



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)



	BIS0035 BIS L-100-05/L-R0
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	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
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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



	BIS0038 BIS L-101-05/L-R0	BIS003C BIS L-102-05/L-R0	BIS003F BIS L-103-05/L-R0
Product Group	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
Dimension	Ø 30 x 1.6 mm	Ø 50 x 1.6 mm	Ø 12.4 x 2 mm
UID serial number, read-only	5 Byte	5 Byte	5 Byte
User data, read/write	—	—	—
Memory type	EEPROM	EEPROM	EEPROM
Antenna type	round	round	round
Installation	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
Storage temperature	-40...95 °C	-40...95 °C	—
Storage temperature temporary	—	—	-40...130 °C 1x1000 h
Ambient temperature	-25...85 °C	-25...85 °C	-25...85 °C
Housing material	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF	PPS, EP
Protection degree	IP67	IP67	IP68
Approval/Conformity	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)
	0-18	0-24	0-40	0-26	0-32	0-55			0-20
			0-27						0-16
									0-11
			0-27						0-16
	10-30	10-35	0-50	15-40	15-45	0-70	3-10	3-12	0-25
	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



	BIS003R 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
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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



	BIS003T BIS L-201-03/L	BIS003U BIS L-202-03/L	BIS003W BIS L-203-03/L
Product Group	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
Dimension	Ø 30 x 1.6 mm	Ø 50 x 1.6 mm	Ø 12.4 x 2 mm
UID serial number, read-only	5 Byte	5 Byte	5 Byte
User data, read/write	—	—	—
Memory type	PROM	PROM	PROM
Antenna type	round	round	round
Installation	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
Storage temperature	-40...95 °C	-40...95 °C	—
Storage temperature temporary	—	—	-40...130 °C 1x1000 h
Ambient temperature	-40...85 °C	-40...85 °C	-25...85 °C
Housing material	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF	PPS, EP
Protection degree	IP67	IP67	IP68
Approval/Conformity	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)
	0-18	0-24	0-40	0-28	0-32	0-55			0-20
			0-23						0-16
									0-11
			0-27						0-16
	10-30	10-35	0-50	15-40	15-45	0-70	3-10	3-12	0-25
	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



	BIS0033 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
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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



	BIS0034 BIS L-100-05/L	BIS0036 BIS L-101-01/L	BIS0037 BIS L-101-05/L
Product Group	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
Dimension	Ø 20 x 1.6 mm	Ø 30 x 1.6 mm	Ø 30 x 1.6 mm
UID serial number, read-only	4 Byte	4 Byte	4 Byte
User data, read/write	192 Byte	192 Byte	192 Byte
Memory type	EEPROM	EEPROM	EEPROM
Antenna type	round	round	round
Installation	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
Storage temperature	-40...95 °C	-40...95 °C	-40...95 °C
Storage temperature temporary	—	—	—
Ambient temperature	-25...85 °C	-25...85 °C	-25...85 °C
Housing material	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF	Epoxy resin-glass fiber, GF
Protection degree	IP67	IP67	IP67
Approval/Conformity	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)*
				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						



	BIS0039 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
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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



	BIS003A BIS L-102-05/L	BIS003E BIS L-103-05/L	BIS00KR BIS L-140-05/L-M8
Product Group	LF (125 kHz)	LF (125 kHz)	LF (125 kHz)
Dimension	Ø 50 x 1.6 mm	Ø 12.4 x 2 mm	Ø 22 x 21 mm
UID serial number, read-only	4 Byte	4 Byte	4 Byte
User data, read/write	192 Byte	192 Byte	192 Byte
Memory type	EEPROM	EEPROM	PROM
Antenna type	round	round	round
Installation	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
Storage temperature	-40...95 °C	—	-25...95 °C
Storage temperature temporary	—	-40...130 °C 1x1000 h	—
Ambient temperature	-25...85 °C	-25...85 °C	-25...85 °C
Housing material	Epoxy resin-glass fiber, GF	PPS, EP	Steel, PA 12, GF30
Protection degree	IP67	IP68	—
Approval/Conformity	CE	CE	CE
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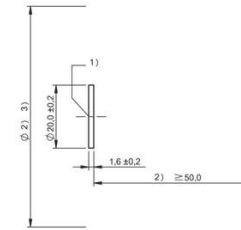
Installation	flush in metal	on metal	metal-free (clear zone)	flush in metal	on metal	metal-free (clear zone)	flush in metal*	on metal*	metal-free (clear zone)*
	15-40	15-45	0-70						
	25-55	25-60	0-100						
	10-20	10-25	0-40						
	10-20	10-25	0-40						
						0-7			



	BISO03N 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
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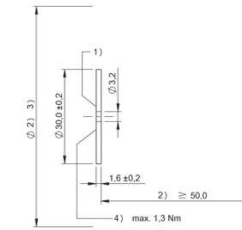
Suitable read/write head with max. read/write working distance

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			



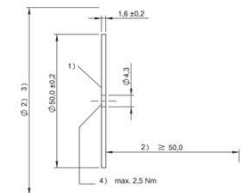
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head

BISO035, BISO03R, BISO033, BISO034



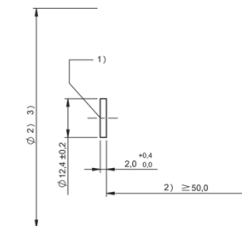
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head, 4) Tightening torque

BISO038, BISO03T, BISO036, BISO037



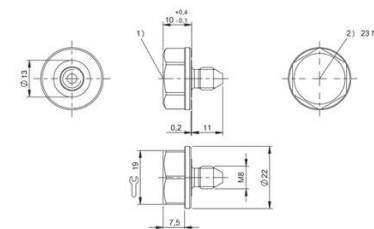
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head, 4) Tightening torque

BISO03C, BISO03U, BISO039, BISO03A



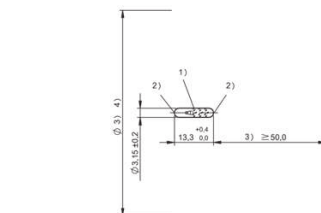
1) Sensing surface, 2) Clear zone, 3) see corresponding RW head

BISO03F, BISO03W, BISO03E



1) Sensing surface, 2) Tightening torque

BISO0KR



1) Sensing surface parallel, 2) Sensing surface axial, 3) Clear zone, 4) see corresponding RW head

BISO03N

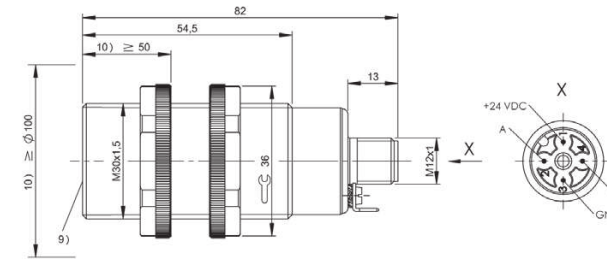


	BISO00L BIS VL-300-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 30 x 82 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 connector, 4-pin
Housing material	PVDF, nuts PA 6.6
Interface	—
Operating voltage Ub	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BISO033			BISO036			BISO039			BISO03R BISO035			BISO03T BISO038		
	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	0-30	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
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

	BISO03U BISO03C			BISO03W BISO03F		
	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	0-70	15-45	15-40	0-25	3-12	3-10
Working distance for reading	0-70	15-45	15-40	0-25	3-12	3-10
Offset at distance						
±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	±25	±20	±15			
±35	±20	±20	±13			
±35	±20	±20				
±35	±15	±15				
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±35						
±35						
±35						
±35						

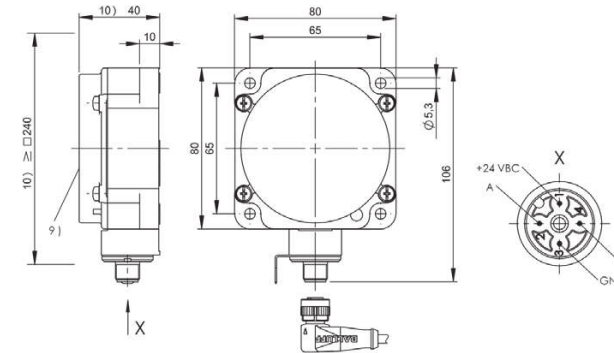


	BISO006 BIS VL-301-001-S4
Product Group	LF (125 kHz)
Dimension	80 x 80 x 40 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1 connector, 4-pin
Housing material	PBT
Interface	—
Operating voltage U _b	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BISO033			BISO036			BISO039			BISO03N BISO17H			BISO03R BISO035		
	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	0-40	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



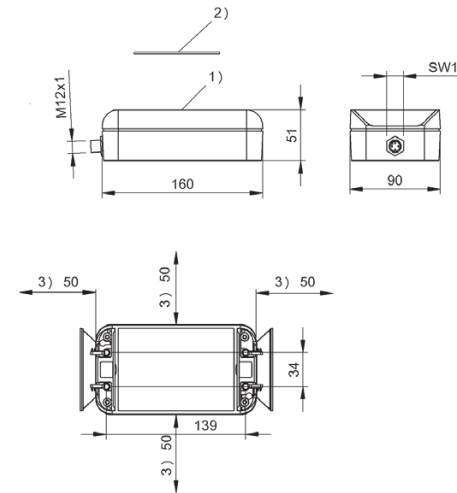
9) Sensing surface, 10) Clear zone

	BISO03T BISO038			BISO03U BISO03C		
	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		
	±40			±45		



	BISO15U 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

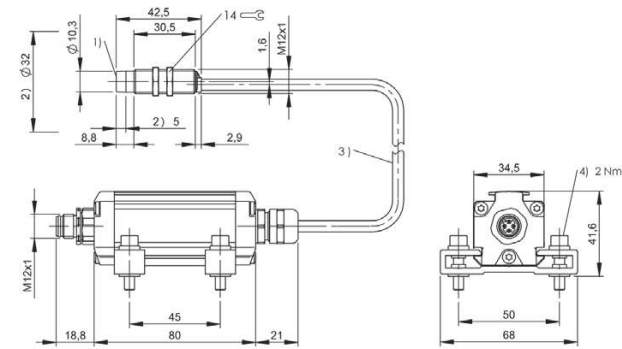


	BISO00J BIS VL-306-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 12 x 42.5 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PU1
Housing material	Brass, interface aluminum
Interface	—
Operating voltage U_b	—
Storage temperature	-20...85 °C
Ambient temperature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

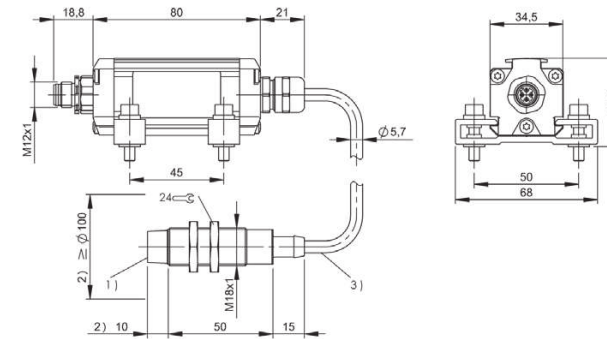


	BIS000UF BIS VL-302-001-S4
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PVC
Housing material	Brass, interface aluminum
Interface	—
Operating voltage U_b	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039			BIS003R BIS0035			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				0-25	8-15	8-15	0-30	10-20	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
Data carrier distance to metal						
Data carrier clear zone						
Working distance for writing	0-40	10-25	10-20	0-15	4-10	3-8
Working distance for reading	0-40	10-25	10-20	0-15	4-10	3-8
Offset at distance						
	±20			±6		
	±20			±6		±5
	±20			±6	±7	±4
	±20			±6	±6	±3
	±20	±15	±8	±6	±5	
	±20	±15	±8	±6		±10
	±20	±15	±6	±6		±8
	±20	±10	±0			±0
	±20	±10	±0			±0
	±20	±0				±15
	±20					±15
	±20					±15

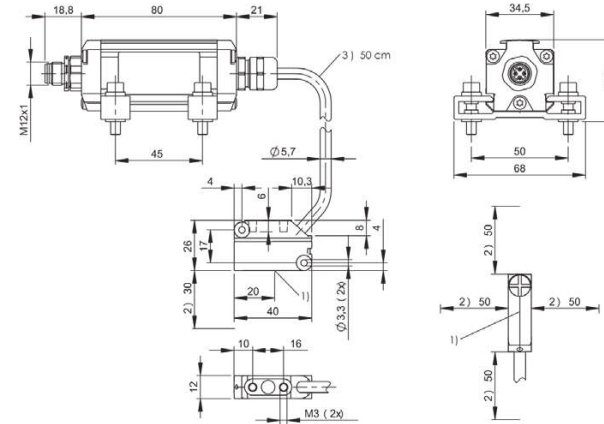


	BIS000JK BIS VL-350-001-S4
Product Group	LF (125 kHz)
Dimension	12 x 26 x 40 mm
Installation	metal-free (clear zone)
Antenna type	Rod
Connection	M12x1-Male, 4-pole, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	—
Operating voltage Ub	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

Data carrier distance to metal	BIS003N		
	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 ±10	±14	±14
	20 ±10	±14	±14
	25 ±10	±14	±14

Dimensions in mm



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

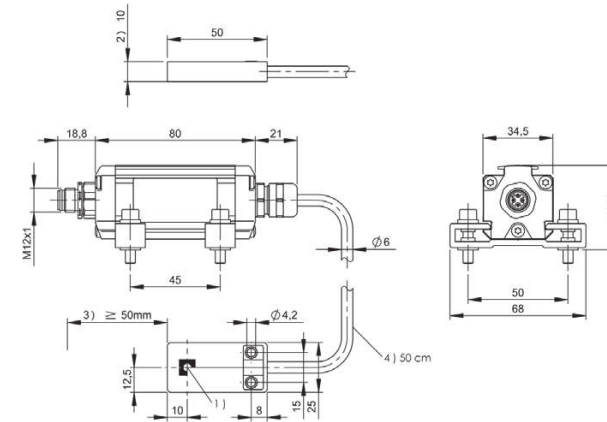


	BISO00H BIS VL-304-001-S4
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	M12x1-Male, 4-pole, 0.50 m, PU
Housing material	ABS, GF16, interface aluminum
Interface	—
Operating voltage U_b	—
Storage temperature	-20...85 °C
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE

Appropriate data carrier

	BIS0033			BIS0036			BIS0039			BIS003R BIS0035			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				0-25	8-15	8-15	0-30	
Working distance for reading	0-20	8-15	8-15	0-25	10-20	10-20	0-30	10-25	10-20								
Offset at distance																	
	0	±10											0	±13		±15	
	3	±10											3	±13		±15	
	7	±10											4	±13		±15	
	8	±10	±6	±6	±12								8	±13	±8	±6	±15
	10	±10	±5	±5	±12	±10	±8	±15	±15	±10			10	±13	±8	±6	±15
	12	±10	±3	±3	±12	±10	±8	±15	±15	±10			12	±13	±8	±6	±15
	15	±10	±0	±0	±12	±5	±5	±15	±15	±5			15	±13	±0	±0	±15
	18	±10			±12	±0	±0	±15	±10	±0			18	±13			±15
	20	±10			±12	±0	±0	±15	±10	±0			20	±13			±15
	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
Data carrier distance to metal						
Data carrier clear zone						
Working distance for writing	0-40	10-25	10-20	0-15	4-10	3-8
Working distance for reading						
Offset at distance						
	±20			±6		
	±20			±6		±5
	±20			±6	±7	±3
	±20			±6	±6	±3
	±20	±15	±8	±6	±5	
	±20	±15	±8	±6		±10
	±20	±15	±6	±6		±8
	±20	±10	±0	±15	±0	±0
	±20	±10	±0			
	±20	±0				
	±20					
	±20					



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860/960 MHz) *	BIS013U BIS V-6108-048-C002	
Product Group	Multi-Frequency Processors (BIS V)	
Interface	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	
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	
Connection	2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	
Productview	Page 472	

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



BIS013W BIS V-6108-048-C102	BIS00T3 BIS V-6102-019-C001	BIS012E BIS V-6102-019-C101
Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
Profinet I/O (IRT), 2 port Switch	Profibus DP Slave galvanically isolated	Profibus DP Slave galvanically isolated
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
2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	M12x1-Male, 5-pole, B-coded M12x1-Female, 5-pole, B-coded 7/8"-Male, 5-pole	M12x1-Male, 5-pole, B-coded M12x1-Female, 5-pole, B-coded 7/8"-Male, 5-pole
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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) *	BIS0186 BIS V-6107-039-C005	
Product Group	Multi-Frequency Processors (BIS V)	
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	
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	
Connection	M12x1-Female, 4-pole, D-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 5-pole	
Productview	Page 473	

* Use adapter **BISOFCCK** 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 Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
Ethernet TCP/IP, USB	Ethernet TCP/IP, USB	Ethernet TCP/IP, USB
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-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
M12x1-Female, 4-pole, D-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 4-pole	M12x1-Female, 4-pole, D-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 5-pole	M12x1-Female, 4-pole, D-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 4-pole
Page 473	Page 473	Page 473



For read/write heads BIS VM (HF 13.56 MHz), BIS VL (LF 125 kHz) and BIS VU (UHF 860/960 MHz) *	BIS012F BIS V-6106-034-C002	
Product Group	Multi-Frequency Processors (BIS V)	
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	
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	
Connection	2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	
Productview	Page 474	

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



BIS0122 BIS V-6106-034-C004	BIS014C BIS V-6106-034-C102	BIS0146 BIS V-6106-034-C104
Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
Ethernet/IP	Ethernet/IP	Ethernet/IP
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-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
2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 4-pole	2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 4-pole
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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) *	BIS00U9 BIS V-6110-063-C002	
Product Group	Multi-Frequency Processors (BIS V)	
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	
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	
Connection	2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	
Productview	Page 475	

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



BIS0147 BIS V-6110-063-C102	BIS010P BIS V-6111-073-C003	BIS014E BIS V-6111-073-C103
Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)	Multi-Frequency Processors (BIS V)
EtherCAT	CC-Link	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), 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-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
2x M12x1-Female, 4-pole, D-coded 7/8"-Male, 5-pole	M12x1-Male, 5-pole, A-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 5-pole	M12x1-Male, 5-pole, A-coded M12x1-Female, 5-pole, A-coded 7/8"-Male, 5-pole
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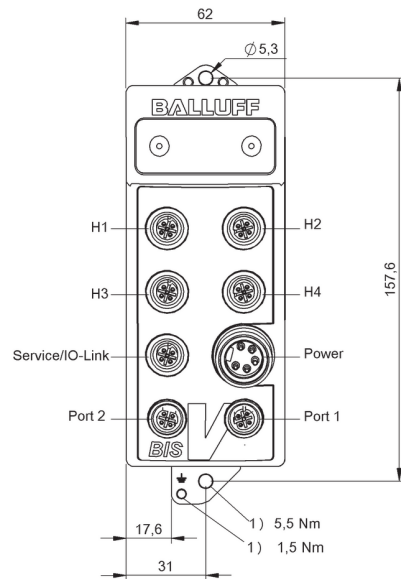
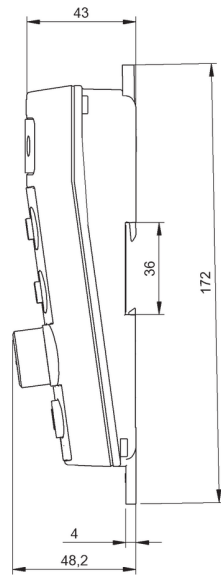


For read/write heads BIS L-400-043...	BAE003W BIS Z-EL-002-RS232	
Product Group	LF (125 kHz)	
Interface	RS232	
Supported RFID technologies	LF 125 kHz (BIS L, Easy Loop)	
Number of connectable R/W heads / antennas	16	
Operating voltage U _b	19.2...28.8 VDC	
Housing material	ABS	
Ambient temperature	0...60 °C	
Protection degree	IP65 with connector	
Approval/Conformity	CE	
Connection	Male, 4-pole Male, 5-pole	
Productview	Page 476	



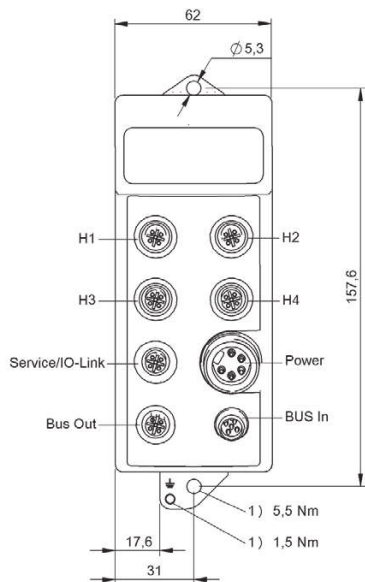
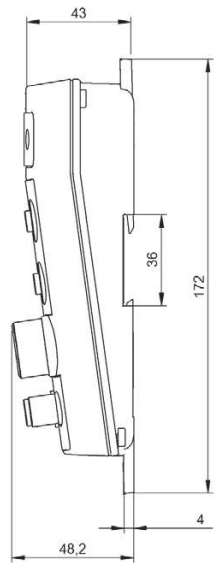
	BAE003U BIS Z-EL-001-ETHERNET	
	LF (125 kHz)	
	Ethernet TCP/IP	
	LF 125 kHz (BIS L, Easy Loop)	
	16	
	19.2...28.8 VDC	
	ABS	
	0...60 °C	
	IP65 with connector	
	CE	
	Female, 4-pole, D-coded Male, 5-pole	
	Page 476	

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1) Tightening torque

BIS013U, BIS013W

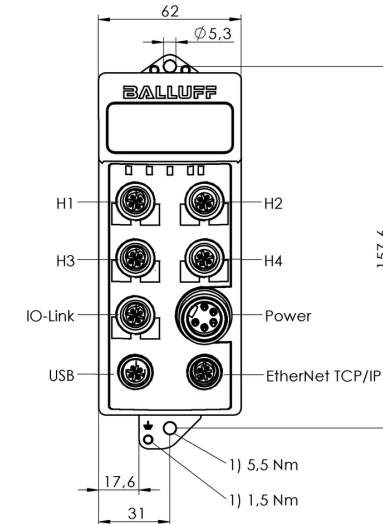
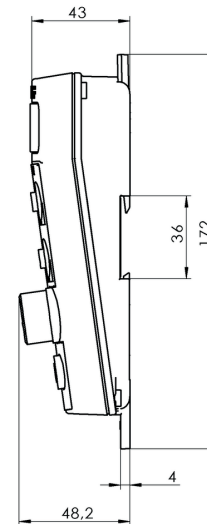


1) Tightening torque

BIS00T3, BIS012E

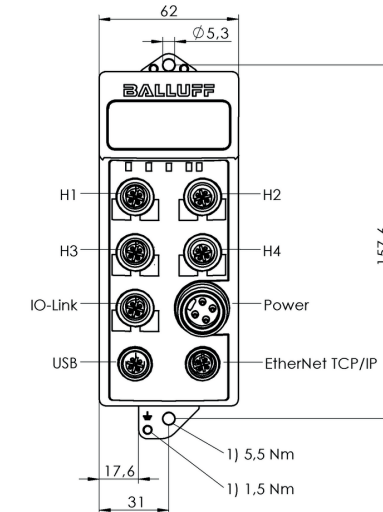
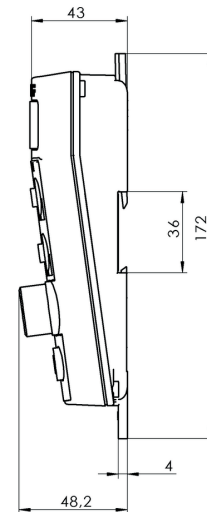
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LF processor units (125 kHz) | 473



1) Tightening torque

BIS0186, BIS0187

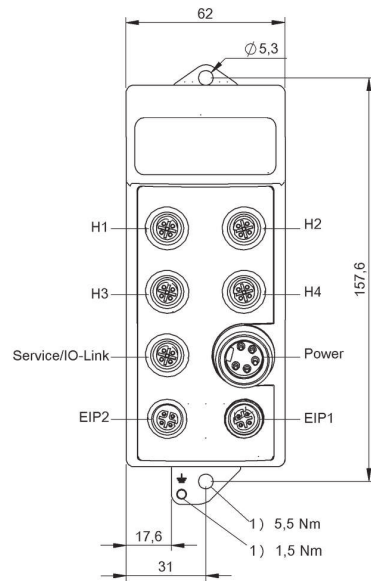
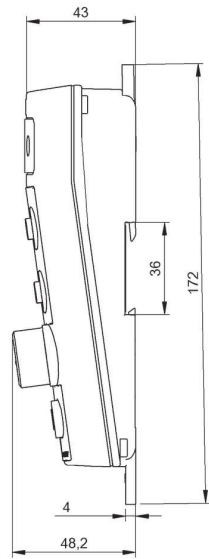


1) Tightening torque

BIS018A, BIS018K

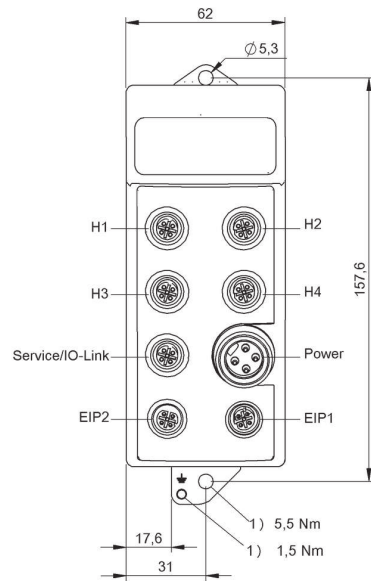
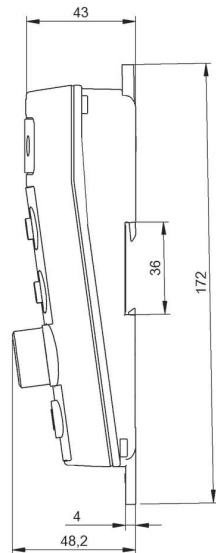
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1) Tightening torque

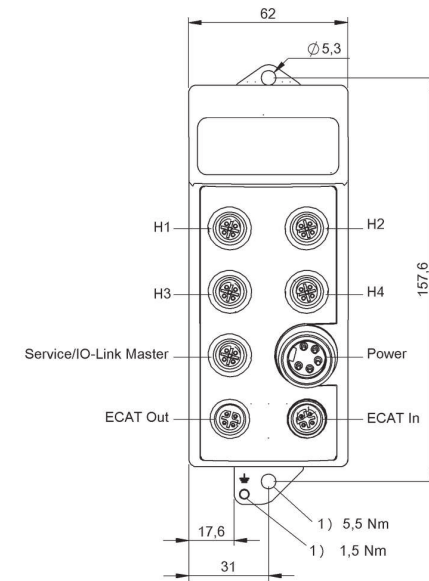
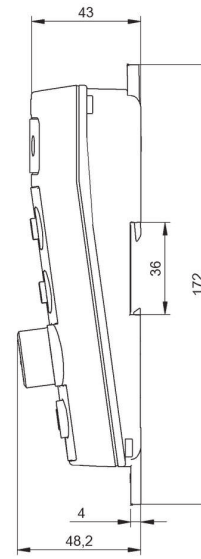
BIS012F, BIS014C



1) Tightening torque

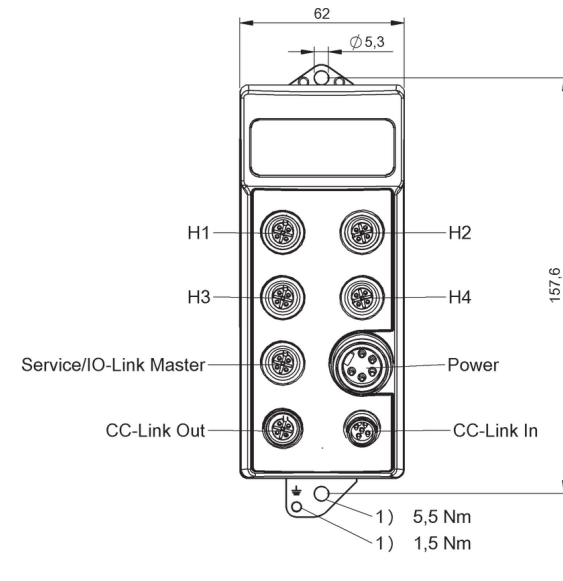
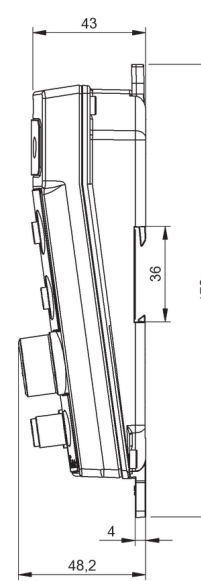
BIS0122, BIS0146

LF processor units (125 kHz) | 475



1) Tightening torque

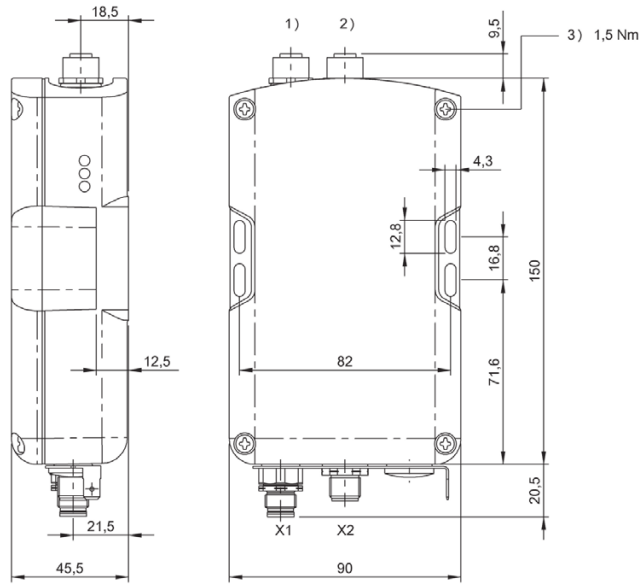
BIS0009, BIS0147



1) Tightening torque

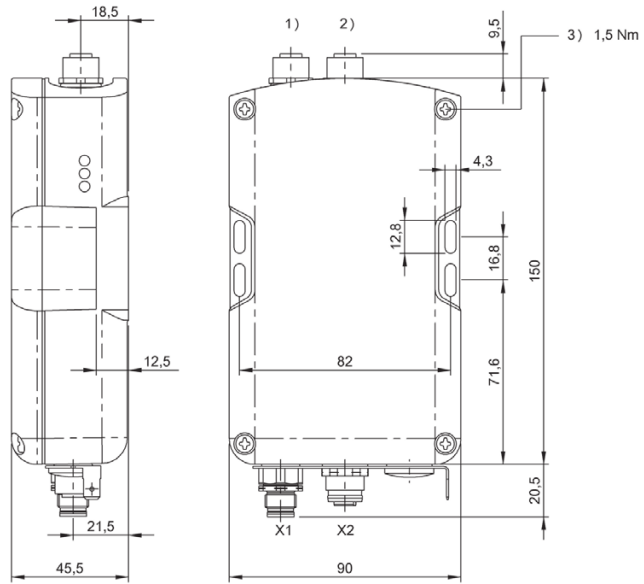
BIS010P, BIS014E

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

BAE003W



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

BAE003U

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LF processor units (125 kHz) | 477

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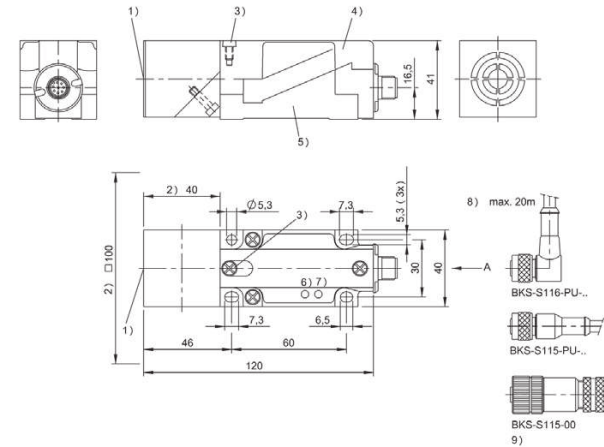


	BISO0C5 BIS L-400-035-001-00-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS232
Operating voltage U _b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035			BISO03T BISO038			BISO03U BISO03C			BISO03W BISO03F	
	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	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Working distance for reading											
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

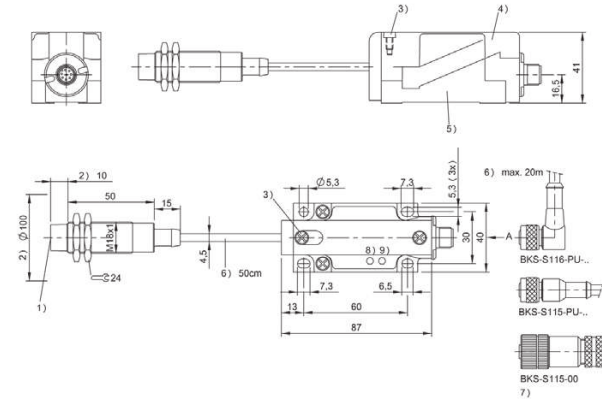


	BISO0C7 BIS L-400-035-002-00-S115
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS232
Operating voltage U _b	19.2...26.4 VDC
Ambient temperature	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

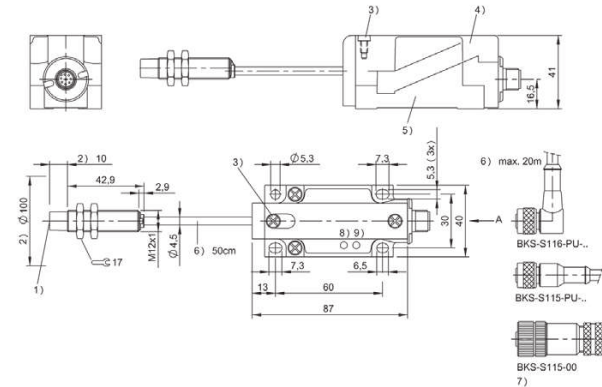


	BISO0C9 BIS L-400-035-003-00-S115
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS232
Operating voltage Ub	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03W	BISO03F
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

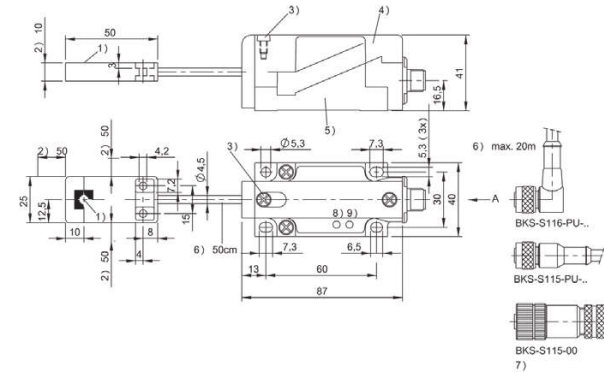


	BISO0CC BIS L-400-035-004-00-S115
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	RS232
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	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



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

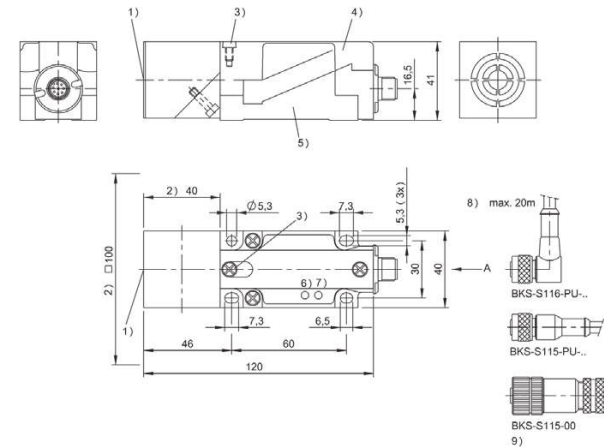


	BISO0C6 BIS L-400-035-001-02-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS422
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035			BISO03T BISO038			BISO03U BISO03C			BISO03W BISO03F	
	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



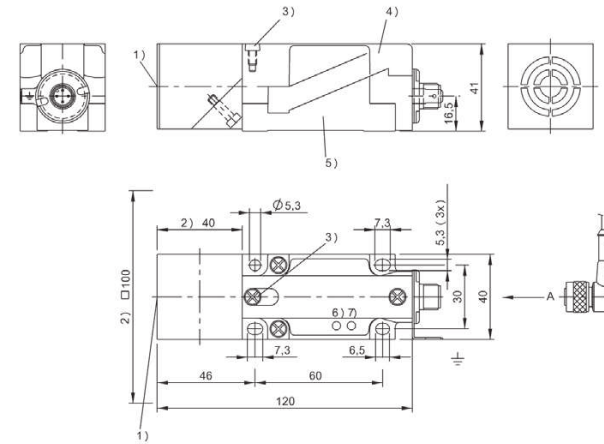
IO-Link, 10 Bytes process data length	BISO0CZ BIS L-409-045-001-07-54
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin
Housing material	PBT
Interface	IO-Link
Operating voltage Ub	18...30 VDC
Ambient 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

	BISO03R BISO035		BISO03T BISO038		BISO03U BISO03C		BISO03W BISO03F				
	metal-free	on metal	flush in metal	metal-free	on metal	flush in metal	metal-free	on metal			
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



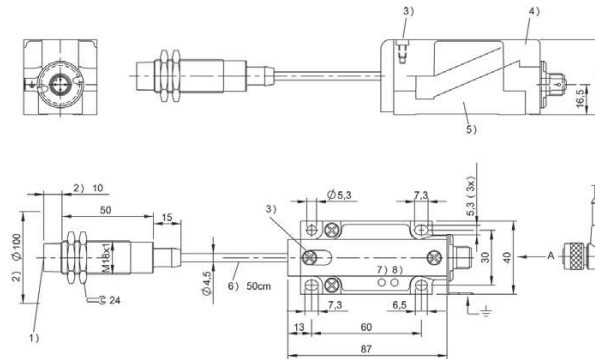
IO-Link, 10 Bytes process data length	BISO0E0 BIS L-409-045-002-07-54
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	IO-Link
Operating voltage Ub	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

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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



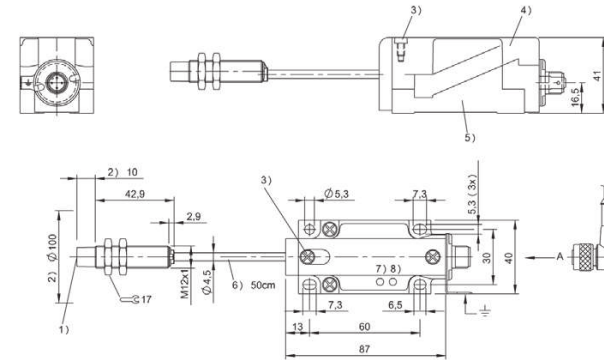
IO-Link, 10 Bytes process data length	BISO0E1 BIS L-409-045-003-07-54
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	IO-Link
Operating voltage U_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

	BISO03W	BISO03F
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



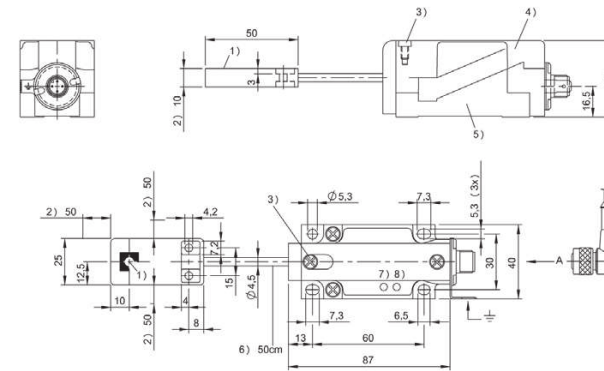
IO-Link, 10 Bytes process data length	BISO0E2 BIS L-409-045-004-07-54
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 4-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	IO-Link
Operating voltage 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

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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



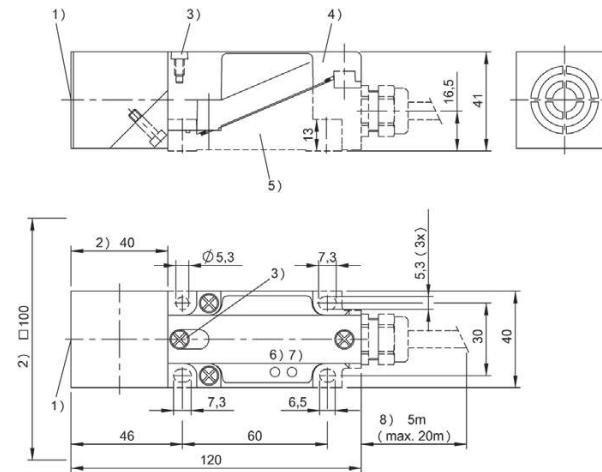
	BIS00CM BIS L-405-033-001-05-MU
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	—
Housing material	PBT
Interface	parallel
Operating voltage Ub	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity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

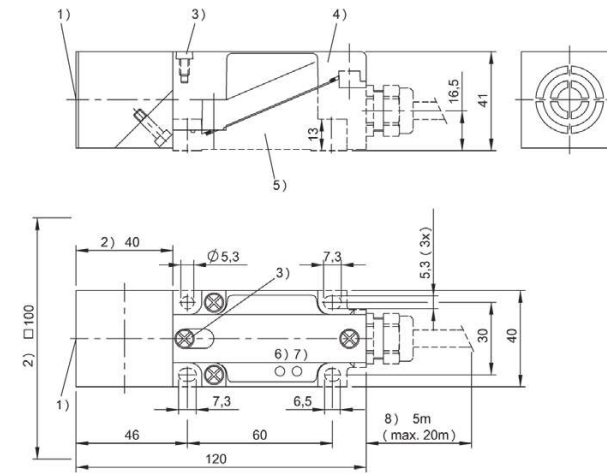


	BISO0CT BIS L-405-037-001-05-MU
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	—
Housing material	PBT
Interface	parallel
Operating voltage U _b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	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			

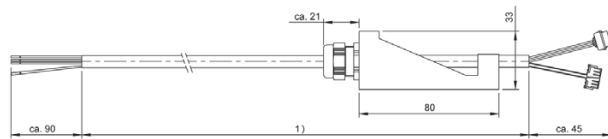
Dimensions in mm



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



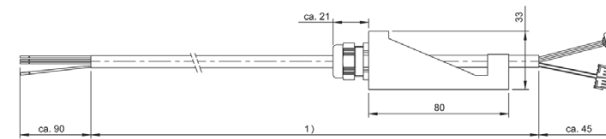
	BCC00R2 BIS L-503-PU1-05
Product Group	LF (125 kHz)
Dimension	—
Installation	—
Antenna type	—
Connection	Cable with connector housing, 5.00 m, PU
Housing material	PBT
Interface	parallel
Operating voltage U_b	—
Ambient temperature	—
Protection degree	IP65
Approval/Conformity	CE



1) Cable length see text



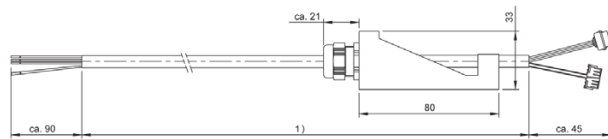
	BCC00R3 BIS L-503-PU1-10
Produktgruppe	LF (125 kHz)
Abmessung	—
Einbau	—
Antennenform	—
Anschluss	Cable with connector housing, 10.00 m, PU
Gehäusematerial	PBT
Schnittstelle	parallel
Betriebsspannung U_b	—
Umgebungstemperatur	—
Schutzart	IP67
Zulassung/Konformität	CE



1) Cable length see text



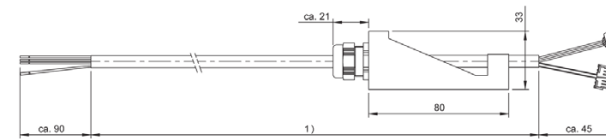
	BCC00R4 BIS L-503-PU1-15
Product Group	LF (125 kHz)
Dimension	—
Installation	—
Antenna type	—
Connection	Cable with connector housing, 15.00 m, PU
Housing material	PBT
Interface	parallel
Operating voltage U_b	—
Ambient temperature	—
Protection degree	IP65
Approval/Conformity	CE



1) Cable length see text



	BCC00R5 BIS L-503-PU1-20
Product Group	LF (125 kHz)
Dimension	—
Installation	—
Antenna type	—
Connection	Cable with connector housing, 20.00 m, PU
Housing material	PBT
Interface	parallel
Operating voltage U_b	—
Ambient temperature	—
Protection degree	IP65
Approval/Conformity	CE



1) Cable length see text

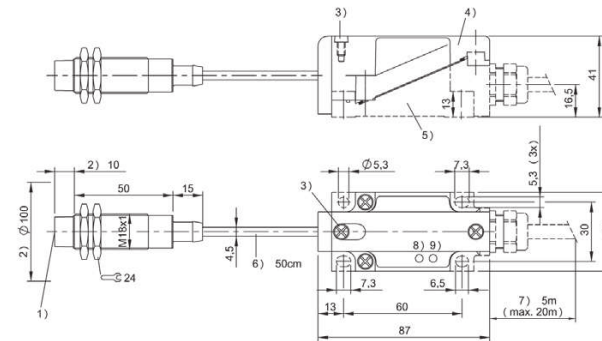


	BISO0CN BIS L-405-033-002-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage Ub	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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

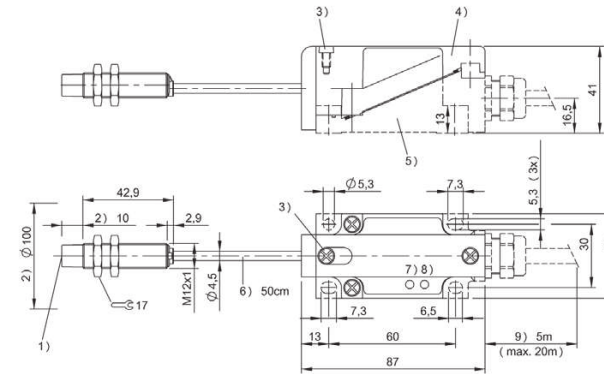


	BISO0CP BIS L-405-033-003-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03W	BISO03F
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) standard length, 8) Power, 9) Tag present

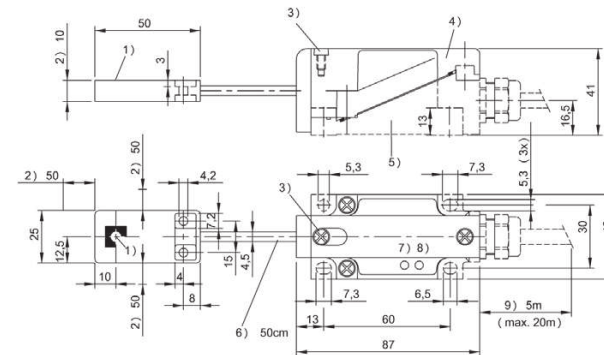


	BISO0CR BIS L-405-033-004-05-MU
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	ABS, interface PBT
Interface	parallel
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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

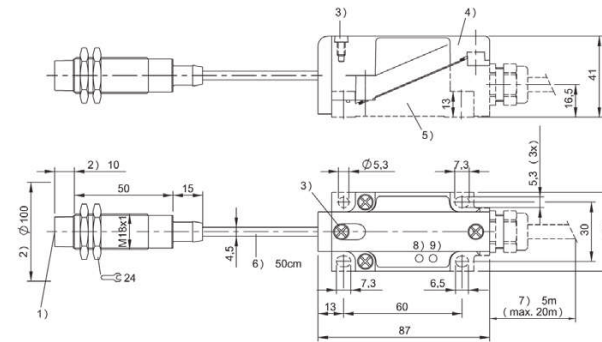


	BISO03U BIS L-405-037-002-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage Ub	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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

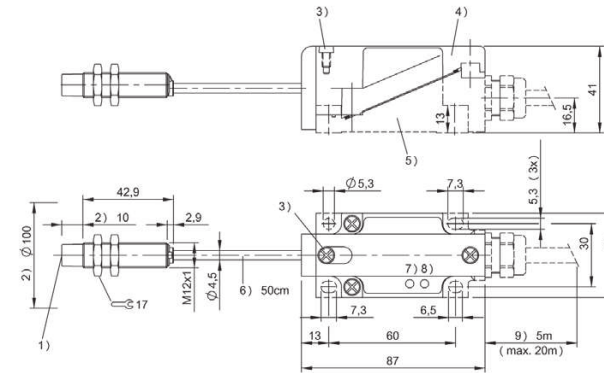


	BISO0CW BIS L-405-037-003-05-MU
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	Brass, interface PBT
Interface	parallel
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03W	BISO03F
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

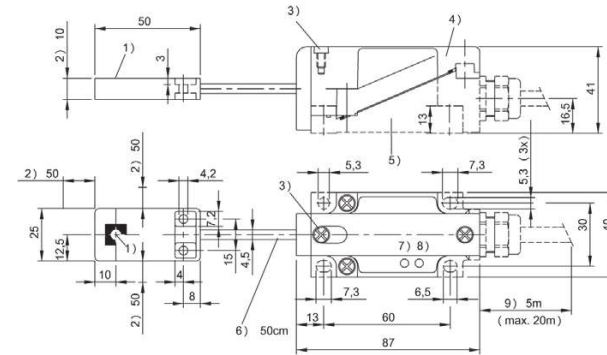


	BISO00CY BIS L-405-037-004-05-MU
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	0.50 m, PU
Housing material	ABS, interface PBT
Interface	parallel
Operating voltage U_b	19.2...26.4 VDC
Ambient temperature	0...70 °C
Protection degree	IP67
Approval/Conformity	CE, UL-FILE E227256, Vol.X1, BIS

Appropriate data carrier

	BISO03R BISO035	BISO03T BISO038	BISO03W BISO03F
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

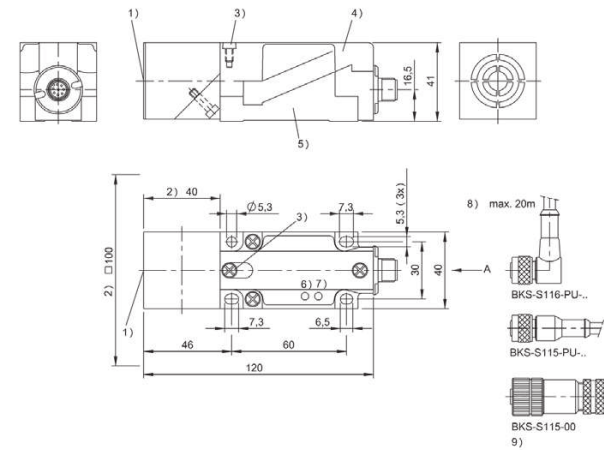


For processor units BAE003W and BAE003U (Easy Loop)	BISO00CH BIS-L-400-043-001-02-S115
Product Group	LF (125 kHz)
Dimension	40 x 41 x 120 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin
Housing material	PBT
Interface	RS422 (Easy Loop)
Operating 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	0-30	0-15	5-12	0-40	0-24	0-18	0-55	0-32	0-28	0-20	
Working distance for reading											
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

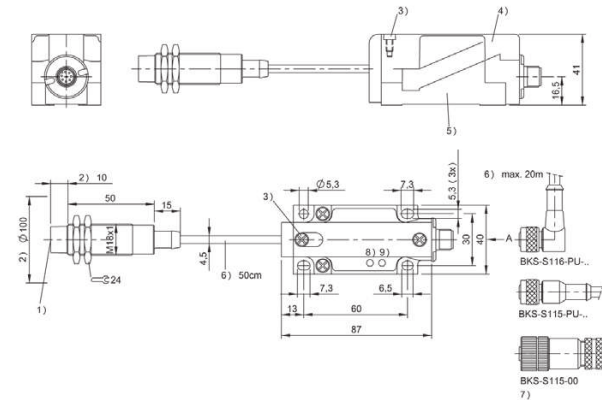


For processor units BAE003W and BAE003U (Easy Loop)	BISO0CJ BIS L-400-043-002-02-S115
Product Group	LF (125 kHz)
Dimension	Ø 18 x 75 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS422 (Easy Loop)
Operating voltage U _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

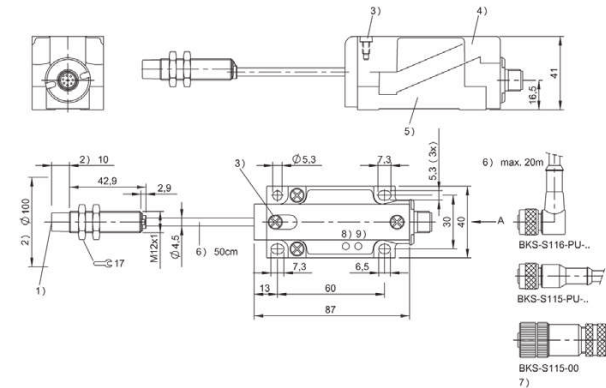


For processor units BAE003W and BAE003U (Easy Loop)	BISO00CK BIS L-400-043-003-02-S115
Product Group	LF (125 kHz)
Dimension	Ø 12 x 53 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	Brass, interface PBT
Interface	RS422 (Easy Loop)
Operating voltage Ub	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

	BISO03W	BISO03F
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

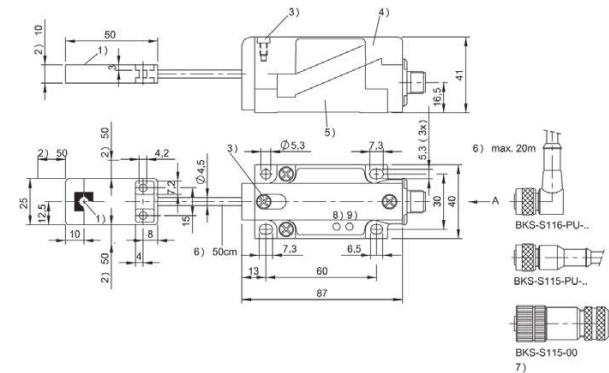


For processor units BAE003W and BAE003U (Easy Loop)	BIS00CL BIS L-400-043-004-02-S115
Product Group	LF (125 kHz)
Dimension	25 x 10 x 50 mm
Installation	metal-free (clear zone)
Antenna type	round
Connection	Connector, M12x1 connector, 8-pin, 0.50 m, PU
Housing material	ABS, interface PBT
Interface	RS422 (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

	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) no cable, 8) Power, 9) Tag present

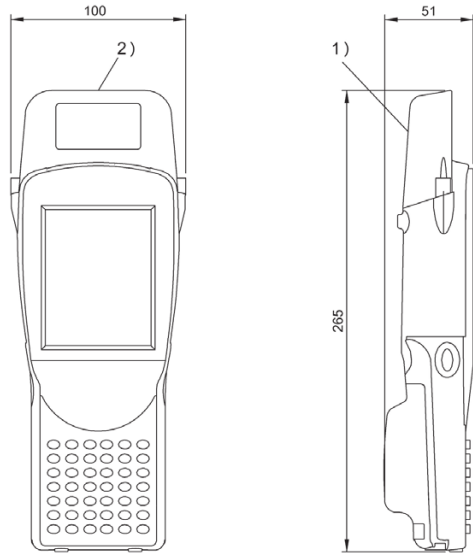


	BAE00K4 BIS L-870-1-008-X-001	
Product Group	LF (125 kHz)	
Product name	WLAN	
Dimension	100 x 51 x 265 mm	
Antenna type	round	
Use	for data carriers $\varnothing \geq 20$ mm	
Display	TFT Touchscreen-display (color): 480x640 VGA resolution	
Keypad	52 keys, alphanumeric	
Operating voltage U_b	3.7 V DC rechargeable battery pack	
Storage temperature	-40...60 °C	
Ambient temperature	-10...50 °C	
Protection degree	IP65	
Approval/Conformity	CE	
Productview	Page 526	



	BAE00EA BIS L-870-1-008-X-004	BAE00EJ BIS L-873-1-008-X-001
Product Group	LF (125 kHz)	LF (125 kHz)
Product name	WLAN + 1D	WLAN
Dimension	100 x 69 x 265 mm	100 x 51 x 265 mm
Antenna type	round	round
Use	for data carriers $\varnothing \geq 20$ mm	for data carriers $\varnothing < 20$ mm
Display	TFT Touchscreen-display (color): 480x640 VGA resolution	TFT Touchscreen-display (color): 480x640 VGA resolution
Keypad	52 keys, alphanumeric	52 keys, alphanumeric
Operating voltage U_b	3.7 V DC rechargeable battery pack	3.7 V DC rechargeable battery pack
Storage temperature	-40...60 °C	-40...60 °C
Ambient temperature	-10...50 °C	-10...50 °C
Protection degree	IP65	IP65
Approval/Conformity	CE	CE
Productview	Page 526	Page 527

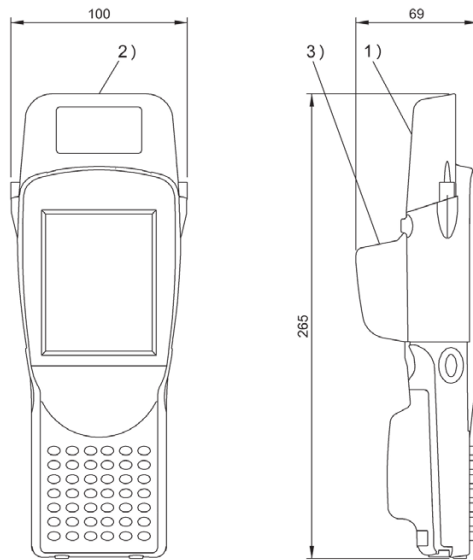
526 | RFID | LF (125 kHz)



X1

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

BAE00K4



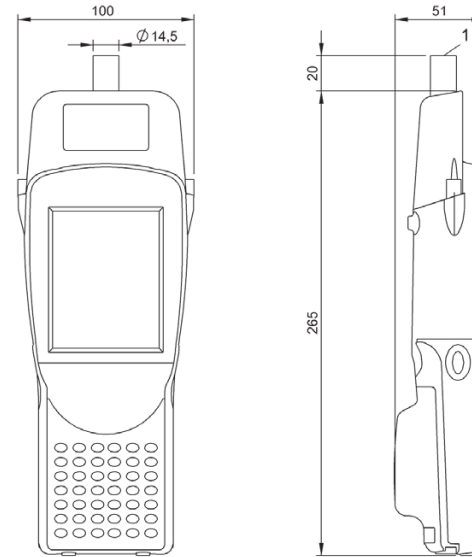
X1

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

BAE00EA

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X1

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

BAE00EJ

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