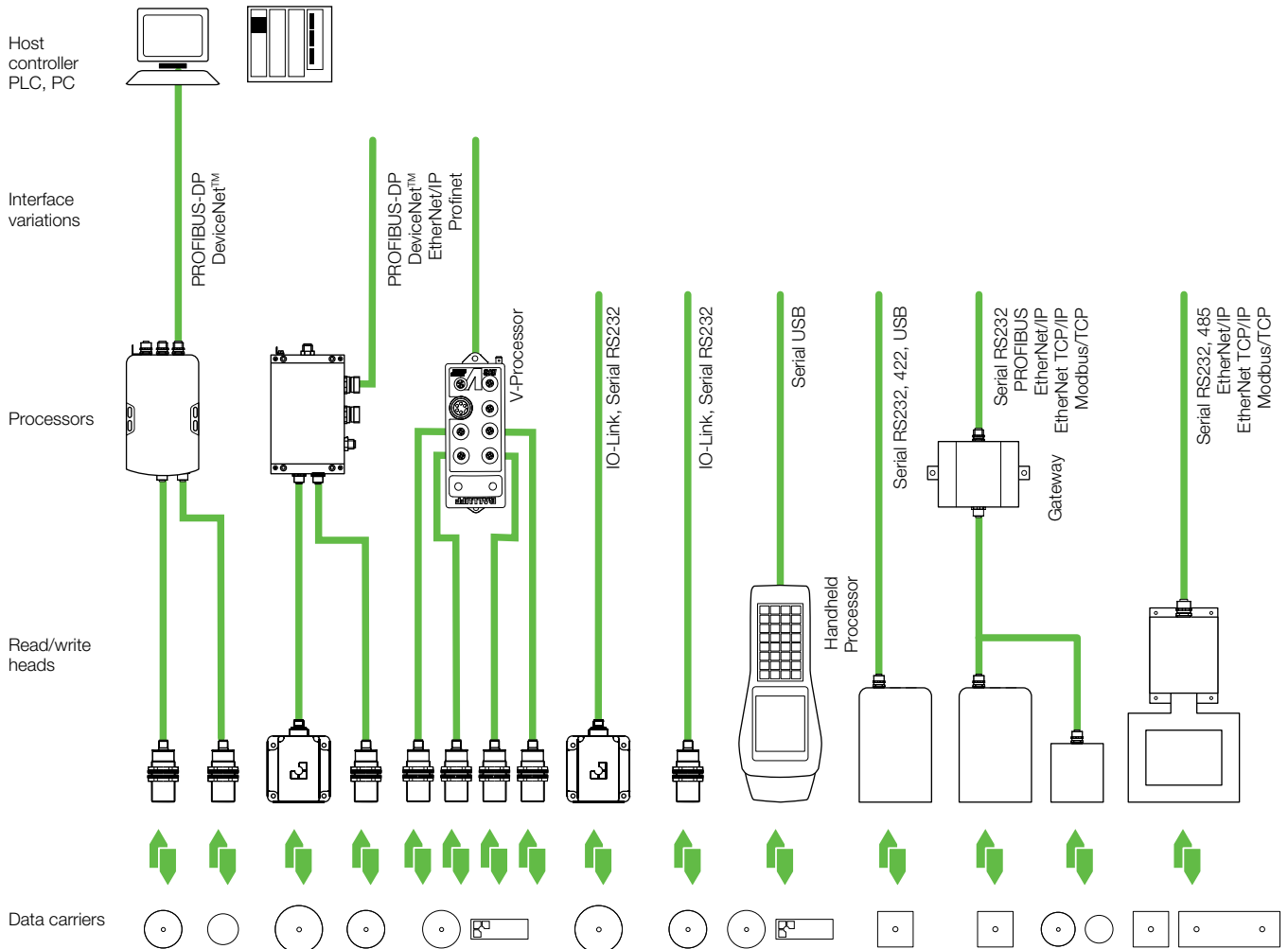




BIS M Industrial RFID System

Inductive Identification

The **BIS M** system uses a High Frequency or HF 13.56 MHz inductively coupled technology along with passive tags to provide mid-range RFID solutions as far as 400 mm. This system is ideal for closer range asset tracking, WIP (work in process) or production control such as palletized production or "on part" tracking and quality traceability applications. This system also offers high temperature, metal mount, hardened and disposable tagging options.



BIS M Industrial RFID System

Inductive identification

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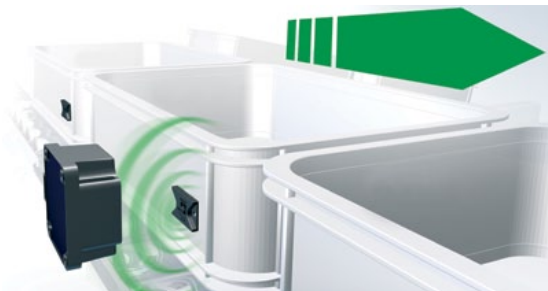


Technical information and definitions can be found on page 354

BIS M Industrial RFID Systems

Wide range of applications supported

The main areas of application for the BIS M include internal company logistics, access control and copy protection. The powerful identification system is proven in all applications where lightning-fast data transfer and large read/write distances are required. Select the most suitable BIS M system for your application from the table.



Data carrier		Page
BIS003Y	BIS M-101-01/L	41
BIS003Z	BIS M-102-01/L	43
BIS0040	BIS M-105-01/A	38
BIS0042	BIS M-105-02/A	38
BIS00LC	BIS M-107-03/L-H200	57
BIS0043	BIS M-108-02/L	46
BIS0111	BIS M-108-20/A	46
BIS0044	BIS M-110-02/L	38
BIS0045	BIS M-111-02/L	41
BIS0046	BIS M-112-02/L	43
BIS00KM	BIS M-115-03/A	47
BIS00RZ	BIS M-115-03/A-SA2	47
BIS00UC	BIS M-116-03/A	39
BIS00UE	BIS M-116-08/A	39
BIS0047	BIS M-120-01/L	47
BIS0048	BIS M-122-01/A	38
BIS0049	BIS M-122-01/A-ZC1	49
BIS004A	BIS M-122-02/A	38
BIS00T1	BIS M-122-02/A-SA2	50
BIS00YL	BIS M-130-03/L	39
BIS00YK	BIS M-130-07/L	39
BIS00YF	BIS M-132-03/L	40
BIS00YE	BIS M-132-03/L-HT	56
BIS00YC	BIS M-132-10/L	41
BIS00YA	BIS M-132-10/L-HT	56
BIS00Y9	BIS M-133-02/A	41
BIS00Y7	BIS M-134-10/L-HT	56
BIS00Y6	BIS M-135-02/L	44
BIS00Y5	BIS M-135-03/L	44
BIS00Y4	BIS M-135-03/L-HT	57
BIS00Y3	BIS M-135-07/L	44
BIS00Y2	BIS M-135-07/L-HT	57
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see data carriers	BIS M-142-20/A-M_-GY	51
see data carriers	BIS M-143-02/A-M_	51
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BIS004F	BIS M-150-02/A	54
BIS004H	BIS M-151-02/A	54
BIS00M2	BIS M-152-03/A	48
BIS00P3	BIS M-153-02/A	56
BIS010R	BIS M-153-20/A	55
BIS00P1	BIS M-154-03/A	49
BIS0117	BIS M-155-20/A	55
BIS0112	BIS M-156-20/A	55
BIS00NZ	BIS M-191-02/A	49

BIS M Industrial RFID Systems

Selection criteria for read/write distances

Memory	Data carrier	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	100	120	140	160	mm	
BIS M-302-00 -...																								
752 bytes	BIS M-101-01/L																							0...16
752 bytes	BIS M-102-01/L																							0...20
752 bytes	BIS M-105-01/A																							0...7
2000 bytes	BIS M-105-02/A																							0...9
752 bytes	BIS M-122-01/A																							0...7
2000 bytes	BIS M-122-02/A																							0...9
2000 bytes	BIS M-108-02/L																							0...20
2000 bytes	BIS M-110-02/L																							0...16
2000 bytes	BIS M-111-02/L																							0...20
2000 bytes	BIS M-112-02/L																							0...30
2000 bytes	BIS M-140-02/A-M_																							0...14
2000 bytes	BIS M-142-02/A-M_																							0...14
2000 bytes	BIS M-143-02/A-M_																							0...10
2000 bytes	BIS M-144-02/A-M_																							0...14
BIS M-304-00 -...																								
752 bytes	BIS M-101-01/L																							0...14
752 bytes	BIS M-102-01/L																							0...18
752 bytes	BIS M-105-01/A																							0...5
2000 bytes	BIS M-105-02/A																							0...7
752 bytes	BIS M-122-01/A																							0...5
2000 bytes	BIS M-122-02/A																							0...7
2000 bytes	BIS M-108-02/L																							0...18
2000 bytes	BIS M-110-02/L																							0...14
2000 bytes	BIS M-122-02/A-SA2																							0...5
BIS M-300-00 -...																								
112 bytes	BIS M-115-03/A-SA2																							0...18
752 bytes	BIS M-101-01/L																							0...22
752 bytes	BIS M-102-01/L																							0...32
752 bytes	BIS M-105-01/A																							0...9
2000 bytes	BIS M-105-02/A																							0...11
2000 bytes	BIS M-108-02/L																							0...30
8192 bytes	BIS M-108-20/A																							0...30
2000 bytes	BIS M-110-02/L																							0...22
2000 bytes	BIS M-111-02/L																							0...28
2000 bytes	BIS M-112-02/L																							0...44
2000 bytes	BIS M-140-02/A-M_																							0...20
2000 bytes	BIS M-143-02/A-M_																							0...14
2000 bytes	BIS M-144-02/A-M_																							0...17
112 bytes	BIS M-102-03/L-H200																							0...18
BIS M-400-...-001-...																								
752 bytes	BIS M-101-01/L																							0...20
752 bytes	BIS M-102-01/L																							0...28
752 bytes	BIS M-105-01/A																							0...7
2000 bytes	BIS M-105-02/A																							0...11
2000 bytes	BIS M-108-02/L																							0...28
8192 bytes	BIS M-108-20/A																							0...28
2000 bytes	BIS M-110-02/L																							0...20
2000 bytes	BIS M-111-02/L																							0...28
2000 bytes	BIS M-112-02/L																							0...38
BIS M-400-...-002-...																								
752 bytes	BIS M-101-01/L																							0...15
752 bytes	BIS M-102-01/L																							0...18
752 bytes	BIS M-105-01/A																							0...6
2000 bytes	BIS M-105-02/A																							0...9
752 bytes	BIS M-122-01/A																							0...5
2000 bytes	BIS M-122-02/A																							0...6
2000 bytes	BIS M-108-02/L																							0...20
8192 bytes	BIS M-108-20/A																							0...20
2000 bytes	BIS M-110-02/L																							0...15
2000 bytes	BIS M-111-02/L																							0...20
2000 bytes	BIS M-112-02/L																							0...28
BIS M-301-00 -...																								
112 bytes	BIS M-115-03/A-SA2																							0...30
112 bytes	BIS M-107-03/L-H200																							0...28
752 bytes	BIS M-101-01/L																							0...34
752 bytes	BIS M-102-01/L																							0...45
2000 bytes	BIS M-108-02/L																							0...45
8192 bytes	BIS M-108-20/A																							0...45
2000 bytes	BIS M-110-02/L																							0...32
2000 bytes	BIS M-111-02/L																							0...45
2000 bytes	BIS M-112-02/L																							0...70
752 bytes	BIS M-120-01/L																							0...50
BIS M/VM-351-00 -...																								
2000 bytes	BIS M-150-02/A																							0...65
2000 bytes	BIS M-151-02/A																							0...65
112 bytes	BIS M-152-03/A																							0...30
2000 bytes	BIS M-153-02/A																							0...100
112 bytes	BIS M-154-03/A																							0...30
8192 bytes	BIS M-155-20/A																							0...65
8192 bytes	BIS M-156-20/A																							0...65

BIS M Industrial RFID Systems

Selection criteria for read/write distances

Memory	Data carrier	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	100	120	140	160	mm		
BIS M/VM-341-00 -...																									
2000 bytes	BIS M-140-02/A-M_	[Green bar]																						0...40	
2000 bytes	BIS M-112-02/L	[Green bar]																						35...90	
2000 bytes	BIS M-108-02/L	[Green bar]																						0...50	
8192 bytes	BIS M-108-20/A	[Green bar]																						0...50	
2000 bytes	BIS M-142-02/A-M_	[Green bar]																						0...40	
8192 bytes	BIS M-142-20/A-M8	[Green bar]																						0...40	
2000 bytes	BIS M-143-02/A-M_	[Green bar]																						5...21	
2000 bytes	BIS M-144-02/A-M_	[Green bar]																						0...40	
BIS M-401-0 -...																									
752 bytes	BIS M-101-01/L	[Green bar]																						0...28	
752 bytes	BIS M-102-01/L	[Green bar]																						0...45	
752 bytes	BIS M-120-01/L	[Green bar]																						0...50	
2000 bytes	BIS M-108-02/L	[Green bar]																						0...40	
8192 bytes	BIS M-108-20/A	[Green bar]																						0...40	
2000 bytes	BIS M-110-02/L	[Green bar]																						0...30	
2000 bytes	BIS M-111-02/L	[Green bar]																						0...40	
2000 bytes	BIS M-112-02/L	[Green bar]																						0...60	
2000 bytes	BIS M-140-02/A-M_	[Green bar]																						0...32	
BIS M-451-0 -...																									
2000 bytes	BIS M-150-02/A	[Green bar]																						0...65	
2000 bytes	BIS M-151-02/A	[Green bar]																						0...65	
112 bytes	BIS M-152-03/A	[Green bar]																						0...30	
2000 bytes	BIS M-153-02/A	[Green bar]																						0...100	
112 bytes	BIS M-154-03/A	[Green bar]																						0...30	
8192 bytes	BIS M-155-20/A	[Green bar]																						0...65	
8192 bytes	BIS M-156-20/A	[Green bar]																						0...65	
BIS M-410-0 -...																									
112 bytes	BIS M-132-03/L	[Green bar]																						0...48	
112 bytes	BIS M-132-03/L-HT	[Green bar]																						0...40	
736 bytes	BIS M-132-10/L	[Green bar]																						0...15	
736 bytes	BIS M-132-10/L-HT	[Green bar]																						0...15	
2000 bytes	BIS M-133-02/A	[Green bar]																						0...32	
736 bytes	BIS M-134-10/L-HT	[Green bar]																						0...36	
2000 bytes	BIS M-135-02/L	[Green bar]																						0...60	
112 bytes	BIS M-135-03/L	[Green bar]																						0...68	
112 bytes	BIS M-135-03/L-HT	[Green bar]																						0...20	
992 bytes	BIS M-135-07/L	[Green bar]																						25...45	
992 bytes	BIS M-135-07/L-HT	[Green bar]																						25...45	
112 bytes	BIS M-136-03/L	[Green bar]																						0...85	
112 bytes	BIS M-130-03/L	[Green bar]																						0...7	
992 bytes	BIS M-130-07/L	[Green bar]																						0...10	
BIS M-411-0 -...																									
112 bytes	BIS M-132-03/L	[Green bar]																						0...80	
112 bytes	BIS M-132-03/L-HT	[Green bar]																						0...70	
736 bytes	BIS M-132-10/L	[Green bar]																						0...26	
736 bytes	BIS M-132-10/L-HT	[Green bar]																						0...22	
2000 bytes	BIS M-133-02/A	[Green bar]																						38...52	
736 bytes	BIS M-134-10/L-HT	[Green bar]																						0...60	
2000 bytes	BIS M-135-02/L	[Green bar]																						0...100	
112 bytes	BIS M-135-03/L	[Green bar]																						0...110	
112 bytes	BIS M-135-03/L-HT	[Green bar]																						0...125	
992 bytes	BIS M-135-07/L	[Green bar]																						11...95	
992 bytes	BIS M-135-07/L-HT	[Green bar]																						11...75	
112 bytes	BIS M-136-03/L	[Green bar]																						0...155	
992 bytes	BIS M-130-07/L	[Green bar]																						0...13	
BIS M-352-001-S115																									
2000 bytes	BIS M-191-02/A	[Green bar]																						0...22	
112 bytes	BIS M-152-03/A	[Green bar]																						0...17	
BIS M-305-001-S115																									
752 bytes	BIS M-105-01/A	[Green bar]																						0...6	
2000 bytes	BIS M-105-02/A	[Green bar]																						0...8	
2000 bytes	BIS M-110-02/L	[Green bar]																						0...13	
752 bytes	BIS M-122-01/A	[Green bar]																						0...5	
2000 bytes	BIS M-122-02/A	[Green bar]																						0...7	
2000 bytes	BIS M-108-02/L	[Green bar]																						0...17	
2000 bytes	BIS M-140-02/A-M_	[Green bar]																						0...15	
2000 bytes	BIS M-144-02/A-M_	[Green bar]																						0...13	
BIS M-307-001-S115																									
752 bytes	BIS M-105-01/A	[Green bar]																						0...6	
2000 bytes	BIS M-105-02/A	[Green bar]																						0...8	
2000 bytes	BIS M-110-02/L	[Green bar]																						0...13	
752 bytes	BIS M-122-01/A	[Green bar]																						0...5	
2000 bytes	BIS M-122-02/A	[Green bar]																						0...7	
BIS VM-306-001-S4																									
752 bytes	BIS M-105-01/A	[Green bar]																						0...5	
2000 bytes	BIS M-105-02/A	[Green bar]																						0...6	
112 bytes	BIS M-116-03/A	[Green bar]																						0...3	
2000 bytes	BIS M-122-02/A	[Green bar]																						0...5	
752 bytes	BIS M-105-01/A	[Green bar]																						0...6	

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS M Industrial RFID Systems

Selection criteria for read/write distances

Memory	Data carrier	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	100	120	140	160	180	200	mm	
BIS VM-307-001-S4																										
2000 bytes	BIS M-105-02/A																									0...8
2000 bytes	BIS M-110-02/L																									0...13
752 bytes	BIS M-122-01/A																									0...5
2000 bytes	BIS M-122-02/A																									0...7
2000 bytes	BIS M-140-02/A-M_																									0...15
2000 bytes	BIS M-142-02/A-M_																									0...13
2000 bytes	BIS M-143-02/A-M_																									0...10
2000 bytes	BIS M-144-02/A-M_																									0...13
BIS VM-352-001-S4																										
2000 bytes	BIS M-191-02/A																									0...22
BIS VM-305-001-S4																										
752 bytes	BIS M-105-01/A																									0...6
2000 bytes	BIS M-105-02/A																									0...8
2000 bytes	BIS M-110-02/L																									0...13
752 bytes	BIS M-122-01/A																									0...5
2000 bytes	BIS M-122-02/A																									0...7
2000 bytes	BIS M-108-02/L																									0...17
8192 bytes	BIS M-108-20/A																									0...17
2000 bytes	BIS M-140-02/A-M_																									0...15
2000 bytes	BIS M-144-02/A-M_																									0...13
BIS M-402-00 -002-...																										
752 bytes	BIS M-105-01/A																									0...5
2000 bytes	BIS M-105-02/A																									0...5
752 bytes	BIS M-122-01/A																									0...5
2000 bytes	BIS M-122-02/A																									0...5
2000 bytes	BIS M-110-02/L																									0...5
112 bytes	BIS M-116-03/A																									0...7
160 bytes	BIS M-116-08/A																									0...7
BIS M-402-00 -004-...																										
752 bytes	BIS M-105-01/A																									0...5
2000 bytes	BIS M-105-02/A																									0...5
752 bytes	BIS M-122-01/A																									0...5
2000 bytes	BIS M-122-02/A																									0...5
2000 bytes	BIS M-110-02/L																									0...15
BIS M-402-00 -005-...																										
2000 bytes	BIS M-110-02/L																									0...6
BIS M-350/350-...																										
2000 bytes	BIS M-153-02/A																									0...275
2000 bytes	BIS M-151-02/A																									0...130
112 bytes	BIS M-107-03/L-H200																									0...100
112 bytes	BIS M-135-03/L-HT																									0...200
BIS M-450/440-...																										
2000 bytes	BIS M-153-02/A																									0...275
2000 bytes	BIS M-151-02/A																									0...130
112 bytes	BIS M-107-03/L-H200																									0...100
112 bytes	BIS M-135-03/L-HT																									0...200
BIS M-370-000-A02																										
112 bytes	BIS M-132-03/L-HT																									0...57
112 bytes	BIS M-135-03/L																									0...127
BIS M-371-000-A01																										
112 bytes	BIS M-132-03/L																									0...152
112 bytes	BIS M-132-03/L-HT																									0...152
112 bytes	BIS M-135-03/L																									0...230
112 bytes	BIS M-135-03/L-HT																									0...257
112 bytes	BIS M-136-03/L																									0...216
112 bytes	BIS M-136-03/L-HT																									0...254
BIS M-372-000-A01																										
112 bytes	BIS M-132-03/L																									0...216
112 bytes	BIS M-132-03/L-HT																									0...216
112 bytes	BIS M-135-03/L																									0...350
112 bytes	BIS M-135-03/L-HT																									0...381
112 bytes	BIS M-136-03/L																									0...318
112 bytes	BIS M-136-03/L-HT																									0...381
BIS M-373-000-A01																										
112 bytes	BIS M-132-03/L																									0...238
112 bytes	BIS M-132-03/L-HT																									0...228
112 bytes	BIS M-135-03/L																									0...380
112 bytes	BIS M-135-03/L-HT																									0...406
112 bytes	BIS M-136-03/L																									0...356
112 bytes	BIS M-136-03/L-HT																									0...432

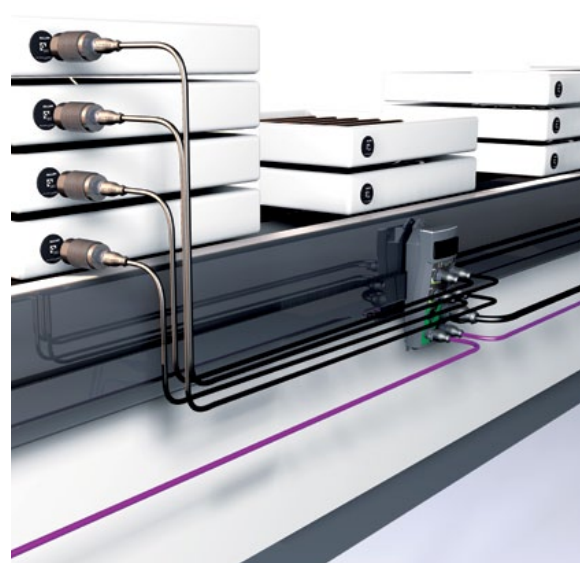
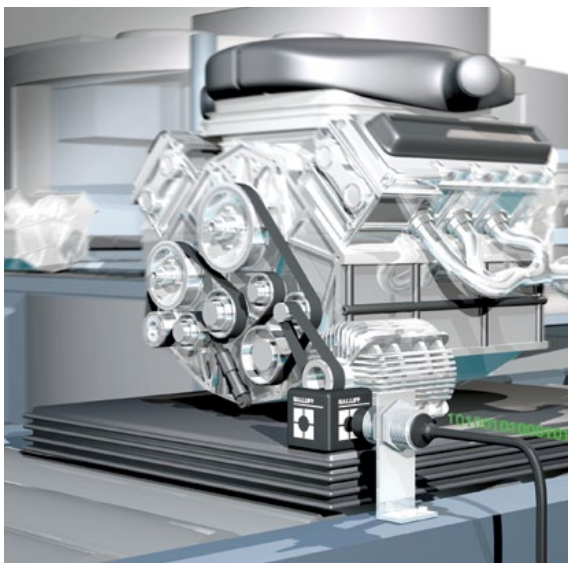
BIS M Industrial RFID Systems
Selection criteria for read/write distances



Range of Applications
Selection Criteria
 Data carriers

- Barrel**
- Read/write heads
- Read/write heads with integrated processor
- Block**
- Read/write heads
- Read/write heads with integrated processor
- Remote**
- Read/write heads
- Read/write heads with integrated processor

Long range
 Read/write heads
 Read/write heads with integrated processor
 Controller
 Antenna



Processors
 Gateways
 Handheld
 Accessories



Simply attach data carrier

A single screw is enough – and the data carrier is firmly attached. Or simply glue it in place.

For reliable traceability

All data carriers have a 4-byte or 8-byte unique ID contained in the read/write memory. This number is read-only.

For greatest flexibility

Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

Dimensions	Ø 10x4.5	Ø 12x6
Housing material	PA12	EP
Weight	< 1.5 g	< 1.5 g

BIS M Programmable

112 bytes	Ordering code		
	Part number		
160 bytes	Ordering code		
	Part number		
752 bytes	Ordering code	BIS0048	BIS0040
	Part number	BIS M-122-01/A**	BIS M-105-01/A**
992 bytes	Ordering code		
	Part number		
2000 bytes	Ordering code	BIS004A	BIS0042
	Part number	BIS M-122-02/A*	BIS M-105-02/A*
Operating temperature		0...+70 °C	-25...+70 °C
Storage temperature		-25...+85 °C	-25...+85 °C
Protection per IEC 60529		IP 67	IP 67

Appropriate read/write head with max. read/write distance

Mounting				
BIS M-300				0-11 mm
BIS M-301				
BIS M-302	0-6 mm	0-9 mm	0-6 mm	0-9 mm
BIS M-304	0-5 mm	0-7 mm	0-5 mm	0-7 mm
BIS M 410				
BIS M 411				
BIS VM-306		0-2 mm		0-3 mm

For installation see technical section.

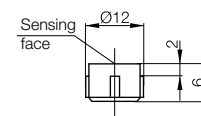
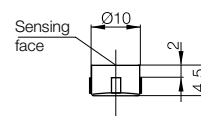
Supported standard
* ISO 15693
**ISO 14443

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



glue into hole Ø 10 H11
DIN 69 873

glue into hole Ø 12 H11



BIS M Industrial RFID Systems

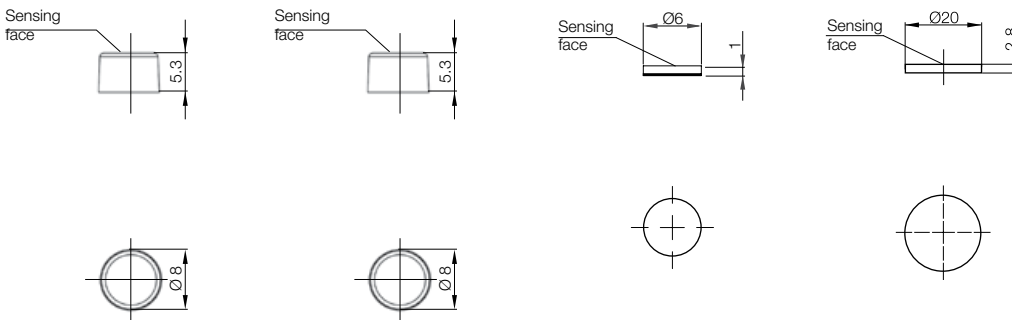
Data carriers read/write



Ø 8x5	Ø 8x5	Ø 6x1.00	Ø 20x2.5
ABS	ABS	EP	PA6
0.5 g	0.5 g	0.6 g	< 1.3 g

BIS00YL		BIS00UC	
BIS M-130-03/L*		BIS M-116-03/A*	
		BIS00UE	
		BIS M-116-08/A*	
	BIS00YK		
	BIS M-130-07/L*		
			BIS0044
			BIS M-110-02/L*
-20...+85 °C	-20...+85 °C	0...+50 °C	-25...+85 °C
-40...+85 °C	-40...+85 °C	-20...+90 °C	-40...+90 °C (100 h at 140 °C)
IP 67	IP 67	IP 67	IP 67

				0-22 mm
				0-32 mm
				0-16 mm
				0-14 mm
0-7 mm	0-10 mm			
	0-13 mm			
		0-7 mm	0-4.5 mm	



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

Long range
Read/write heads

Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



Simply attach data carrier

A single screw is enough – and the data carrier is firmly attached. Or simply glue it in place.

For reliable traceability

All data carriers have a 4-byte or 8-byte unique ID contained in the read/write memory. This number is read-only.

For greatest flexibility

Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

Dimensions	Ø 25x5
Housing material	ABS
Weight	2 g

BIS M Programmable

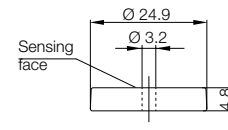
112 bytes	Ordering code	BIS00YF
	Part number	BIS M-132-03/L*
736 bytes	Ordering code	
	Part number	
752 bytes	Ordering code	
	Part number	
2000 bytes	Ordering code	
	Part number	
Operating temperature	-20...+85 °C	
Storage temperature	-40...+85 °C	
Protection per IEC 60529	IP 68	

Appropriate read/write head with max. read/write distance

Mounting	
BIS M-300	
BIS M-301	
BIS M-302	
BIS M-304	
BIS M-410	0-48
BIS M-411	0-80 mm

For installation see technical section.

Supported standard
* ISO 15693
**ISO 14443

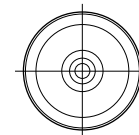


Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Data carriers read/write



Ø 25x5	Ø 30x10	Ø 30x1.6	Ø 30x2.5
ABS	PA	EP	PA6
3 g	10 g	< 1.6 g	< 3.0 g

BIS00YC BIS M-132-10/L**	BIS00Y9 BIS M-133-02/A*	BIS003Y BIS M-101-01/L**	BIS0045 BIS M-111-02/L*
-20...+85 °C	-40...+85 °C	-25...+70 °C	-25...+85 °C
-40...+85 °C	-40...+85 °C	-40...+85 °C	-40...+90 °C (100 h at 140 °C)
IP 68	IP 67	IP 67	IP 67

0-22 mm	0-32 mm	0-34 mm	0-45 mm
0-15 mm	0-32 mm	0-16 mm	0-20 mm
0-26 mm	38-52 mm	0-14 mm	

Range of Applications
Selection Criteria
Data carriers

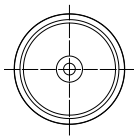
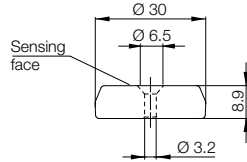
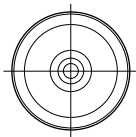
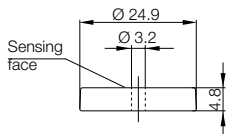
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

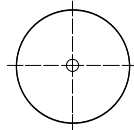
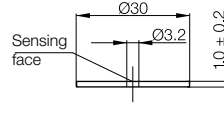
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

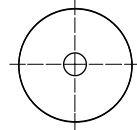
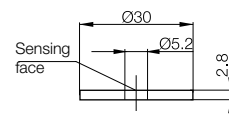
Processors
Gateways
Handheld
Accessories



Tightening torque max. 0.75 Nm



Tightening torque max. 1 Nm



Tightening torque max. 1 Nm



For greatest flexibility
Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

For reliable traceability
All data carriers have a 4-byte unique ID contained in the read/write memory. This number is read-only.

Dimensions	
Housing material	
Weight	

BIS M Programmable

752 bytes	Ordering code	
	Part number	
2000 bytes	Ordering code	
	Part number	
Operating temperature		
Storage temperature		
Protection per IEC 60529		




Appropriate read/write head with max. read/write distance

Mounting	
BIS M-300	
BIS M-301	
BIS M-302	
BIS M-304	

For installation see technical section.

Supported standard
* ISO 15693
**ISO 14443

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round

BIS M Industrial RFID Systems

Data carriers read/write



Ø 50x1.6

EP

< 2.5 g

50x3 mm

PA6

< 9.5 g

BIS003Z

BIS M-102-01/L**

-25...+70 °C

-25...+85 °C

IP 67

BIS0046

BIS M-112-02/L*

-25...+85 °C

-40...+90 °C (100 h at 140 °C)

IP 67

0-32 mm

0-45 mm

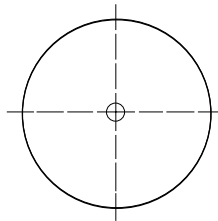
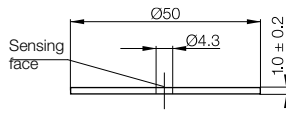
0-20 mm

0-18 mm

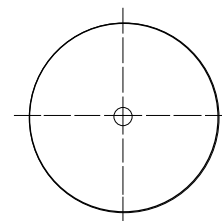
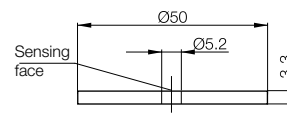
0-44 mm

0-70 mm

0-30 mm



Tightening torque max. 2.5 Nm



Tightening torque max. 5.9 Nm

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



For greatest flexibility
Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

For reliable traceability
All data carriers have a 4-byte unique ID contained in the read/write memory. This number is read-only.

Dimensions	
Housing material	
Weight	

BIS M Programmable

112 bytes	Ordering code	
	Part number	
992 bytes	Ordering code	
	Part number	
2000 bytes	Ordering code	
	Part number	
Operating temperature		
Storage temperature		
Protection per IEC 60529		




Appropriate read/write head with max. read/write distance

Mounting	
BIS M-410	
BIS M-411	



For installation see technical section.

Supported standard
* ISO 15693

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round

BIS M Industrial RFID Systems

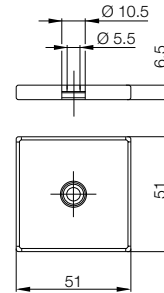
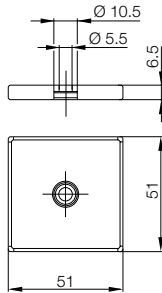
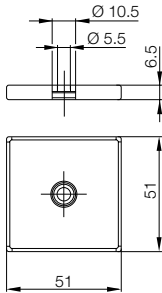
Data carriers read/write



51.5x51.5x6.5 mm	51.5x51.5x6.5 mm	51.5x51.5x6.5 mm
ABS	ABS	ABS
18 g	25 g	25 g

	BIS00Y5	
	BIS M-135-03/L*	
		BIS00Y3
		BIS M-135-07/L*
BIS00Y6		
BIS M-135-02/L*		
-40...+85 °C	-55...+85 °C	-40...+85 °C
-40...+85 °C	-55...+140 °C	-40...+125 °C
IP 67	IP 67	IP 67

0-60 mm	0-68 mm	23-46 mm
0-100 mm	0-110 mm	11-95 mm



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



Dimensions	52x32x11 mm	128x52x11 mm
Housing material	PBT	ABS
Weight	< 27.0 g	46 g

BIS M Programmable

112 bytes	Ordering code		BIS00W9
	Part number		BIS M-136-03/L*
752 bytes	Ordering code		
	Part number		
2000 bytes	Ordering code	BIS0043	
	Part number	BIS M-108-02/L*	
8192 bytes***	Ordering code	BIS0777	
	Part number	BIS M-108-20/A***	
Operating temperature		-25...+70 °C	-20...+85 °C
Storage temperature		-25...+85 °C	-40...+85 °C
Protection per IEC 60529		IP 67	IP 67

Appropriate read/write head with max. read/write distance

Mounting			
BIS M-300 / BIS VM-300	0-16 mm	0-30 mm	
BIS M-301 / BIS VM-301		0-45 mm	
BIS M-302	0-12 mm	0-20 mm	
BIS M-304	0-10 mm	0-18 mm	
BIS M410			0-85 mm
BIS M411			0-155 mm

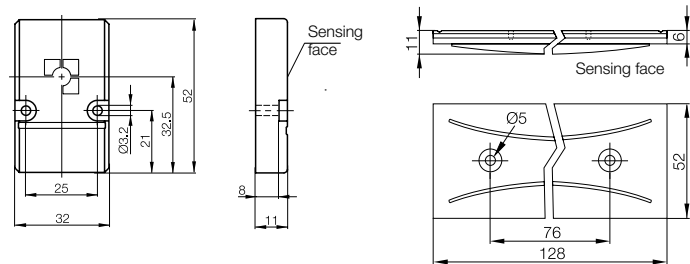
For installation see technical section.

Supported standard
 * ISO 15693
 ** ISO 14443
 *** First 2 kbytes are ISO 15693 compatible. Only for use with BIS VM or 32 byte IO-Link heads.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:



For greatest flexibility

Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

For reliable traceability

All data carriers have a 4-byte unique ID contained in the read/write memory. This number is read-only.

BIS M Industrial RFID Systems

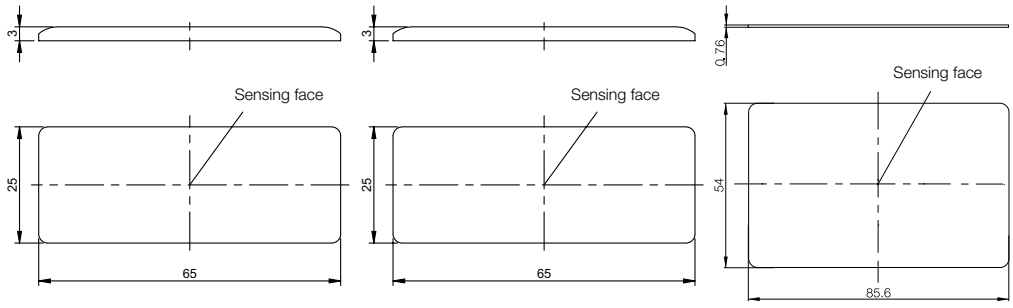
Data carriers read/write



65x25x3 mm	65x25x3 mm	85.6x54x0.76 mm
EP + PVC	EP + PVC	PVC
7,00 g	7,00 g	< 5.8 g

BIS00KM	BIS00RZ	BIS0047
BIS M-115-03/A*	BIS M-115-03/A-SA2*	BIS M-120-01/L**
-25 °C...+50 °C	-25 °C...+50 °C	-25...+70 °C
-30 °C...+60 °C	-30 °C...+60 °C	-25...+70 °C
IP 65	IP 65	IP 67

0-18 mm	0-22 mm	0-18 mm	0-22 mm	
0-30 mm	0-38 mm	0-30 mm	0-38 mm	0-50 mm



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



FERRIODENT/Metal Mount

Dimensions	4x22 mm
Housing material	Glass
Weight	0,60 g

BIS M Programmable

112 bytes	Ordering code	BIS00M2
	Part number	BIS M-152-03/A*
2000 bytes	Ordering code	
	Part number	
Operating temperature		-25...+85 °C
Storage temperature		-25...+85 °C
Protection per IEC 60529		IP 67

Appropriate read/write head with max. read/write distance

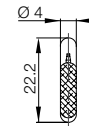
Mounting			
BIS M-304			
BIS M-352			0...10 mm
BIS M-341			0...30 mm
BIS M-351			0...30 mm 0...17 mm

For installation see technical section.

Supported standard

* ISO 15693

**See page 129 for housing accessories



Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:



rod



round

For greatest flexibility

Data carriers in various formats including wafer, cylinder, block or handy credit card format allow for a wide range of applications

For reliable traceability

All data carriers have a 4-byte unique ID contained in the read/write memory. This number is read-only.

BIS M Industrial RFID Systems

Data carriers read/write



**FERRIDENT/
Metal Mount**



**FERRIDENT/
Metal Mount**



Ø 8x35	24x24x21 mm	Ø 15x50
PA66-GF30	PBT	POM/PA12
2,00 g	18 g	< 1.98 g

BIS00P1	BIS00NZ	BIS0049
BIS M-154-03/A*	BIS M-191-02/A*	BIS M-122-01/A-ZC1**
-25...+85 °C	-25...+70 °C	-25...+70 °C
-25...+85 °C	-25...+85 °C	-25...+85 °C
IP 67	IP 67	IP 67

Range of Applications
Selection Criteria
Data carriers

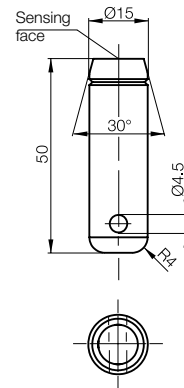
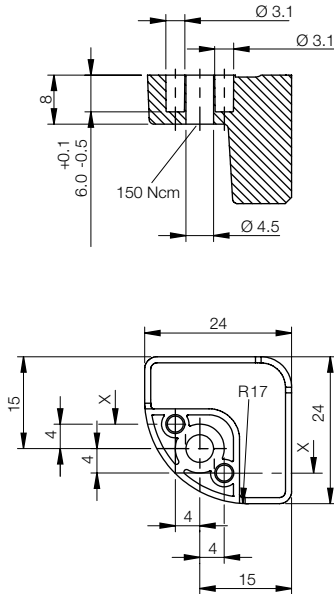
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories





Dimensions	M6
Housing material	Steel, coated/PA12-GF30
Weight	12 g

BIS M Programmable

2000 bytes	Ordering code	BIS00T1
	Part number	BIS M-122-02/A-SA2*
8192 bytes**	Ordering code	
	Part number	
Operating temperature		-25 °C...+70 °C
Storage temperature		-25 °C...+95 °C
Protection per IEC 60529/DIN 40050		IP 68/69k

Appropriate read/write head with max. read/write distance

Mounting	
BIS M-300	
BIS M-302	
BIS M-304	0-5 mm
VM-307	
BIS M-341/VM-341	

For installation see technical section.

Supported standard

* ISO 15693

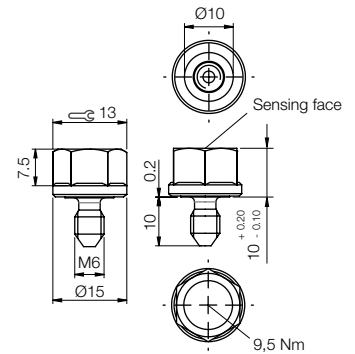
** First 2 kbytes are ISO 15693 compatible. Only for use with BIS VM or 32 byte IO-Link heads.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

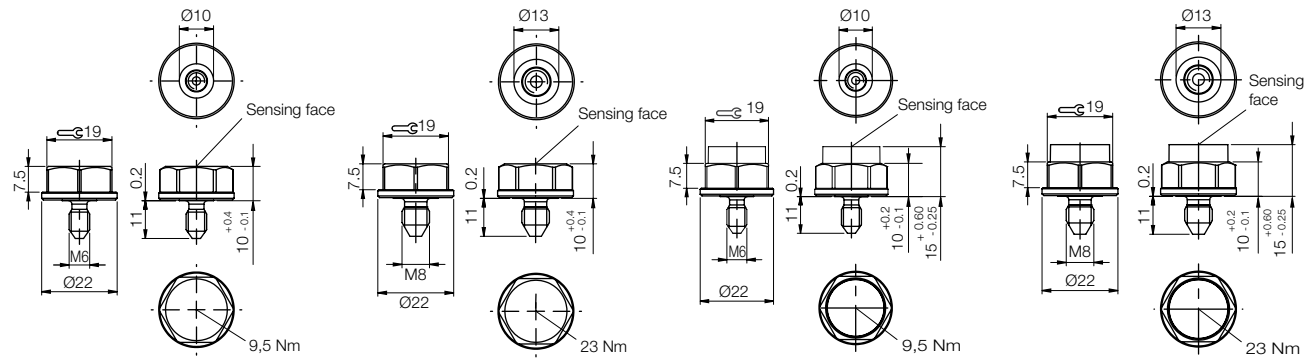
Data carriers read/write



M6	M8	M6	M8
Steel, coated/PA12-GF30	Steel, coated/PA12-GF30	Steel, coated/PA12-GF30	Steel, coated/PA12-GF30
17 g	18 g	15 g	16 g

BIS00NU	BIS00NW	BIS00PT	BIS00PU	Range of Applications Selection Criteria Data carriers
BIS M-143-02/A-M6*	BIS M-143-02/A-M8*	BIS M-142-02/A-M6-GY*	BIS M-142-02/A-M8-GY*	
			BIS0119	Barrel Read/write heads Read/write heads with integrated processor
			BIS M-142-20/A-M8-GY**	
-25 °C...+70 °C	-25 °C...+70 °C	-25 °C...+70 °C	-25 °C...+70 °C	Block Read/write heads Read/write heads with integrated processor
-25 °C...+95 °C	-25 °C...+95 °C	-25 °C...+95 °C	-25 °C...+95 °C	
IP 68	IP 68/69k	IP 68/69k	IP 68/69k	

0-14 mm	0-14 mm	0-14 mm	0-14 mm
0-10 mm	0-10 mm	0-14 mm	0-14 mm
0-10 mm	0-10 mm	0-13 mm	0-13 mm
5-21 mm	5-21 mm	0-40 mm	0-40 mm



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



Dimensions	
Housing material	
Weight	

BIS M Programmable

2000 bytes	Ordering code
	Part number
Operating temperature	
Storage temperature	
Protection per IEC 60529/DIN 40050	




Appropriate read/write head with max. read/write distance

Mounting	
BIS M-300/VM-300	
BIS M-302	
BIS M-305/VM305	
BIS VM-307	
BIS M-341/VM-341	
BIS M-400	

For installation see technical section.

Supported standard
 * ISO 15693
 ** First 2 kbytes are ISO 15693 compatible. Only for use with BIS VM or 32 byte IO-Link heads.

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round

BIS M Industrial RFID Systems

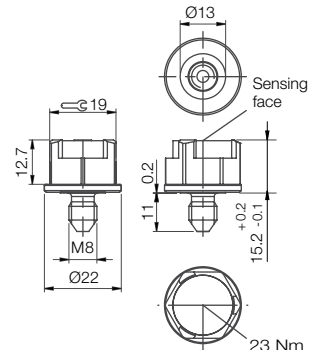
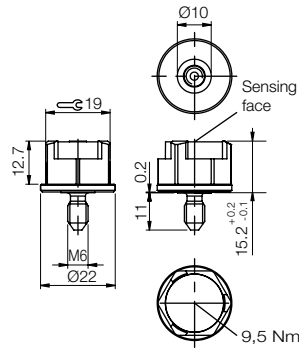
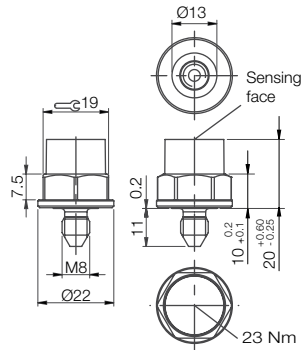
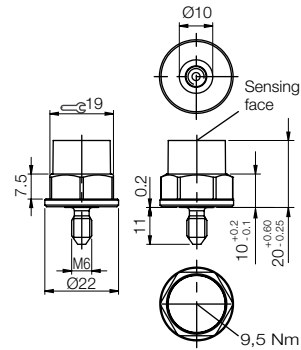
Data carriers read/write



M6	M8	M6	M8
Steel, coated/PA12-GF30	Steel, coated/PA12-GF30	Steel, coated/PA12-GF30	Steel, coated/PA12-GF30
17 g	18 g	16 g	17 g

BIS00M9	BIS00M8	BIS00R4	BIS00R5	Range of Applications
BIS M-140-02/A-M6*	BIS M-140-02/A-M8*	BIS M-144-02/A-M6-GY*	BIS M-144-02/A-M8-GY*	Selection Criteria
-25 °C...+70 °C	-25 °C...+70 °C	-25 °C...+70 °C	-25 °C...+70 °C	Data carriers
-25 °C...+95 °C	-25 °C...+95 °C	-25 °C...+95 °C	-25 °C...+95 °C	
IP 68/69k	IP 68/69k	IP 68/69k	IP 68/69k	

0-20 mm	0-20 mm	0-17 mm	0-17 mm
0-14 mm	0-14 mm	0-14 mm	0-14 mm
0-15 mm	0-15 mm	0-13 mm	0-13 mm
0-15 mm	0-15 mm	0-13 mm	0-13 mm
		0-40 mm	0-40 mm
0-32 mm	0-32 mm		



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads

Read/write heads with integrated processor
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



Dimensions	40×22×6.5 mm	40×22×6.5 mm
Housing material	PPS-GF40	PPS-GF40
Weight	< 8.0 g	< 8.0 g

BIS M Programmable

2000 bytes	Ordering code	BIS004F	BIS004H
	Part number	BIS M-150-02/A*	BIS M-151-02/A*
8192 bytes	Ordering code		
	Part number		
Operating temperature		-25...+70 °C	-25...+70 °C
Storage temperature		-25...+130 °C	-25...+130 °C
Protection per IEC 60529		IP 67	IP 67

Appropriate read/write head with max. read/write distance

Mounting		
BIS M-350	0-130 mm	0-130 mm
BIS M-351	0-65 mm	0-65 mm
BIS M-450	0-130 mm	0-130 mm
BIS M-451	0-65 mm	0-65 mm

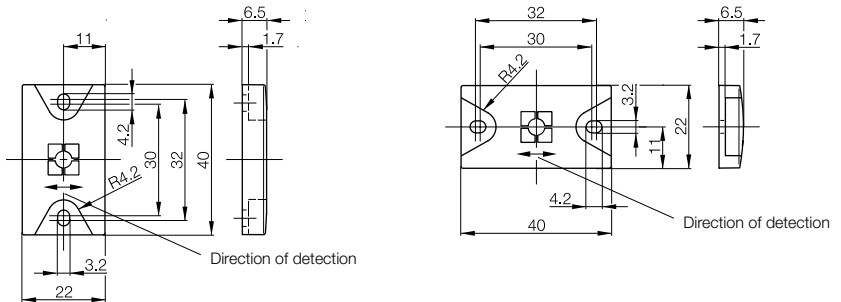
For installation see technical section.

Supported standard
* ISO 15693
** First 2 kbytes are ISO 15693 compatible. Only for use with BIS VM or 32 byte IO-Link heads.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

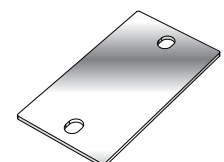


For maximum data security in all environments – even on metal.

For reliable traceability

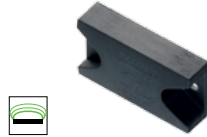
All data carriers have a 4-byte unique ID contained in the read/write memory. This number is read-only.

Metal mounting plate 40×22 mm
BIS Z-MP-001
Please order separately.
(10 to a package) Required if no metal substrate is used.



BIS M Industrial RFID Systems

Data carriers read/write – mount on steel



40x22x6.5 mm	40x22x6.5 mm	80x40x22 mm
PPS (fiberglass reinforced)	PPS (fiberglass reinforced)	POM
9 g	9 g	95 g

BIS0117	BIS0112	BIS00P3
BIS M-155-20/A**	BIS M-156-20/A**	BIS M-153-02/A*
-25...+70 °C	-25...+70 °C	BIS010R
-25...+130 °C	-25...+130 °C	BIS M-153-20/A**
IP 67	IP 67	-25...+85 °C
		-25...+85 °C
		IP 68

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

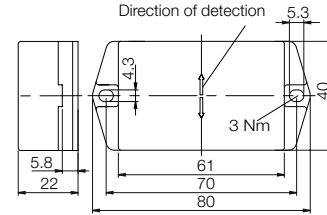
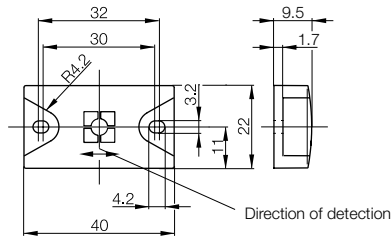
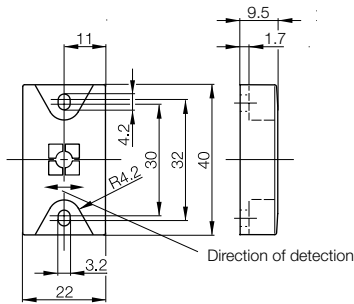
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

0-65 mm	0-65 mm	0-275 mm	0-90 mm
		0-100 mm	
		0-275 mm	
		0-100 mm	





Dimensions	Ø 25x5	Ø 25x5	Ø 50x5
Housing material	PPS	PPS	PPS
Weight	4 g	4 g	17 g

BIS M Programmable

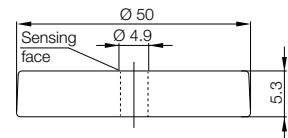
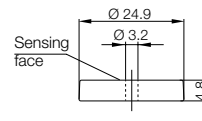
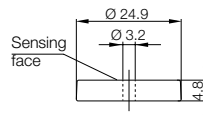
112 bytes	Ordering code	BIS00YE		
	Part number	BIS M-132-03/L-HT*		
736 bytes	Ordering code		BIS00YA	BIS00Y7
	Part number		BIS M-132-10/L-HT**	BIS M-134-10/L-HT**
992 bytes	Ordering code			
	Part number			
Operating temperature		-40...+93 °C	-40...+93 °C	-40...+93 °C
Storage temperature		-40...+220 °C	-40...+220 °C	-40...+220 °C
Storage temperature extended				
Protection per IEC 60529		IP 67	IP 67	IP 67

Appropriate read/write head with max. read/write distance

Mounting			
BIS M-300 / BIS VM-300			
BIS M-301 / BIS VM-301			
BIS M-410	0-40 mm	0-15 mm	0-36 mm
BIS M-411	0-70 mm	0-22 mm	0-60 mm

For installation see technical section.

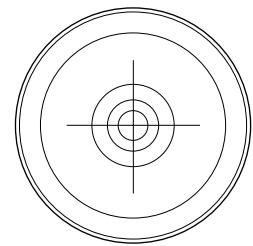
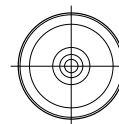
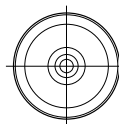
Supported standard
* ISO 15693
** ISO 14443



Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:



BIS M Industrial RFID Systems

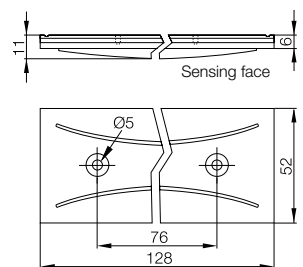
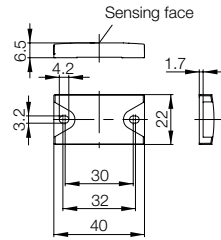
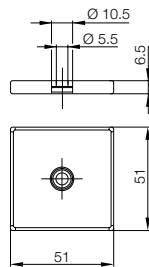
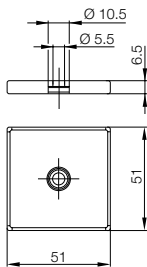
Data carriers read/write



51.5x51.5x6.5 mm	51.5x51.5x6.5 mm	40x22x6.5 mm	128x52x11 mm
PPS	PPS	PPS-GF40	PPS
25 g	25 g	6,00 g	68 g

BIS00Y4		BIS00LC	BIS00Y1	Range of Applications
BIS M-135-03/L-HT*		BIS M-107-03/L-H200*	BIS M-136-03/L-HT*	
				Data carriers
	BIS00Y2			Barrel
	BIS M-135-07/L-HT*			Read/write heads
-40...+93 °C	-40...+93 °C	-25...+70 °C	-40...+93 °C	Read/write heads with integrated processor
-40...+220 °C	-40...+220 °C	-25...+85 °C	-40...+220 °C	
IP 67	IP 67	200° C (1000 h tested)	IP 67	
		IP 68/x9K		

				Block
				Read/write heads
		0-18 mm		Read/write heads with integrated processor
		0-28 mm		
0-70 mm	23-46 mm		0-185 mm	
0-125 mm	11-75 mm			Remote



Range of Applications
Selection Criteria

Data carriers
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

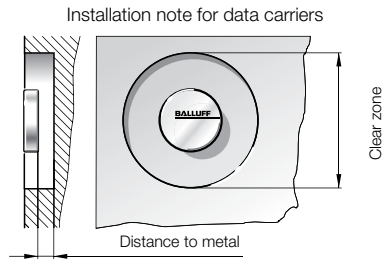


**Small size –
big performance**

Broad selection range

Read/write heads in various form factors offer wide application possibilities. Simply choose according to your application.

Dimensions	
Housing material	
For standard processors	Ordering code
	Part number
For BIS M-407 processors	Ordering code
	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm

For installation see technical section.

* For use only with processor BIS M-407-039-06-S115. See page 109.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write heads



M18

Nickel plated brass

BIS0057

BIS M-302-001-S115

BIS0059

BIS M-302-003-S115*



0...+70 °C

-20...+85 °C

IP 67

Processor

See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

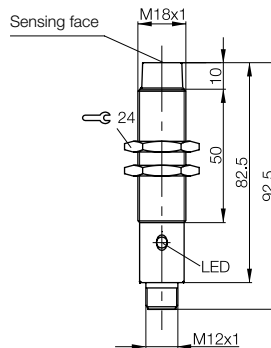
Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0043	BIS M-108-02/L	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L	see data carriers	BIS M-140-02/A-M_	see data carriers	BIS M-142-02/A-M_	see data carriers	BIS M-143-02/A-M_	see data carriers	BIS M-144-02/A-M_
>25	>5	>50	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	>25	>5	>25	>5	>50	>20	>0		>0		>0	>0		
>60	>50	>60	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	>80	>50	>80	>50	>150	>70	>100		>100		>100	>100		
0-16	0-10	0-20	0-10	0-7	0-5	0-9	0-6	0-7	0-5	0-9	0-6	0-20	0-12	0-16	0-8	0-20	0-5	0-30	0-12	0-14		0-14		0-10	0-14		
±10	±4	±18	±8	±5	±4	±5	±5	±4	±3	±4	±3	±14	±10	±8	±4	±12	±7	±20	±14	±8		±8		±5	±6		
±10	±4	±18	±6	±4	±3	±5	±3.5	±3	±2	±3	±2	±12	±8	±8	±4	±12	±4	±20	±14	±8		±8		±5	±6		
±10	±2	±16	±4			±3.5						±12	±6	±6		±10		±18	±10	±8		±8		±3	±6		
±8		±14										±10	±4	±4		±10		±18	±6	±8		±8			±6		
±7		±12										±10		±4		±10		±18				±8				±6	
±4		±10										±7		±3		±5		±16				±16					
		±8										±7				±5		±16				±16					
		±4										±5				±5		±16				±16					
																		±12				±12					
																		±8				±8					

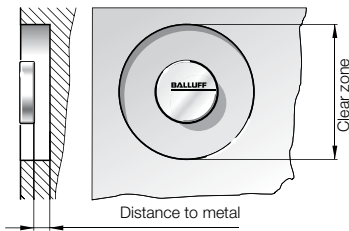




M18 housing with extra small read/write head: just 14mm provides security (in tool identification, for example).

Dimensions	
Housing material	
For standard processors	Ordering code
	Part number
For BIS M-407 processors	Ordering code
	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm

For installation see technical section.

* For use only with processor BIS M-407-039-06-S115. See page 109.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write heads



M18

Nickel plated brass

BIS005A

BIS M-304-001-S115

BIS008P

BIS M-304-003-S115*

0...+70 °C
 -20...+85 °C
 IP 67
 Processor
 See Connectivity section for cable options

Range of Applications
 Selection Criteria
 Data carriers

Barrel Read/write heads

Read/write heads with integrated processor

Block Read/write heads

Read/write heads with integrated processor

Remote Read/write heads

Read/write heads with integrated processor

Long range Read/write heads

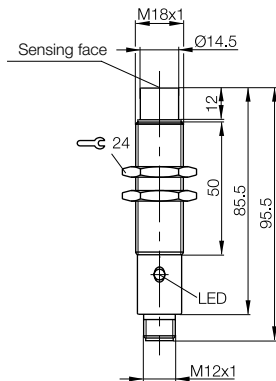
Read/write heads

Read/write heads with integrated processor

Controller
 Antenna

Processors
 Gateways
 Handheld
 Accessories

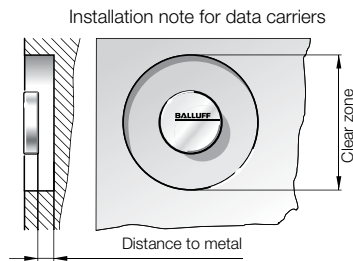
BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0043	BIS M-108-02/L	BIS0044	BIS M-110-02/L	BIS00T1	BIS M-122-02/A-SA2																		
> 25	> 5	> 50	> 10	> 10	> 0	> 10	> 0	> 10	> 0	> 10	> 0	> 25	> 0	> 25	> 5	> 0																			
> 60	> 50	> 60	> 50	> 60	> 0	> 60	> 0	> 60	> 0	> 60	> 0	> 60	> 0	> 80	> 50	> 0																			
0-14	0-8	0-18	0-10	0-5	0-5	0-7	0-6	0-5	0-4	0-7	0-5	0-18	0-10	0-14	0-8	0-5																			
0-14	0-8	0-18	0-10	0-5	0-5	0-7	0-6	0-5	0-4	0-7	0-5	0-18	0-10	0-14	0-8	0-5																			
±10	±4	±18	±8	±5	±4	±5	±5	±4	±2	±4	±3	±14	±10	±8	±4	±3																			
±10	±4	±18	±6	±4	±3	±5	±3.5	±3		±3	±2	±12	±8	±8	±4	±2																			
±10		±16	±4			±3						±12	±6	±6																					
±8		±14										±10		±4																					
		±12										±10																							
		±10										±7																							
		±8										±5																							





The large diameter of these tubular read/write heads enables generous distances to the object.

Dimensions	M30
Housing material	Nickel plated brass
For standard processor	Ordering code BIS0053
	Part number BIS M-300-001-S115
For BIS M-407 processor	Ordering code BIS0054
	Part number BIS M-300-003-S115*
For BIS V processor	Ordering code BIS00RF
New Generation**	Part number BIS VM-300-001-S4
Mounting	—
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67
Connection to	Processor
Connection cable	See Connectivity section for cable options



Appropriate data carrier

Data carrier to metal distance in mm	> 0	BIS M-115-03/A-SA2	> 25	> 5	> 50	> 10	> 20	> 5
Data carrier clear zone in mm	> 50		> 100	> 50	> 150	> 70	> 100	> 100

Write distance in mm	0-18	0-22	0-15	0-32	0-12	0-9	0-9
Read distance in mm	0-18	0-22	0-15	0-32	0-12	0-9	0-9
Offset in mm at distance	0 mm ±14	±15	±8	±20	±6	±7	±6
	5 mm ±14	±15	±8	±20	±6	±7	±6
	9 mm ±14	±15	±6	±20	±5	±2	±1
	12 mm ±14	±15	±4	±20	±4		
	15 mm ±14	±15	±4	±20			
	16 mm ±14	±12		±20			
	18 mm ±10	±12		±20			
	20 mm	±12		±20			
	22 mm	±4		±18			
	25 mm			±14			
	30 mm			±10			
	32 mm			±4			
	35 mm						
	40 mm						
	43 mm						

For installation see technical section.

* For use only with processor BIS M-407-039-06-S115. See page 109.

**See page 114.

***8k byte tag for use with BIS V and VM heads only.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write heads



Range of Applications
Selection Criteria
Data carriers

Barrel Read/write heads

Read/write heads with integrated processor

Block Read/write heads

Read/write heads with integrated processor

Remote Read/write heads

Read/write heads with integrated processor

Long range Read/write heads

Read/write heads with integrated processor

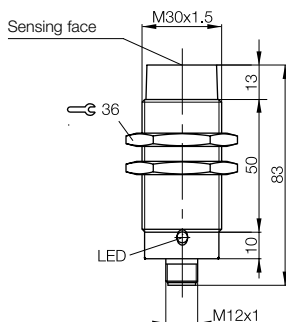
Controller

Antenna

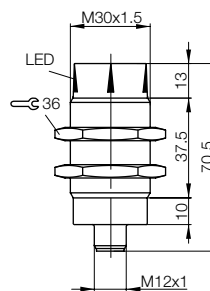
Processors
Gateways
Handheld
Accessories

BIS0042	BIS M-105-02/A	BIS M-108***	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L	BIS00M9	BIS M-140-02/A-M6	BIS00NU	BIS M-143-02/A-M6	BIS00NW	BIS M-143-02/A-M8	BIS00R4	BIS M-144-02/A-M6	BIS00R5	BIS M-144-02/A-M8	BIS00LC	BIS M-102-03/L-H200
> 20	> 5	> 25	> 0	> 25	> 5	> 25	> 5	> 50	> 10	> 0		> 0		> 0		> 0		> 0		> 20
> 100	> 100	> 100	> 0	> 100	> 50	> 100	> 50	> 150	> 70	> 100		> 100		> 100		> 100		> 100		> 110
0-11	0-11	0-30	0-16	0-22	0-10	0-28	0-10	0-44	0-15	0-20		0-14		0-14		0-17		0-17		0-18
0-11	0-11	0-30	0-16	0-22	0-10	0-28	0-10	0-44	0-15	0-20		0-14		0-14		0-17		0-17		0-18
±10	±7	±18	±10	±14	±7	±16	±7	±25	±15	±12		±9		±9		±12		±12		±15
±8	±7	±18	±10	±14	±7	±16	±7	±25	±15	±12		±9		±9		±12		±12		±12
±5	±3	±18	±8	±12	±2	±14	±2	±25	±12	±12		±9		±9		±12		±12		±12
		±16	±6	±12		±14		±24	±10	±12		±6		±6		±8		±8		±10
		±16	±6	±12		±14		±24	±8	±12						±8		±8		±7
		±16	±4	±10		±14		±24		±7						±8		±8		±5
		±16		±10		±14		±24		±7										±5
		±16		±10		±14		±24		±7										±5
		±14		±6		±12		±22												
		±14				±12		±22												
								±22												
								±16												
								±16												
								±16												
								±10												

BIS M-300



BIS VM-300



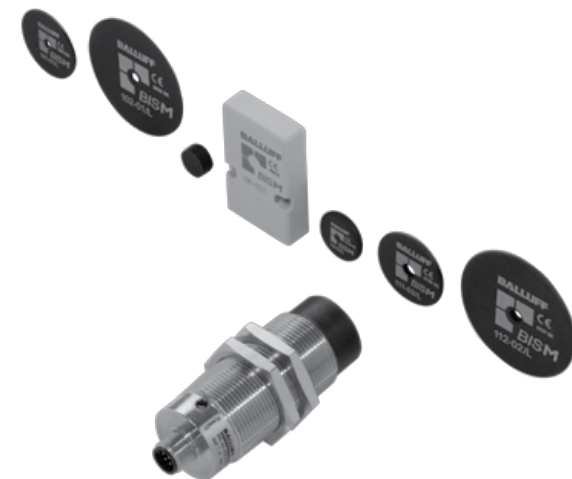
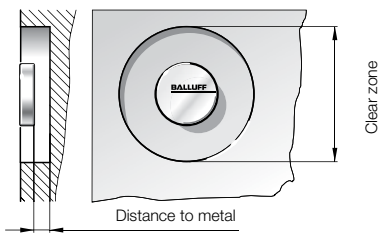


For longer ranges

Integrated version of read/write head with processor in large form factor. For direct connection to the controller

Dimensions			
Housing material			
Serial	RS232	Ordering code	
		Part number	
IO-Link	10 byte	Ordering code	
		Part number	
	32 byte*	Ordering code	
		Part number	
Mounting			
Supply voltage			
Current			
Operating temperature			
Storage temperature			
Protection per IEC 60529			
Connection type			
Accessories included			
Connection cable			

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	32 mm
	35 mm

For installation see technical section.

*8k byte tag for use with 32 byte IO-Link head only.

Mounting (see technical section for details):

- flush in steel
- non-flush in steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write heads with integrated processor



M30x1,5 Nickel plated brass	M30x1,5 Nickel plated brass
BIS000EJ	BIS00LH
BIS M-400-007-001-00-S115	BIS M-400-045-001-07-S4
	BIS0108
	BIS M-400-072-001-07-S4
■	■
24 V DC +10 %/-20 % including ripple ≤ 50 mA no-load 0...+70 °C -20...+85 °C IP 67 1 connector, round 8-pin serial / round 4-pin IO-Link Configuration software See Connectivity section for cable options Data carriers common for both heads	24 V DC +10 %/-20 % including ripple ≤ 150 mA 0...+70 °C -20...+85 °C IP 67 Round 4-pin IO-Link Configuration software See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

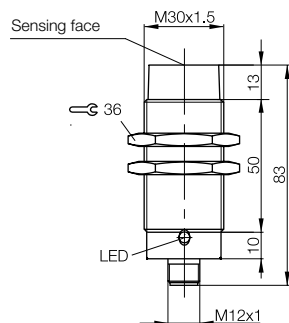
Long range
Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories

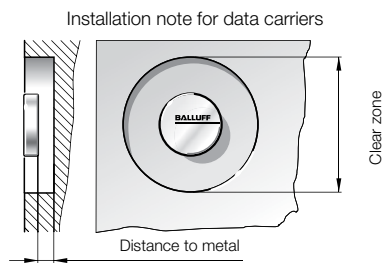
BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A		BIS M-108*	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L																								
> 25	> 5	> 50	> 10	> 20	> 5	> 20	> 5	> 25	> 0	> 25	> 5	> 25	> 5	> 50	> 10																								
> 100	> 50	> 150	> 70	> 100	> 100	> 100	> 100	> 100	> 0	> 100	> 50	> 100	> 60	> 150	> 70																								
0-20	0-12	0-28	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-8	0-28	0-10	0-38	0-15																								
0-20	0-12	0-28	0-12	0-7	0-6	0-11	0-7	0-28	0-16	0-20	0-8	0-28	0-10	0-38	0-15																								
±14	±6	±20	±6	±7	±6	±9	±6	±16	±10	±12	±6	±16	±7	±22	±13																								
±14	±6	±20	±6	±7	±6	±8	±6	±16	±10	±12	±5	±16	±7	±22	±13																								
±14	±4	±20	±3			±5		±14	±8	±10		±14	±2	±22	±10																								
±10	±2	±20	±2					±14	±6	±8		±14		±20	±8																								
±10		±20						±14	±6	±8		±14		±20	±6																								
±8		±18						±14	±4	±5		±14		±20																									
±6		±16						±14		±5		±14		±20																									
±5		±15						±14		±5		±14		±20																									
		±15						±12				±12		±20																									
		±10						±12				±12		±20																									
														±16																									
														±10																									
														±10																									



For direct connection to the controller for tight space conditions



Dimensions			
Housing material			
Serial	RS232	Ordering code	
		Part number	
IO-Link	10 byte	Ordering code	
		Part number	
	32 byte	Ordering code	
		Part number	
Mounting			
Supply voltage			
Current			
Operating temperature			
Storage temperature			
Protection per IEC 60529			
Connection type			
Accessories included			
Connection cable			



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm

For installation see technical section.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write heads with integrated processor



M30x15,5		M30x15,5	
Nickel plated brass		Nickel Plated Brass	
BIS00EK		BIS00LJ	
BIS M-400-007-002-00-S115		BIS M-400-045-002-07-S4	
		BIS0104	
		BIS M-400-072-002-07-S4	
<p>24 V DC +10 %/-20 % including ripple ≤ 50 mA no-load 0...+70 °C -20...+85 °C IP 67 1 connector, round 8-pin serial / round 4-pin IO-Link Configuration software See Connectivity section for cable options Data carriers common for both heads</p>		<p>18...30V DC draw at 24V DC ≤150mA, load ≤50mA 0...+70 °C -20...+85 °C P 67 IO link Panel connector 4-pin round 4-pin IO-Link none See Connectivity section for cable options</p>	

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

Long range

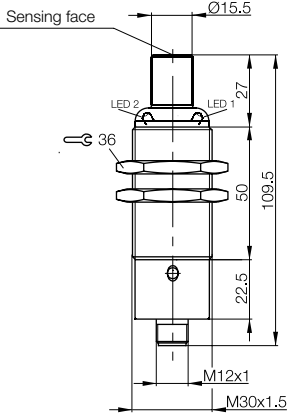
Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0043	BIS M-108-02/L	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L										
>25	>5	>50	>10	>10	>0	>10	>0	>10	>0	>10	>0	>25	>0	>25	>5	>25	>5	>50	>20										
>60	>50	>60	>50	>60	>0	>60	>0	>60	>0	>60	>0	>60	>0	>80	>50	>80	>50	>150	>70										
0-15	0-9	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	0-15	0-6	0-20	0-5	0-28	0-10										
0-15	0-9	0-18	0-10	0-6	0-5	0-9	0-5	0-5	0-4	0-6	0-5	0-20	0-12	0-15	0-6	0-20	0-5	0-28	0-10										
±9	±4	±16	±4	±5	±4	±6	±4	±4	±3	±4	±3	±14	±10	±8	±4	±12	±7	±20	±14										
±9	±4	±16	±4	±4	±2	±6	±2	±3		±3	±2	±14	±8	±8	±4	±12	±4	±20	±14										
±8	±2	±12	±2			±2						±12	±6	±6	±10		±18	±10											
±6		±8										±10	±4	±4	±10		±18	±6											
±4		±8										±10		±4	±10		±18												
																±7	±16												
																±7	±16												
																±7	±16												
																±7	±16												
																	±12												
																		±12											

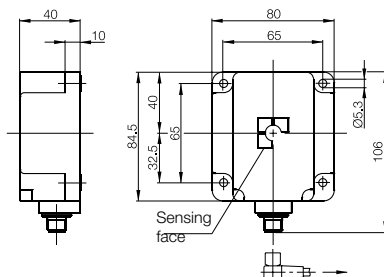
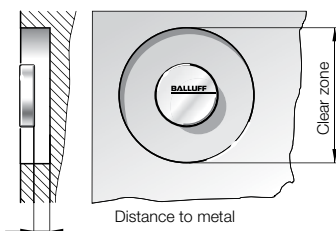




The right choice when you need a flat design with long read/write distance.

Dimensions	
Housing material	
For standard processors	Ordering code
	Part number
For BIS M-407 processors	Ordering code
	Part number
For BIS V processors	Ordering code
New Generation**	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	32 mm
	35 mm
	40 mm
	43 mm
	45 mm
	50 mm
	52 mm
	60 mm
	65 mm
	70 mm

For installation see technical section.

* For use only with processor BIS M-407-039-06-S115. See page 109.

**See page 114.

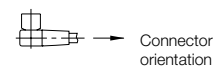
***8k byte tag for use with BIS V and VM heads only.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write heads



80x80x40 mm

PBT

BIS0055

BIS M-301-001-S115

BIS0056

BIS M-301-003-S115*

BIS00T0

BIS VM-301-001-S4

0...+70 °C

-20...+85 °C

IP 67

Processor

See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

Read/write heads

Read/write heads with integrated processor

Controller

Antenna

Processors

Gateways

Handheld

Accessories

BIS00RZ	BIS M-115-03/A-SA2	BIS00LC	BIS M-107-03/L-H200	BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L		BIS M-108***	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L	BIS0047	BIS M-120-01/L																						
> 0		> 20		> 50	> 5	> 50	> 10	> 50	> 20	> 50	> 30	> 50	> 30	> 50	> 30	> 80																							
> 50		> 110		> 200	> 50	> 200	> 150	> 200	> 60	> 200	> 100	> 200	> 100	> 200	> 100	> 250																							
0-30	0-28	0-34	0-15	0-45	0-35	0-45	8-22	0-32	0-20	0-45	0-30	0-70	0-45	0-50																									
±25	±20	±22	±14	±30	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30																									
±25	±20	±22	±14	±30	±18	±32	±20	±28	±20	±32	±22	±40	±25	±30																									
±20	±20	±22	±14	±30	±18	±32	±20	±28	±18	±32	±22	±40	±25	±30																									
±20	±20	±22	±10	±30	±18	±32	±18	±24	±18	±32	±22	±40	±25	±30																									
±20	±20	±22	±10	±30	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30																									
±20	±20	±22	±8	±30	±18	±32	±18	±24	±15	±32	±20	±40	±25	±30																									
±20	±17	±22	±6	±30	±18	±32	±16	±24	±12	±32	±18	±40	±25	±30																									
±18	±17	±22	±4	±30	±18	±32	±16	±24	±8	±32	±16	±40	±25	±30																									
±18	±10	±20		±30	±15	±25	±14	±20		±25	±14	±40	±22	±30																									
±18	±5	±15		±30	±15	±25		±20		±25	±12	±40	±22	±30																									
±8		±15		±30	±12	±25		±12		±25	±10	±40	±22	±28																									
		±8		±30	±8	±20		±12		±20		±40	±22	±24																									
		±4		±30	±4	±20				±20		±40	±20	±22																									
				±24		±20				±20		±40	±20	±18																									
				±20		±12				±12		±35	±15	±14																									
				±16		±12				±12		±35	±12	±12																									
				±4								±35		±4																									
												±35																											
												±30																											
												±30																											
												±20																											

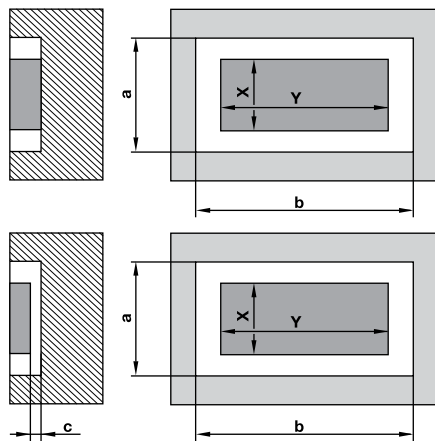


The right choice when you need a flat design with long read/write distance.

FERROIDENT/Metal Mount

Read/write head with rod type antenna.
Simply use the arrows for alignment.
For fast positioning.

Installation notes for data carriers



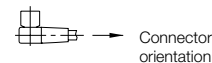
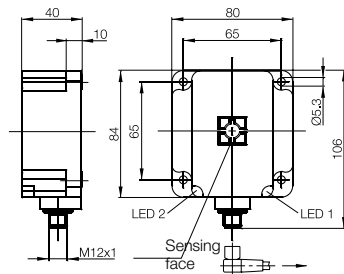
**FERROIDENT/
Metal Mount**

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



Dimensions	
Housing material	
For standard processors	Ordering code
	Part number
For BIS M-407 processors	Ordering code
	Part number
For BIS V processors	Ordering code
New Generation*	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	

Appropriate data carrier

Data carrier clear zone in mm (a)	
Data carrier clear zone in mm (b)	
Data carrier clear zone in mm (c)	

Metallic mounting surface 40x22	
Metallic mounting surface $\geq 200 \times 200$	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	5 mm
	10 mm
	12 mm
	15 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	32 mm
	35 mm
	40 mm
	45 mm
	50 mm
	52 mm
	60 mm
	65 mm
	70 mm
	80 mm
	90 mm
	100 mm

For installation see technical section.

*See page 114.

**8k byte tag for use with BIS V and VM heads only.

BIS M Industrial RFID Systems

Read/write heads



FERROIDENT/Metal Mount

80x84,5x40 mm

PBT and ASA

BIS005C

BIS M-351-001-S115

BIS00KU

BIS M-351-003-S115

BIS00T2

BIS VM-351-001-S4

0...+70 °C

-20...+85 °C

IP 67

Processor

See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

Read/write heads

Read/write heads with integrated processor

Controller
Antenna

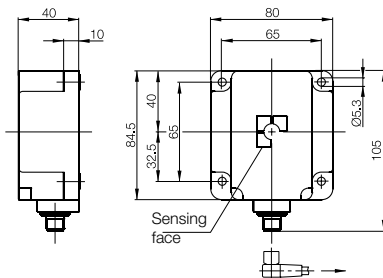
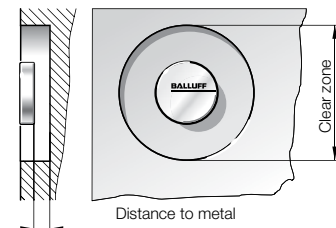
Processors
Gateways
Handheld
Accessories

BIS004F		BIS M-150-02/A		BIS004H		BIS M-151-02/A		BIS00M2		BIS M-152-03/A		BIS00P3		BIS M-153-02/A		BIS0111		BIS M-155-20/A**		BIS0112		BIS M-156-20/A**							
> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 10	> 10	> 240	> 240	> 240	> 240	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200						
> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 50	> 50	> 480	> 480	> 480	> 480	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200						
								> 50	> 50	> 2	> 2	> 50	> 50	0	0														
0-52	0-52			0-52	0-52											0-52	0-52			0-52	0-52								
		0-65	0-65			0-65	0-65											0-65	0-65			0-65	0-65						
0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100	0-90	0-90	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65						
0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100	0-100	0-90	0-90	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65						
X	Y	X	Y	Y	X	Y	X	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	Y	X	Y	X	Y	X				
±60	±25	±65	±26	±60	±25	±65	±26	±35	±20			±100	±20	±100	±20	±60	±25	±65	±26	±60	±25	±65	±26						
±60	±25	±65	±26	±60	±25	±65	±26	±35	±20			±100	±20	±100	±20	±60	±25	±65	±26	±60	±25	±65	±26						
±60	±25	±65	±26	±60	±25	±65	±26	±35	±20			±100	±20	±100	±20	±60	±25	±65	±26	±60	±25	±65	±26						
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±50	±25	±65	±25	±50	±25	±65	±25						±80	±20	±80	±20	±50	±25	±65	±25	±50	±25	±65	±25					
±50	±20	±50	±25	±50	±20	±50	±25						±80	±20	±80	±20	±50	±20	±50	±25	±50	±20	±50	±25					
±25	±20	±50	±25	±25	±20	±50	±25						±80	±20	±80	±20	±25	±20	±50	±25	±25	±25	±20	±50	±25				
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±25	±8	±25	±25	±25	±8	±25	±25						±80	±20	±80	±20	±25	±8	±25	±25	±25	±8	±25	±25					
		±25	±10			±25	±10						±65	±20	±65	±20			±25	±10			±25	±10					
		±25	±10			±25	±10						±65	±20	±65	±20			±25	±10			±25	±10					
													±65	±20	±65	±20													
													±65	±20	±65	±20													
													±50	±20	±50	±20													
													±40	±20															



Dimensions	
Housing material	
For standard processors	Ordering code
	Part number
For BIS M-407 processors	Ordering code
	Part number
For BIS V processors	Ordering code
New Generation*	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	35 mm
	40 mm
	45 mm
	50 mm
	60 mm
	70 mm
	80 mm
	90 mm

For installation see technical section.

*See page 114.

**8k byte tag for use with BIS V and VM heads only.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write heads



84,5x80x40 mm
PBT
BIS00M6
BIS M-341-001-S115
BIS00R3
BIS M-341-003-S115
BIS00TA
BIS VM-341-001-S4
0...+70 °C
-20...+85 °C
IP 67
Processor
See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads
Read/write heads with integrated processor

Block

Read/write heads
Read/write heads with integrated processor

Remote

Read/write heads
Read/write heads with integrated processor

Long range

Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

see data carriers	BIS M-140-02/A-M_	BIS0046	BIS M-112-02/L	BIS M-108**	see data carriers	BIS M-142**	see data carriers	BIS M-143-02/A-M_	see data carriers	BIS M-144-02/A-M_																											
> 0	> 50	> 50	> 50	> 0	> 0	> 0	> 0	> 0	> 0																												
> 100	> 200	> 200	> 200	> 0	> 100	> 100	> 100	> 100	> 100																												
0-40	35-90		20-60	0-50	0-40		5-21		0-40																												
0-40	35-90		20-60	0-50	0-40		5-21		0-40																												
±25				±30	±25		±25		±25																												
±25				±30	±25		±25		±25																												
±25				±30	±25		±17		±25																												
±25				±30	±25		±17		±25																												
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±25				±35	±30				±25																												
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±25				±35	±30				±25																												
±15				±35	±30				±25																												
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±10	±55			±30	±20	±15			±15																												
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	±40			±30	±20																																
	±40			±30	±20																																
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BIS M Industrial RFID Systems

Read/write head with integrated processor

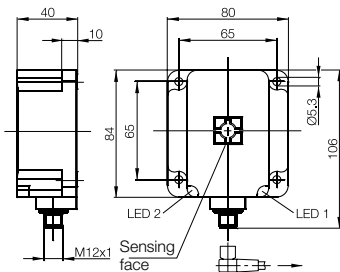
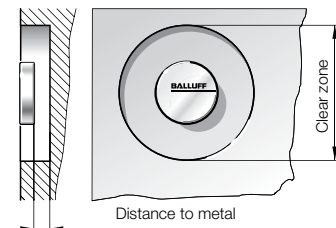
Block Style



When the available space requires a flat housing, this version is the ideal choice. For direct connection to the controller

Dimensions		
Housing material		
Serial	RS232	Ordering code
		Part number
IO-Link	10 byte	Ordering code
		Part number
	32 byte*	Ordering code
		Part number
Mounting		
Supply voltage		
Current		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Connection type		
Accessories included		
Connection cable		

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	9 mm
	12 mm
	15 mm
	16 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	32 mm
	35 mm
	40 mm
	43 mm
	45 mm
	50 mm
	52 mm
	60 mm

For installation see technical section.

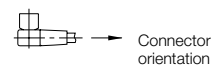
*8k byte tag for use with 32 byte IO-Link head only.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write head with integrated processor



80x80x40 mm
PBT
BIS00EM
BIS M-401-007-001-00-S115
BIS00LK
BIS M-401-045-001-07-S4
BIS0102
BIS M-401-072-001-07-S4
—
24 V DC +10 %/–20 % including ripple
≤ 50 mA no-load
0...+70 °C
–20...+85 °C
IP 67
1 connector, round 8-pin serial / round 4-pin IO-Link
Serial includes configuration software
See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads
Read/write heads with integrated processor

Block

Read/write heads
Read/write heads with integrated processor

Remote

Read/write heads
Read/write heads with integrated processor

Long range

Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS003Y	BIS M-101-01/L	BIS003Z	BIS M-102-01/L	BIS0047	BIS M-120-01/L	BIS0043	BIS M-108-02/L	BIS0044	BIS M-110-02/L	BIS0045	BIS M-111-02/L	BIS0046	BIS M-112-02/L	BIS00M9	BIS M-140-02/A-M6*	BIS00M8	BIS M-140-02/A-M8*																			
> 50	> 10	> 50	> 10	> 80		> 50	> 20	> 50	> 30	> 50	> 30	> 50	> 30	> 0		> 0																				
> 200	> 150	> 200	> 150	> 250		> 200	> 60	> 200	> 100	> 200	> 100	> 200	> 100	> 100		> 100																				
0-28	0-20	0-45	0-34	0-50		0-40	0-18	0-30	0-18	0-40	0-25	0-60	0-25	0-32	0-32	0-32	0-32																			
±22	±12	±30	±16	±30		±30	±16	±25	±18	±30	±20	±35	±25			±25																				
±22	±12	±30	±16	±30		±30	±16	±25	±18	±30	±20	±35	±25			±25																				
±22	±10	±30	±16	±30		±30	±16	±25	±15	±30	±20	±35	±25			±25																				
±22	±8	±30	±14	±30		±25	±16	±20	±15	±25	±20	±35	±25			±25																				
±22	±8	±30	±14	±30		±25	±16	±20	±12	±25	±18	±35	±25			±25																				
±20	±6	±30	±12	±30		±25	±16	±20	±12	±25	±18	±35	±25			±25																				
±20	±4	±30	±10	±30		±25	±14	±20	±8	±25	±16	±35	±25			±25																				
±20	±2	±30	±10	±30		±25		±20		±25	±14	±35	±25			±25																				
±16		±24	±8	±30		±20		±15		±20	±12	±35	±22			±20																				
±12		±24	±8	±30		±20		±15		±20	±10	±35	±22			±20																				
		±24	±6	±28		±20		±10		±20		±35	±22			±20																				
		±20	±4	±24		±15		±10		±15		±35	±22			±15																				
		±20		±22		±15				±15		±35	±20			±15																				
		±15		±18		±15				±15		±35																								
		±8		±14								±25																								
		±5		±12								±25																								
				±4								±25																								

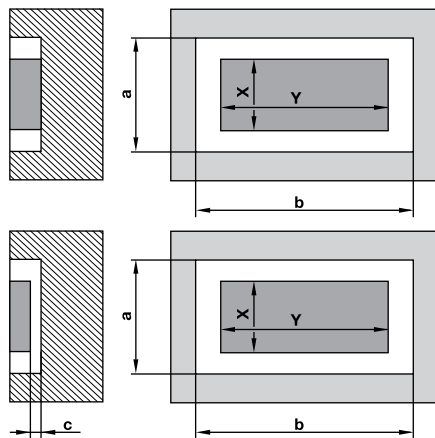


When the available space requires a flat housing, this version is the ideal choice.
For direct connection to the controller

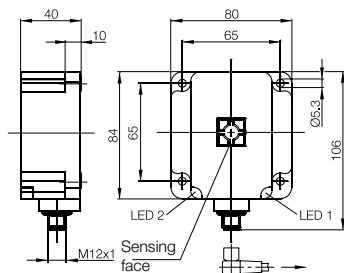
FERROIDENT/Metal Mount

Read/write head with rod type antenna.
Simply use the arrows for alignment.
For fast positioning.

Installation notes for data carriers



**FERROIDENT/
Metal Mount**

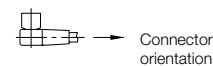


Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



Dimensions		
Housing material		
Serial	RS232	Ordering code
		Part number
IO-Link	10 byte	Ordering code
		Part number
	32 byte*	Ordering code
		Part number
Mounting		
Supply voltage		
Current		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Connection type		
Accessories included		
Connection cable		

Appropriate data carrier

Data carrier clear zone in mm (a)	
Data carrier clear zone in mm (b)	
Data carrier clear zone in mm (c)	
Metallic mounting surface 40x22	
Metallic mounting surface ≥ 200x200	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	5 mm
	10 mm
	12 mm
	15 mm
	18 mm
	20 mm
	22 mm
	25 mm
	30 mm
	32 mm
	35 mm
	40 mm
	45 mm
	50 mm
	52 mm
	60 mm
	65 mm
	70 mm
	80 mm
	90 mm
	100 mm

For installation see technical section.

*8k byte tag for use with 32 byte IO-Link head only.

BIS M Industrial RFID Systems

Read/write head with integrated processor



FERROIDENT/Metal Mount

80x84,5x40 mm

PBT and ASA

BIS00ER

BIS M-451-007-001-00-S115

BIS00LM

BIS M-451-045-001-07-S4

BIS0103

BIS M-451-072-001-07-S4

24 V DC +10 %/-20 % including ripple

≤ 50 mA no-load

0...+70 °C

-20...+85 °C

IP 67

1 connector, round 8-pin serial / round 4-pin IO-Link

Serial includes configuration software

See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

Read/write heads

Read/write heads with integrated processor

Controller
Antenna

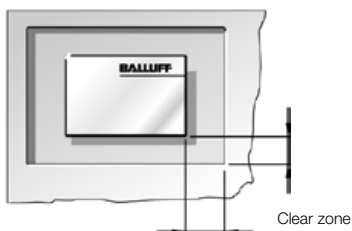
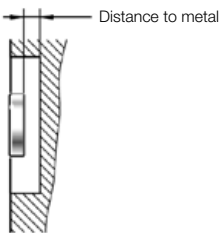
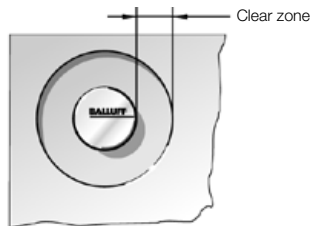
Processors
Gateways
Handheld
Accessories

BIS004F		BIS M-150-02/A		BIS004H		BIS M-151-02/A		BIS00M2		BIS M-152-03/A		BIS00P3		BIS M-153-02/A		BIS00P1		BIS M-154-03/A		BIS0111		BIS M-155-20/A*		BIS0112		BIS M-156-20/A*		
> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 10	> 10	> 240								> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	
> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 50	> 50	> 480								> 200	> 200	> 200	> 200	> 200	> 200	> 200	> 200	
								> 50	> 50	> 2	> 2	> 50																
0-52	0-52			0-52	0-52																0-52	0-52			0-52	0-52		
		0-65	0-65			0-65	0-65																					
0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100		0-100		0-30	0-30	15-30	15-30	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	
0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	0-30	0-30	15-30	15-30	0-100		0-100		0-30	0-30	15-30	15-30	0-52	0-52	0-65	0-65	0-52	0-52	0-65	0-65	
X	Y	X	Y	Y	X	Y	X	X	Y	X	Y	X		Y		X	Y	X	Y	X	Y	X	Y	Y	X	Y	X	
±60	±25	±65	±26	±60	±25	±65	±26	±35	±20			±60		±20		±35	±20			±60	±25	±65	±26	±60	±25	±65	±26	
±60	±25	±65	±26	±60	±25	±65	±25	±35	±20			±60		±20		±35	±20			±60	±25	±65	±26	±60	±25	±65	±25	
±60	±25	±65	±26	±60	±25	±65	±25	±35	±20			±60		±20		±35	±20			±60	±25	±65	±26	±60	±25	±65	±25	
±60	±25	±65	±25	±60	±25	±65	±25	±35	±20	±35	±15	±60		±20		±35	±20	±35	±15	±60	±25	±65	±25	±60	±25	±65	±25	
±60	±25	±65	±25	±60	±25	±65	±25	±35	±20	±35	±15	±60		±20		±35	±20	±35	±15	±60	±25	±65	±25	±60	±25	±65	±25	
±60	±25	±65	±25	±60	±25	±65	±25	±35	±20	±35	±15	±60		±20		±35	±20	±35	±15	±60	±25	±65	±25	±60	±25	±65	±25	
±60	±25	±65	±25	±60	±25	±65	±25	±20	±12	±28	±15	±60		±20		±20	±12	±28	±15	±60	±25	±65	±25	±60	±25	±65	±25	
±60	±25	±65	±25	±60	±25	±65	±25	±20	±12	±28	±15	±60		±20		±20	±12	±28	±15	±60	±25	±65	±25	±60	±25	±65	±25	
±50	±25	±65	±25	±50	±25	±65	±25					±60		±20						±50	±25	±65	±25	±50	±25	±65	±25	
±50	±25	±65	±25	±50	±25	±65	±25					±60		±20						±50	±25	±65	±25	±50	±25	±65	±25	
±50	±20	±50	±25	±50	±20	±50	±25					±60		±20						±50	±20	±50	±25	±50	±20	±50	±25	
±25	±20	±50	±25	±25	±20	±50	±25					±60		±20						±25	±20	±50	±25	±25	±20	±50	±25	
±25	±20	±50	±25	±25	±20	±50	±25					±60		±20						±25	±20	±50	±25	±25	±20	±50	±25	
±25	±8	±25	±25	±25	±8	±25	±25					±60		±20						±25	±8	±25	±25	±25	±8	±25	±25	
			±10				±10					±60		±20								±25	±10			±25	±10	
			±10				±10					±60		±20												±25	±10	
												±60		±20														
												±40		±20														
												±40		±20														



Dimensions			
Housing material			
Subnet16*	RS485	Ordering code	
		Part number	
Serial	RS232	Ordering code	
		Part number	
Serial	RS422	Ordering code	
		Part number	
Serial	USB	Ordering code	
		Part number	
Mounting			
Supply voltage			
Current			
Operating temperature			
Storage temperature			
Protection per IEC 60529			
Connection type			

Installation notes for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	5 mm
	10 mm
	15 mm
	23 mm
	32 mm
	46 mm
	60 mm
	70 mm
	85 mm

For installation see technical section.

* See Gateways on page 118 for multiprocessor configuration.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write head with integrated processor



56x40x24 mm	56x40x24 mm	56x40x24 mm	56x40x24 mm
PC	PC	PC	PC
BIS00W1			
BIS M-410-067-001-04-S92			
	BIS00W2		
	BIS M-410-068-001-00-S115		
		BIS00W3	
		BIS M-410-068-001-02-S115	
			BIS00W4
			BIS M-410-068-001-09-S72
10...30 V DC over BUS	10...30 V DC over BUS	10...30 V DC over BUS	5 V DC
87 mA @ 24 V DC	87 mA @ 24 V DC	87 mA @ 24 V DC	
-20...+50 °C	-20...+50 °C	-20...+50 °C	-20...+50 °C
-40...+85 °C	-40...+85 °C	-40...+85 °C	-40...+85 °C
IP 67	IP 67	IP 67	IP 67
M12 5-pin	M12 8-pin	M12 8-pin	M12 5-pin (B-Coded)

Data carriers common for all heads

BIS00YF	BIS00YE	BIS00YC	BIS00YA	BIS00Y9	BIS00Y7	BIS00Y6	BIS00Y5	BIS00Y4	BIS00Y3	BIS00Y2	BIS00W9	BIS00YL	BIS00YK
> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50
> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50	> 50
0-48	0-40	0-15	0-15	0-32	0-36	0-60	0-68	0-20	23-46	23-46	0-85	0-7	0-10
±30	±25	±15	±15	±20	±25	±35	±40	±44			±40	±11	±12
±30	±25	±15	±15	±20	±25	±35	±40	±44			±40	±8	±10
±25	±20	±8	±8	±16	±25	±35	±40	±44			±40		±5
±25	±20			±10	±20	±35	±40	±32	±25	±24	±35		
±20	±12			±8	±12	±30	±32	±32	±20	±18	±35		
±12						±24	±32	±32	±10	±10	±35		
						±16	±24	±25			±20		

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

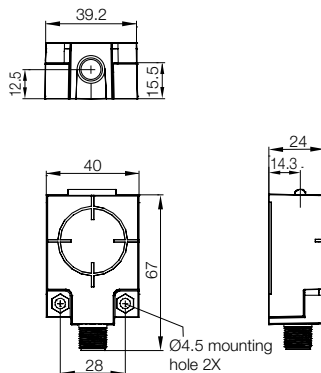
Long range

Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories

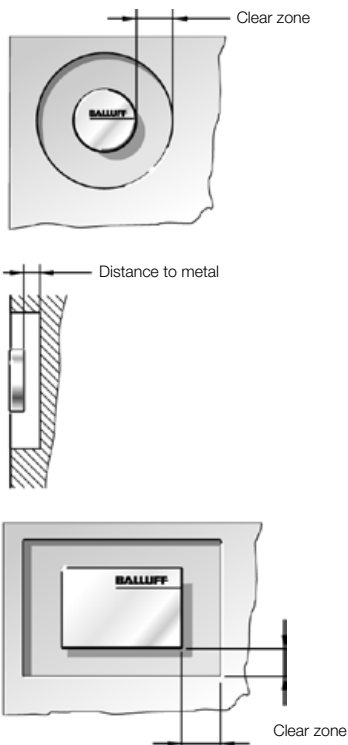




Dimensions			
Housing material			
Subnet16*	RS485	Ordering code	
		Part number	
Serial	RS232	Ordering code	
		Part number	
Serial	RS422	Ordering code	
		Part number	
Serial	USB	Ordering code	
		Part number	
Mounting			
Supply voltage			
Current			
Operating temperature			
Storage temperature			
Protection per IEC 60529			
Connection type			

The Unit may be mounted to wood, plastic fixtures and metal plate surfaces. However, do not recess the controller in metal. For optimal performance, allow 60 mm (2.5 inches) clearance from metallic objects around the sides of the controller.

Installation notes for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	0 mm
	11 mm
	22 mm
	26 mm
	38 mm
	52 mm
	60 mm
	75 mm
	95 mm
	100 mm
	110 mm
	125 mm
	150 mm
	155 mm

For installation see technical section.

* See Gateways on page 118 for multiprocessor configuration.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write head with integrated processor



105x73x24 mm	105x73x24 mm	105x73x24 mm	105x73x24 mm
PC	PC	PC	PC
BIS00W5			
BIS M-411-067-001-04-S92			
	BIS00W6		
	BIS M-411-068-001-00-S115		
		BIS00W7	
		BIS M-411-068-001-02-S115	
			BIS00W8
			BIS M-411-068-001-09-S72
10...30 V DC 87 mA @ 24 V DC -20...+50 °C -20...+70 °C IP 67 M12 5-pin	10...30 V DC 87 mA @ 24 V DC -20...+50 °C -20...+70 °C IP 67 M12 8-pin	10...30 V DC 87 mA @ 24 V DC -20...+50 °C -20...+70 °C IP 67 M12 8-pin	5 V DC -20...+50 °C -20...+70 °C IP 67 M12 5-pin (B-Coded)

Data carriers common for all heads

BIS00YF	BIS M-132-03/L	BIS00YE	BIS M-132-03/L-HT	BIS00YC	BIS M-132-10/L	BIS00YA	BIS M-132-10/L-HT	BIS00Y9	BIS M-133-02/A	BIS00Y7	BIS M-134-10/L-HT	BIS00Y6	BIS M-135-02/L	BIS00Y5	BIS M-135-03/L	BIS00Y4	BIS M-135-03/L-HT	BIS00Y3	BIS M-135-07/L	BIS00Y2	BIS M-135-07/L-HT	BIS00W9	BIS M-136-03/L	BIS00YK	BIS M-130-07/L						
> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10						
> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100	> 100							
0-80	0-70	0-26	0-22	38-52	0-60	0-100	0-110	0-125	11-95	11-75	0-155	0-13																			
±50	±42	±20	±20	±32	±50	±62	±65	±65	±52	±50	±90	±4																			
±50	±42	±20	±20	±32	±50	±62	±65	±65	±52	±50	±90	±4																			
±40	±39	±15	±10		±30	±50	±62	±65	±52	±50	±90																				
±40	±39	±15			±25	±30	±50	±58	±65	±48	±42	±80																			
±35	±36				±25	±25	±50	±58	±62	±48	±42	±80																			
±35	±36					±20	±50	±58	±62	±48	±35	±80																			
±30							±45	±52	±62	±44	±35	±80																			
							±45	±52	±58	±40		±75																			
								±50	±58			±75																			
									±50			±60																			
												±50																			

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

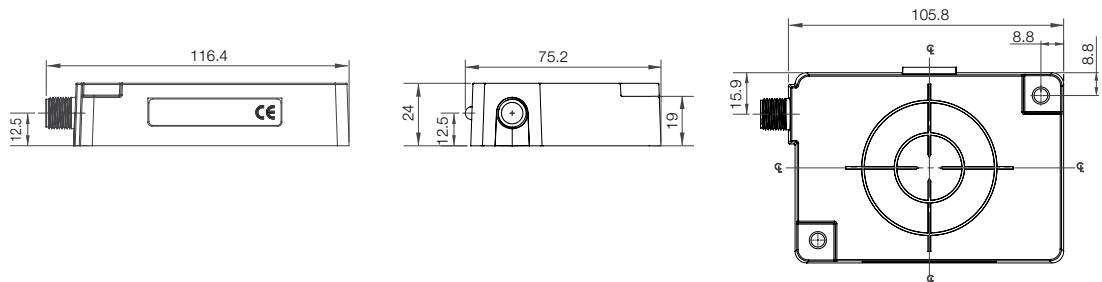
Remote
Read/write heads

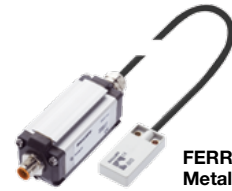
Read/write heads with integrated processor

Long range
Read/write heads

Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories





**FERROIDENT/
Metal Mount**

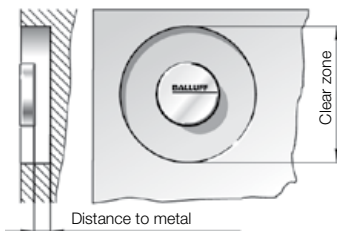
The Balluff BIS-M System combines advantages such as the fully flush installation of data carriers in steel and absolute data reliability with important properties such as:

- Large reading/writing distances of up to 130 mm
- Fast data communication from data carrier via processor to controller
- Seamless integration in intralogistics applications through global standard ISO 15693/14443
- Smallest possible antenna design sizes

The components are specially designed and manufactured for use with transfer systems from Bosch-Rexroth (TS1 and TS2). The design not only takes RFID communication into consideration but also simple assembly.

Can be installed from the kit, depending on the application. Thanks to the robust systems and 20 years of experience with RFID, the described solution is a must for every automation task.

Installation note for data carriers



Dimensions	25x50x10 mm
Housing material	ABS-GF16
Standard	Ordering code
	Part number
	BIS00NY
	BIS M-352-001-S115
Mounting	—
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67
Cable type	0.5 m PUR
Connection to	Processor
Connection cable	See Connectivity section for cable options

	BIS00NZ	BIS M-191-02/A	BIS00M2	BIS M-152-03/A				
Appropriate data carrier								
Data carrier to metal distance in mm	> 27	> 27	> 0	> 0				
Data carrier clear zone in mm	> 27	> 27	> 0	> 0				

Write distance in mm	0-22	0-22	0-17	0-17				
Read distance in mm	0-22	0-22	0-17	0-17				
Offset in mm at distance	X	Y	X	Y				
	0 mm	±25	±5	±22	±8			
	5 mm	±25	±5	±22	±8			
	9 mm	±25	±5	±22	±8			
	10 mm	±25	±5	±22	±8			
	11 mm	±25	±5	±22	±8			
	12 mm	±25	±5	±22	±8			
	15 mm	±25	±5	±15	±8			
	17 mm	±25	±5	±15	±8			
	20 mm	±15	±5					
	22 mm	±15	±5					

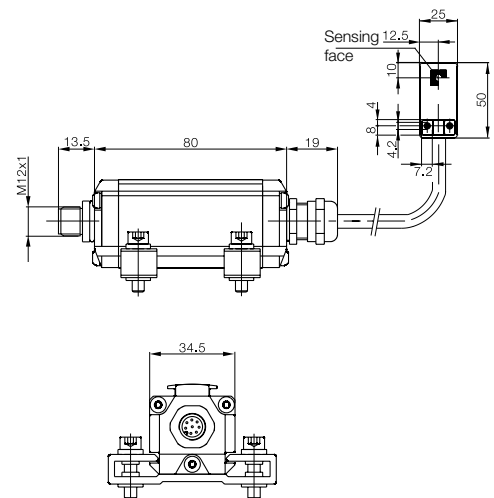
For installation see technical section.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write head



25x50x10 mm ABS-GF16	M18x1 Nickel plated brass
BIS00NK	BIS00P2
BIS M-305-001-S115	BIS M-307-001-S115
0...+70 °C -20...+85 °C	0...+70 °C -20...+85 °C
IP 67	IP 67
0.5 m PUR	0.5 m PUR
Processor See Connectivity section for cable options	Processor See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads
Read/write heads with integrated processor

Block

Read/write heads
Read/write heads with integrated processor

Remote

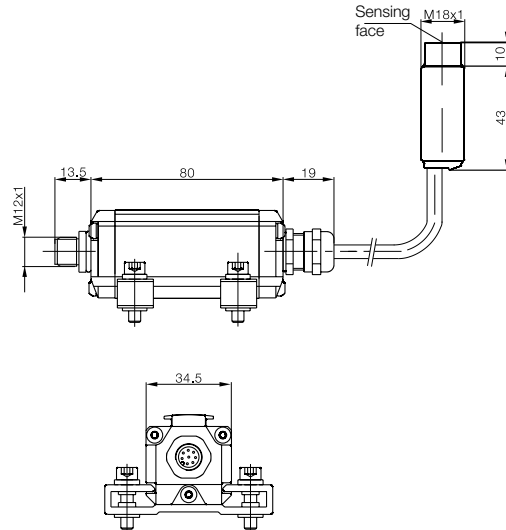
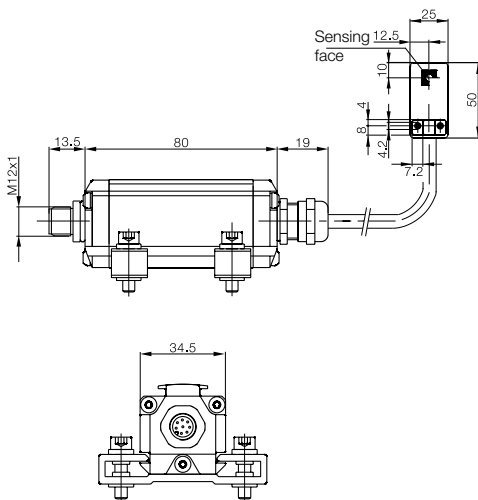
Read/write heads
Read/write heads with integrated processor

Long range

Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

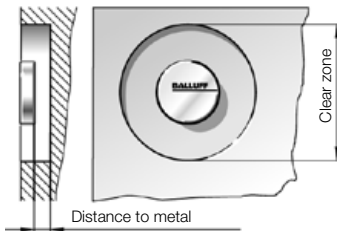
BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0044	BIS M-110-02/L	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0043	BIS M-108-02/L	BIS00M9	BIS M-140-02/A-M6	BIS00R4	BIS M-144-02/A-M6-GY	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0044	BIS M-110-02/L	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A		
>10	>0	>10	>0	>25	>0	>10	>0	>10	>0	>25	>0	>0		>0		>10	>0	>10	>0	>25	>0	>10	>0	>10	>0		
>60	>0	>60	>0	>80	>0	>60	>0	>60	>0	>100	>0	>100		>100		>60	>0	>60	>0	>80	>0	>60	>0	>60	>0		
0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-17	0-11	0-15		0-13		0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5		
±3	±3	±4	±4	±6		±3	±3	±4	±3	±12	±8	±8		±8		±3	±3	±4	±4	±6		±3	±3	±4	±3		
±2		±4	±2	±6		±2		±3	±2	±12	±8	±8		±8		±2		±4	±2	±6		±2		±3	±2		
				±4						±12	±6	±8		±8						±4							
				±2						±10	±4	±6		±6							±2						
										±8		±6															
										±4																	





Dimensions	
Housing material	
For BIS V processor	Ordering code
New Generation*	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Cable type	
Connection to	
Connection cable	

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	5 mm
	9 mm
	10 mm
	11 mm
	12 mm
	15 mm

For installation see technical section.

*See page 114.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write head



M12x1	M18x1
AlMg Si 0.5/nickel plated CuZn	AlMg Si 0.5/nickel plated CuZn
BIS00T7	BIS00T8
BIS VM-306-001-S4	BIS VM-307-001-S4
0...+70 °C	0...+70 °C
-20...+85 °C	-20...+85 °C
IP 67	IP 67
0.5 m PUR	0.5 m PUR
Processor	Processor
See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

Read/write heads

Read/write heads with integrated processor

Controller

Antenna

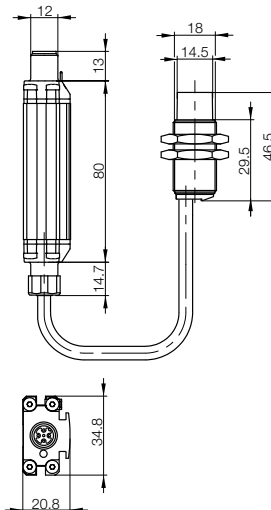
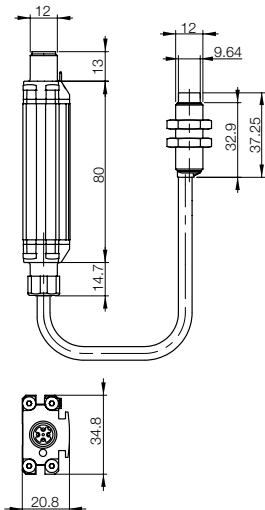
Processors

Gateways

Handheld

Accessories

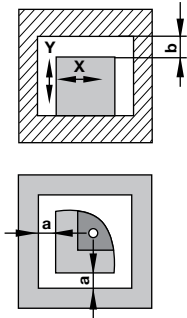
BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS00UC	BIS M-116-03/A	BIS004A	BIS M-122-02/A	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0044	BIS M-110-02/L	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	see data carriers	BIS M-140-02/A-M_	see data carriers	BIS M-142-02/A-M_	see data carriers	BIS M-143-02/A-M_	see data carriers	BIS M-144-02/A-M_
> 5		> 5		> 0	> 5	> 5		> 10	> 0	> 10	> 0	> 25	> 0	> 10	> 0	> 10	> 0	> 0		> 0		> 0		> 0	
> 10		> 10		> 10	> 10	> 10		> 60	> 0	> 60	> 0	> 80	> 0	> 60	> 0	> 60	> 0	> 100		> 100		> 100		> 100	
0-5		0-6		0-1	0-3	0-5		0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-15		0-13		0-10		0-13	
0-5		0-6		0-1	0-3	0-5		0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-15		0-13		0-10		0-13	
±2		±2		±1	±2	±2		±3	±3	±4	±4	±6		±3	±3	±4	±3	±10		±8		±5		±8	
±1		±2			±1			±2		±4	±2	±6		±2		±3	±2	±10		±8		±5		±8	
												±4						±10		±8		±5		±8	
												±4						±10		±8		±5		±8	
												±2						±8		±8				±6	
												±2						±8		±6					
																		±8							





Dimensions	
Housing material	
For BIS V processor	Ordering code
New Generation*	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Cable type	
Connection to	
Connection cable	

Installation note for data carriers



Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm	
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	5 mm
	9 mm
	10 mm
	11 mm
	12 mm
	15 mm
	17 mm

For installation see technical section.

*See page 114.

**8k byte tag for use with BIS V and VM heads only.



Mounting bracket for BIS VM-352
Ordering code: BAM01MY
Part number: BAM MB-XA-010-B07-4
See accessories section.
For BIS VM or M-352 heads only.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

BIS M Industrial RFID Systems

Read/write head



25x50x10 mm AlMg Si 0.5/ABS-GF16	25x50x10 mm AlMg Si 0.5/ABS-GF16
BIS0076	BIS00T9
BIS VM-352-001-S4	BIS VM-305-001-S4
0...+70 °C -20...+85 °C IP 67 0.5 m PUR Processor See Connectivity section for cable options	0...+70 °C -20...+85 °C IP 67 0.5 m PUR Processor See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads
Read/write heads with integrated processor

Block

Read/write heads
Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

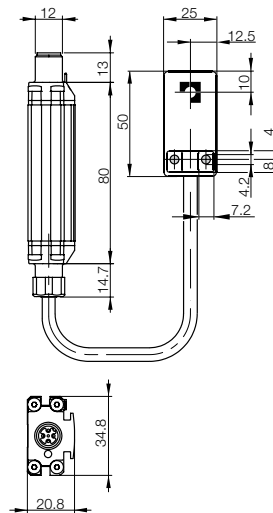
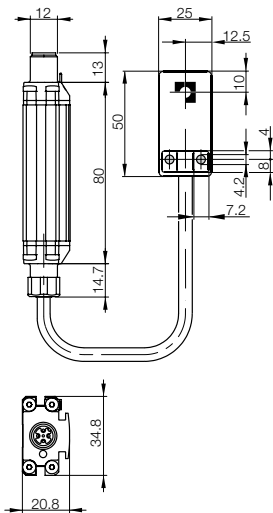
Long range

Read/write heads

Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS00NZ	BIS M-191-02/A										BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0044	BIS M-110-02/L	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A		BIS M-108**	BIS00M9	BIS M-140-02/A-M6	BIS00R4	BIS M-144-02/A-M6-GY
> 27	> 27										> 10	> 0	> 10	> 0	> 25	> 0	> 10	> 0	> 10	> 0	> 25	> 0	> 0		> 0	
> 27	> 27										> 60	> 0	> 60	> 0	> 80	> 0	> 60	> 0	> 60	> 0	> 100	> 0	> 100		> 100	
0-22	0-22										0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-17	0-11	0-15		0-13	
0-22	0-22										0-6	0-4	0-8	0-6	0-13		0-5	0-4	0-7	0-5	0-17	0-11	0-15		0-13	
X	Y										±3	±3	±4	±4	±6		±3	±3	±4	±3	±12	±8	±8		±8	
±25	±5										±2		±4	±2	±6		±2		±3	±2	±12	±8	±8		±8	
±25	±5														±4					±2	±12	±8	±8		±8	
±25	±5														±4						±10	±6	±6		±6	
±25	±5														±4						±10	±4	±6		±6	
±25	±5																				±10		±6			
±25	±5																				±8		±6			
±25	±5																				±4					





For tight mounting spaces

The remote electronics of the integrated version creates extra installation space. For direct connection to the controller

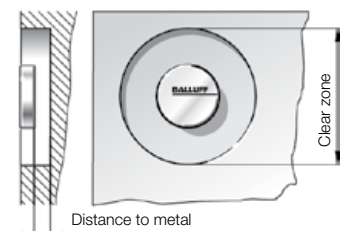
Dimensions	M18x1,5	
Housing material	Nickel plated brass	
Serial	RS232	Ordering code
		BIS00EN
		Part number
		BIS M-402-007-002-00-S115
IO-Link	10 byte	Ordering code
		BIS00LW
		Part number
		BIS M-402-045-002-07-S4
	32 byte	Ordering code
		BIS0105
		Part number
		BIS M-402-072-002-07-S4
Mounting	—	
Supply voltage	24 V DC +10 %	
Current	≤ 50 mA no-load / ≤ 150 IO-Link	
Operating temperature	0...+70 °C	
Storage temperature	-20...+85 °C	
Protection per IEC 60529	IP 67	
Connection type	1 connector, round 8-pin serial / round 4-pin IO-Link	
Accessories included	Configuration software	
Connection cable	See Connectivity section for cable options	

Data carriers common for both heads

	BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0044	BIS M-110-02/L	see data carriers	BIS M-116-_/_/A
Data carrier to metal distance in mm	>10	>0	>10	>0	>10	>0	>10	>0	>25	>5	>0	>0
Data carrier clear zone in mm	>60	>0	>60	>0	>60	>0	>60	>0	>80	>20	>20	>20
Write distance in mm	0-5	0-3	0-5	0-3	0-5	0-2	0-5	0-2	0-5	0-7	0-4,5	0-4,5
Read distance in mm	0-5	0-3	0-5	0-3	0-5	0-2	0-5	0-2	0-5	0-7	0-4,5	0-4,5
Offset in mm at distance	0 mm	±3	±2	±3	±2	±3	±2	±3	±2	±8	±4	±3
	5 mm	±2		±2		±2		±2		±8	±3	
	9 mm									±6		
	12 mm									±4		
	15 mm									±4		

Appropriate data carrier

Installation note for data carriers



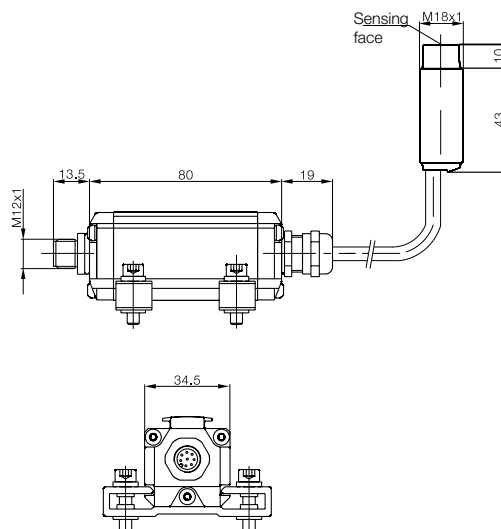
For installation see technical section.

Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round



BIS M Industrial RFID Systems

Read/write head with integrated processor



25x50x10 mm aLmGsl 0.5/ABS-GF16	25x50x10 mm aLmGsl 0.5/ABS-GF16
BIS00RU	
BIS M-402-007-004-00-S115	
BIS00M1	BIS00UY
BIS M-402-045-004-07-S4	BIS M-402-045-005-07-S4-SA1
BIS0106	
BIS M-402-072-004-07-S4	
—	—
24 V DC +10 % ≤ 50 mA no-load / ≤ 150 IO-Link 0...+70 °C -20...+85 °C IP 67 1 connector, round 8-pin serial / round 4-pin IO-Link Configuration software See Connectivity section for cable options	24 V DC +10 % ≤ 50 mA no-load / ≤ 150 IO-Link 0...+70 °C -20...+85 °C IP 67 1 connector, round 4-pin IO-Link Configuration software See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

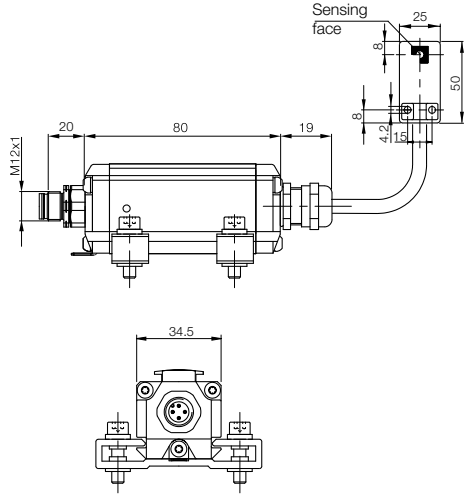
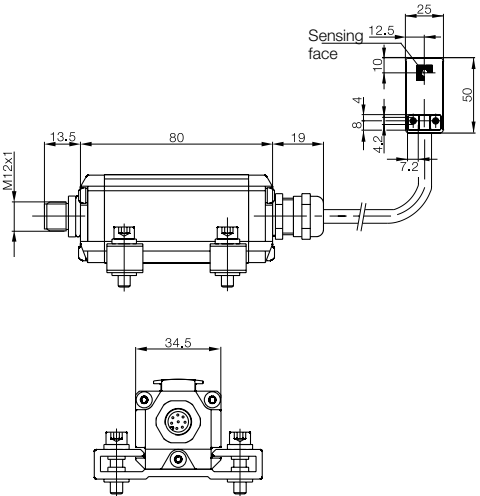
Remote
Read/write heads

Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

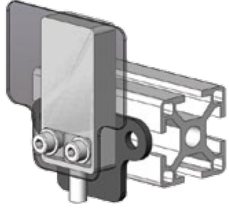
BIS0040	BIS M-105-01/A	BIS0042	BIS M-105-02/A	BIS0048	BIS M-122-01/A	BIS004A	BIS M-122-02/A	BIS0044	BIS M-110-02/L			BIS0044	BIS M-110-02/L					
> 10	> 0	> 10	> 0	> 10	> 0	> 10	> 0	> 25				> 5						
> 60	> 0	> 60	> 0	> 60	> 0	> 60	> 0	> 80				> 50						
0-5	0-3	0-5	0-3	0-5	0-2	0-5	0-2	0-15				0-6						
0-5	0-3	0-5	0-3	0-5	0-2	0-5	0-2	0-15				0-6						
±3	±2	±3	±2	±3	±2	±3	±2	±8				±8						
±2		±2		±2		±2		±8				±4						
								±4										
								±4										



Mounting only with included mounting clamps. Values are under rated conditions unless otherwise specified.

Shielding plate **BAM01Y8**. Read/write device use only with FlexLink systems.

For use with BIS M-402-045-005 head only.



BIS M Industrial RFID Systems

Long range read/write head



A Powerful High-frequency Package Ensures Maximum Transparency

- Distances up to 275 mm offer greater flexibility, regardless of the background surface.
- FRAM data carriers ensure virtually unlimited read/write cycles.
- Can be used all over the world thanks to ISO-15693-conformity.
- Status indicators mounted directly on the antenna housing are a valuable feature.
- The robust housing guarantees reliable operation in harsh environments.
- 100 % RFID quality means greater reliability.

One of the challenges of intralogistics is the transportation of constantly changing materials. However, smooth operation and transparent processes are still required in spite of the wide variety of different products. A requirement that is not always easy for RFID systems because metallic surfaces, fluids and dirt really put these systems to the test. Not the HF antenna BIS M-350, however. The antenna is fitted with optimized data carriers that help overcome difficulties of this kind with ease while reliably ensuring maximum transparency. All data can be traced at any time.

The following system versions are available:

- BIS M 350 and 450 (rod antenna)
- BIS M 340 and 440 (circular antenna)

Dimensions	
Housing material	
Standard	Ordering code
	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable	

Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm (a x b)	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	25 mm
	50 mm
	75 mm
	100 mm
	150 mm
	200 mm
	250 mm

For installation see technical section.

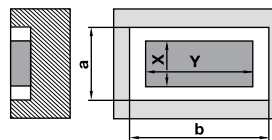
Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

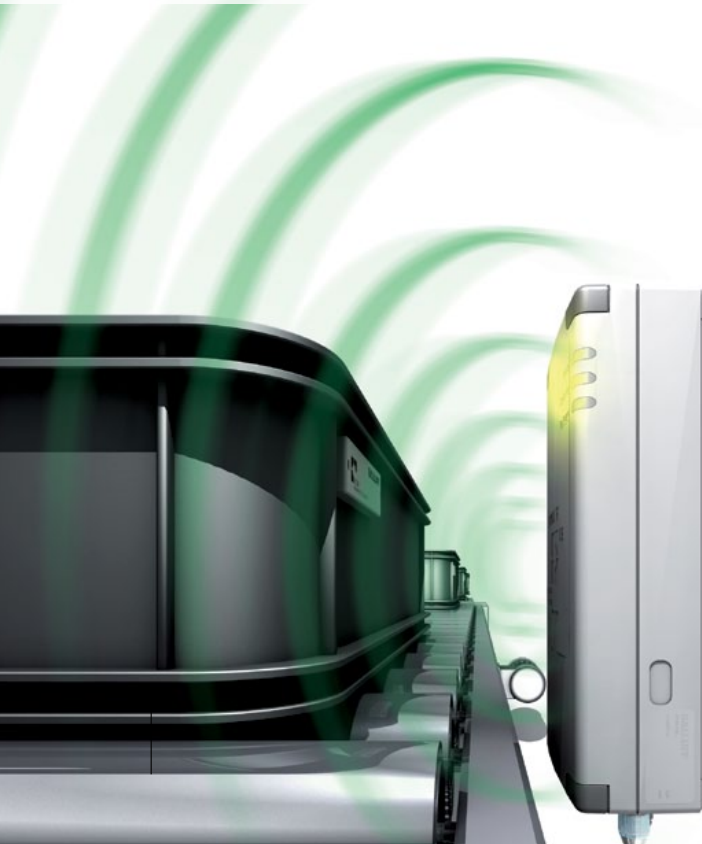
Antenna type:

- rod
- round

Installation note for data carriers



Appropriate data carrier
BIS M-153 and BIS M-107



BIS M Industrial RFID Systems

Long range read/write head



FERROIDENT/Metal Mount



240×120×60 mm	240×120×60 mm
PC	PC
BIS00LZ	BIS00N6
BIS M-350-001-S115	BIS M-340-001-S115
0...+55 °C	0...+55 °C
-20...+85 °C	-20...+85 °C
IP 65	IP 65
Processor	Processor
See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads
Read/write heads with integrated processor

Block

Read/write heads
Read/write heads with integrated processor

Remote

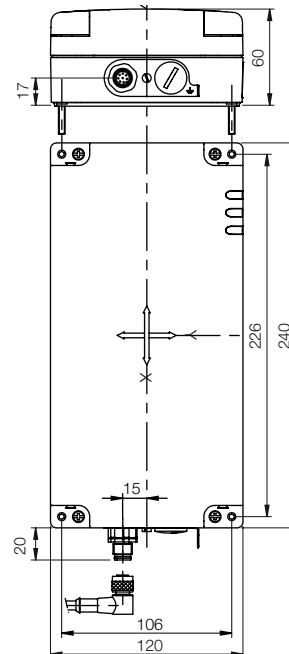
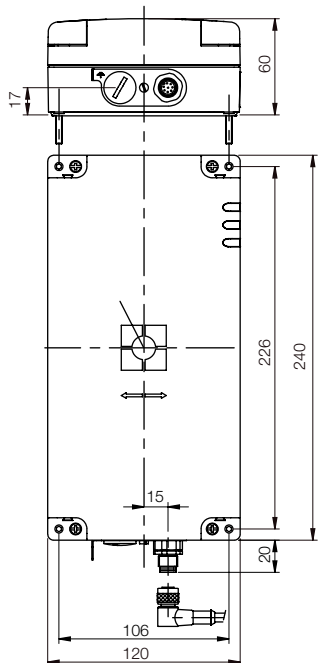
Read/write heads
Read/write heads with integrated processor

Long range Read/write heads

Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS00P3		BIS004H		BIS00LC		BIS00Y4	
BIS M-153-02/A		BIS M-151-02/A		BIS M-107-03/L-H200		BIS M-135-03/L-HT	
0		0		> 120		> 120	
> 240×480		> 240×480		> 240×480		> 240×480	
0-275		0-130		0-100		0-200	
0-275		0-130		0-100		0-200	
X	Y	X	Y	X	Y	X	Y
±200	±100	±60	±140	±50	±100	±80	±100
±200	±100	±60	±135	±50	±100	±80	±100
±200	±100	±60	±125	±50	±95	±80	±100
±200	±100	±55	±100	±45	±85	±80	±100
±200	±100			±40	±75	±80	±100
±200	±100					±80	±100
±175	±100					±80	±100
±100	±100						



BIS M Industrial RFID Systems

Long range read/write head with integrated processor



A Powerful High-frequency Package Ensures Maximum Transparency

- Distances up to 275 mm offer greater flexibility, regardless of the background surface.
- FRAM data carriers ensure virtually unlimited read/write cycles.
- Can be used all over the world thanks to ISO-15693-conformity.
- Status indicators mounted directly on the antenna housing are a valuable feature.
- The robust housing guarantees reliable operation in harsh environments.
- 100 % RFID quality means greater reliability.

One of the challenges of intralogistics is the transportation of constantly changing materials. However, smooth operation and transparent processes are still required in spite of the wide variety of different products. A requirement that is not always easy for RFID systems because metallic surfaces, fluids and dirt really put these systems to the test. Not the HF antenna BIS M-350, however. The antenna is fitted with optimized data carriers that help overcome difficulties of this kind with ease while reliably ensuring maximum transparency. All data can be traced at any time.

Dimensions	
Housing material	
Ethernet TCP/IP	Ordering code
	Part number
Mounting	
Supply voltage	
Current	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection type	
Accessories included	
Connection cable	

Appropriate data carrier

Data carrier to metal distance in mm	
Data carrier clear zone in mm (a x b)	

Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	0 mm
	25 mm
	50 mm
	75 mm
	100 mm
	150 mm
	200 mm
	250 mm

For installation see technical section.

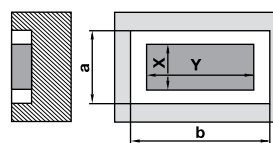
Mounting (see technical section for details):

- flush in steel
- non-flush on steel
- non-metal

Antenna type:

- rod
- round

Installation note for data carriers



Appropriate data carrier
BIS M-153 and BIS M-107



BIS M Industrial RFID Systems

Long range read/write head with integrated processor



FERROIDENT/Metal Mount



240x120x60 mm	240x120x60 mm
PC	PC
BIS00R0	BIS00PZ
BIS M-450-039-001-06-ST2	BIS M-440-039-001-06-ST2
19.2 to 28V DC, ≤10% ripple	19.2 to 28V DC, ≤10% ripple
≤1A	≤1A
0...+55 °C	0...+55 °C
-20...+85 °C	-20...+85 °C
IP 65	IP 65
5-pin panel, 4-pin female D code	5-pin panel, 4-pin female D code
Configuration software	Configuration software
See Connectivity section for cable options	See Connectivity section for cable options

BIS00P3	BIS004H	BIS00LC	BIS00Y4
BIS M-153-02/A	BIS M-151-02/A	BIS M-107-03/L-H200	BIS M-135-03/L-HT
0	0	> 120	> 120
> 240x480	> 240x480	> 240x480	> 240x480

0.-275		0-130		0-100		0-200	
0.-275		0-130		0-100		0-200	
X	Y	X	Y	X	Y	X	Y
±200	±100	±60	±140	±50	±100	±80	±100
±200	±100	±60	±135	±50	±100	±80	±100
±200	±100	±60	±125	±50	±95	±80	±100
±200	±100	±55	±100	±45	±85	±80	±100
±200	±100			±40	±75	±80	±100
±200	±100					±80	±100
±175	±100					±80	±100
±100	±100						

Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

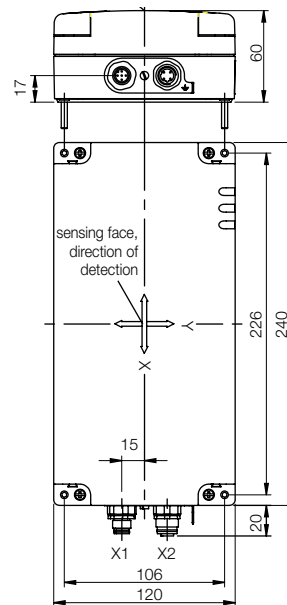
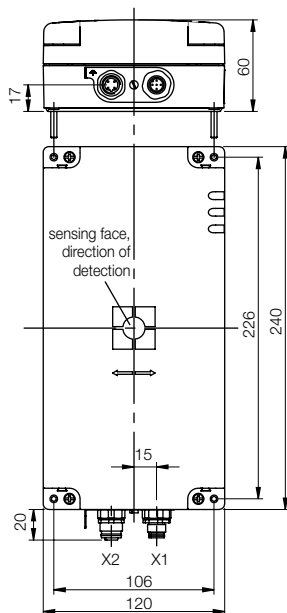
Long range

Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories





With the connection of one of several long range or conveyor mount antennas, these high frequency long range self-contained processors can be used to maximize working distances. This controller/antenna combination allows a maximum working envelop to any applications.




**These controllers must be used with these antennas:
 BISM-370, BISM-371,
 BISM-372, or BISM-373**

Controllers

Dimensions			
Housing Material			
Serial	RS232 w/IO	Ordering code	
		Part number	
Subnet16*	RS485 w/IO	Ordering code	
		Part number	
Ethernet/IP and Ethernet TCP/IP w/IO			
		Ordering code	
		Part number	
Mounting			
Supply voltage, Ripple			
Current			
Operating temperature			
Storage temperature			
Protection per IEC 60529			
Read/write head ports			
Service interface			
Control inputs			
Control outputs			
Connection for			
Connection type			
Accessories included			

*See pages 96-103 for antenna options.

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round

BIS M Industrial RFID Systems

Long range controller



114x112x45 mm	114x112x45 mm	114x112x45 mm
AL	AL	AL
BIS00ZH		
BIS M-620-068-A01-00-ST29*		
	BIS00ZK	
	BIS M-620-067-A01-04-ST30*	
		BIS00ZA
		BIS M-626-069-A01-06-ST32*
12-30 V DC	12-30 V DC	12-30 V DC
≤ 400 mA	≤ 400 mA	≤ 400 mA
-20...+50 °C	-20...+50 °C	-20...+50 °C
-20...+70 °C	-20...+70 °C	-20...+70 °C
IP65	IP65	IP65
1 external	1 external	1 external
no	no	no
1	1	1
2	2	2
com./power + I/O	com./power + I/O	com./power + I/O
8-pin male M12 com + power, 8-pin female M12 I/O	5-pin male M12 com + power, 8-pin female M12 I/O	4-pin female D-code M12 com, 5-pin male M12 power, 8-pin female M12 I/O
2 screws	2 screws	2 screws

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

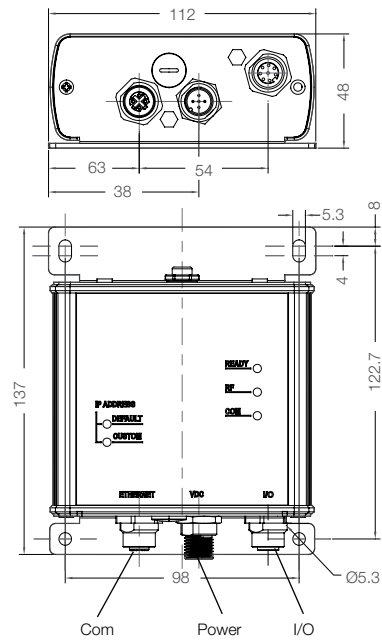
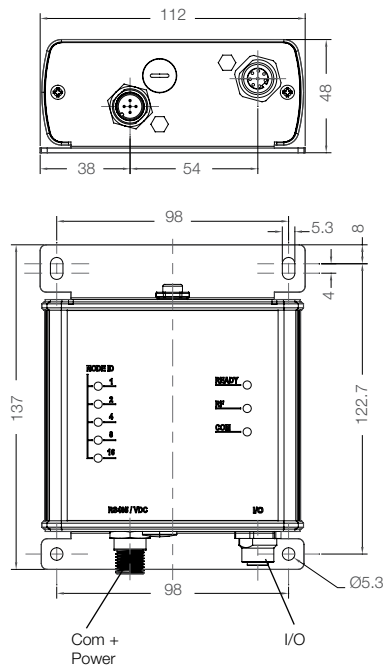
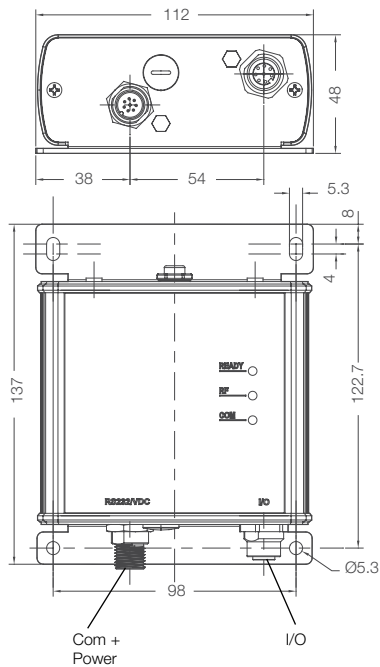
Read/write heads with integrated processor

Long range
Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors
Gateways
Handheld
Accessories



BIS M Industrial RFID Systems

Long range conveyor antenna



This antenna is specially designed to replace a roller on a roller conveyor, allowing tags to read from under a pallet or container.

These antennae work with these controllers:
BIS M-620-068-A01-00-ST29
BIS M-620-067-A01-04-ST30
BIS M-626-069-A01-06-ST32

Dimensions	
Housing material	
Standard only	Ordering code
	Part number
Mounting	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Connection to	
Connection cable (please order separately)	

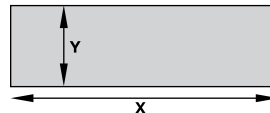
Appropriate data carrier

Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	50 mm
	100 mm

Mounting (see technical section for details):

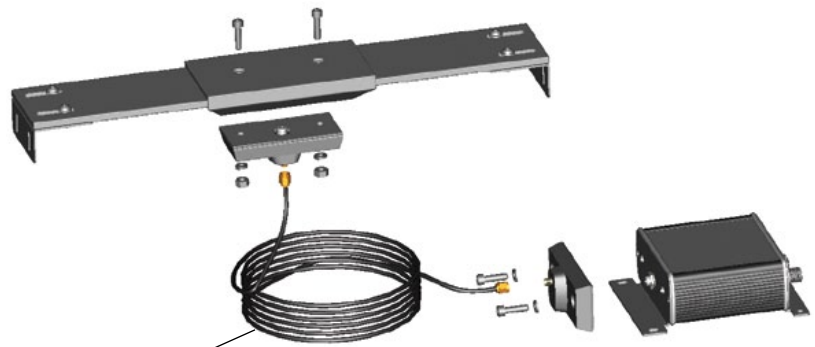
- flush in steel
- non-flush on steel
- non-metal

Installation note



Antenna type:

- rod
- round



External Antenna Connection Kit

Order code: **BIS00WJ**

Part number: BIS M-500-PVC-07-A01/02

BIS M Industrial RFID Systems

Long range conveyor antenna



70x500x6 mm

PA

BIS00WN

BIS M-370-000-A02

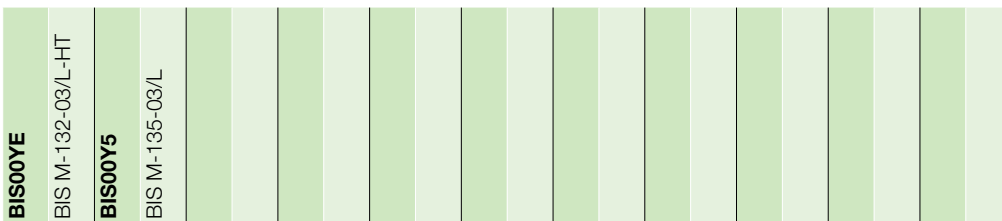
-20...+50 °C

-40...+85 °C

IP65

1 internal RCA jack to processor

Extension cable kit BIS M-500-PVC-07-A01/02



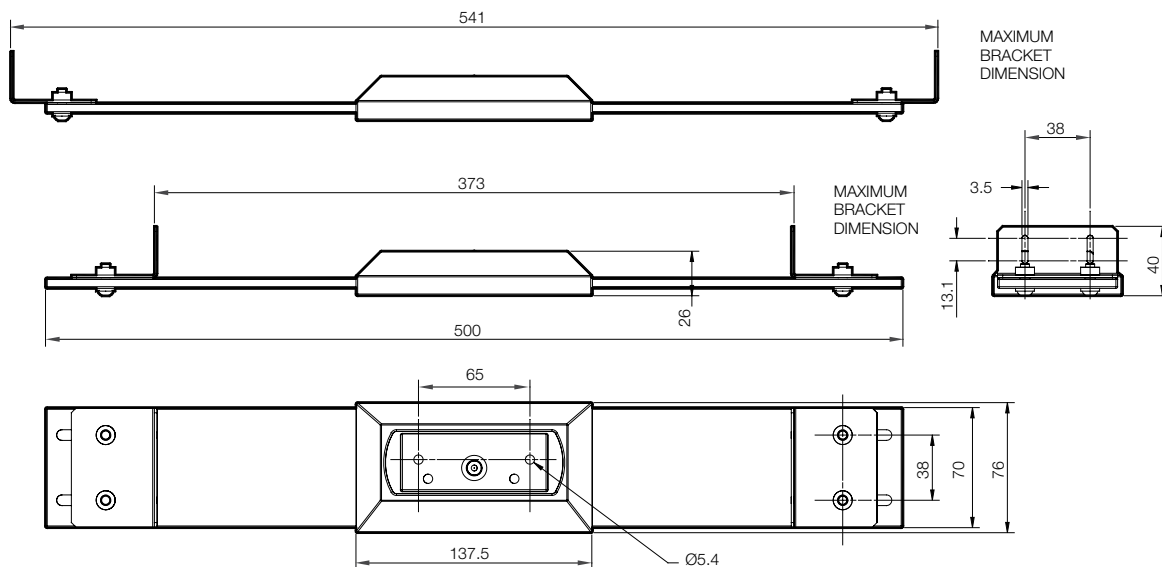
0-57 0-57 0-127 0-127

0-57 0-57 0-127 0-127

X Y X Y

±100 ±10 ±100 ±10

±80 ±10 ±80 ±10



Range of Applications
Selection Criteria
Data carriers

Barrel

Read/write heads

Read/write heads with integrated processor

Block

Read/write heads

Read/write heads with integrated processor

Remote

Read/write heads

Read/write heads with integrated processor

Long range

Read/write heads

Read/write heads with integrated processor

Controller

Antenna

Processors

Gateways

Handheld

Accessories

BIS M Industrial RFID Systems

Long range antenna



This antenna type is well suited for longer range read/write requirements in both logistics and manufacturing line applications.




These antennae work with these controllers:
BIS M-620-068-A01-00-ST29
BIS M-620-067-A01-04-ST30
BIS M-626-069-A01-06-ST32

Dimensions		
Housing material		
Standard only	Ordering code	
	Part number	
Mounting		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Connection to		
Connection cable (please order separately)		



Appropriate data carrier

Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	100 mm
	200 mm

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round



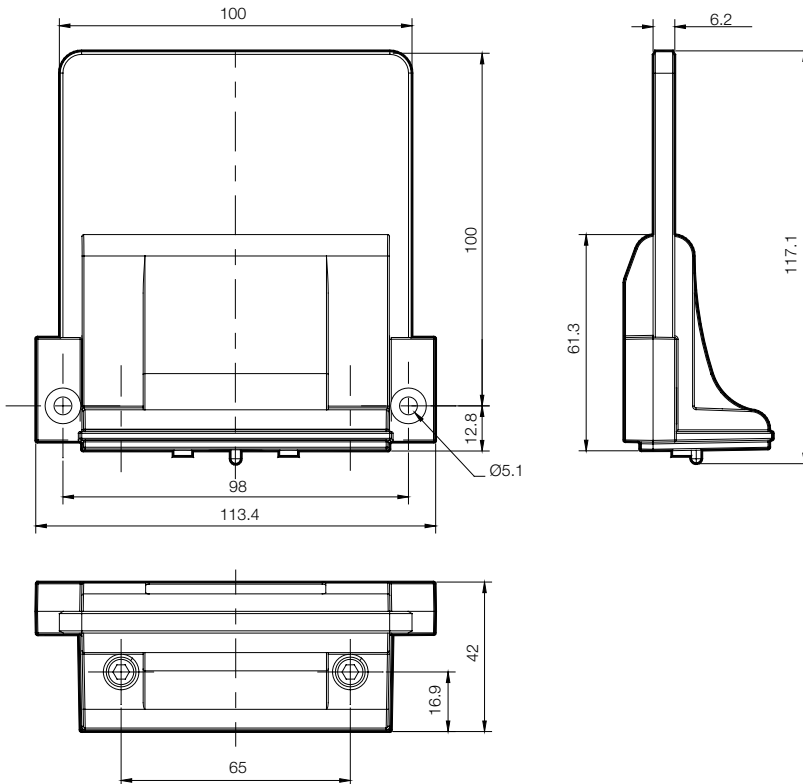
BIS M Industrial RFID Systems

Long range antenna



112x100x6 mm
PA
BIS00WM
BIS M-371-000-A01
—
-20...+50 °C
-40...+85 °C
IP65
1 internal RCA jack to processor
Extension cable kit BIS M-500-PVC-07-A01/02

BIS00YF	BIS M-132-03/L	BIS00YE	BIS M-132-03/L-HT	BIS00Y5	BIS M-135-03/L	BIS00Y4	BIS M-135-03/L/HT	BIS00W9	BIS M-136-03/L	BIS00Y1	BIS M-136-03/L-HT											
0-152	0-152	0-152	0-152	0-230	0-230	0-257	0-257	0-216	0-216	0-254	0-254											
±30	±30	±30	±30	±35	±35	±35	±35	±35	±35	±40	±40											
				±10	±10	±30	±30	±10	±10	±30	±30											



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads
Read/write heads with integrated processor
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

BIS M Industrial RFID Systems

Long range antenna



This antenna type is well suited for longer range read/write requirements in both logistics and manufacturing line applications.




These antennae work with these controllers:
BIS M-620-068-A01-00-ST29
BIS M-620-067-A01-04-ST30
BIS M-626-069-A01-06-ST32

Dimensions		
Housing material		
Standard only	Ordering code	
	Part number	
Mounting		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Connection to		
Connection cable (please order separately)		



Appropriate data carrier

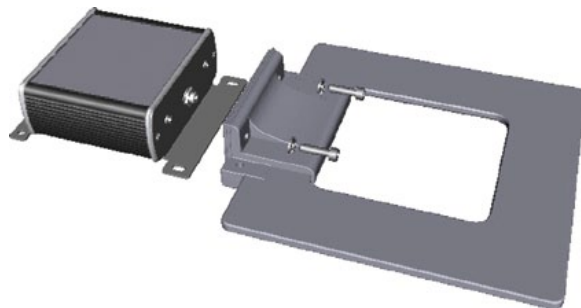
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	100 mm
	200 mm

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round



BIS M Industrial RFID Systems

Long range antenna



200x200x6 mm
PA
BIS00WL
BIS M-372-000-A01
—
-20...+50 °C
-40...+85 °C
IP65
1 internal RCA jack to processor
Extension cable kit BIS M-500-PVC-07-A01/02

BIS00YF	BIS M-132-03/L	BIS00YE	BIS M-132-03/L-HT	BIS00Y5	BIS M-135-03/L	BIS00Y4	BIS M-135-03/L-HT	BIS00W9	BIS M-136-03/L	BIS00Y1	BIS M-136-03/L-HT										
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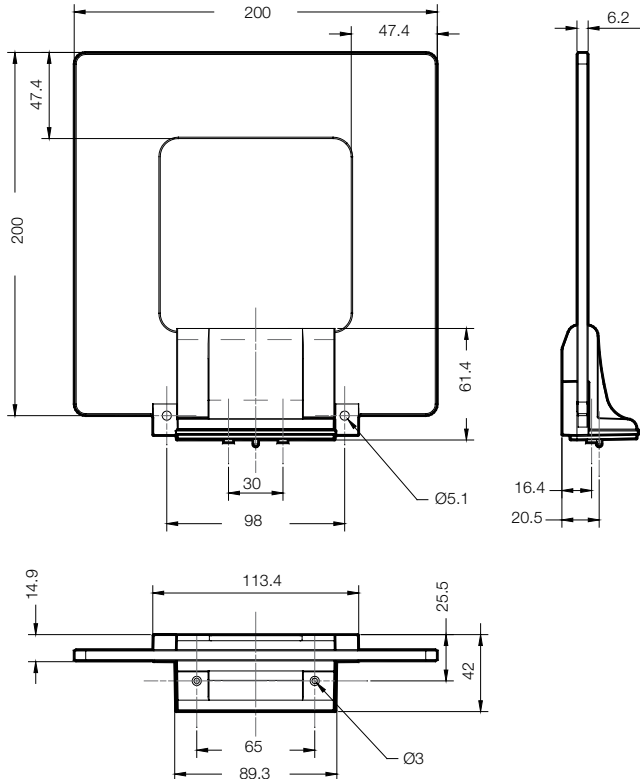
0-216	0-216	0-350	0-381	0-318	0-381																
0-216	0-216	0-350	0-381	0-318	0-381																
±75	±75	±75	±75	±75	±75																
±10	±10	±75	±75	±75	±75																

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads
Read/write heads with integrated processor
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



BIS M Industrial RFID Systems

Long range antenna



This antenna is specially designed to replace a roller on a roller conveyor, allowing tags to read from under a pallet or container.




These antennae work with these controllers:
BIS M-620-068-A01-00-ST29
BIS M-620-067-A01-04-ST30
BIS M-626-069-A01-06-ST32

Dimensions		
Housing material		
Standard only	Ordering code	
	Part number	
Mounting		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Connection to		
Connection cable (please order separately)		



Appropriate data carrier

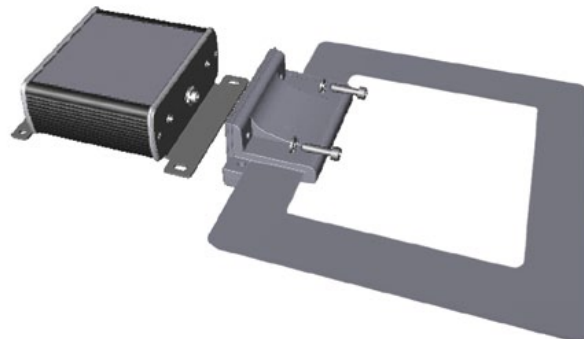
Write distance in mm	
Read distance in mm	
Offset in mm at distance	
	100 mm
	200 mm

Mounting (see technical section for details):

-  flush in steel
-  non-flush on steel
-  non-metal

Antenna type:

-  rod
-  round





BIS M Industrial RFID Systems

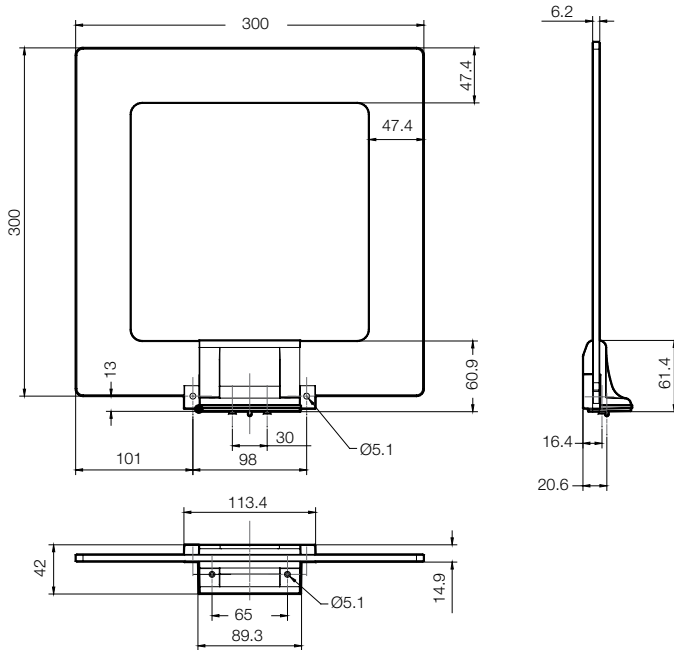
Long range antenna



300x300x6 mm	
PA	
BIS00WK	
BIS M-373-000-A01	
■	
-20...+50 °C	
-40...+85 °C	
IP65	
1 internal RCA jack to processor	
Extension cable kit BIS M-500-PVC-07-A01/02	

BIS00YF	BIS M-132-03/L	BIS00YE	BIS M-132-03/L-HT	BIS00Y5	BIS M-135-03/L	BIS00Y4	BIS M-135-03/L-HT	BIS00W9	BIS M-136-03/L	BIS00Y1	BIS M-136-03/L-HT									
----------------	----------------	----------------	-------------------	----------------	----------------	----------------	-------------------	----------------	----------------	----------------	-------------------	--	--	--	--	--	--	--	--	--

0-238	0-228	0-380	0-406	0-356	0-432															
0-238	0-228	0-380	0-406	0-356	0-432															
±100	±100	±110	±110	±110	±125															
±100	±100	±110	±110	±110	±125															



Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads
Read/write heads with integrated processor
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



Description		
Serial	RS232	Ordering code
		Part number
Supply voltage, Ripple		
Current		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Read/write head ports		
Service interface		
Control inputs		
Control outputs		
Connection for		
Connection type		
Accessories included		
Connection cable		

BIS M Industrial RFID Systems Processors



Processor	Processor
BIS00N1	BIS00J0
BIS M-6000-007-050-00-ST15	BIS M-6000-007-050-00-ST24
19.2 to 28.8V DC, $\geq 10\%$	19.2 to 28.8V DC, $\geq 10\%$
24V DC $\leq 400\text{mA}$	24V DC $\leq 400\text{mA}$
0...+60 °C	0...+60 °C
0...+60 °C	0...+60 °C
IP65 (with connectors)	IP65 (with connectors)
2 external	2 external
RS232	RS232
1 (optocoupler isolated)	1 (optocoupler isolated)
	4
2 read/write heads BIS M-3_ _-001	2 read/write heads BIS M-3_ _-001
X1=24V DC(5-pin), X2=RS232(4-pin)	X1=24V DC(5-pin), X2= IO(8-pin), X3=RS232(5-pin B-coded)
Software	Software
See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

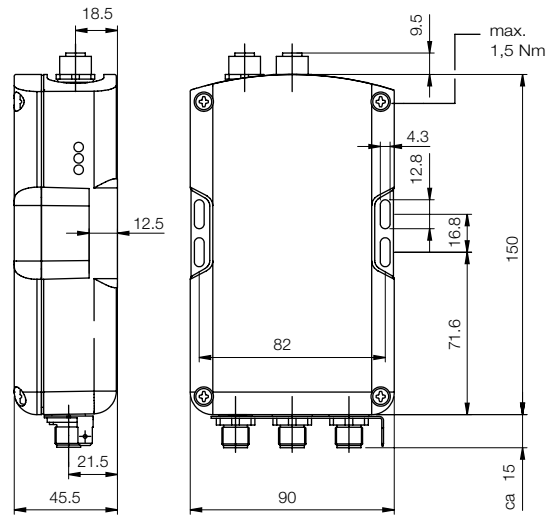
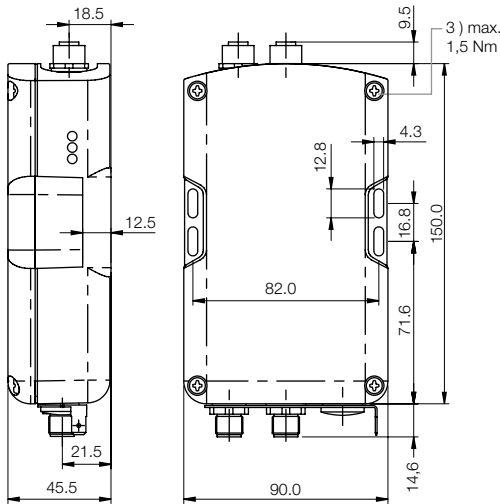
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories





Cost-effective identification
– operate 2 read/write heads
simultaneously

- Selectable division of the data width on the PROFIBUS-DP, 4 to 128 bytes
- Free assigning of the data width for each read/write head
- Optimum data speed, internal cycle time is shorter than the BUS activation time
- Service friendly, all parameter data are stored in an exchangeable memory
- BUS address selectable with switches
- Accepts all read/write heads

Description		
PROFIBUS-DP	Ordering code	
	Part number	
Supply voltage, Ripple		
Current		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Read/write head ports		
Service interface		
Connection for		
Connection type		
Accessories included		
Connection cable		



The **BIS M-6002 processor** features a small form factor and flexible interface options for use wherever ambient conditions require IP 65 protection.

These models are ideal also when no aggressive media are used with PS plastic.

Small, compact, flexible and cost-effective

BIS M Industrial RFID Systems Processors



In robust metal housing

Processor	Processor
BIS00EW	BIS00F0
BIS M-6002-019-050-03-ST11	BIS M-6022-019-050-03-ST14
24 V DC $\pm 20\%$, $\leq 10\%$	24 V DC $\pm 20\%$, $\leq 10\%$
≤ 400 mA	≤ 400 mA
0...+60 °C	0...+60 °C
0...+60 °C	0...+60 °C
IP 65	IP 65
2 external	2 external
RS232	RS232
2 read/write heads BIS M-3_ _-001	2 read/write heads BIS M-3_ _-001
2 connectors round 5-pin, B-coded	2 connectors round 5-pin, B-coded
1 connector round 5-pin	2 connectors round 5-pin
Software GSD file	Software GSD file
See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

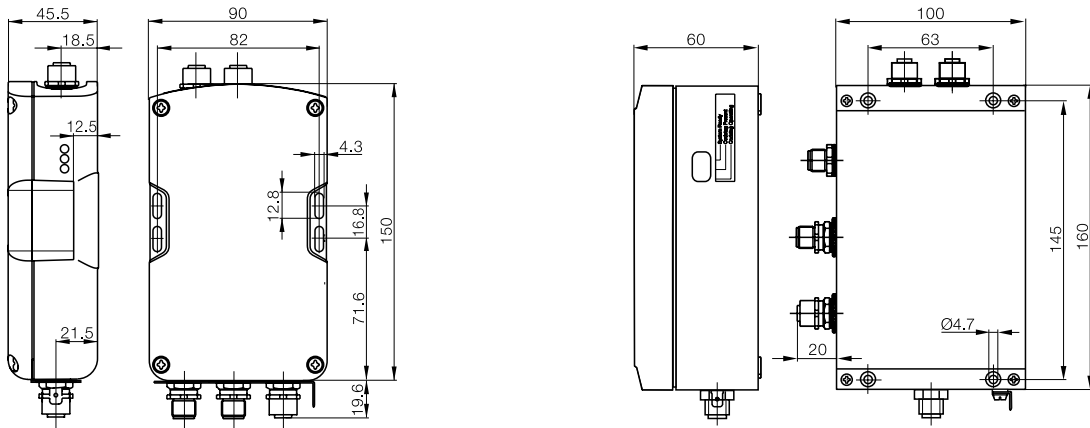
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



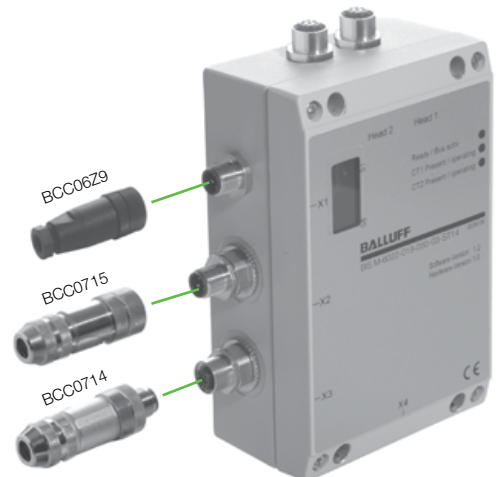
The rugged BIS M-6022 with the die-cast aluminum housing is a small, flexible processor which is available with various interface options.

Great mechanical stability and high chemical resistance.

Rugged, small and flexible



Threaded cover
Ordering code: BAM0114
Part number: BKS 12-CS-01
coded for M12 connector type





**Cost-effective identification
– operate 2 read/write heads
simultaneously**

- Freely selectable buffer size between 0 and 256 bytes
- Service friendly, all parameter data are stored in an exchangeable memory
- Accepts all read/write heads

Description	Ordering code
DeviceNet	Part number
Supply voltage, Ripple	
Current	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Read/write head ports	
Service interface	
Connection for	
Connection type	
Accessories included	
Connection cable	



The **BIS M-6003 processor** features a small form factor and flexible interface options for use wherever ambient conditions require IP 65 protection.

These models are ideal also when no aggressive media are used with PS plastic.

Small, compact, flexible and cost-effective

BIS M Industrial RFID Systems Processors



In robust metal housing

Processor	Processor
BIS00EY	BIS00F1
BIS M-6003-025-050-03-ST12	BIS M-6023-025-050-03-ST13
24 V DC $\pm 20\%$, $\leq 10\%$	24 V DC $\pm 20\%$, $\leq 10\%$
≤ 400 mA	≤ 400 mA
0...+60 °C	0...+60 °C
0...+60 °C	0...+60 °C
IP 65	IP 65
2 external	2 external
RS232	RS232
2 read/write heads BIS M-3_ _-001	2 read/write heads BIS M-3_ _-001
3 connectors round 5-pin	4 connectors round 5-pin
Software EDS file	Software EDS file
See Connectivity section for cable options	See Connectivity section for cable options

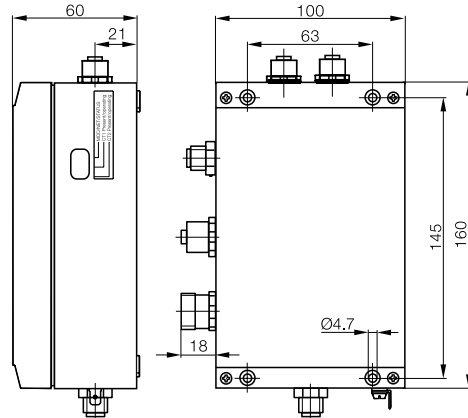
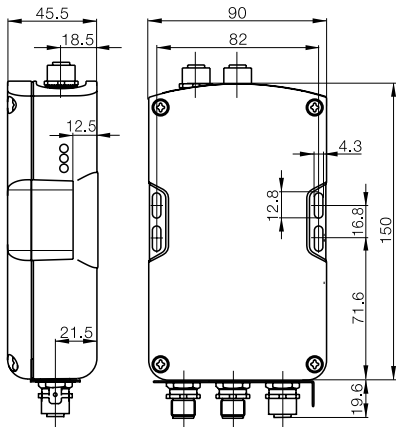
Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

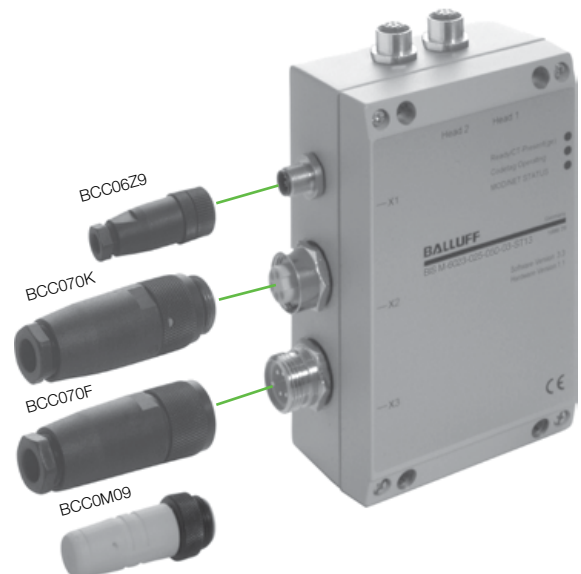
Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna



The rugged **BIS M-6023** with the die-cast aluminum housing is a small, flexible processor which is available with various interface options.

Great mechanical stability and high chemical resistance.

Rugged, small and flexible



Processors
Gateways
Handheld
Accessories



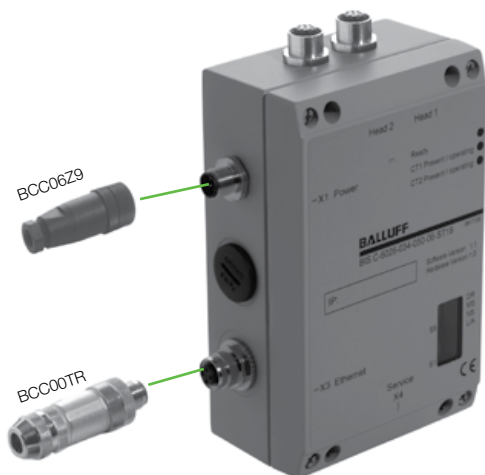
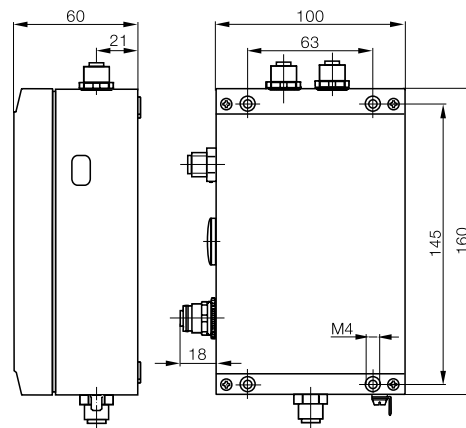
In robust metal housing

Description		Processor
EtherNet/IP	Ordering code	BIS00F2
	Part number	BIS M-6026-034-050-06-ST19
Supply voltage, Ripple		24 V DC ±20 %, ≤ 10 %
Current		≤ 400 mA
Operating temperature		0...+60 °C
Storage temperature		0...+60 °C
Protection per IEC 60529		IP 65
Read/write head ports		2 external
Service interface		RS232
Connection for		2 read/write heads BIS M-3_ _
Connection type		Connector round 4-pin, D-coded 1 connector 5-pin 1 connector 4-pin
Accessories included		Configuration software
Connection cable		See Connectivity section for cable options



**Cost-effective identification –
operate 2 read/write heads
simultaneously.**

Rugged processor for
EtherNet/IP networks





Description		Processor
EtherNet TCP/IP	Ordering code	BIS00EP
	Part number	BIS M-407-039-003-06-S115
Supply voltage, Ripple		24 V DC $\pm 20\%$, $\leq 10\%$
Current		≤ 150 mA
Operating temperature		0...+60 °C
Storage temperature		0...+60 °C
Protection per IEC 60529		IP 67
Read/write head ports		1 external
Service interface		none
Connection for		1 read/write head BIS M-3__-003-__
Connection type		1 connector round 4-pin, D-coded 1 connector round 5-pin
Accessories included		Configuration software
Connection cable		See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

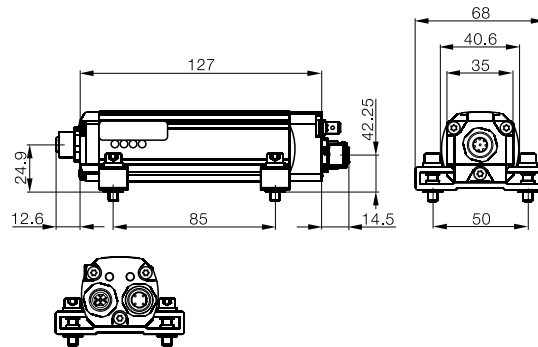
Remote
Read/write heads

Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories

Small and compact –
for one read head
Easy to connect to any
PC-based controller.



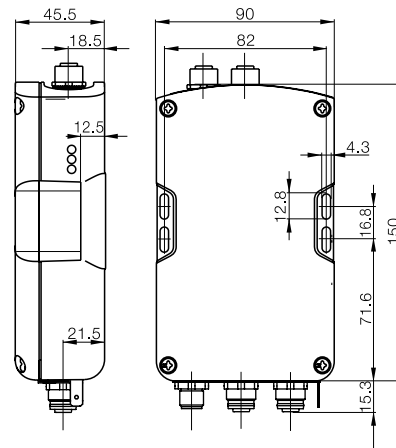
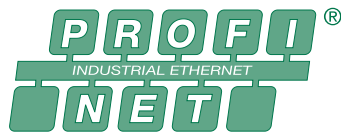
For use only with these read heads

- BIS M-300-**003**-S115
- BIS M-301-**003**-S115
- BIS M-302-**003**-S115
- BIS M-304-**003**-S115
- see page 56/58/60/66

Rugged processors for Profinet



Description		Processor
PROFINET RT	Ordering code	BIS00L7
with IRT-capable 2-PORT switch	Part number	BIS M-6008-048-050-06-ST23
Supply voltage, Ripple		24 V DC $\pm 10\%$, $\leq 10\%$
Current		≤ 400 mA
Operating temperature		0...+60 °C
Storage temperature		0...+60 °C
Protection per IEC 60529		IP 65
Read/write head ports		2 external
Service interface		RS232 internal
Connection for		Read/write heads BIS M-3_ _-001
Connection type		Connector round 5-pin, A-coded 2 connectors 4-pin, D-coded
Accessories included		Configuration software
Connection cable		See Connectivity section for cable options



BIS M Industrial RFID Systems Processors



Processor	Processor
BIS00KZ	BIS00TW
BIS M-6028-048-050-06-ST22	BIS M-6028-048-050-06-ST28
24 V DC $\pm 10\%$, $\leq 10\%$	24 V DC $\pm 10\%$, $\leq 10\%$
≤ 400 mA	≤ 400 mA
0...+60 °C	0...+60 °C
0...+60 °C	0...+60 °C
IP 65	IP 65
2 external	2 external
RS232	RS232
Read/write heads BIS M-3_ _-001	Read/write heads BIS M-3_ _-001
1 connector 5-pin, Push-pull AIDA	1 connector 7/8" 5-pin
2 connectors 8-pin, Push-pull RJ45 AIDA	2 connectors M-12 D-coded 5-pin
Connector round 4-pin	Connector round 4-pin
Configuration software	Configuration software
See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

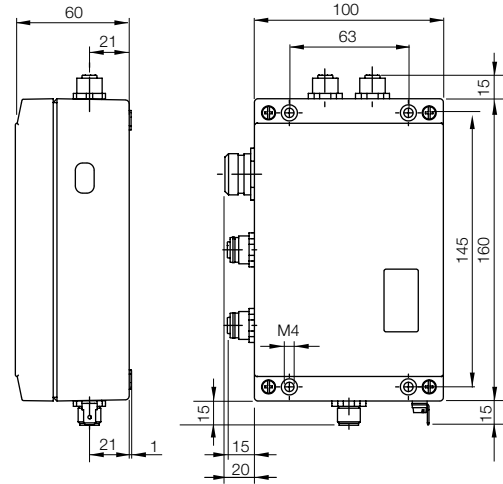
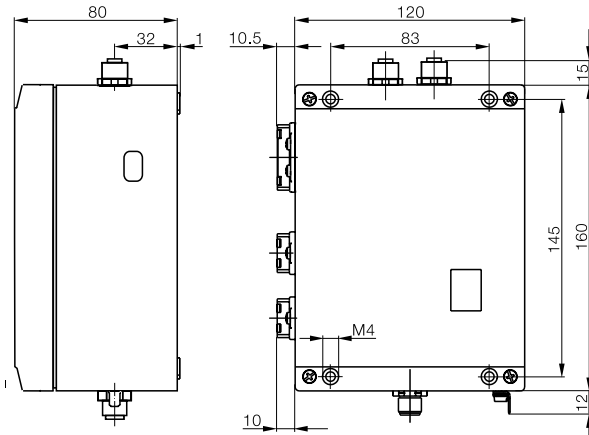
Long range
Read/write heads

Read/write heads with integrated processor

Controller
Antenna

Processors

Gateways
Handheld
Accessories



BIS M Industrial RFID Systems

Processor for Mitsubishi controller

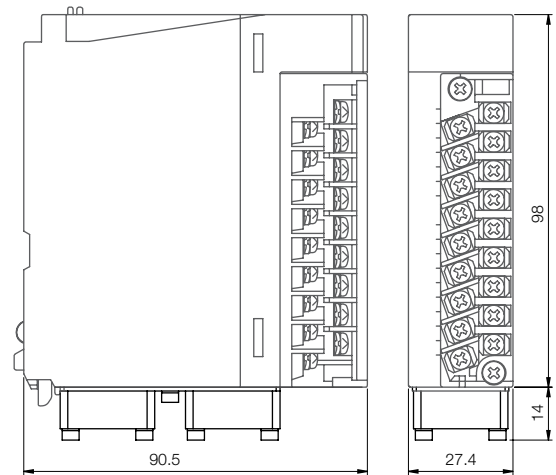


Suitable for every environment

Identification without diversions

Dimensions		Processor
CPU for MELSEC-Q BUS interface by Mitsubishi	Ordering code	BIS00HM
	Part number	BIS M-688-001
CC Link	Ordering code	BIS00RY
	Part number	BIS M-688-002
Supply voltage, Ripple		21.6 to 26.4V DC, inclusive
Current		<500mA
Operating temperature		0...+55 °C
Storage temperature		-25...+75 °C
Protection per IEC 60529		IP 20
Read/write head ports		Up to 2
Connection type		BUS direct

For installation see technical section.





- Flexible use due to a wide range of different combinations of data carriers and antennas
- Up to two antennas per processor
- Tested quality with CC-Link certificate
- Make use of timesaving features: Connector-based cabling, robust housing that is easy to install, preassembled function modules and diagnostics function that enable easy commissioning

The CC Link field bus protocol ensures quick, robust communication between different stations. The new BIS M-699 processor can now be used directly in the field. Conformity with standards ISO 15693 and 14443 as well as globally approved frequency of 13.56 MHz allow worldwide use of this CC-Link processor.

Dimensions	Processor
Ordering code	BIS00LY
Part number	BIS M-699-052-050-03-ST11
Supply voltage, Ripple	LPS CL. 2 supplied only, 21.6 to 26.4V DC, ≥10%
Current	≤800mA
Operating temperature	0...+55 °C
Storage temperature	-25...+75 °C
Protection per IEC 60529	IP 65 (with connectors)
Read/write head ports	2
Service interface	CC-Link
Connection for	2 read/write heads BIS M-3_ _-001
Connection type	X1=24V DC(5-pin), X2= CC-Link In:(Panel Connector 5-pin), X3=CC-Link Out:(Panel connector 5-pin)
Accessories (please order separately)	For X1=BCC06ZG, X2=BCC06ZN, X3=BCC086A

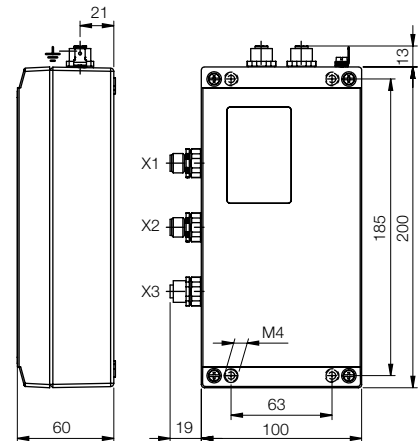
Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads

Read/write heads with integrated processor
Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories



The HF processor BIS M-699 with 13.56 MHz is used directly in the field in all applications where robust controllers are connected directly to CC-Link. Thanks to the wide variety of special data carriers, for example, optimized for flush installation in metal, for temperatures up to 200 °C or for the maximum distance, this HF processor can be used in almost all industrial sectors.

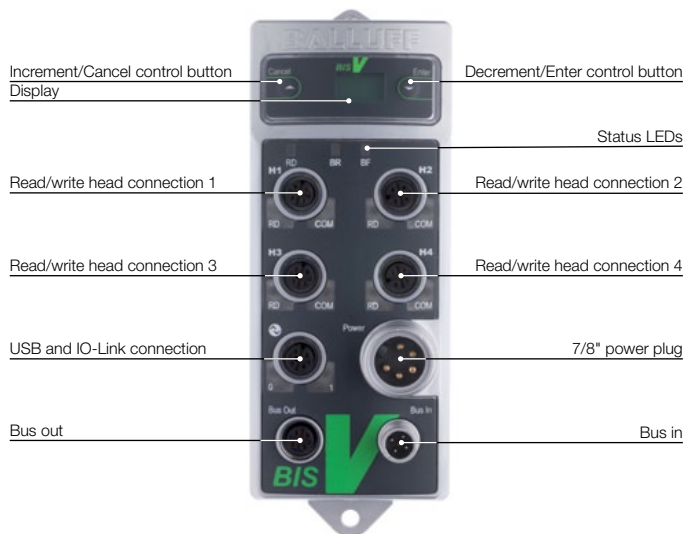


**A new generation system for more flexible RFID:
Combine up to four low and high frequency read/write heads
with I/O in one device.**

The BIS V Radio Frequency Identification (RFID) system is founded on a new generation of RFID processors that maximize your flexibility by providing a single device for both low frequency 125Khz and high frequency 13.56Mhz read/write heads with an IO-Link master port. Combining up to four heads on either frequency with local analog, valve manifold or I/O access/control provides a solution you can apply to many types of RFID applications. This can save cost and time using a single processor platform across your application installation base. The BIS V system also allows you to draw on a single processor family with a wide array of read/write head and RFID tag options for both manufacturing and logistics solutions.

The BIS V RFID system offers a higher level of performance than other systems to solve today's industrial applications. Designed to maximize performance while improving usability out on the line, the BIS V processor provides a functional display and LED's making status and setup easier. And a USB service interface makes connection for setup to today's PC's simple. The BIS V offers these additional functions:

- Four asynchronous 125Khz and 13.56Mhz read/write antenna channels.
- LCD display with control buttons for setting and displaying the Profibus address and data carrier/tags UID.
- An integrated IO-Link master port for connecting discrete or analog I/O, or valve manifolds.
- Intelligent power plug option for saving parameters on the device.
- Industrial IP rated metal housing for any application environment.
- Flexible mounting options for hard-point or DIN rail.



Description		
PROFIBUS-DP	Ordering code	
	Part number	
EtherCAT	Ordering code	
	Part number	
CC-Link	Ordering code	
	Part number	
Ethernet/IP	Ordering code	
	Part number	
Supply voltage, Ripple		
Current		
Operating temperature		
Storage temperature		
Protection per IEC 60529		
Read/write head ports		
Service interface		
Control inputs / outputs		
Connection for		
Connection type		
Accessories included		
Connection cable		



See pages 62, 68, 70, 84, 86 for read/write heads.

The following communication options will become available in 2013/2014:

Ethernet/IP, CC-Link, ProfiNet, and TCP/IP



BIS M Industrial RFID Systems Processors



BIS V RFID Unit	BIS V RFID Unit	BIS V RFID Unit
BIS00T3 BIS V-6102-019-C001		
		BIS00U9 BIS V-6110-063-C002
BIS010P BIS V-6111-073-C003		
	BIS0122 BIS V-6106-034-C004	
24V DC $\pm 10\%$ LPS Class 2, $\leq 10\%$ ≤ 2 A 0...+60 °C 0...+60 °C IP 65 4 - M12 5-pin A-coded IO-Link 1.1, USB 2.0 IO-Link based 4 Read/write head BIS VM-3_ _ _ 7/8" plug, 5-pin power Configuration software See Connectivity section for cable options	24V DC $\pm 10\%$ LPS Class 2, $\leq 10\%$ ≤ 2 A 0...+60 °C 0...+60 °C IP 65 4 - M12 5-pin A-coded IO-Link 1.1, USB 2.0 IO-Link based 4 Read/write head BIS VM-3_ _ _ 7/8" plug, 4-pin power Configuration software See Connectivity section for cable options	24V DC $\pm 10\%$ LPS Class 2, $\leq 10\%$ ≤ 2 A 0...+60 °C 0...+60 °C IP 65 4 - M12 5-pin A-coded IO-Link 1.1, USB 2.0 IO-Link based 4 Read/write head BIS VM-3_ _ _ 7/8" plug, 5-pin power Configuration software See Connectivity section for cable options

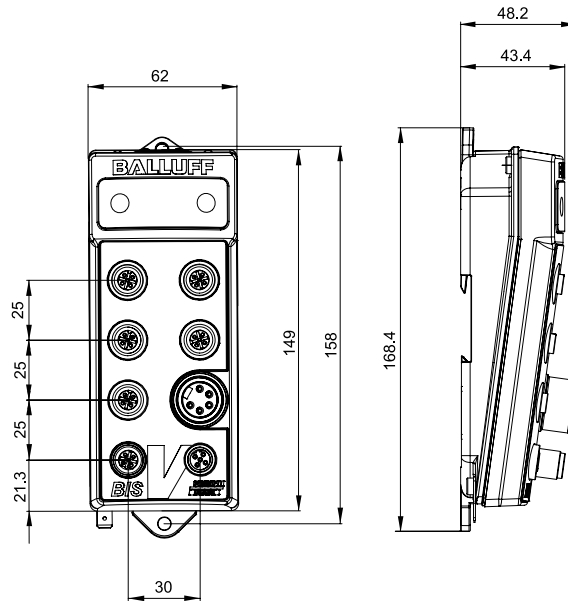
Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads
Read/write heads with integrated processor
Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna

Processors
Gateways
Handheld
Accessories





Dimensions		
Housing material		
RS232	Ordering code	
	Part number	
Ethernet/IP Modbus TCP, TCP/IP	Ordering code	
	Part number	
Profibus	Ordering code	
	Part number	
Ethernet TCP/IP	Ordering code	
	Part number	
Supply voltage, Ripple		
Operating temperature		
Protection per IEC 60529		
Service interface		
Connection for		
Connection type		
Connection cables		

For installation see technical section.

See page 78 and 80 for read/write heads or pages 94-95 long range read/write head and controller options.

BIS M Industrial RFID Systems Gateways



89x76x32 mm	89x76x32 mm	89x76x32 mm	89x76x32 mm
AL	AL	AL	AL
BAE00JL			
BIS Z-GW-001-RS232			
	BAE00JJ		
	BIS Z-GW-001-IND		
		BAE00JK	
		BIS Z-GW-001-PBS	
			BAE00JM
			BIS Z-GW-001-TCP
10-30V DC by net	10-30V DC by net	10-30V DC by net	10-30V DC by net
0...+50 °C	0...+50 °C	0...+50 °C	0...+50 °C
IP 30	IP 30	IP 30	IP 30
none	none	USB	none
1 RS232 port, 1 RS485 port + Power, M12 8 pin, M12 5 pin	1 Ethernet port, RS485 port + Power, RJ45, M12 5 pin	1 Profibus port, 1 RS485 port + Power, USB type B, M12 Sub D 9 pin, M12 5 pin	1 Ethernet port, RS485 port + Power RJ45, M12 5 pin
M12x2 for BIS M-41_-067	M12x2	M12x2	M12x2
See Connectivity section for cable options	See Connectivity section for cable options	See Connectivity section for cable options	See Connectivity section for cable options

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

Long range
Read/write heads

Read/write heads with integrated processor

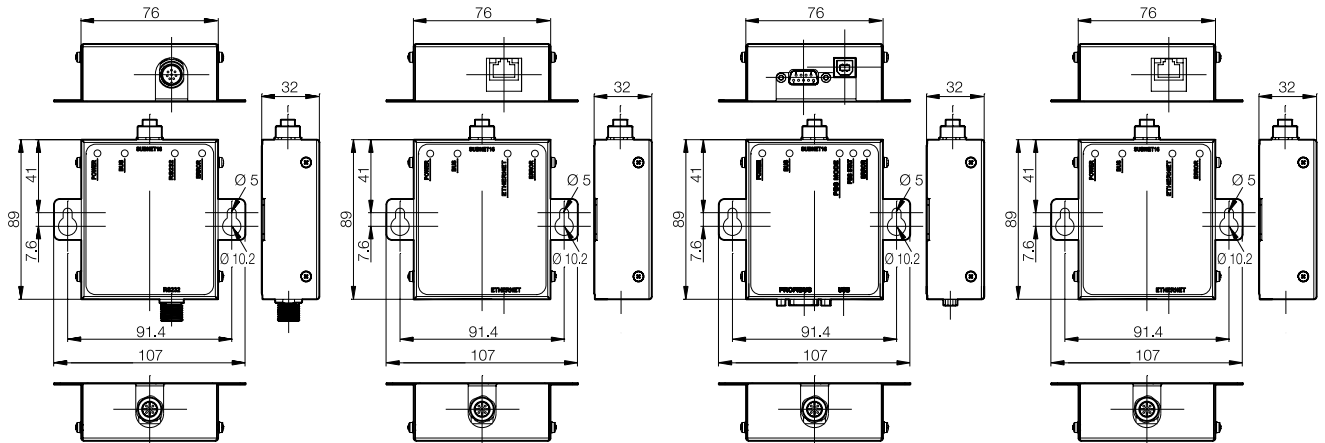
Controller
Antenna

Processors

Gateways

Handheld

Accessories





For enhanced operating convenience

Allows portable writing and reading of BIS M data carriers.

Easy operation thanks to:

- Touchscreen with large Windows CE® color display
- Pre-installed Balluff software and keyboard or stylus

Ideal for poor light conditions and challenging environments. Data transfer via optional Bluetooth or wired USB.

The handheld is also modular for expandability.

Additional convenience

A pistol grip is provided for ergonomic comfort.

Antenna type		
Function		
Housing material		
Standard base	Ordering code	
	Part number	
Standard + WLAN module	Ordering code	
	Part number	
Standard + 1D code reader	Ordering code	
	Part number	
Standard + 2D code reader	Ordering code	
	Part number	
Standard + ID code reader + WLAN	Ordering code	
	Part number	
Standard +2D code reader + WLAN	Ordering code	
	Part number	
Keyboard		
Display		
Supply voltage		
Capacity		
Interface		
Working temperature		
Degree of protection in accordance with IEC 60529		
Read/write head option		
Accessories included		
Appropriate data carrier		
Please order additional accessories separately		

Antenna type:



rod



round

Handheld Standard **BIS M-87_-1-008-x-000_**
Includes charger and stylus



+ Recommended accessories (please order separately)



Description	Pistol grip option	Optional docking station with power supply	Replacement battery 4000mAh rechargeable battery	Hand grip for ergonomic use For read/write heads or read/write heads with integrated processors
Part code	FHW0004	FHW0003	WA3010	BAM012J
Part number	11023836	11023834	162936	BIS Z-HG-002

BIS M Industrial RFID Systems

Standard handheld



General purpose	Rod	Tool ID	Tool ID remote head
Read/write	Read/write	Read/write	Read/write
ABS	ABS	ABS	ABS
BAE00HT		BAE00HY	BAE00J2
BIS M-870-1-008-X-000-3000	BIS M-871-1-008-X-000-3000	BIS M-873-1-008-X-000-3000	BIS M-874-1-008-X-000-3000
BIS M-870-1-008-X-001-3000	BIS M-871-1-008-X-001-3000	BIS M-873-1-008-X-001-3000	BIS M-874-1-008-X-001-3000
BIS M-870-1-008-X-002-3000	BIS M-871-1-008-X-002-3000	BIS M-873-1-008-X-002-3000	BIS M-874-1-008-X-002-3000
BIS M-870-1-008-X-003-3000	BIS M-871-1-008-X-003-3000	BIS M-873-1-008-X-003-3000	BIS M-874-1-008-X-003-3000
BIS M-870-1-008-X-004-3000	BIS M-871-1-008-X-004-3000	BIS M-873-1-008-X-004-3000	BIS M-874-1-008-X-004-3000
BAE00HL	BAE00HM	BAE00HP	
BIS M-870-1-008-X-005-3000	BIS M-871-1-008-X-005-3000	BIS M-873-1-008-X-005-3000	BIS M-874-1-008-X-005-3000
52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric
TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display
3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack
4000 mA/h	4000 mA/h	4000 mA/h	4000 mA/h
RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog
-10...+50 °C	-10...+50 °C	-10...+50 °C	-10...+50 °C
IP 65	IP 65	IP 65	IP 65
Integrated	Integrated	Integrated	Integrated
Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \geq 35$ mm	Charging power supply and stylus for BIS M-Data carrier with rod antenna	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm
Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

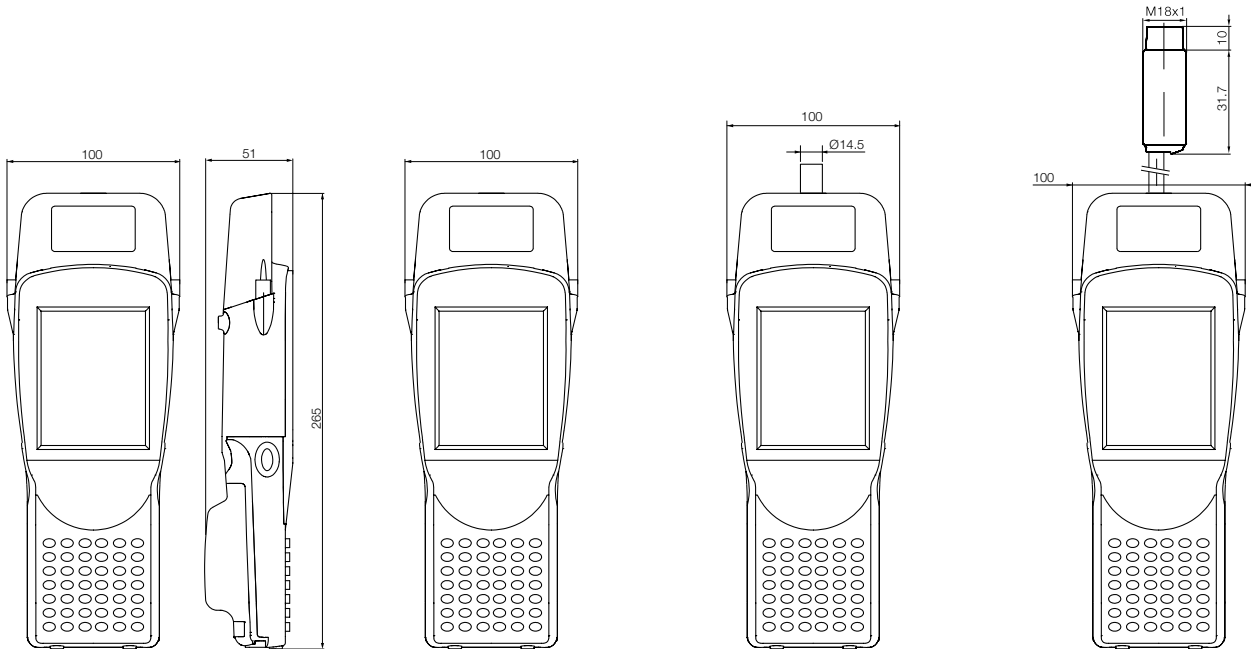
Long range

Read/write heads

Read/write heads with integrated processor

Controller Antenna

Processors
Gateways
Handheld
Accessories





For enhanced operating convenience

Allows portable writing and reading of BIS M data carriers.

Easy operation thanks to:

- Touchscreen with large Windows CE® color display
- Pre-installed Balluff software and keyboard or stylus
- Additional pre-installed user-configurable template GUI software for customized user screens.

Ideal for mobile conditions and challenging environments. Data transfer via optional WLAN or wired USB. The handheld is also modular for expandability.

Additional options:

A pistol grip and desktop docking/charging station.

Template software program provides customizable data formatting and screens. See page 126 for details.

Antenna type		
Function		
Housing material		
Standard base	Ordering code	
	Part number	
Standard + WLAN module	Ordering code	
	Part number	
Standard + 1D code reader	Ordering code	
	Part number	
Standard + 2D code reader	Ordering code	
	Part number	
Standard + ID code reader + WLAN	Ordering code	
	Part number	
Standard +2D code reader + WLAN	Ordering code	
	Part number	
Keyboard		
Display		
Supply voltage		
Capacity		
Interface		
Working temperature		
Degree of protection in accordance with IEC 60529		
Read/write head option		
Accessories included		
Appropriate data carrier		
Please order additional accessories separately		

Antenna type:



rod



round

Handheld Standard **BIS M-87_-1-008-x-000_**
Includes charger and stylus



+ Recommended accessories
(please order separately)



Description	Pistol grip option	Optional docking station with power supply	Replacement battery 4000mAh rechargeable battery	Hand grip for ergonomic use For read/write heads or read/write heads with integrated processors
Part code	FHW0004	FHW0003	WA3010	BAM012J
Part number	11023836	11023834	162936	BIS Z-HG-002

BIS M Industrial RFID Systems

Standard handheld with software



General purpose	Rod	Tool ID	Tool ID remote head
Read/write	Read/write	Read/write	Read/write
ABS	ABS	ABS	ABS
BAE00HU	BAE00K0	BAE00J3	BAE00J3
BIS M-870-1-008-X-000-3001	BIS M-871-1-008-X-000-3001	BIS M-873-1-008-X-000-3001	BIS M-874-1-008-X-000-3001
BIS M-870-1-008-X-001-3001	BIS M-871-1-008-X-001-3001	BIS M-873-1-008-X-001-3001	BIS M-874-1-008-X-001-3001
BIS M-870-1-008-X-002-3001	BIS M-871-1-008-X-002-3001	BIS M-873-1-008-X-002-3001	BIS M-874-1-008-X-002-3001
BIS M-870-1-008-X-003-3001	BIS M-871-1-008-X-003-3001	BIS M-873-1-008-X-003-3001	BIS M-874-1-008-X-003-3001
BIS M-870-1-008-X-004-3001	BIS M-871-1-008-X-004-3001	BIS M-873-1-008-X-004-3001	BIS M-874-1-008-X-004-3001
BIS M-870-1-008-X-005-3001	BIS M-871-1-008-X-005-3001	BIS M-873-1-008-X-005-3001	BIS M-874-1-008-X-005-3001
52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric
TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display
3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack
4000 mA/h	4000 mA/h	4000 mA/h	4000 mA/h
RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog
-10...+50 °C	-10...+50 °C	-10...+50 °C	-10...+50 °C
IP 65	IP 65	IP 65	IP 65
Integrated	Integrated	Integrated	Integrated
Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \geq 35$ mm	Charging power supply and stylus for BIS M-Data carrier with rod antenna	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm
Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip

Range of Applications
Selection Criteria
Data carriers

Barrel
Read/write heads

Read/write heads with integrated processor

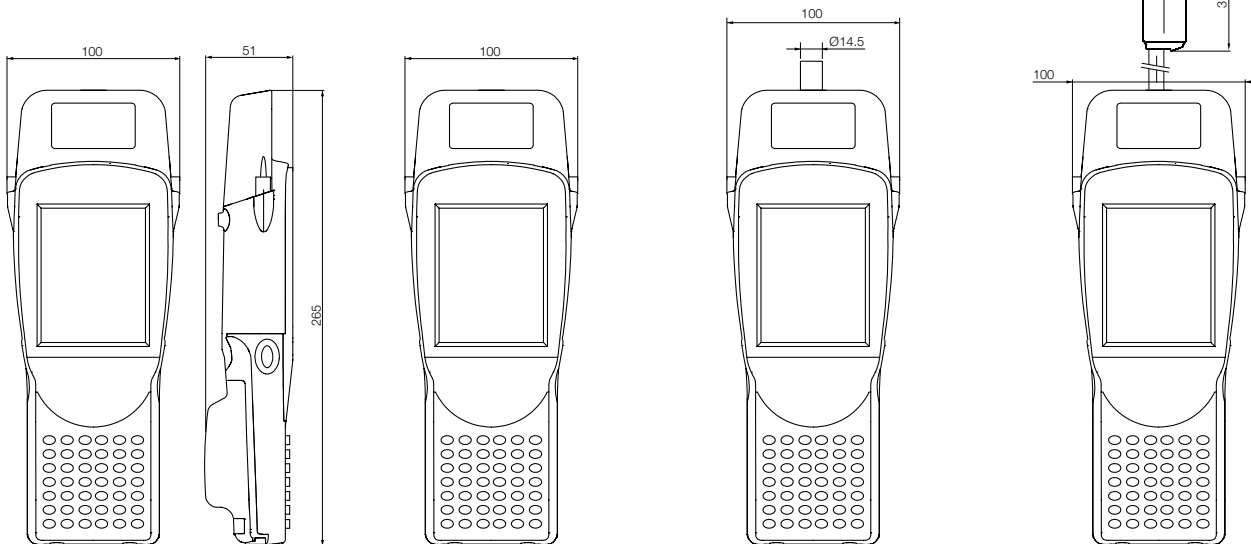
Block
Read/write heads

Read/write heads with integrated processor

Remote
Read/write heads

Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
Controller
Antenna



Processors
Gateways
Handheld
Accessories



For enhanced operating convenience

Allows portable writing and reading of BIS M data carriers.

Easy operation thanks to:

- Touchscreen with large Windows CE® color display
- Pre-installed Balluff software and keyboard or stylus
- Additional pre-installed user-configurable BIS Portal advanced operation and GUI software for customized user screens and data handling options, including bar code reading integration.

Ideal for mobile conditions and challenging environments. Data transfer via optional WLAN or wired USB. The handheld is also modular for expandability.

Additional options:

A pistol grip and desktop docking/charging station.

BISPortal software program provides data formatting and screens, bar code reading and data queries. See page 126 for details.

Antenna type		
Function		
Housing material		
Standard base	Ordering code	
	Part number	
Standard + WLAN module	Ordering code	
	Part number	
Standard + 1D code reader	Ordering code	
	Part number	
Standard + 2D code reader	Ordering code	
	Part number	
Standard + ID code reader + WLAN	Ordering code	
	Part number	
Standard +2D code reader + WLAN	Ordering code	
	Part number	
Keyboard		
Display		
Supply voltage		
Capacity		
Interface		
Working temperature		
Degree of protection in accordance with IEC 60529		
Read/write head option		
Accessories included		
Appropriate data carrier		
Please order additional accessories separately		

Antenna type:



rod



round

Handheld Standard **BIS M-87_-1-008-x-000_**
Includes charger and stylus



+ Recommended accessories
(please order separately)



Description	Pistol grip option	Optional docking station with power supply	Replacement battery 4000mAh rechargeable battery	Hand grip for ergonomic use For read/write heads or read/write heads with integrated processors
Part code	FHW0004	FHW0003	WA3010	BAM012J
Part number	11023836	11023834	162936	BIS Z-HG-002

BIS M Industrial RFID Systems

Standard handheld with software



General purpose	Rod	Tool ID	Tool ID remote head
Read/write	Read/write	Read/write	Read/write
ABS	ABS	ABS	ABS
BAE00JW		BAE00HJ	BAE00JO
BIS M-870-1-008-X-000-3002	BIS M-871-1-008-X-000-3002	BIS M-873-1-008-X-000-3002	BIS M-874-1-008-X-000-3002
BAE00JX		BAE00J7	BAE00JU
BIS M-870-1-008-X-001-3002	BIS M-871-1-008-X-001-3002	BIS M-873-1-008-X-001-3002	BIS M-874-1-008-X-001-3002
BAE00JY			
BIS M-870-1-008-X-002-3002	BIS M-871-1-008-X-002-3002	BIS M-873-1-008-X-002-3002	BIS M-874-1-008-X-002-3002
BAE00JZ			
BIS M-870-1-008-X-003-3002	BIS M-871-1-008-X-003-3002	BIS M-873-1-008-X-003-3002	BIS M-874-1-008-X-003-3002
BAE00K			
BIS M-870-1-008-X-004-3002	BIS M-871-1-008-X-004-3002	BIS M-873-1-008-X-004-3002	BIS M-874-1-008-X-004-3002
BAE00L			BAE00HN
BIS M-870-1-008-X-005-3002	BIS M-871-1-008-X-005-3002	BIS M-873-1-008-X-005-3002	BIS M-874-1-008-X-005-3002
52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric	52 buttons, alphanumeric
TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display	TFT Touchscreen display
3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack	3.7 V rechargeable battery pack
4000 mA/h	4000 mA/h	4000 mA/h	4000 mA/h
RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog	RS232/Balluff Dialog
-10...+50 °C	-10...+50 °C	-10...+50 °C	-10...+50 °C
IP 65	IP 65	IP 65	IP 65
Integrated	Integrated	Integrated	Integrated
Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \geq 35$ mm	Charging power supply and stylus for BIS M-Data carrier with rod antenna	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm	Charging power supply and stylus for BIS M-Data carrier with round coil $\varnothing \leq 34$ mm
Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip	Docking Station and Pistol Grip

Range of Applications
Selection Criteria
Data carriers

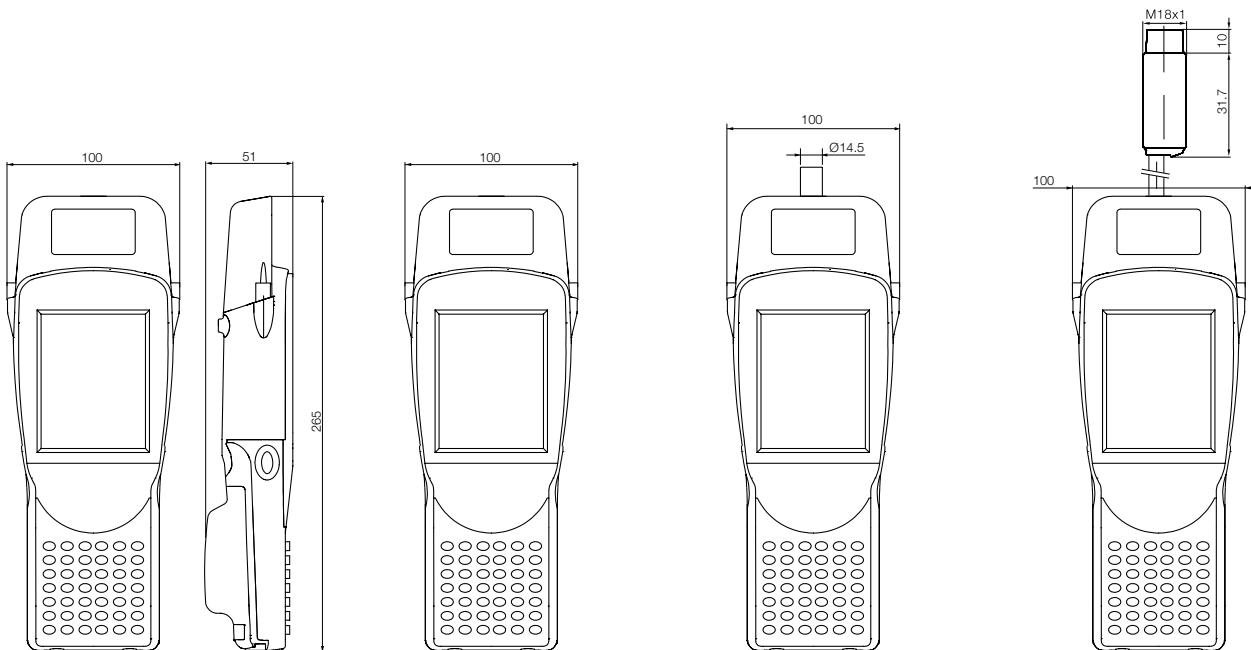
Barrel
Read/write heads
Read/write heads with integrated processor

Block
Read/write heads
Read/write heads with integrated processor

Remote
Read/write heads
Read/write heads with integrated processor

Long range
Read/write heads
Read/write heads with integrated processor
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Data displayed the way you want it

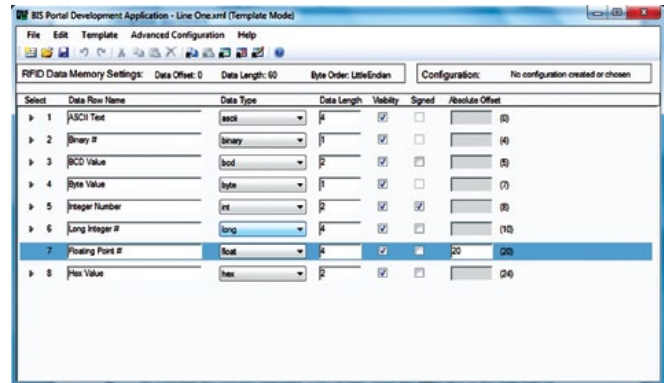
When you require a way to see your critical RFID based data in a legible and logical manner using a mobile device, having a data display solution you can customize without a great deal of time, expense or programing expertise is the answer.

The BIS Template Software solution for Balluff's handhelds allows you to access the data on your RFID tags and display it the way you want it, maximizing access and increasing visibility to your process. It allows you to read and write data to the tag and store or transfer that data to and from the handheld using a simple to customize and easy to understand software interface.

The BISPortal software solution for Balluff's handhelds allows you to get data from your RFID tags and bar codes, then display and search it the way you want, maximizing access and increasing visibility to your process. It allows you to read data from a tag or bar code, write data to a tag, easily search the read data, compare data to a onboard user created database and store or transfer that data to and from the handheld using a simple to customize and easy to understand software interface.

Simple to customize

The Template software has a simple Windows™ PC based configuration interface that uses menu driven, pull-down selection options to configure and display your RFID tags data in a logical and application specific manner. You decide and configure customized descriptions and what format your data is shown in without the need for any programming.



Windows™ PC template Development Application interface

Template driven

The BIS Portal Development Application uses a simple template configuration method to define the RFID and bar code data and setup the way in which that data will be displayed. Using a template format makes it a simple to understand configuration method, allowing you to create your own customized handheld data screens. No need to do your own programming or hire an integrator. This software also makes configuring and uploading your data to the handheld just as easy.

RFID data display types include:

- ASCII
- Binary
- BCD
- Byte
- Integer
- Long integer
- Floating point
- Hexadecimal

Template Software Solution

Benefits of BIS Template software

- Access your RFID data anywhere using a mobile handheld solution.
- Display RFID data the way you want to see it.
- No programming or integration required!

Customizable data display

- Data can be displayed using different data formats.
- Raw data can be grouped together and displayed using defined rows.
- User defined descriptions on each row for easy data identification.

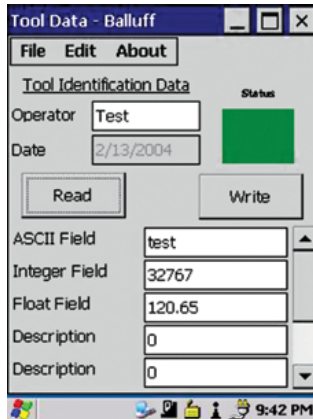
Simple display configuration

- Configure a data "template" using the simple PC configuration interface program.
- Transfer the template to the handheld using the PC interface and USB connection.
- Use the automatically installed icon on the handheld's interface desktop to begin using the created template.

Balluff Tool ID compatibility

The Template software combined with our BIS Tool ID RFID hardware provides a powerful mobile solution to access Tool ID tag data anywhere on the shop floor with the greatest flexibility.

With the use of this software and a Tool ID RFID tag antenna on a handheld, Tool ID data can be accessed, customized and seen the way you need it. Provide unparalleled mobile access to the Tool data at the machine on the shop floor, tool crib, or anywhere in between.



Handheld data display and interface

Portal Software Solution

Benefits of BISPortal software

- Access your RFID and bar code data anywhere using a mobile handheld solution.
- Display and query RFID and bar code data the way you want.
- No programming or integration required!

Customizable data display

- Data can be displayed using different data formats.
- Raw data can be grouped together and displayed using defined rows.
- User defined descriptions on each row make it easy for data identification.

Simple display configuration

- Configure a data "template" using the simple PC configuration interface program.
- Create multiple templates for different applications.
- Easily transfer templates and databases to the handheld using the PC interface and USB connection.



Handhelds interface data display, part, and database query screens

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Data carriers

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Access protection

And here's how it works

Individual access codes are allocated via programmable data keys, which can then be disabled to prevent further programming.

Unauthorized personnel cannot manipulate the data key as a result. The data key is read via an antenna fitted to a special bracket. The processor unit then issues the data.

Different interfaces such as serial, PROFIBUS, DeviceNet™, Ethernet/IP or parallel interfaces enable simple connection to the monitored system. Available for systems BIS C, BIS L and BIS M.

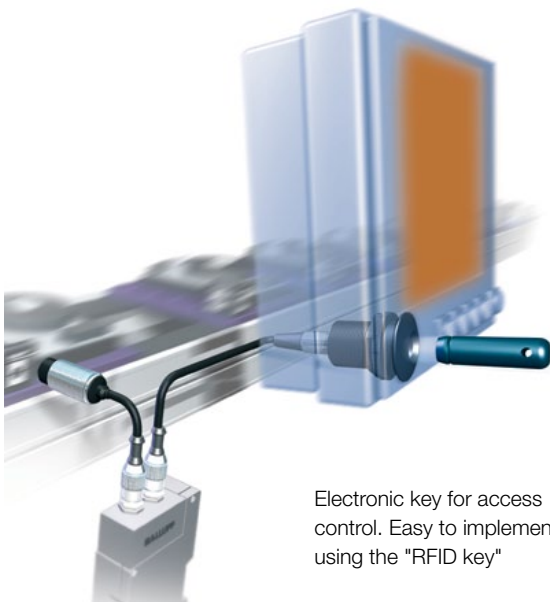
The benefits

The programmable data key allows upgrades or replacements without requiring modifications to the system software.

End users are independent of system providers. The access system is easy to integrate in read/write stations that already use an identification system.

Simply connect the access monitoring antenna to the second channel on the existing processor unit. Hardware expenses are reduced to a minimum and software only requires slight modification in order to process both channels.

Version	
Use	
Ordering code	
Part number	
Operating temperature	
Storage temperature	
Protection per IEC 60529	



Electronic key for access control. Easy to implement using the "RFID key"

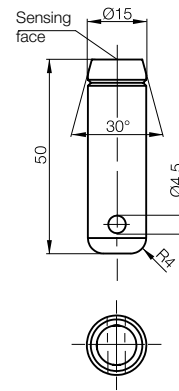
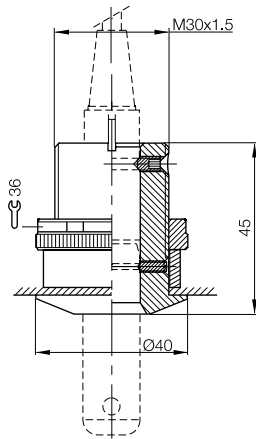
BIS M Industrial RFID Systems

Mechanical accessories



Access protection Attachment for read/write head BIS M-304	Data carrier + Bracket Used with BIS Z-ZA-001
BAM012N	BIS0049
BIS Z-ZA-001	BIS M-122-01/A-ZC1
0...+70 °C	-25...+70 °C
-20...+85 °C	-25...+85 °C
	IP 67

Range of Applications
Selection Criteria
Data carriers



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Read/write heads with integrated processor

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Read/write heads
Read/write heads with integrated processor

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