttons	5 buttons	
Operating voltage Ub	—	—	
Storage temperature	-20...60 °C	-20...60 °C	
Ambient temperature	-20...55 °C	-20...55 °C	
Protection degree	IP54	IP54	
Approval/Conformity	CE, ETSI EN 302 208	FCC, IC	
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	BAE0102 BIS U-890-2-020-X-005-2	BAE00J8 BIS U-870-1-008-X-001	BAE00W7 BIS U-870-1-008-X-001-1	BAE00LK BIS U-870-1-008-X-005
	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)	UHF (860...960 MHz)
	China	—	—	—
	WLAN + 2D	WLAN	WLAN	WLAN + 2D
	91 x 196 x 135 mm	100 x 51 x 265 mm	100 x 51 x 265 mm	100 x 69 x 265 mm
	Cross dipole	Dipol	Dipol	Dipol
	4.3" Touchscreen display (color): 800x480 VGA resolution 262,000 colors	TFT Touchscreen-display (color): 480x640 VGA resolution	TFT Touchscreen-display (color): 480x640 VGA resolution	TFT Touchscreen-display (color): 480x640 VGA resolution
	5 buttons	52 keys, alphanumeric	52 keys, alphanumeric	52 keys, alphanumeric
	—	3.7 V DC rechargeable battery pack	3.7 V DC rechargeable battery pack	3.7 V DC rechargeable battery pack
	-20...60 °C	-40...60 °C	-40...60 °C	-40...60 °C
	-20...55 °C	-10...50 °C	-10...50 °C	-10...50 °C
	IP54	IP65	IP65	IP65
	CMIIT-Radio Transmiss. Equipm.	CE, ETSI EN 302 208	FCC Part 15, IC RSS-210	CE, ETSI EN 302 208
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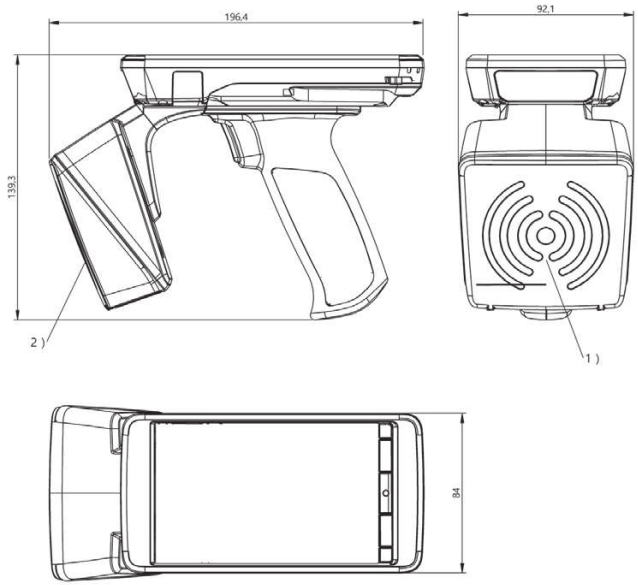
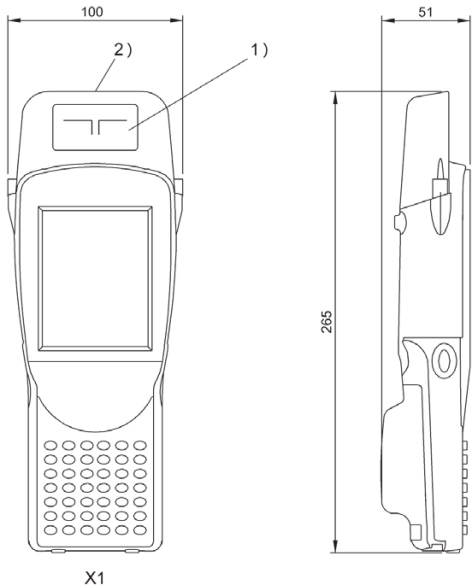


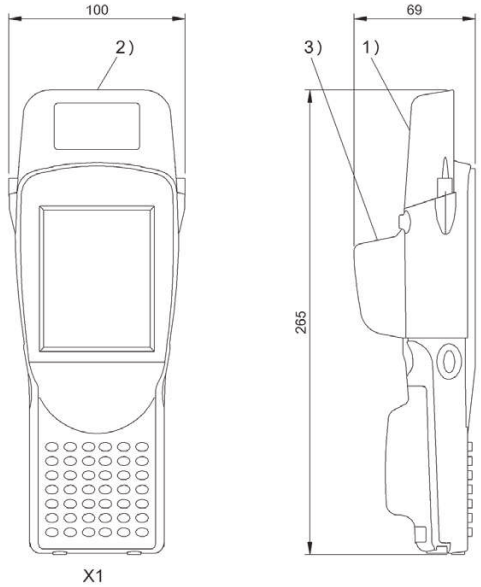
1) Sensing surface, 2) See data for antenna form

BAE0100, BAE0101, BAE0102



1) Sensing surface, 2) See data for antenna form

BAE00J8, BAE00W7



1) Sensing surface, 2) See data for antenna form, 3) Barcode 2D-Scanner

BAE00LK