

Industrial RFID Systems BIS C

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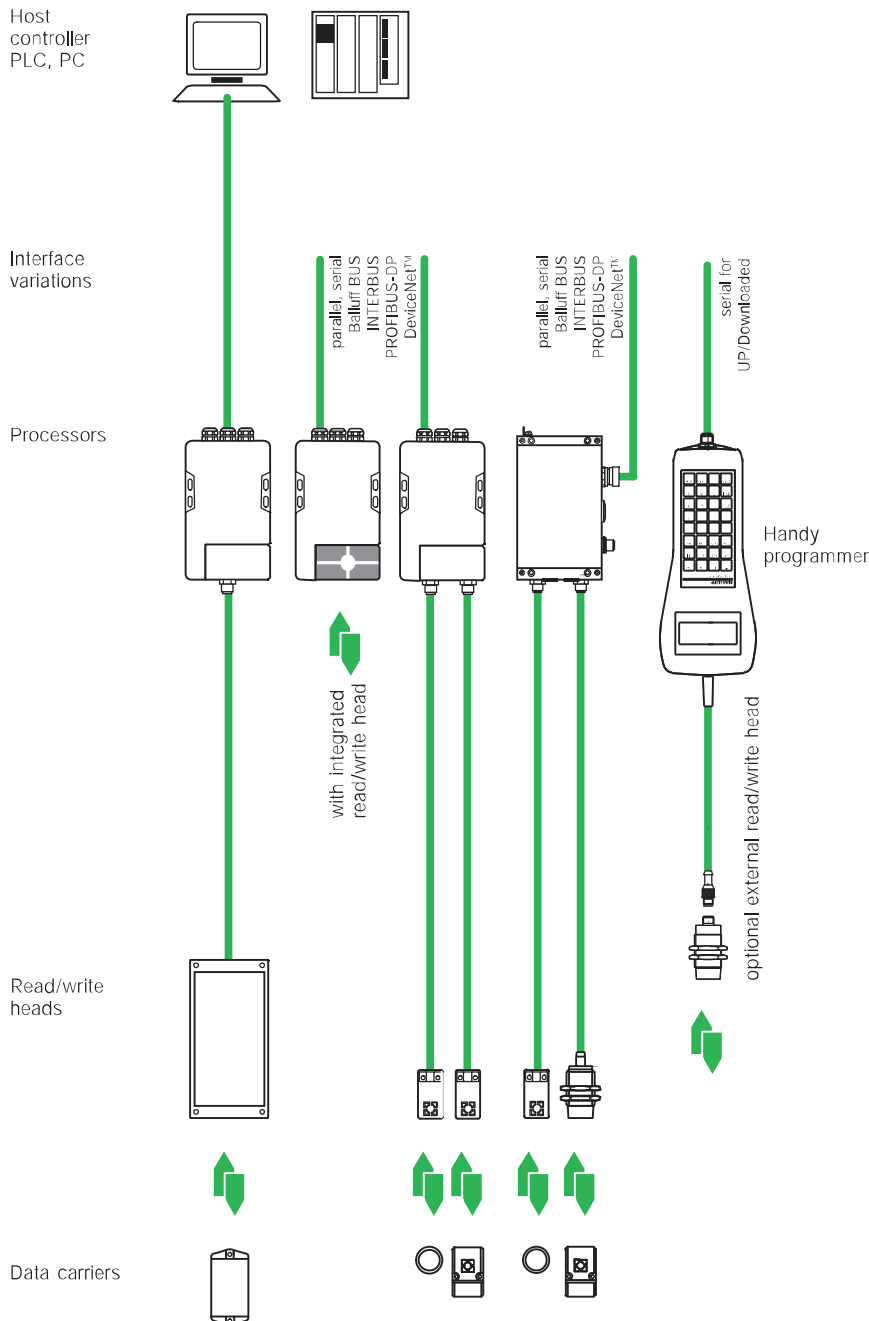


Many variants, wide spectrum – BIS C

BIS C

Combine BIS C components according to your needs

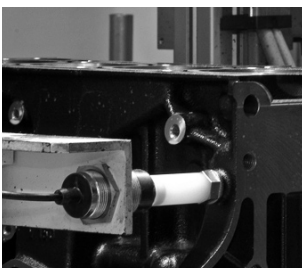
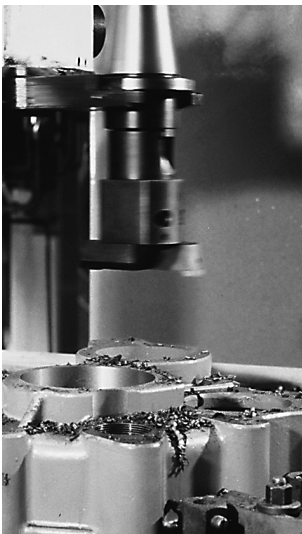
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Industrial RFID Systems BIS C

Wide range of applications, many different variants

The versatile BIS C is ideal for a wide range of applications. Select the most suitable BIS C system for your application from the table.



Data carrier	Tools		Production			
	Data storage on machine tools		Tool and die management		Assembly conveying systems	
	Tool holder collar	Retention knob	On tool	Dies	Pallets	On part
BIS C-100-05/A	■		■			■
BIS C-103-05/A	■	■		■	■	■
BIS C-104-11/A					■	
BIS C-104-32/A					■	
BIS C-105-05/A	■	■	■	■		■
BIS C-108-05/L				■	■	
BIS C-108-11/L				■	■	
BIS C-108-32/L				■	■	
BIS C-108-05/L-SA2					■	
BIS C-108-11/L-SA2					■	
BIS C-117-05/A				■	■	
BIS C-117-05/L				■	■	
BIS C-117-11/L				■	■	
BIS C-121-04/L	■		■			■
BIS C-121-04/L-SA1					■	
BIS C-122-04/L	■	■	■			■
BIS C-122-11/L	■	■	■			■
BIS C-127-05/L						
BIS C-128-05/L				■	■	■
BIS C-128-11/L				■	■	■
BIS C-130-05/L			■		■	
BIS C-130-05/L-SA1			■		■	
BIS C-133-05/L					■	
BIS C-133-11/L					■	
BIS C-134-05/L				■	■	
BIS C-150-05/A					■	
BIS C-150-11/A					■	
BIS C-150-32/A					■	
BIS C-190-05/L					■	
BIS C-190-11/L					■	
BIS C-190-32/L					■	
BIS C-191-05/L					■	
BIS C-191-11/L					■	

Industrial RFID Systems BIS C

Selection criteria for read/write distances

How much data do you require?

How dynamic is your application?

Use the table and combine the BIS C components as you need them.

In three steps you will have selected your BIS C system:

1. First choose the appropriate form factor for your data carrier and the associated read/write heads.
2. Then determine your read/write distance, which also depends on the speed of your system: the faster the data carrier moves, the closer the distance needs to be.

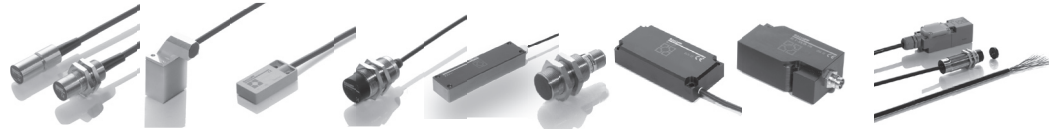
3. Finally determine the desired memory capacity.

This will give you the maximum data security.

Questions?

Whatever your need, whether analysis, selection and return on investment, formats, interfaces and software, installation, disassembly and retrofitting – in short: we are here to help you in every way.

Take advantage of our personal consultation, individual support and worldwide service. And contact us.



0-12

Read/write heads

Data carrier	Memory capacity in bytes	Read/write distance									
		BIS C-300- BIS C-306- Page 32	BIS C-302- Page 33	BIS C-305- Page 34	BIS C-310- Page 37	BIS C-318- Page 43	BIS C-325- Page 38	BIS C-327- Page 42	BIS C-328- -S49 Page 42	BIS C-60R- BIS C-61R- Page 52/53	
BIS C-100-05/A Page 27	1023	0...4 mm	0...4 mm	0...4 mm			0...4 mm			0...6 mm 0...5 mm	
BIS C-103-05/A Page 26	1023	0...3,5 mm	0...3 mm	0...5 mm						0...4 mm	
BIS C-104-11/A BIS C-104-32/A Page 28	2047 8192				0...11 mm 0...12 mm					1...8 mm 1...8 mm	
BIS C-105-05/A Page 26	1023	0...3,5 mm	0...3 mm	0...5 mm			0...5 mm			0...4 mm	
BIS C-108-05/L BIS C-108-11/L BIS C-108-32/L Page 28	1023 2047 8192			0...6 mm 0...6 mm 0...6 mm	0...12 mm 0...12 mm 0...12 mm	0...6 mm 0...6 mm 0...6 mm		0...8 mm		1...8 mm 0...6 mm	
BIS C-108-05/L-SA2 BIS C-108-11/L-SA2 Page 30	1023 2047				0...11 mm 0...4 mm	0...6 mm					
BIS C-117-05/A BIS C-117-05/L Page 27	1023 1023			0...8 mm 0...7 mm	0...12 mm 0...13 mm	0...7 mm				1...8 mm 1...8 mm	
BIS C-121-04/L Page 26	511	0...2 mm	0...1,5 mm	0...2 mm			0...1,7 mm			1...5 mm	
BIS C-121-04/L-SA1 Page 30	511	0...1,2 mm	0...0,7 mm	0...1,2 mm						0...4 mm	
BIS C-122-04/L BIS C-122-11/L Page 26	511 2047	0...2,5 mm 0...2,5 mm	0...2 mm 0...2 mm	0...2,5 mm 0...2,5 mm			0...2,5 mm 0...2,5 mm		0...3 mm 0...3 mm	1...5 mm 1...5 mm	
BIS C-128-05/L BIS C-128-11/L Page 27	1023 2047			0...6 mm 0...6 mm	0...8 mm 0...13 mm	0...7,5 mm 0...7,5 mm		0...8 mm 0...8 mm		3...12 mm 3...12 mm	
BIS C-130-05/L Page 27	1023	0...4 mm	0...3,5 mm	0...7 mm			0...4 mm			1...8 mm	
BIS C-130-05/L-SA1 Page 30	1023	0...4 mm	0...4 mm	0...7 mm	0...8 mm		0...4 mm			1...8 mm	
BIS C-133-05/L BIS C-133-11/L Page 31	1023 2047				0...10 mm 0...10 mm						
BIS C-134-11/L Page 30	2047	0...3 mm		0...6 mm	0...10 mm		0...4 mm				
BIS C-190-05/L BIS C-190-11/L BIS C-190-32/L Page 29	1023 2047 8192				0...11 mm 0...11 mm 0...11 mm	0...8 mm 0...8 mm 0...8 mm		0...8 mm 0...8 mm 0...8 mm			
BIS C-191-05/L BIS C-191-11/L Page 29	1023 2047	0...3,5 mm 0...3,5 mm	0...3 mm 0...3 mm		0...10 mm 0...10 mm		0...3 mm 0...3 mm				

0...2 mm = Data carrier flush mounted in steel

Industrial RFID Systems BIS C

Selection criteria for read/write distances

8-20



Read/write heads

		BIS C-315-__ Page 36		BIS C-319-__ Page 35		BIS C-323-__ Page 39		BIS C-324-__ Page 41		BIS C-326-__ Page 35	
Data carrier	Memory capacity in bytes	Read/write distance									
BIS C-104-11/A BIS C-104-32/A Page 28	2047 8192	1...13 mm 1...13 mm			1...11 mm 0...12 mm		1...11 mm 0...12 mm				
BIS C-108-05/L BIS C-108-11/L BIS C-108-32/L Page 28	1023 2047 8192	0...16 mm 0...16 mm 0...16 mm		0...14 mm 0...14 mm 0...14 mm		0...12 mm 0...12 mm 0...12 mm		0...12 mm 0...12 mm 0...12 mm			
BIS C-108-05/L-SA2 BIS C-108-11/L-SA2 Page 30	1023 2047	0...16 mm 0...16 mm				0...11 mm 0...11 mm		0...11 mm 0...11 mm		0...12 mm 0...12 mm	
BIS C-117-05/A BIS C-117-05/L Page 27	1023 1023	0...15 mm 0...20 mm		0...13 mm 0...15 mm		1...12 mm 0...13 mm		1...12 mm 0...13 mm		0...18 mm	
BIS C-128-05/L BIS C-128-11/L Page 27	1023 2047	0...18 mm 0...18 mm				0...8 mm 0...13 mm		0...8 mm 0...13 mm		0...15 mm 0...15 mm	
BIS C-130-05/L Page 27	1023	0...18 mm		0...13 mm		0...11 mm				0...13 mm	
BIS C-130-05/L-SA1 Page 30	1023	0...18 mm		0...13 mm		0...8 mm		0...8 mm		0...13 mm	
BIS C-133-05/L BIS C-133-11/L Page 31	1023 2047	0...15 mm 0...15 mm				0...10 mm 0...10 mm		0...10 mm 0...10 mm		0...12 mm 0...12 mm	
BIS C-134-11/L Page 30	2047	0...16 mm		0...12 mm		0...10 mm		0...10 mm		0...10 mm	
BIS C-190-05/L BIS C-190-11/L BIS C-190-32/L Page 29	1023 2047 8192	0...20 mm 0...20 mm 0...20 mm				0...11 mm 0...11 mm 0...11 mm		0...11 mm 0...11 mm 0...11 mm		0...18 mm 0...18 mm 0...18 mm	
BIS C-191-05/L BIS C-191-11/L Page 29	1023 2047			0...11 mm 0...11 mm		0...10 mm 0...10 mm		0...10 mm 0...10 mm			

BIS C

- Range of Applications
- Selection Criteria**
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

15-30



Read/write heads

		BIS C-315-__ Page 36	
Data carrier	Memory capacity in bytes	Read/write distance	
BIS C-117-05/L BIS C-117-11/L Page 27	1023 2047	0...20 mm 0...20 mm	
BIS C-127-05/L Page 28	1023	0...30 mm	
BIS C-190-05/L BIS C-190-11/L BIS C-190-32/L Page 29	1023 2047 8192	0...20 mm 0...20 mm 0...20 mm	

25-50



Read/write heads

		BIS C-351-__ Page 43		BIS C-355/05-S92 Page 45	
Data carrier	Memory capacity in bytes	Read/write distance			
BIS C-150-05/A BIS C-150-11/A BIS C-150-32/L Page 29	1023 2047 8192	0...45 mm 0...45 mm 0...45 mm		0...35 mm 0...35 mm 0...35 mm	

> 40



Read/write heads

		BIS C-350-00.3 Page 45		BIS C-351-__ Page 43	
Data carrier	Memory capacity in bytes	Read/write distance			
BIS C-150-05/A BIS C-150-11/A BIS C-150-32/A Page 29	1023 2047 8192	0...100 mm 0...100 mm 0...100 mm		0...45 mm 0...45 mm 0...45 mm	

Industrial RFID Systems BIS C

Data Carriers read/write

Dimensions	Ø 9×4.5	Ø 10×4.5	Ø 12×8	Ø 12×6
Housing material	EP	EP	EP	EP
Antenna type	round	round	round	round
Weight	0.5 g	0.7 g	1.8 g	1.2 g



<p>glue into hole Ø 9 H11</p> <p>PI0120</p> <p>Note installation instructions on page 78/79!</p>	<p>glue into hole Ø 10 H11</p> <p>DIN 69 873</p> <p>PI0119</p> <p>Note installation instructions on page 78/79!</p>	<p>glue into hole Ø 12 H11</p> <p>PI0008</p> <p>Note installation instructions on page 78/79!</p>	<p>glue into hole Ø 12 H11</p> <p>PI0008</p> <p>Note installation instructions on page 78/79!</p>
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BIS C Programmable

511 bytes	Ordering code	BIS C-121-04/L	BIS C-122-04/L	BIS C-103-05/A	BIS C-105-05/A
1023 bytes	Ordering code				
2047 bytes	Ordering code		BIS C-122-11/L		
8 Kbytes	Ordering code				

Operating temperature	0...+70 °C	0...+70 °C	-30...+70 °C	-30...+70 °C
Storage temperature	-30...+85 °C*	-30...+85 °C*	-30...+85 °C*	-30...+85 °C*
Protection per IEC 60529	IP 68	IP 68	IP 68	IP 68

	flush		non-flush		flush		non-flush		flush		non-flush	
Mounting in steel												
Appropriate read/write head with max. read/write distance	BIS C-300	2 mm	3 mm	BIS C-300	2,5 mm	3 mm	BIS C-300	3,5 mm	4 mm	BIS C-300	3,5 mm	4 mm
	BIS C-302	1,5 mm	2,5 mm	BIS C-302	2,0 mm	2,5 mm	BIS C-302	3 mm	3,5 mm	BIS C-302	3 mm	3,5 mm
	BIS C-305	2 mm	3 mm	BIS C-305	2,5 mm	3 mm	BIS C-305	5 mm	6 mm	BIS C-305	5 mm	6 mm
	BIS C-306	2 mm	3 mm	BIS C-306	2,5 mm	3 mm	BIS C-306	3,5 mm	4 mm	BIS C-306	3,5 mm	4 mm
	BIS C-325	1,7 mm	3 mm	BIS C-325	2,5 mm	3 mm	BIS C-325	4,5 mm	5 mm	BIS C-325	4,5 mm	5 mm
				BIS C-328		3 mm						

*also available for up to +120 °C on request

more added value

Flush installation –
ideal for tool identification



Read/Write Cycles

Data carriers	Memory type	Write cycles up to 30 °C	Write cycles up to 70 °C	Read cycles	Memory organization
511 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
1023 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
2047 bytes	EEPROM	1 000 000	500 000	unlimited	64 bytes per block
8 Kbytes	FRAM	unlimited	unlimited	unlimited	64 bytes per block

Industrial RFID Systems BIS C

Data Carriers read/write

\varnothing 16x7	\varnothing 16x10.5	\varnothing 26x6	\varnothing 30x16	\varnothing 30x16 air coil
EP	PA 66	EP	PBT	PBT
round	round	round	round	round
2 g	3 g	6 g	23 g	5.5 g

glue into hole \varnothing 16 H11

PI0057

Note installation instructions on page 78/79!

for wrench

PI0189

Note installation instructions on page 78/79!

Aurflage fläche

PI0042

Note installation instructions on page 78/79!

Note installation instructions on page 78/79!

PI0178

Note installation instructions on page 78/79!

PI0178

BIS C-130-05/L	BIS C-100-05/A	BIS C-128-05/L BIS C-128-11/L	BIS C-117-05/A	BIS C-117-05/L BIS C-117-11/L
-30...+70 °C -30...+85 °C*	0...+70 °C -20...+85 °C	-20...+70 °C -30...+85 °C*	-30...+70 °C -30...+85 °C	-30...+70 °C -30...+85 °C
IP 68	IP 68	IP 68	IP 68	IP 68

	flush	non-flush		flush	non-flush		flush	non-flush		flush	non-flush		flush	non-flush
BIS C-300	4 mm	4 mm	BIS C-300	4 mm	4 mm	BIS C-305**	3.5 mm	6 mm	BIS C-305	8 mm	10 mm	BIS C-305		7 mm
BIS C-305	6 mm	7 mm	BIS C-302	4 mm	4 mm	BIS C-310	8 mm	13 mm	BIS C-310	12 mm	13 mm	BIS C-310		13 mm
BIS C-306	4 mm	4 mm	BIS C-305	4 mm	4 mm	BIS C-315		18 mm	BIS C-315	15 mm	22 mm	BIS C-315		20 mm
BIS C-310		11 mm	BIS C-306	4 mm	4 mm	BIS C-318		7.5 mm	BIS C-319	13 mm	13 mm	BIS C-318		7 mm
BIS C-315		18 mm	BIS C-325	4 mm	4 mm	BIS C-319		14 mm	BIS C-323	12 mm	13 mm	BIS C-319	8 mm	15 mm
BIS C-319	6 mm	13 mm				BIS C-323	8 mm	13 mm	BIS C-324	12 mm	13 mm	BIS C-323		13 mm
BIS C-323		11 mm				BIS C-324	8 mm	13 mm				BIS C-324		13 mm
BIS C-325	4 mm	5 mm				BIS C-326		15 mm				BIS C-326		18 mm
BIS C-326		13 mm				BIS C-327		8 mm						



- Range of Applications
- Selection Criteria
- Data Carriers**
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

Compatible screws for BIS C-128-...data carriers:
DIN EN ISO 2009 M5 (countersunk slot head screw)
DIN EN ISO 7046-1 M5 (countersunk Philips head screw)
Screw tightening torque 2.5 Nm

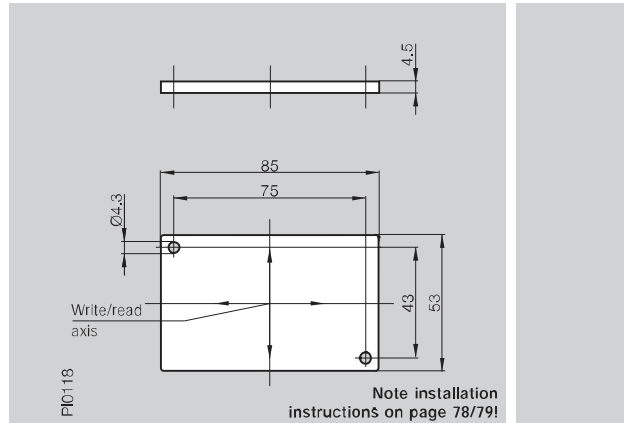
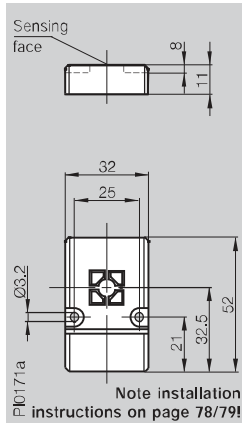
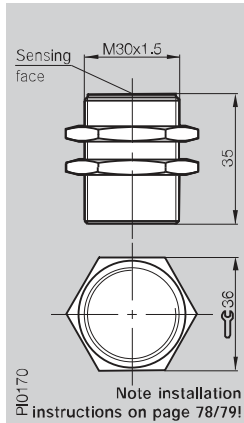
**BIS C-305, only if BIS C-128_ _ is attached using plastic screw.

Installation tool 710691
for BIS C-100-05/A data carrier please order separately!

Industrial RFID Systems BIS C

Data Carriers read/write

Dimensions	Ø 30x35	52x32x11	85x53x4.5
Housing material	Nickel plated brass	PBT	ABS
Antenna type	round	round	round
Weight	54 g	28 g	30 g



BIS C Programmable

511 bytes	Ordering code			
1023 bytes	Ordering code		BIS C-108-05/L	BIS C-127-05/L
2047 bytes	Ordering code	BIS C-104-11/A	BIS C-108-11/L	
8 Kbytes	Ordering code	BIS C-104-32/A	BIS C-108-32/L	

Operating temperature	-30...+70 °C	-30...+70 °C	0...+60 °C
Storage temperature	-30...+85 °C	-30...+85 °C	-20...+60 °C
Protection per IEC 60529	IP 67	IP 68	IP 65

	flush		non-flush			flush		non-flush	
Mounting in steel									
Appropriate read/write head with max. read/write distance	BIS C-310	11 mm	12 mm	BIS C-305	6 mm	BIS C-315	30 mm		
	BIS C-315	13 mm	14 mm	BIS C-310	5 mm	12 mm	BIS C-318	25 mm	
	BIS C-323	11 mm	12 mm	BIS C-315	10 mm	16 mm			
	BIS C-324	11 mm	12 mm	BIS C-318	7 mm				
				BIS C-319	11 mm	14 mm			
				BIS C-323	12 mm				
				BIS C-324	12 mm				
				BIS C-327	8 mm				

Screw tightening torque
40 Nm

more added value

Specially designed for palletizing/logistics



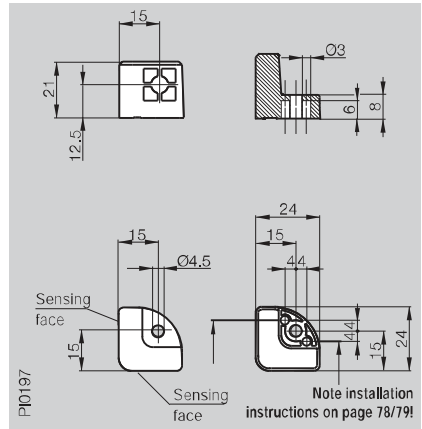
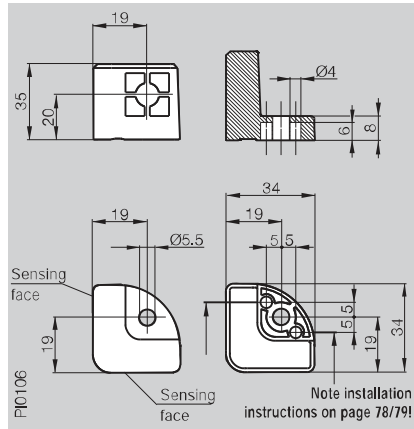
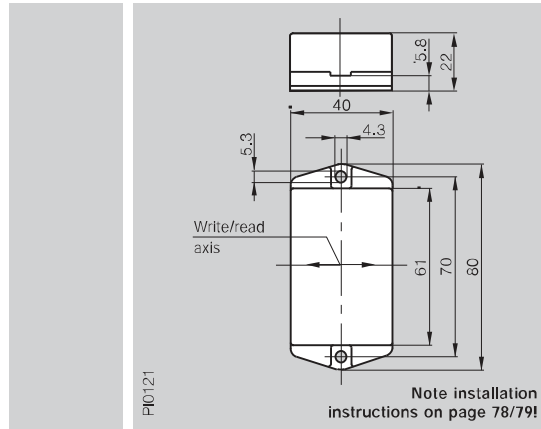
Read/Write Cycles

Data carriers	Memory type	Write cycles up to 30 °C	Write cycles up to 70 °C	Read cycles	Memory organization
511 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
1023 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
2047 bytes	EEPROM	1 000 000	500 000	unlimited	64 bytes per block
8 Kbytes	FRAM	unlimited	unlimited	unlimited	64 bytes per block

Industrial RFID Systems BIS C

Data Carriers read/write

80×40×22	34×34	12.5×12.5
POM	PBT	PBT
rod	round/double	round/double
75 g	29 g	10 g



- Range of Applications
- Selection Criteria
- Data Carriers**
- Read/Write Heads
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- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

BIS C-150-05/A	BIS C-190-05/L	BIS C-191-05/L
BIS C-150-11/A	BIS C-190-11/L	BIS C-191-11/L
BIS C-150-32/A	BIS C-190-32/L	
-30...+70 °C	-30...+70 °C	-30...+70 °C
-30...+85 °C	-30...+85 °C	-30...+85 °C
IP 68	IP 68	IP 68

	flush	non-flush		flush	non-flush		flush	non-flush
BIS C-350		100 mm	BIS C-310		11 mm	BIS C-300		3,5 mm
BIS C-351		50 mm	BIS C-315		20 mm	BIS C-306		3,5 mm
			BIS C-318		8 mm	BIS C-310		10 mm
			BIS C-323		11 mm	BIS C-319		11 mm
			BIS C-324		11 mm	BIS C-323		10 mm
			BIS C-326		18 mm	BIS C-324		10 mm
			BIS C-327		8 mm	BIS C-325		3,5 mm

Screw tightening torque 1.5 Nm, anti-torquing installation provided by straight pin Ø 4 mm according to DIN EN 22338; DIN EN 28734

Screw tightening torque 1.5 Nm, anti-torquing installation provided by straight pin Ø 3 mm according to DIN EN 22338; DIN EN 28734

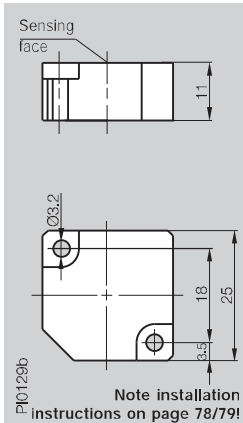
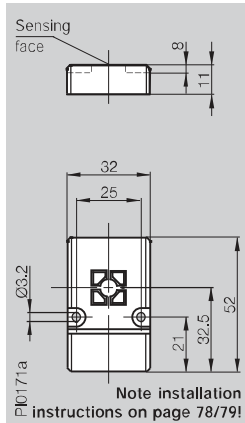
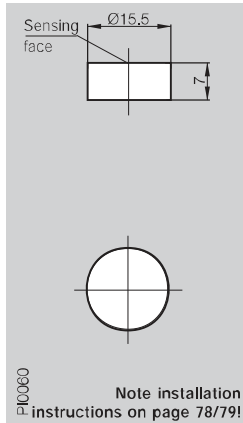
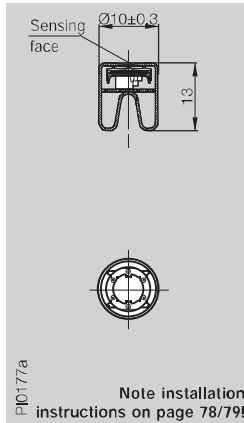


Caution!
Reading or writing can be performed on one active surface as desired.

Industrial RFID Systems BIS C

Data Carriers read/write

Dimensions	Ø 11×13	Ø 15.5×7	52×32×11	25×25
Housing material	Glass	PBT	PBT	PA 66-GF30
Antenna type	round	round	round	round
Weight	0.9 g	2 g	28 g	9 g



BIS C Programmable

511 bytes	Ordering code	BIS C-121-04/L-SA1			
1023 bytes	Ordering code		BIS C-130-05/L-SA1		
2047 bytes	Ordering code			BIS C-108-05/L-SA2	BIS C-134-05/L-H120
8 Kbytes	Ordering code			BIS C-108-11/L-SA2	BIS C-134-11/L

Operating temperature	+10...+70 °C	-30...+70 °C	-30...+70 °C	-30...+70 °C
Storage temperature	+10...+126 °C	-30...+85 °C	-30...+85 °C*	-30...+85 °C*
Protection per IEC 60529	IP 68	IP 68	IP 68	IP 68

	flush		non-flush		flush		non-flush		flush		non-flush		
Mounting in steel													
Appropriate read/write head with max. read/write distance	BIS C-300	1,2 mm			BIS C-300	4 mm	4 mm	BIS C-305		6 mm	BIS C-300	3 mm	
	BIS C-302	0,7 mm			BIS C-305	6 mm	7 mm	BIS C-310	4 mm	11 mm	BIS C-305		6 mm
	BIS C-305	1,2 mm			BIS C-306	4 mm	4 mm	BIS C-315	10 mm	16 mm	BIS C-306	3 mm	
	BIS C-306	1,2 mm			BIS C-310	8 mm	11 mm	BIS C-318		6 mm	BIS C-310		10 mm
	BIS C-325	1,7 mm			BIS C-319	7 mm	13 mm	BIS C-323	4 mm	11 mm	BIS C-315		16 mm
					BIS C-323	8 mm	11 mm	BIS C-324	4 mm	11 mm	BIS C-319		12 mm
					BIS C-324	8 mm	11 mm	BIS C-326		12 mm	BIS C-323		10 mm
					BIS C-325	4 mm	5 mm				BIS C-324		10 mm
					BIS C-326		13 mm				BIS C-325		4 mm
											BIS C-326		12 mm
Suitable for	use in autoclaves		use in vacuum		use in vacuum		use in vacuum		use in vacuum		use in vacuum		

*also available for up to +120 °C on request

more added value

Reliable identification, even in a vacuum



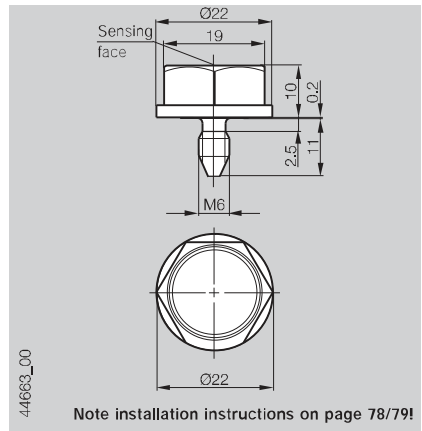
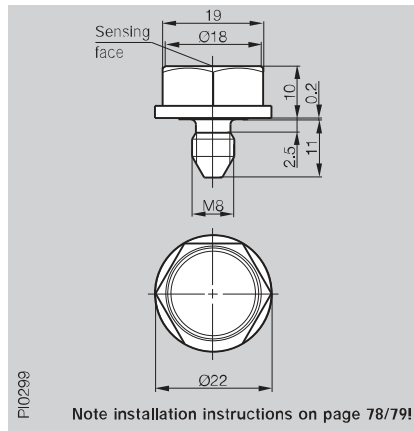
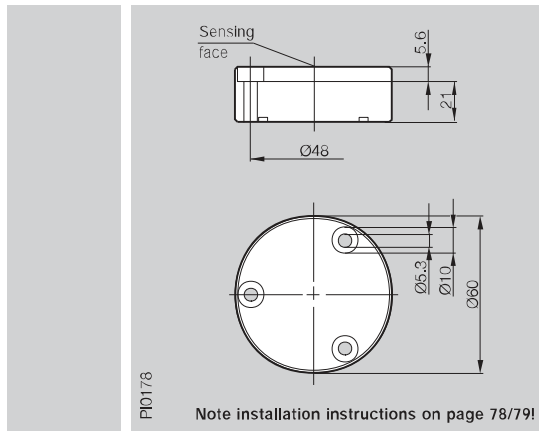
Read/Write Cycles

Data carriers	Memory type	Write cycles up to 30 °C	Write cycles up to 70 °C	Read cycles	Memory organization
511 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
1023 bytes	EEPROM	1 000 000	500 000	unlimited	32 bytes per block
2047 bytes	EEPROM	1 000 000	500 000	unlimited	64 bytes per block
8 Kbytes	FRAM	unlimited	unlimited	unlimited	64 bytes per block

special applications

Industrial RFID Systems BIS C Data Carriers read/write

Ø 60x21	Ø 22x21	Ø 22
POM	42CrMoV	PA 66-GF30
round	round	round
85 g	18 g	18 g



BIS C

- Range of Applications
- Selection Criteria
- Data Carriers**
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

BIS C-133-05/L BIS C-133-11/L	BIS C-140-05/L-M8 BIS C-140-11/L-M8	BIS C-140-05/L-M6 BIS C-140-11/L-M6
-30...+70 °C -30...+85 °C IP 68	-30...+70 °C -30...+85 °C IP 68	-30...+70 °C -30...+85 °C IP 68

	flush	non-flush		flush			flush	
BIS C-310	10mm	10mm	BIS C-300	3 mm		BIS C-300	3 mm	
BIS C-315	15mm	15mm	BIS C-305	4,5 mm		BIS C-305	4,5 mm	
BIS C-323	10mm	10mm	BIS C-306	3 mm		BIS C-306	3 mm	
BIS C-324	10mm	10mm	BIS C-310	7 mm		BIS C-310	7 mm	
BIS C-326	12mm	12mm	BIS C-323	7 mm		BIS C-323	7 mm	
			BIS C-324	7 mm		BIS C-324	7 mm	
use in vacuum			use in vacuum			use in vacuum		



more added value

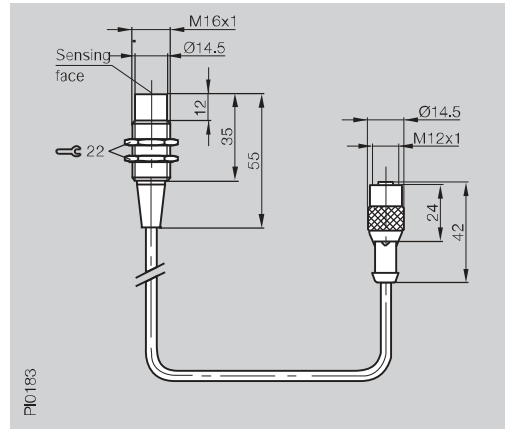
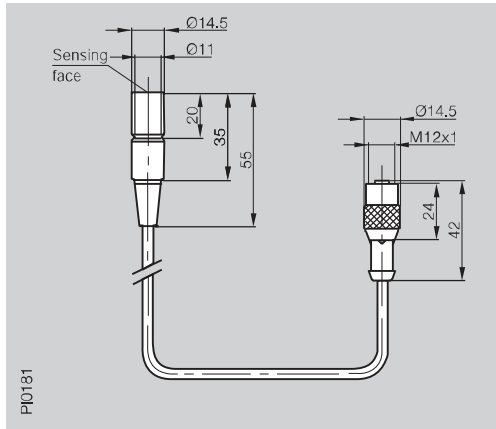
Reusable data carriers,
e.g. for engine manufacture
in the automobile industry

BIS C-131-05/L for radial
data retrieval from rotating
parts, positioning not
required. Contact us!

Industrial RFID Systems BIS C

Read/Write Heads

Dimensions	Ø 14.5	M16
Housing material	CuZn	CuZn
Antenna type	round	round
Weight	210 g	200 g



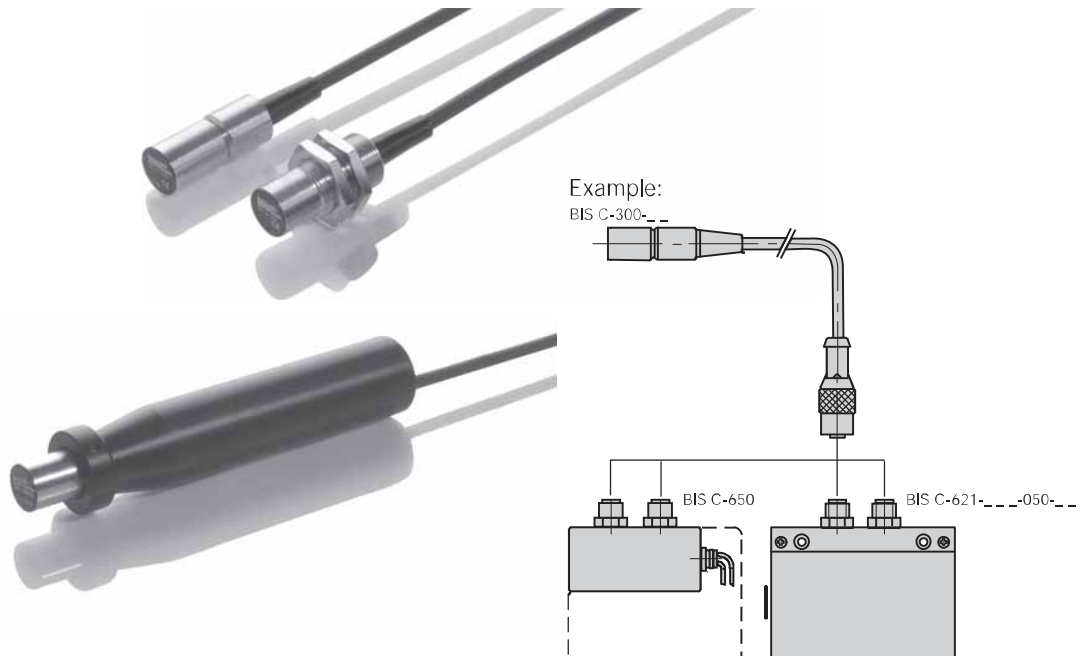
Ordering code	BIS C-300-__	BIS C-306-__
Mounting in steel		flush
Operating temperature		0...+70 °C
Storage temperature		-20...+85 °C
Protection per IEC 60529		IP 67
Cable		1 m, 5 m or 10 m/PUR
Connection to		Processor

Appropriate data carriers	BIS C-100-05/A flush	BIS C-103-05/A flush	BIS C-105-05/A flush	BIS C-121-04/L flush	BIS C-121-04/L-SA1 flush	BIS C-122-04/L flush	BIS C-130-05/L flush	BIS C-134-__-L flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 non-flush	BIS C-130-05/L-SA6	BIS C-191-__-L non-flush
Static mode												
Write distance in mm	0-4	0-3,5	0-3,5	0-2	0-1,2	0-2,5	0-4	0-3	0-4	0-4	0-3	0-3,5
Read distance in mm	0-4	0-3,5	0-3,5	0-2	0-1,2	0-2,5	0-4	0-3	0-4	0-4	0-3	0-3,5
Offset in mm	0.7 mm				±2							
at distance	1 mm	±3	±3	±3		±2,5	±3,5	±4	±5	±5	±3,5	±4
	3 mm	±2	±2	±2			±3		±4	±4	±2	±3
	5 mm											
	7 mm											
	15 mm											
Dynamic mode												
Read/write distance in mm	1	1	1	1		1	1-3	1-2	1-3	1-3	1-3	1-3
V _{max} to write bytes 0...3 in m/min								5-4	7-5	7-5	5-2,5	6-4
V _{max} to read bytes 0...3 in m/min	8	6	6	6		6	7	8-7	10-8	10-8	9-4	10-7

For read/write heads with connector, please append cable length to ordering code!
 01 = Length 1 m, 05 = Length 5 m,
 10 = Length 10 m.

Caution!
 At 10 m cable length, read/write distance is reduced by 10 %.

Handle BIS C-300-HG1
 for read/write head BIS C-300-__
 Material: POM
 see page 206



Industrial RFID Systems BIS C

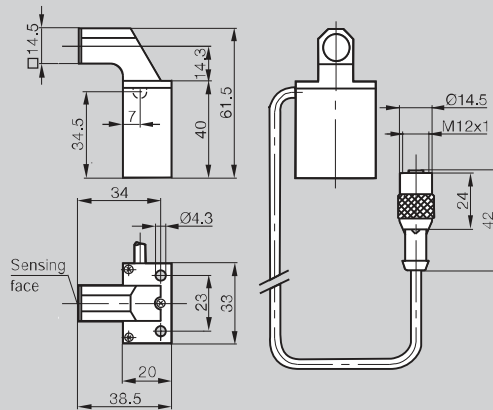
Read/Write Heads

Angle

AlMg3/PA 66

round

270 g



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads**
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

BIS C-302-__

flush

0...+70 °C

-20...+85 °C

IP 67

5 m or 10 m PUR

Processor

BIS C-100-05/A flush	BIS C-103-05/A flush	BIS C-105-05/A flush	BIS C-121-04/L flush	BIS C-121-04/L-SA1 flush	BIS C-122-04/L flush	BIS C-130-05/L flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 non-flush	BIS C-191-__/_/L non-flush
0-4	0-3	0-3	0-1,5	0-0,7	0-2	0-3,5	0-4	0-4	0-3
0-4	0-3	0-3	0-1,5	0-0,7	0-2	0-3,5	0-4	0-4	0-3
±3	±3	±3	±1,5	±1	±2	±3	±5	±5	±4
±2	±1,5	±1,5				±2	±3	±3	±2
1	1	1	1		1	1-3	1-3	1-3	1-3
							6-3	6-3	4-3
8	6	6	4		5	5	8-5	8-5	6-5

more added value

Recommended for tool identification

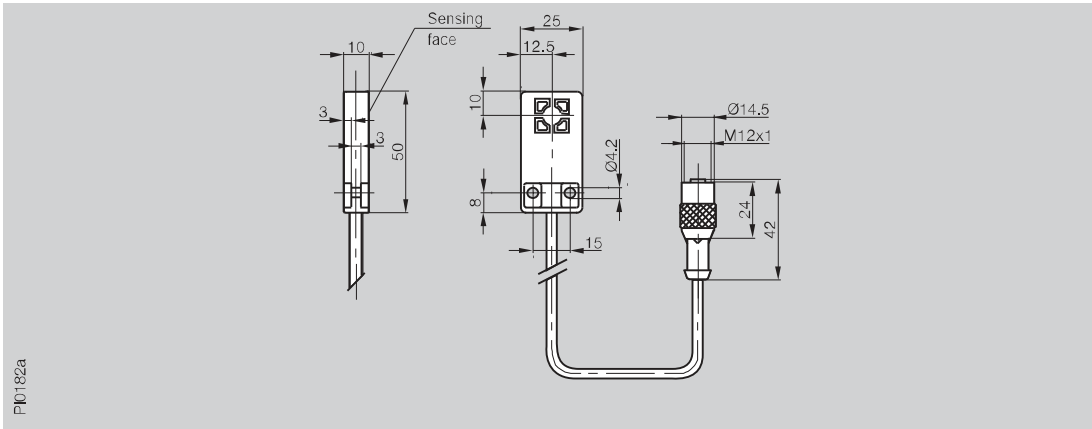
Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.



Industrial RFID Systems BIS C

Read/Write Heads

Dimensions	50x25x10
Housing material	ABS-GF16
Antenna type	round
Weight	230 g



PI0182a

Ordering code	BIS C-305-__
Mounting in steel	flush
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67
Cable	1 m, 5 m or 10 m/PVC
Connection to	Processor

Appropriate data carriers

Static mode

	BIS C-100-05/A flush	BIS C-103-05/A BIS C-105-05/A flush	BIS C-108-__/L BIS C-108-__/L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-121-04/L flush	BIS C-121-04/L-SA1 flush	BIS C-122-04/L flush	BIS C-117-051A non-flush	BIS C-128-05/L non-flush	BIS C-130-05/L BIS C-130-05/L-SA1 non-flush	BIS C-130-05/L-SA6 non-flush	BIS C-134-11/L non-flush
Write distance in mm	0-4	0-5	0-6	1-8	0-7	0-2	0-1,2	0-2,5	0-10	0-6	0-7	0-4,5	0-6
Read distance in mm	0-4	0-5	0-6	1-8	0-7	0-2	0-1,2	0-2,5	0-10	0-6	0-7	0-4,5	0-6
Offset in mm	0.7 mm												
at distance	1 mm	±3	±4	±8	±5	±8,5	±2	±3	±6	±8	±5	±4,5	±5
	3 mm	±2	±3	±7	±4	±7,5		±2	±6	±7	±5	±3,5	±5
	5 mm			±5	±3	±6			±6	±5	±4		±4
	7 mm								±5		±2		
	10 mm								±3				
	15 mm												
	20 mm												

Dynamic mode

Read/write distance in mm	1	1	1-5	1-5	1-5	1		1	2-8	1-5	1-6	1-4	1-5
V _{max} to write bytes 0...3 in m/min			12-7	7-4	12-9				9-7	12-7	11-6	6-4,5	11-6
V _{max} to read bytes 0...3 in m/min	8	10	20-12	12-7	21-16	6		8	16-13	20-12	14-11	11-8	14-11

For read/write heads with connector, please append cable length to ordering code!
 01 = Length 1 m,
 05 = Length 5 m,
 10 = Length 10 m.

Caution!
 At 10 m cable length, read/write distance is reduced by 10 %.

Data coupler BIS C-380-...
 for data transmission between data carriers BIS C-1__ and read/write head BIS C-3__ via a contactless extension page 46/76



more added value

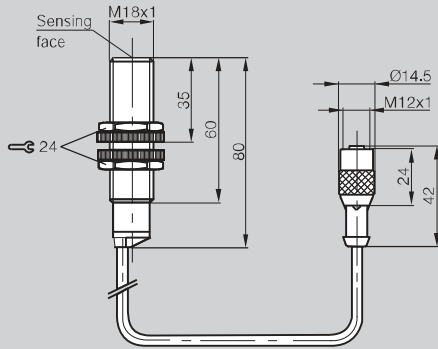
Ideal for palletizing, logistics and handling applications

Industrial RFID Systems BIS C

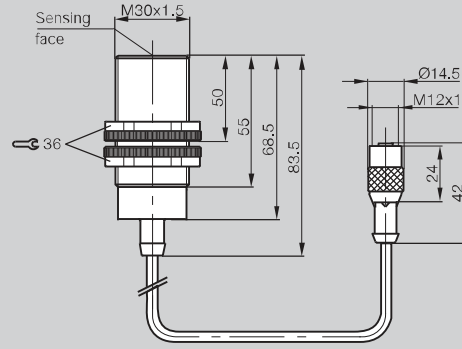
Read/Write Heads

M18
PBT
round
197 g

M30
PVDF
round
270 g



PI0033a



PI0125a

BIS C-319-__

BIS C-326-__

non-flush
0...+70 °C
-20...+85 °C
IP 67
1 m, 5 m or 10 m/PUR
Processor

non-flush
0...+70 °C
-20...+85 °C
IP 67
5 m or 10 m/PUR
Processor

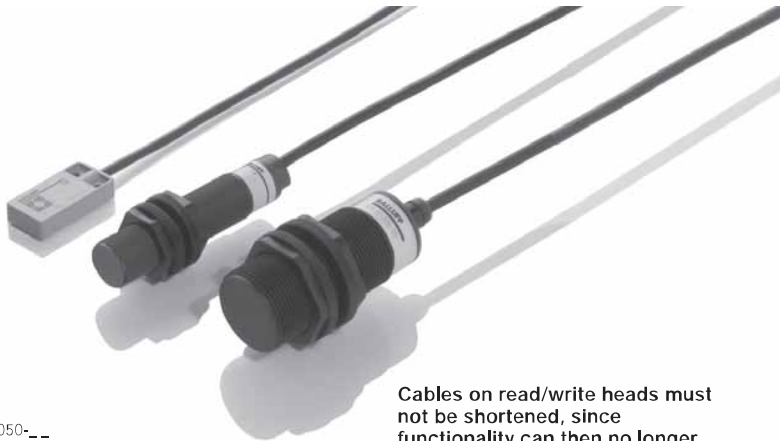
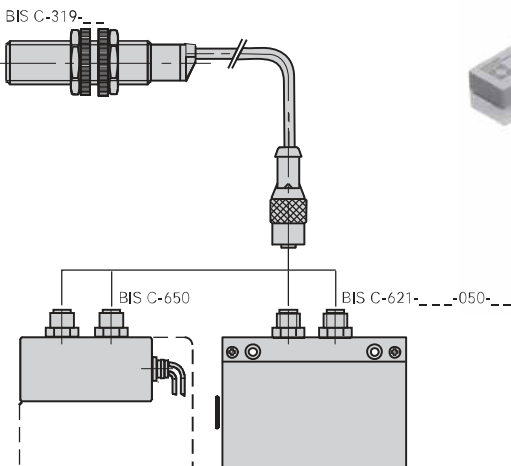
BIS C-108-__/_L non-flush	BIS C-117-05/_L non-flush	BIS C-130-05/_L non-flush	BIS C-130-05/_L-SA1 non-flush	BIS C-134-11/_L non-flush	BIS C-191-__/_L non-flush
0-14	0-15	0-13	0-13	0-12	0-11
0-14	0-15	0-13	0-13	0-12	0-11
±12	±13	±9	±9	±9	±9
±12	±12	±9	±9	±9	±9
±11	±12	±9	±9	±9	±9
±11	±11	±8,5	±8,5	±8,5	±8
±9	±10	±7,5	±7,5	±7	
0-10	0-10	0-10	0-10	0-9	0-8
17-13	18-15	13-11	13-11	13-11	13-11
26-20	31-22	23-19	23-19	23-19	22-20

BIS C-117-05/_L non-flush	BIS C-128-__/_L non-flush	BIS C-128-__/_L auf Stahl	BIS C-130-__/_L non-flush	BIS C-130-05/_L-SA1 non-flush	BIS C-133-__/_L non-flush	BIS C-134-11/_L non-flush	BIS C-190-__/_L non-flush
0-18	0-15	0-12,5	0-13	0-13	0-12	0-12	0-18
0-18	0-15	0-12,5	0-13	0-13	0-12	0-12	0-18
±15	±14	±13	±12	±12	±14	±12	±17
±15	±14	±12	±12	±12	±14	±12	±17
±15	±14	±12	±10	±10	±14	±10	±17
±14	±14	±11	±10	±10	±8,5	±10	±16
±11	±8,5	±8					±14
0-15	0-10	0-10	0-10	0-10	0-10	0-9	0-15
22-16	19-12	18-11	17-11	17-11	19-12	17-11	25-17
38-28	34-21	32-19	30-19	30-19	34-21	30-19	43-29



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads**
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

Example:

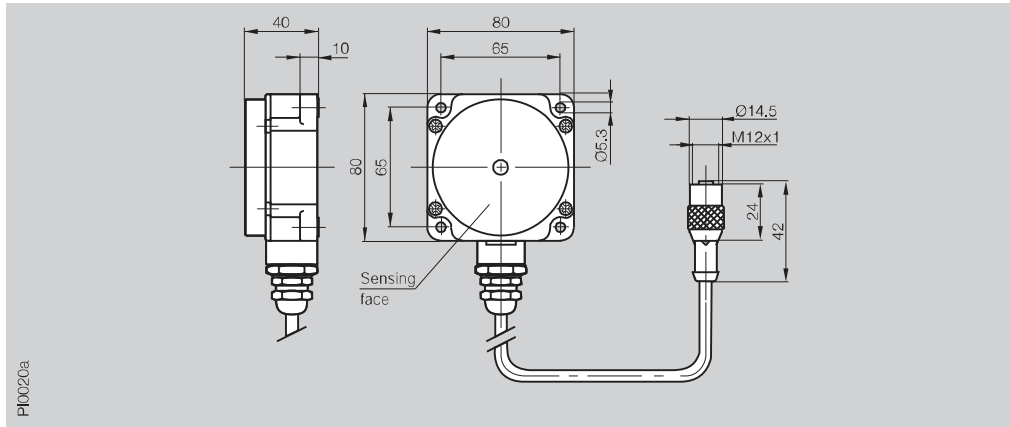


Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.

Industrial RFID Systems BIS C

Read/Write Heads

Dimensions	80×80×40
Housing material	PBT
Antenna type	round
Weight	510 g



Ordering code	BIS C-315-__
Mounting in steel	flush
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67
Cable	1 m, 5 m or 10 m/PUR
Connection to	Processor

	BIS C-104-__/_A flush	BIS C-108-__/_L non-flush	BIS C-108-__/_L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-127-05/L non-flush	BIS C-128-__/_L non-flush	BIS C-130-05/L non-flush	BIS C-133-__/_L non-flush	BIS C-134-11/L non-flush	BIS C-190-__/_L non-flush
Appropriate data carriers											
Static mode											
Write distance in mm	1-13	2-16	2-16	0-15	0-20	10-30	0-18	0-18	0-15	0-16	0-20
Read distance in mm	1-13	2-16	2-16	0-15	0-20	10-30	0-18	0-18	0-15	0-16	0-20
Offset in mm	1 mm	±15	±15	±15	±15	±17	±30	±17	±16	±17	±18
at distance	3 mm	±14	±14	±15	±15	±17	±30	±17	±16	±15	±18
	5 mm	±11	±12	±12	±14	±17	±30	±17	±16	±15	±18
	7 mm	±10	±11	±10	±12	±15	±30	±15	±14	±14	±18
	10 mm	±8	±8	±8	±12	±15	±30	±15	±14	±14	±18
	15 mm					±14	±27	±14	±11		±16
	20 mm						±20				
Dynamic mode											
Read/write distance in mm	1-7	2-10	2-10	3-10	1-15	10-20	1-15	1-15	1-10	1-15	1-15
V _{max} to write bytes 0...3 in m/min	18-9	18-9	18-9	20-14	24-19	39	24-19	22-15	24-19	22-15	25-23
V _{max} to read bytes 0...3 in m/min	25-13	25-13	25-13	34-25	42-33	68	42-33	39-27	42-33	39-27	44-39

For read/write heads with connector, please append cable length to ordering code!
 01 = Length 1 m, 05 = Length 5 m, 10 = Length 10 m.

Caution!
 At 10 m cable length, read/write distance is reduced by 10 %.

Data coupler BIS C-380-...
 for data transmission between data carriers BIS C-1__ and read/write head BIS C-3__ via a contactless extension page 46/47



more added value

For handling and assembly. Greater sensing distance to the object due to large diameter of cylindrical read/write heads.

Industrial RFID Systems BIS C

Read/Write Heads

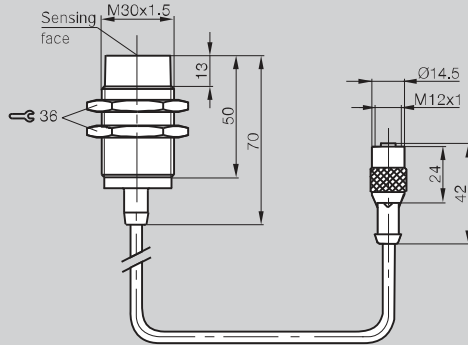
M30

Nickel plated brass

round

314 g

BIS C



Range of Applications
Selection Criteria

Data Carriers
Read/Write Heads

Read/Write Heads with Connector

Read/Write Heads

Data Couplers

Integratable Read/Write Heads

Integratable Adapter

8-bit Processor for Read-Only Mode

Processors
Read/Write Heads

Handy Programmer

Handheld

Accessories
Read/Write Gun

Installation Notes

Read/Write Times

BIS C-310-__

non-flush

0...+70 °C

-20...+85 °C

IP 67

1 m, 5 m or 10 m/PUR

Processor

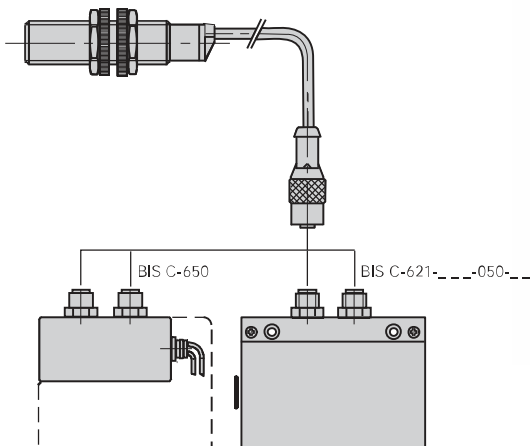
PI0184a

BIS C-104-__/_A flush	BIS C-104-__/_A non-flush	BIS C-108-__/_L non-flush	BIS C-108-__/_L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-128-__/_L flush	BIS C-128-__/_L non-flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 flush	BIS C-130-05/L-SA6 non-flush	BIS C-133-__/_L non-flush	BIS C-134-11/L non-flush	BIS C-190-__/_L non-flush	BIS C-191-__/_L non-flush
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
±7,5	±7,5	±10	±10	±7,5	±11	±8	±10	±9	±6,5	±5,5	±10	±9	±10	±8
±7	±7	±9	±9	±7,5	±10	±7	±10	±8	±6	±5	±9	±8	±9	±7,5
±7	±7	±9	±8,5	±7	±10	±6,5	±9	±7	±5,5	±4	±9	±7	±9	±7
±7	±7	±8,5	±7,5	±6,5	±9,5	±5,5	±9	±5			±7	±4	±8	±6,5
													±6,5	
3-7	3-7	1-7	1-7	3-7	1-7	1-5	1-7	1-7	1-5	1-6	1-7	1-7	1-10	1-7
10	10	14-12	14-10	13	15-14	11-9	14-12	13-7	9-8	8,5-6	14-10	13-5	14-9	11-9
17	17	24-22	24-17	17-16	27-24	19-16	24-22	23-12	16-14	14,5-10	24-17	23-10	25-16	20-16

Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.

Example:

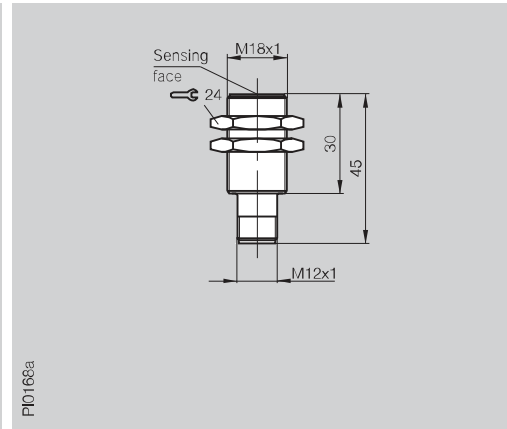
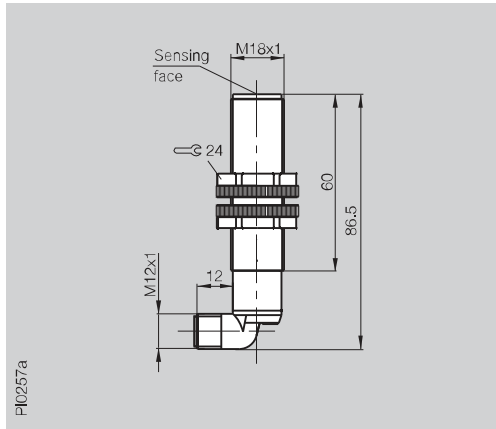
BIS C-319-__



Industrial RFID Systems BIS C

Read/Write Heads

Dimensions	M18	M18
Housing material	PBT	X6CrNiMoTi 17-12-2
Antenna type	round	round
Weight	40 g	26 g



Ordering code	BIS C-319/_/_-S4	BIS C-325/_/_-S4
Mounting in steel	non-flush	flush
Operating temperature	0...+70 °C	0...+70 °C
Storage temperature	-20...+85 °C	-20...+85 °C
Protection per IEC 60529	IP 67	IP 67
Connection to	Processor	Processor
with connection cable*	BIS C-505-PU-_/BIS C-506-PU-_ BIS C-517-PVC-_/BIS C-518-PVC-_	BIS C-505-PU-_/BIS C-506-PU-_ BIS C-517-PVC-_/BIS C-518-PVC-_
Possible cable lengths	1 m, 5 m or 10 m	1 m, 5 m or 10 m

Appropriate data carriers	BIS C-108-_/L non-flush	BIS C-117-05/L non-flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 non-flush	BIS C-134-_/L non-flush	BIS C-191-_/L non-flush	BIS C-100-05/A flush	BIS C-121-04/L-SA1 flush	BIS C-122-_/L flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 non-flush	BIS C-134-_/L non-flush	BIS C-191-_/L non-flush
Static mode													
Write distance in mm	0-14	0-15	0-13	0-13	0-12	0-11	0-4	0-1,7	0-2,5	0-4	0-3	0-4	0-3
Read distance in mm	0-14	0-15	0-13	0-13	0-12	0-11	0-4	0-1,7	0-2,5	0-4	0-3	0-4	0-3,5
Offset in mm	0,7 mm							±2					
at distance	1 mm	±12	±13	±9	±9	±9	±3,5	±2	±2,5	±4	±4	±4	±4
	3 mm	±12	±12	±9	±9	±9	±3			±2	±2	±2	±3
	5 mm	±11	±12	±9	±9	±9							
	7 mm	±11	±11	±8,5	±8,5	±8							
	10 mm	±9	±10	±7,5	±7,5	±6							
	15 mm												
	20 mm												
Dynamic mode													
Read/write distance in mm	0-10	0-10	0-10	0-10	0-9	0-8	1		1	0-5	0-5	1	1
V _{max} to write bytes 0...3 in m/min	17-13	18-15	13-11	13-11	13-11	13-11	5		4	4-2	4-2	4	4
V _{max} to read bytes 0...3 in m/min	26-20	31-22	25-19	23-19	23-19	22-20	9		6	6-3	6-3	6	6

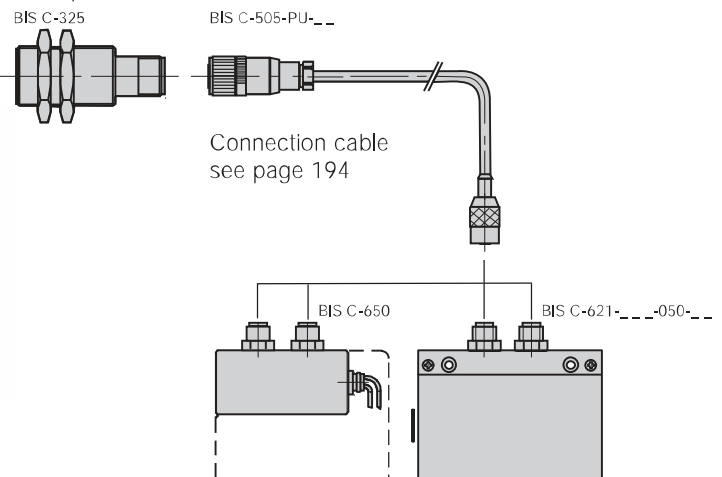
*please order connection cable separately, see page 194

For read/write heads with connector, please append cable length to ordering code!
01 = Length 1 m, 05 = Length 5 m, 10 = Length 10 m.

Caution!
At 10 m cable length, read/write distance is reduced by 10 %.



Example:



Industrial RFID Systems BIS C

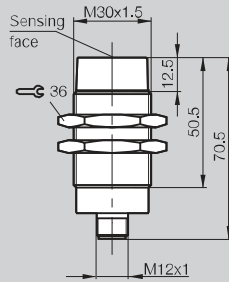
Read/Write Heads

M30

X8CrNiS 18-9

round

90 g



PL0166b

BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld Accessories
Read/Write Gun
Installation Notes
Read/Write Times

BIS C-323-/_/_S4

non-flush

-20...+70 °C

-20...+85 °C

IP 67

Processor

BIS C-505-PU-/_/_/BIS C-506-PU-/_/_

BIS C-517-PVC-/_/_/BIS C-518-PVC-/_/_

5 m, 10 m

BIS C-104-/_/_/A flush	BIS C-104-/_/_/A non-flush	BIS C-108-/_/_/L non-flush	BIS C-108-/_/_/L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-128-/_/_/L flush	BIS C-128-/_/_/L non-flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 flush	BIS C-130-05/L-SA6 non-flush	BIS C-133-/_/_/L non-flush	BIS C-134-/_/_/L non-flush	BIS C-190-/_/_/L non-flush	BIS C-191-/_/_/L non-flush
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
±7,5	±7,5	±10	±10	±7,5	±11	±8	±10	±9	±6,5	±5,5	±10	±9	±10	±8
±7	±7	±9	±9	±7,5	±10	±7	±10	±8	±6	±5	±9	±8	±9	±7,5
±7	±7	±9	±8,5	±7	±10	±6,5	±9	±7	±5,5	±4	±9	±7	±9	±7
±7	±7	±8,5	±7,5	±6,5	±9,5	±5,5	±9	±5			±7	±4	±8	±6,5
													±6,5	
3-7	3-7	1-7	1-7	3-7	1-7	1-5	1-7	1-7	1-5	1-6	1-7	1-7	1-10	1-7
10	10	14-12	14-10	13	15-14	11-9	14-12	13-7	9-8	8,5-6	14-10	13-5	14-9	11-9
17	17	24-22	24-17	17-16	27-24	19-16	24-22	23-12	16-14	14,5-10	24-17	23-10	25-16	20-16

more added value

Pluggable read/write heads have enjoyed outstanding success in the automobile industry.

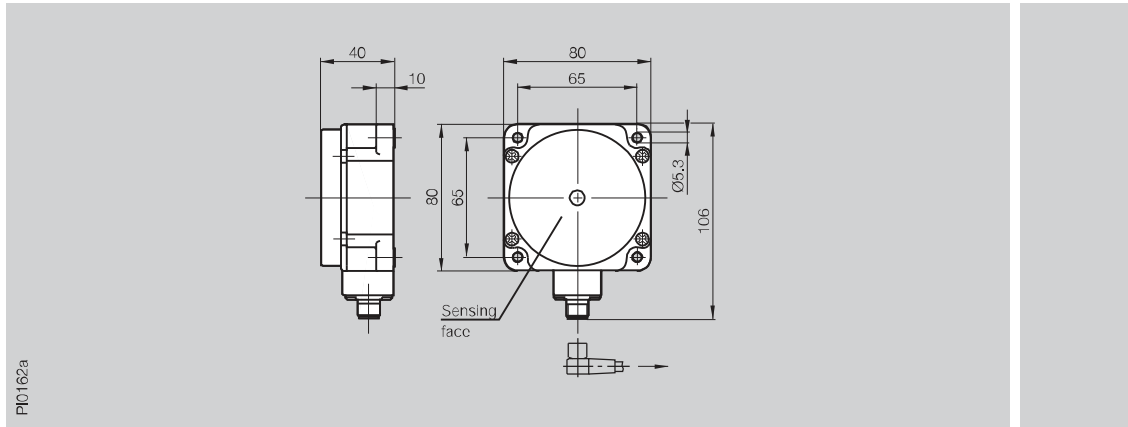


Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.

Industrial RFID Systems BIS C

Read/Write Heads with Connector

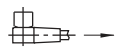
Dimensions	80×80×40
Housing material	PBT
Antenna type	round
Weight	410 g



Ordering code	BIS C-315/_/_-S4
Mounting in steel	flush
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67
Connection to	Processor
with connection cable*	BIS C-505-PU-__/_/BIS C-506-PU-__/_/ BIS C-517-PVC-__/_/BIS C-518-PVC-__/_/
Possible cable lengths	5 m or 10 m

Appropriate data carriers	BIS C-104-__/_/A flush	BIS C-108-__/_/L non-flush	BIS C-108-__/_/L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-127-05/L non-flush	BIS C-128-__/_/L non-flush	BIS C-130-05/L non-flush	BIS C-133-__/_/L non-flush	BIS C-134-11/L non-flush	BIS C-190-__/_/L non-flush
Static mode											
Write distance in mm	1-13	2-16	2-16	0-15	0-20	10-30	0-18	0-18	0-15	0-16	0-20
Read distance in mm	1-13	2-16	2-16	0-15	0-20	10-30	0-18	0-18	0-15	0-16	0-20
Offset in mm	1 mm	±15	±15	±15	±17	±30	±17	±16	±17	±16	±18
at distance	3 mm	±14	±14	±15	±17	±30	±17	±16	±15	±16	±18
	5 mm	±11	±12	±12	±14	±17	±17	±16	±15	±16	±18
	7 mm	±10	±11	±10	±12	±15	±15	±14	±14	±14	±18
	10 mm	±8	±8	±8	±12	±15	±15	±14	±14	±12	±18
	15 mm				±14	±27	±14	±11			±16
	20 mm					±20					
Dynamic mode											
Read/write distance in mm	1-7	2-10	2-10	3-10	1-15	10-20	1-15	1-15	1-10	1-15	1-15
V _{max} to write bytes 0...3 in m/min	18-9	18-9	18-9	20-14	24-19	39	24-19	22-15	24-19	22-15	25-23
V _{max} to read bytes 0...3 in m/min	25-13	25-13	25-13	34-25	42-33	68	42-33	39-27	42-33	39-27	44-39

*please order connection cable separately, see page 194



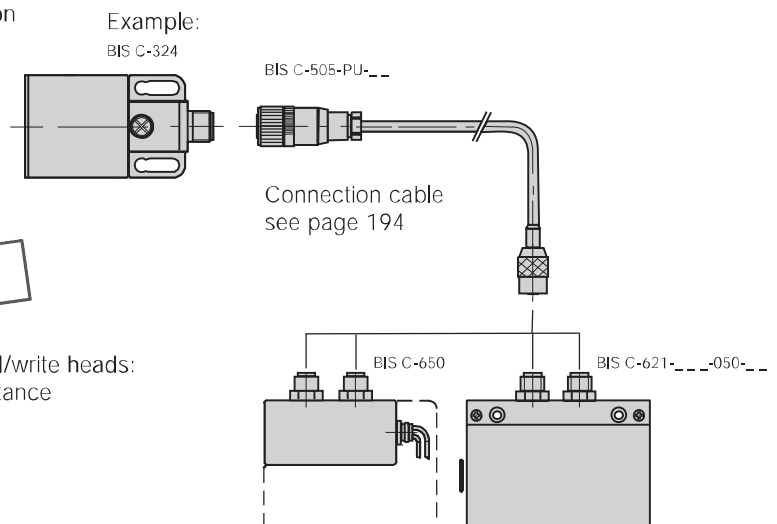
Connector orientation

For read/write heads with connector, please append cable length to ordering code!
01 = Length 1 m, 05 = Length 5 m, 10 = Length 10 m.

Caution!
At 10 m cable length, read/write distance is reduced by 10 %.

more added value

Simply attach the read/write heads:
100 % quality at a distance



Industrial RFID Systems BIS C

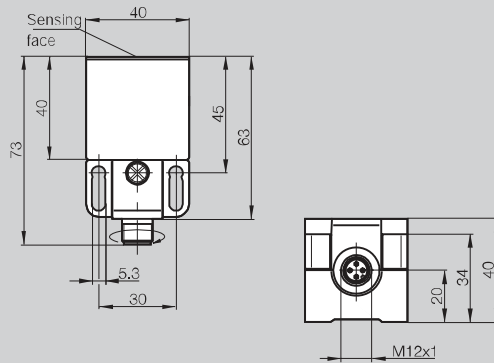
Read/Write Heads with Connector

40x40x73

PBT/Mounting G-2nA14Cu1

round

180 g



BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld Accessories
Read/Write Gun
Installation Notes
Read/Write Times

BIS C-324/_/_-S4

flush

0...+70 °C

-20...+85 °C

IP 67

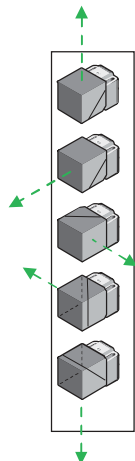
Processor

BIS C-505-PU-/_/_/BIS C-506-PU-/_/_

BIS C-517-PVC-/_/_/BIS C-518-PVC-/_/_

5 m or 10 m

BIS C-104-/_/_/A flush	BIS C-104-/_/_/A non-flush	BIS C-108-/_/_/L non-flush	BIS C-108-/_/_/L-SA2 non-flush	BIS C-117-05/A flush	BIS C-117-05/L non-flush	BIS C-128-/_/_/L flush	BIS C-128-/_/_/L non-flush	BIS C-130-05/L non-flush	BIS C-130-05/L-SA1 flush	BIS C-130-05/L-SA6 non-flush	BIS C-133-/_/_/L non-flush	BIS C-134-11/L non-flush	BIS C-190-/_/_/L non-flush	BIS C-191-/_/_/L non-flush
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
1-11	0-12	0-12	0-11	1-12	0-13	0-8	0-13	0-11	0-8	0-7	0-10	0-10	0-11	0-10
±7,5	±7,5	±10	±10	±7,5	±11	±8	±10	±9	±6,5	±5,5	±10	±9	±10	±8
±7	±7	±9	±9	±7,5	±10	±7	±10	±8	±6	±5	±9	±8	±9	±7,5
±7	±7	±9	±8,5	±7	±10	±6,5	±9	±7	±5,5	±4	±9	±7	±9	±7
±7	±7	±8,5	±7,5	±6,5	±9,5	±5,5	±9	±5			±7	±4	±8	±6,5
3-7	3-7	1-7	1-7	3-7	1-7	1-5	1-7	1-7	1-5	1-6	1-7	1-7	1-10	1-7
10	10	14-12	14-10	13	15-14	11-9	14-12	13-7	9-8	8,5-6	14-10	13-5	14-9	11-9
17	17	24-22	24-17	17-16	27-24	19-16	24-22	23-12	16-14	14,5-10	24-17	23-10	25-16	20-16



Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.

more added value

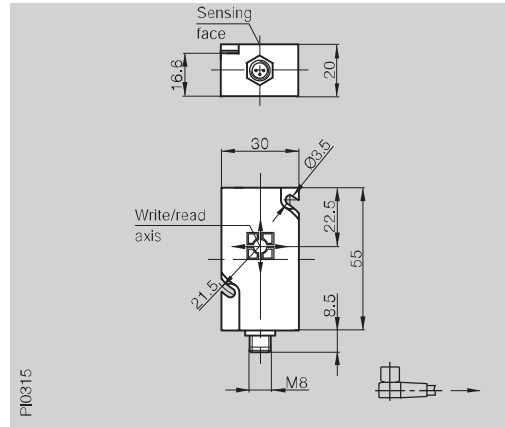
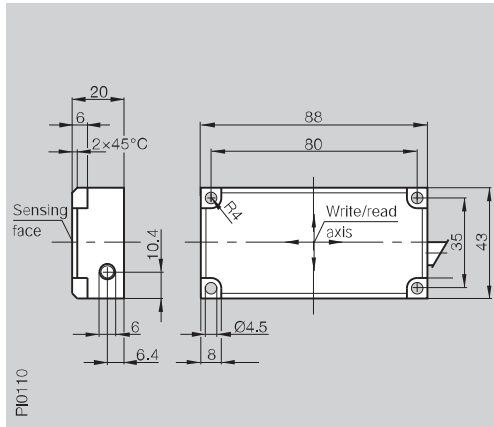
For greater flexibility
Simply align read/write head according to requirements



Industrial RFID Systems BIS C

Read/Write Heads with Connector

Dimensions	88×43×20	55×30×20
Housing material	POM	POM
Antenna type		
Weight	280 g	52 g



Ordering code	BIS C-327-__	BIS C-328-__-S49
Mounting in steel	non-flush	non-flush
Operating temperature	0...+70 °C	0...+70 °C
Storage temperature	-20...+85 °C	-20...+85 °C
Protection per IEC 60529	IP 67	IP 67
Cable	1m, 5 m or 10 m/PUR	1 m, 5 m or 10 m/PUR
Connection to with connection cable	Processor	Processor BIS C-523-PU-__/_/BIS C-523-PU1-__

	BIS C-108-05/L	BIS C-128-11/L	BIS C-190-32/L	BIS C-122-04/L	BIS C-122-11/L
Appropriate data carriers					
Static mode					
Write distance in mm	0-8	0-8	0-8	0-3	0-3
Read distance in mm	0-8	0-8	0-8	0-3	0-3
Offset in mm					
at distance					
1 mm	±6	±6	±6	±2,5	±2,5
2 mm	±6	±6	±6	±2,5	±2,5
3 mm	±6	±6	±6	±2,5	±2,5
4 mm	±5	±5	±5		
5 mm	±5	±5	±5		
6 mm	±4	±4	±4		
10 mm					
20 mm					
Dynamic mode					
Read/write path in mm	54	54	54		
Read/write distance in mm	4	4	4	3	3
V _{max} to write bytes 0...3 in m/min	36	36	36	16	16
V _{max} to read bytes 0...3 in m/min	65	65	65	30	30

For read/write heads with connector, please append cable length to ordering code!
 01 = Length 1 m, 05 = Length 5 m, 10 = Length 10 m.

more added value

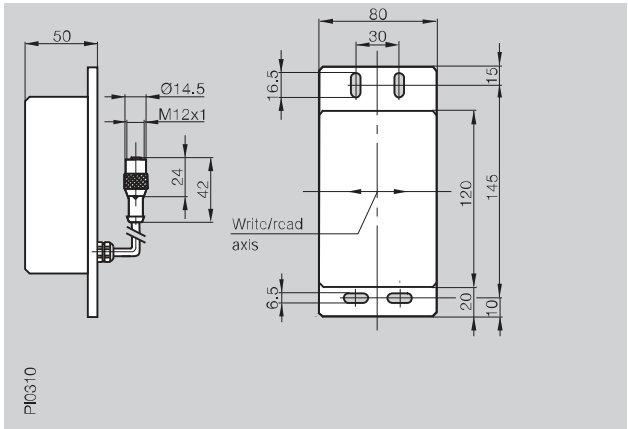
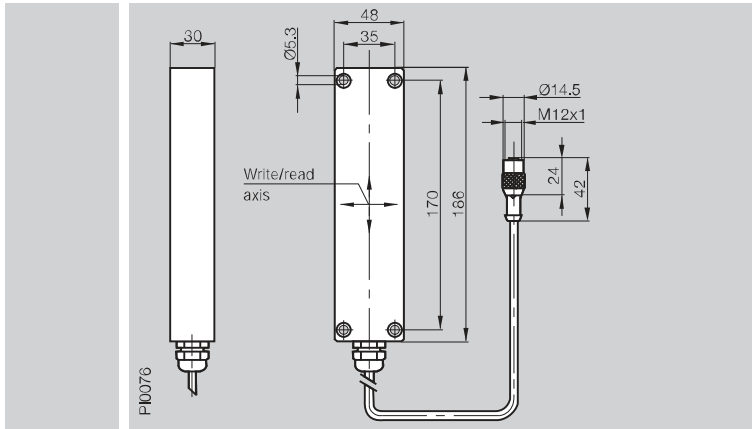
Recommended for handling and assembly in dynamic applications



long distances

Industrial RFID Systems BIS C Read/Write Heads with Connector

186×48×30	170×80×50
PA 66	POM/Platte A/Mg3
round	Stab
550 g	595 g



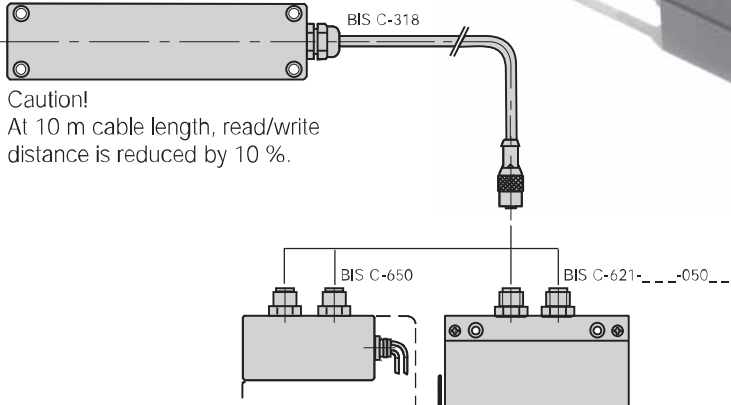
- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector**
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode

BIS C-318-__	BIS C-351-__
non-flush	non-flush
0...+70 °C	-20...+80 °C
-20...+85 °C	-20...+85 °C
IP 65	IP 67
5 m or 10 m/PUR Processor	5 m or 10 m/PUR Processor

BIS C-108-__/_L-SA2 non-flush	BIS C-108-__/_L non-flush	BIS C-117-05/L non-flush	BIS C-127-05/L non-flush	BIS C-128-__/_L non-flush	BIS C-190-__/_L non-flush	BIS C-150-05/A non-flush	BIS C-150-11/A non-flush	BIS C-150-32/A non-flush
0-6	0-7	0-7	10-35	0-7,5	8	0-45	0-45	0-45
0-6	0-7	0-7	10-35	0-7,5	8	0-45	0-45	0-45
±8,5	±9,5	±9,5		±11	±11	±15	±15	±15
±8,5	±9,5	±9,5		±11	±11	±15	±15	±15
±8,5	±9,5	±9,5		±11	±11	±15	±15	±15
±8,5	±9,5	±9,5		±8	±10	±15	±15	±15
±5,5	±8,5	±8,5		±8	±10	±15	±15	±15
	±8,5	±8,5				±15	±15	±15
			±25			±15	±15	±15
			±20			±15	±15	±15
100	100	100	100	100	100	135-140	135-140	135-140
5	6	6	20	6	5	10-30	10-30	10-30
70	70	70	70	70	70	75-60	75-60	75-60
120	120	120	100	120	120	135-110	135-110	135-110

- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

Example:



Cables on read/write heads must not be shortened, since functionality can then no longer be ensured.

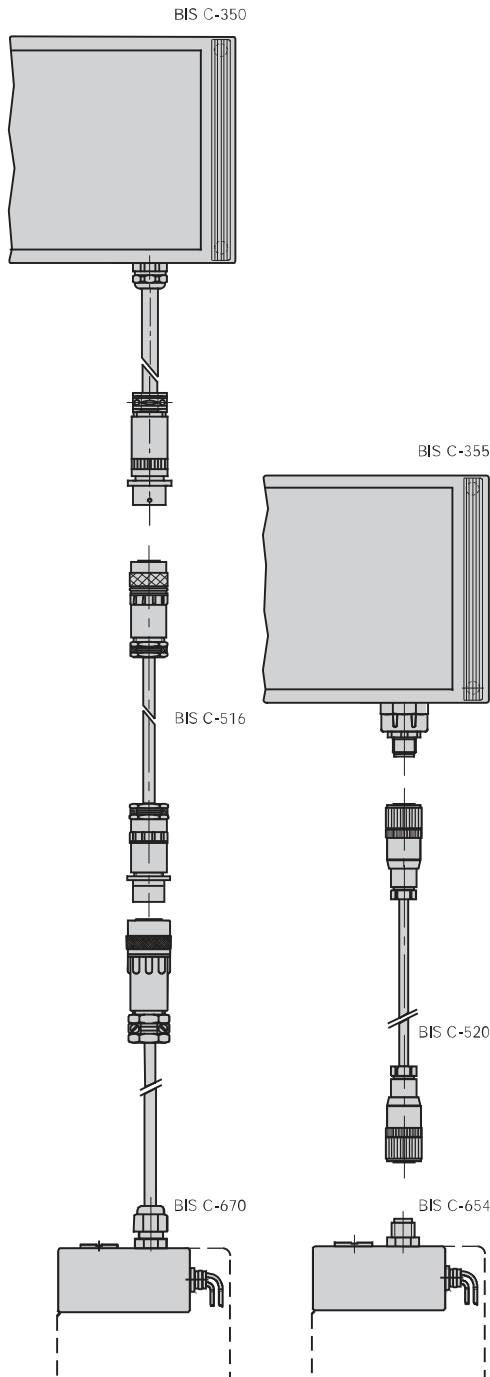
Industrial RFID Systems BIS C

Read/Write Heads

more added value

Guaranteed dynamics over large distances!

Example:



Dimensions	
Housing material	
Antenna type	
Weight	



Ordering code	
Mounting in steel	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Cable	
Connection to	

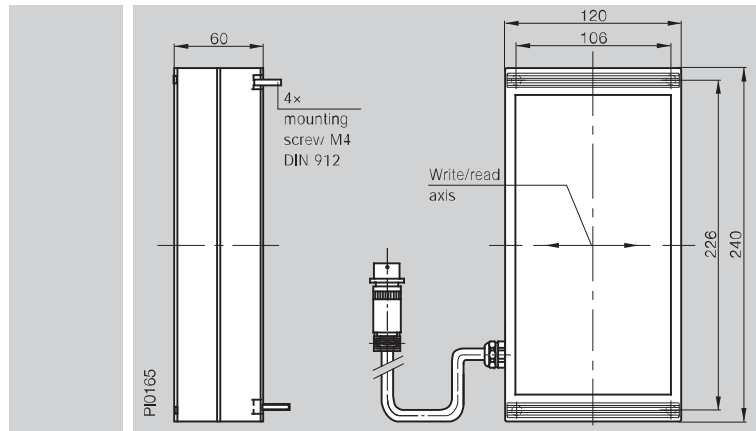
Appropriate data carriers	
Static mode	
Write distance in mm	
Read distance in mm	
Offset in mm	10 mm
at distance	20 mm
	35 mm
	42 mm
	60 mm
Dynamic mode	
Read/write path in mm	
Read/write distance in mm	
V_{max} to write bytes 0...3 in m/min	
V_{max} to read bytes 0...3 in m/min	

For read/write heads with integral cable, please indicate cable length in ordering code!
 01 = Length 1 m,
 05 = Length 5 m,
 10 = Length 10 m.

long distances

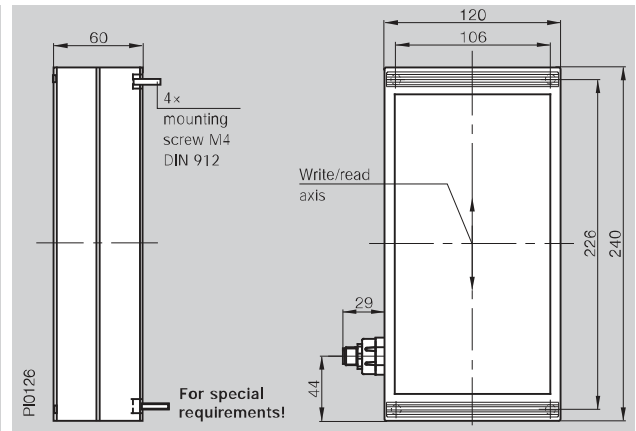
Industrial RFID Systems BIS C Read/Write Heads

240x120x60	240x120x60
PC	PC
Rod	Rod/dual antenna for increased traverse speed
976 g	710 g



BIS C-350-00,3

non-flush
0...+40 °C
-20...+85 °C
IP 67
0,3 m/PUR
Processor only with connection cable BIS C-516-PU-__ (page 197) please order separately



BIS C-355/05-S92

non-flush
0...+70 °C
-20...+85 °C
IP 65
5 m
Processor only with connection cable BIS C-520-PVC-05 (page 195) please order separately



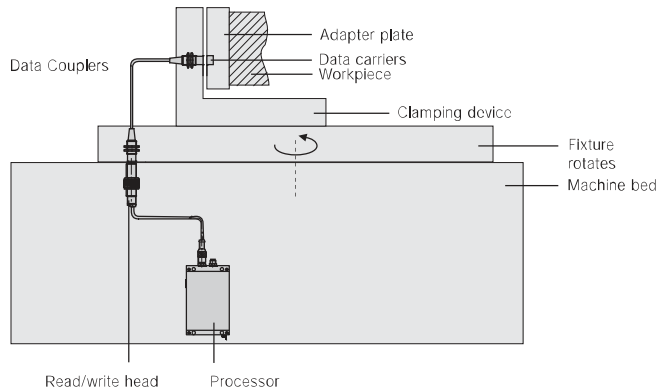
- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads**
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

	BIS C-150-05/A	BIS C-150-11/A	BIS C-150-32/A		BIS C-150-05/A	BIS C-150-11/A	BIS C-150-32/A	
	90	90	90		0-35	0-35	0-35	
	100	100	100		0-40	0-40	0-40	
	±30	±30	±30		±15	±15	±15	
	±30	±30	±30		±15	±15	±15	
	±30	±30	±30		±15	±15	±15	
	±30	±30	±30		±5	±5	±5	
	±30	±30	±30					
	126/140	126/140	126/140		260	260	260	
	63/70	63/70	63/70		1-35	1-35	1-35	
	75	75	75		150	150	150	
	120	120	120		220	220	220	



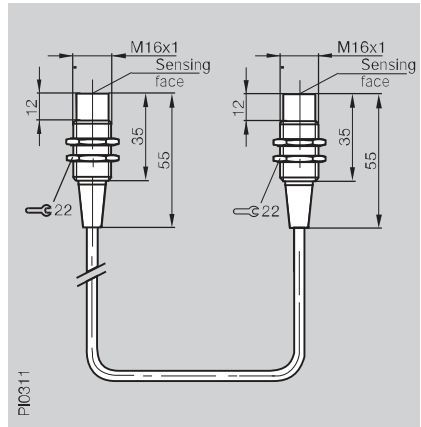
Industrial RFID Systems BIS C

Data Couplers



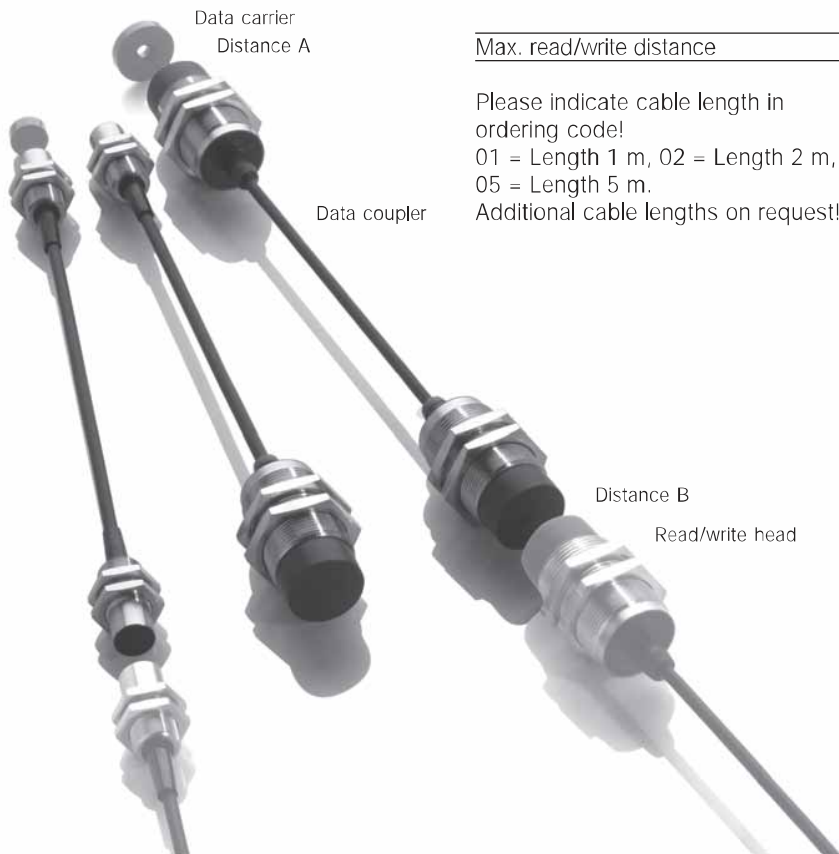
Data couplers are used in applications where a dual mechanical interface is mandatory.

Dimensions	M16/M16
Housing material	Nickel plated brass
Antenna type	round/round

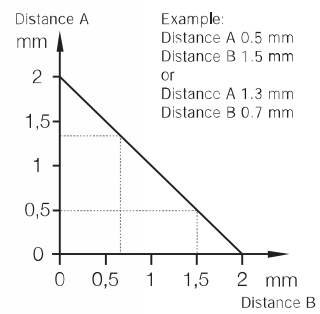


Ordering code	BIS C-380-06/06-__
Read head connection	contactless connection
Operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per IEC 60529	IP 67

Appropriate data carriers	BIS C-100-05/A flush BIS C-103-05/A flush BIS C-105-05/A flush BIS C-121-04/L flush BIS C-122-04/L flush
Appropriate read/write head	BIS C-300 BIS C-302 BIS C-305 BIS C-306
Max. read/write distance	see diagram



Please indicate cable length in ordering code!
01 = Length 1 m, 02 = Length 2 m,
05 = Length 5 m.
Additional cable lengths on request!

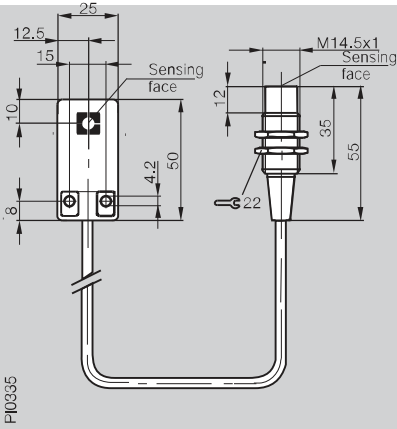


Industrial RFID Systems BIS C

Data Couplers

50x25x10/M16

Nickel plated brass
round/round



BIS C-380-05/06-__

contactless connection

0...+70 °C

-20...+85 °C

IP 67

BIS C-100-05/A
flush

BIS C-103-05/A
flush

BIS C-105-05/A
flush

BIS C-121-04/L
flush

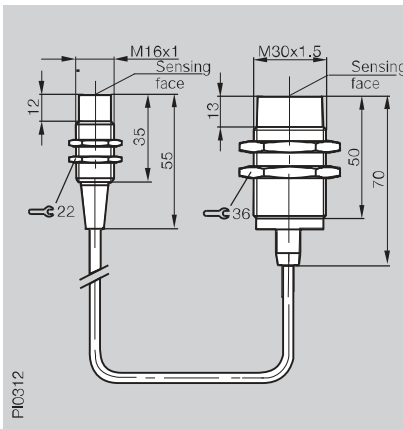
BIS C-122-04/L
flush

BIS C-300
BIS C-302
BIS C-305
BIS C-306

see diagram

M16/M30

Nickel plated brass
round/round



BIS C-380-06/10-__

contactless connection

0...+70 °C

-20...+85 °C

IP 67

BIS C-100-05/A
flush

BIS C-103-05/A
flush

BIS C-105-05/A
flush

BIS C-121-04/L
flush

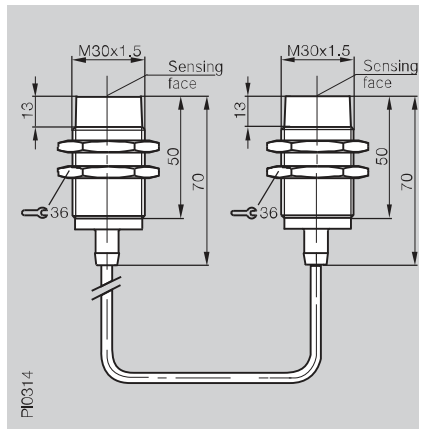
BIS C-122-04/L
flush

BIS C-310

see diagram

M30/M30

Nickel plated brass
round/round



BIS C-380-10/10-__

contactless connection

0...+70 °C

-20...+85 °C

IP 67

BIS C-104-__/_A
non-flush

BIS C-108-__/_L
non-flush

BIS C-117-05/L
non-flush

BIS C-128-__/_L
non-flush

BIS C-130-05/L
non-flush

BIS C-310

see diagram

BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads

Data Couplers

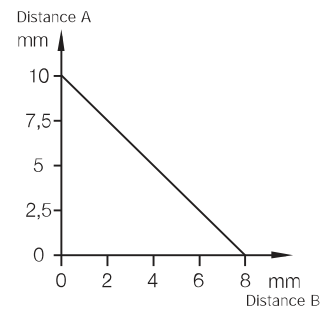
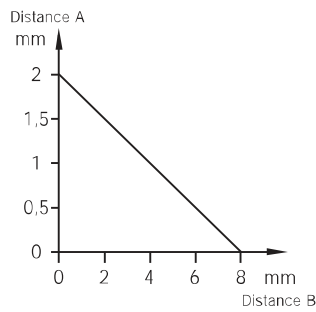
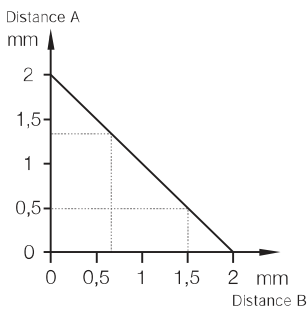
Integratable Read/Write Heads
Integratable Adapter

8-bit Processor for Read-Only Mode

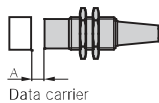
Processors
Read/Write Heads
Handy Programmer
Handheld

Accessories
Read/Write Gun

Installation Notes
Read/Write Times

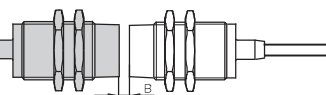


Type C-306



Data carrier

Type C-310



Read/write head

Data coupler
BIS C-380-06/10-__



Industrial RFID Systems BIS C
Integratable Read/Write Heads

more added value

For compact solutions
Read/write heads for
integration in processor units

Read/write head can be
rotated in 3 directions



Dimensions	
Housing material	
Antenna type	
Function	



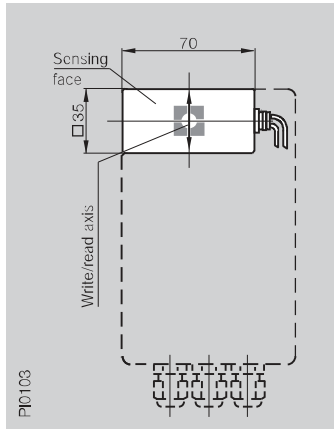
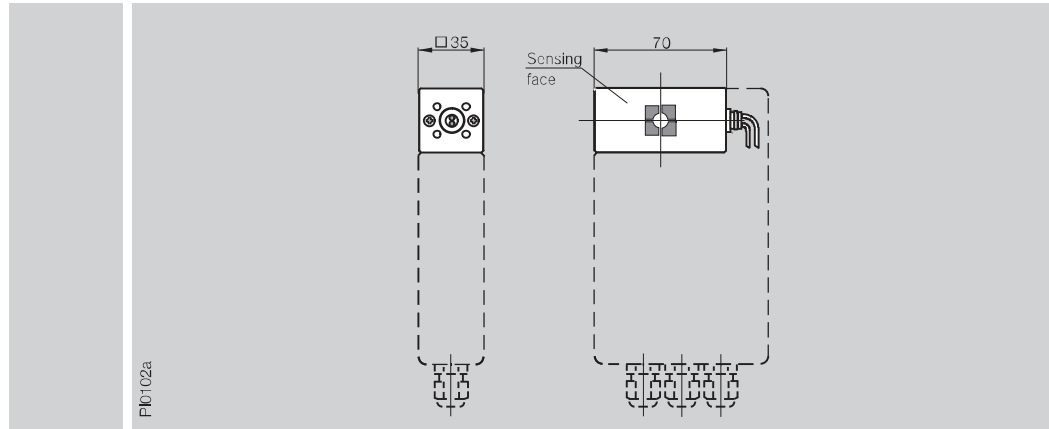
Ordering code	
Mounting in steel	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Read head connection	
Connection to	

Appropriate data carriers	
Static mode	
Write distance in mm	
Read distance in mm	
Offset in mm	1 mm
at distance	3 mm
	5 mm
	7 mm
Dynamic mode	
Read/write distance in mm	
V_{max} to write bytes 0...3 in m/min	
V_{max} to read bytes 0...3 in m/min	

Industrial RFID Systems BIS C

Integratable Read/Write Heads

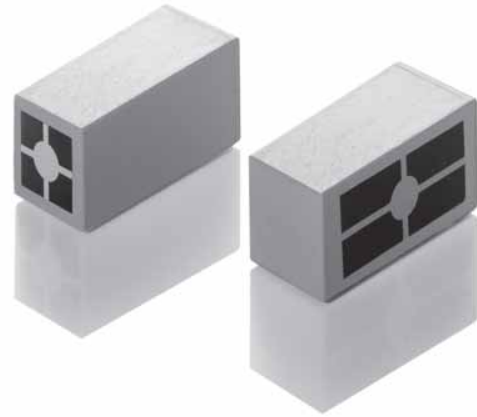
	70x35x35	70x35x35
	ABS	ABS
	round	Rod
	Read/write head	Read/write head



Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld Accessories
Read/Write Gun
Installation Notes
Read/Write Times

	BIS C-652	BIS C-653
	non-flush	non-flush
	0...+60 °C	0...+60 °C
	0...+60 °C	0...+60 °C
	IP 65 (when installed)	IP 65 (when installed)
	3-pin female	3-pin female
	Processors BIS C-600_ (page 54-63/70)	Processors BIS C-600_ (page 54-63/70)

	BIS C-104-_/A non-flush	BIS C-108-_/L non-flush	BIS C-108-_/L-SA2 non-flush	BIS C-117-05/L non-flush	BIS C-128-_/L non-flush	BIS C-130-05/L non-flush	BIS C-130-04/L-SA2 non-flush	BIS C-133-_/L non-flush	BIS C-190-_/L non-flush	BIS C-191-_/L non-flush	BIS C-150-05/A non-flush	BIS C-150-11/A non-flush	BIS C-150-32/A non-flush
	0-12	0-12	0-11	0-13	0-3	0-11	0-10	0-10	0-11	0-10	35	35	35
	0-12	0-12	0-11	0-13	0-13	0-11	0-10	0-10	0-11	0-10	40	40	40
	±7,5	±10	±10	±11	±10	±9	±9	±10	±10	±8	±15	±15	±15
	±7	±9	±9	±10	±10	±8	±8	±9	±9	±7,5	±15	±15	±15
	±7	±9	±8,5	±10	±9	±7	±7	±9	±9	±7	±15	±15	±15
	±7	±8,5	±7,5	±9,5	±9	±5	±4	±7	±8	±6,5	±15	±15	±15
	3-7	1-7	1-7	1-7	1-7	1-7	1-7	1-7	1-10	1-7	25/28	25/28	25/28
	10	14-12	14-10	15-14	14-12	13-7	13-5	14-10	14-9	11-9	20	20	20
	17	24-22	24-17	27-24	24-22	23-12	23-10	24-17	25-16	20-16	40	40	40



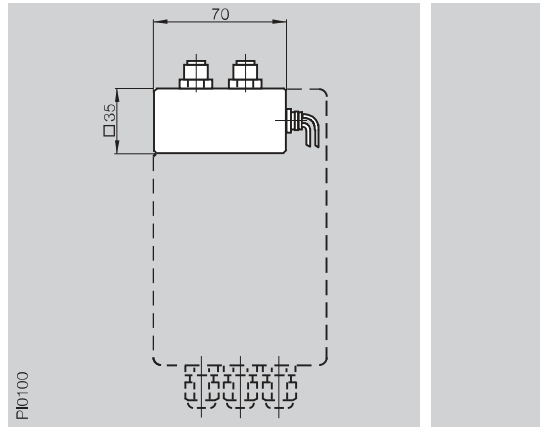
Industrial RFID Systems BIS C

Integratable Adapter

more added value

For the variable connection of read/write heads

Dimensions	70×35×35
Housing material	ABS
Antenna type	
Function	Adapter

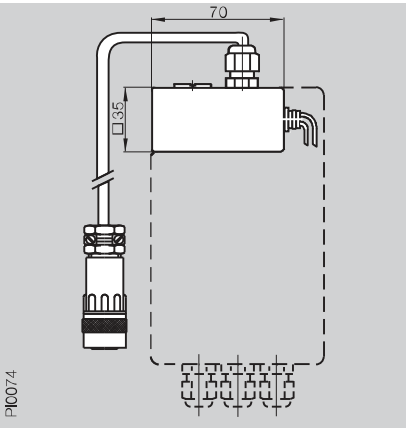
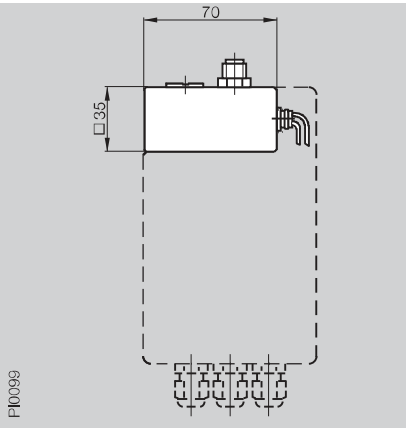
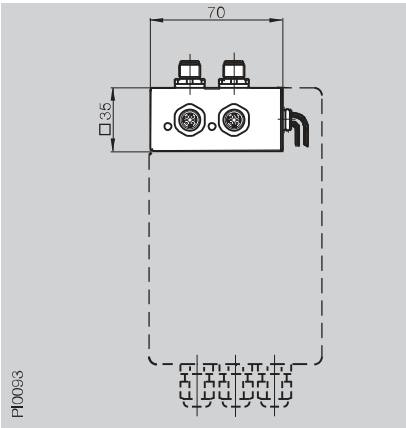


Ordering code	BIS C-650
Mounting in steel	
Operating temperature	0...+60 °C
Storage temperature	0...+60 °C
Protection per IEC 60529	IP 65 (when installed)
Read head connection	2 built-in connectors 4-pin
Connection to	Processors BIS C-600_ (page 54-63/70)
Connection for	Read/write heads BIS C-3_ _ Exception: BIS C-350 and BIS C-355



Industrial RFID Systems BIS C

Integratable Adapter

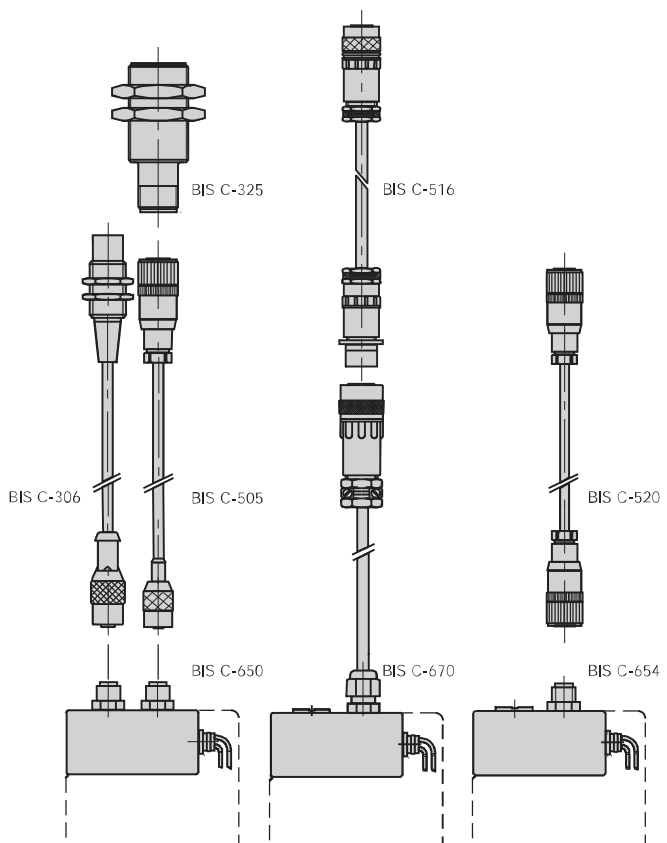
70x35x35 ABS Adapter	70x35x35 ABS Adapter	70x35x35 ABS round Adapter
		
BIS C-670	BIS C-654	BIS C-655
0...+60 °C 0...+60 °C	non-flush 0...+60 °C 0...+60 °C	non-flush 0...+60 °C 0...+60 °C
IP 65 (when installed) 1 coupling 8-pin Processors BIS C-600_ (page 54-63/70)	IP 65 (when installed) 1 built-in connectors 5-pin Processors BIS C-600_ (page 54-63/70)	IP 65 (when installed) 4-pin inline female connector, 4x panel-mount male connectors Adapter for BIS C-6002, BIS C-6003 for connecting all read/write heads, 4-pin (page 54-63/70)
Read/write head BIS C-350 and cable BIS C-516-__	Read/write head BIS C-355/05-S92 and cable BIS C-520-PVC-05	Read/write heads BIS C-3__ Exception: BIS C-350 and BIS C-355



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter**
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times



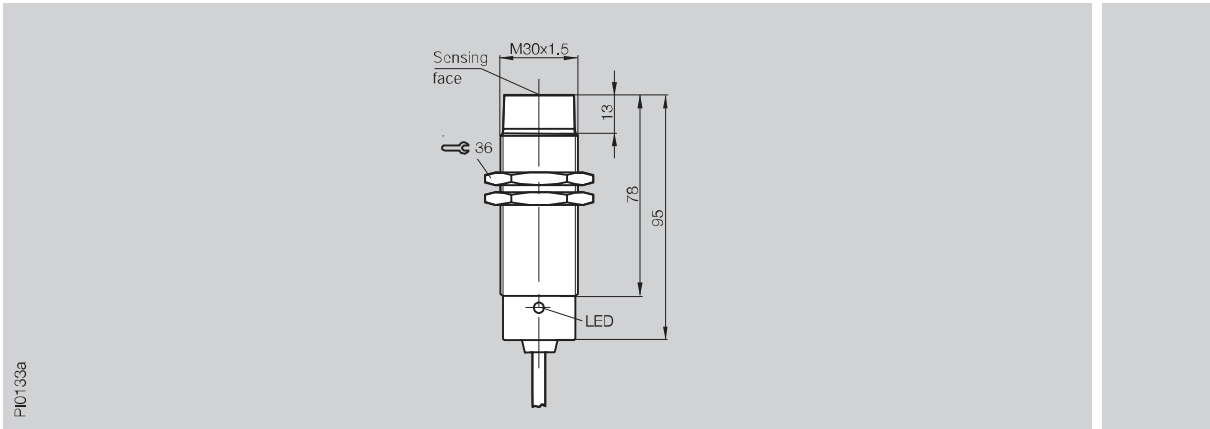
Example:



Industrial RFID Systems BIS C

8-bit Processor for Read-Only Mode

Dimensions	M30
Function	read
Antenna type	round
Weight	330 g



Description/interface	
8-bit parallel	BIS C-60R-001-08P-PU-__
8× 8-bit parallel	BIS C-60R-002-08P-PU-__
2× 8-bit parallel dynamic*	BIS C-60R-003-08P-PU-__
Supply voltage	24 V DC +10/-20 % (incl. ripple)
Current	max. 300 mA without load
Output current per output	max. 50 mA
Voltage drop	≤ 1.5 V
Leakage current	≤ 0.08 mA
Operating temperature	0...+50 °C
Enclosure rating	IP 67
Tightening torque	20 Nm
Mounting in steel	non-flush
Housing material	CuZn nickel plated/PA
Conductor cross-sections	2 × 0.5 mm ² and 9 × 0.18 mm ²
LED function indicator	yes

Appropriate data carriers	BIS C-121-04 flush	BIS C-121-04 BIS C-122-04 non-flush	BIS C-103-05 flush	BIS C-103-05 non-flush	BIS C-130-05 flush	BIS C-130-05 non-flush	BIS C-100-05 flush	BIS C-100-05 non-flush	BIS C-128-05 non-flush	BIS C-117/A flush	BIS C-117/L BIS C-108-05 non-flush	BIS C-104-11 flush non-flush	BIS C-108-05 flush
Static mode													
Read distance in mm	0-3	1-5	0-4	1-5	0-5	1-8	0-5	1-6	3-12	1-8	1-8	1-8	0-6
Offset in mm	±2	±3	±4	±2,5	±3	±4	±2,5	±3	±7	±5	±7	±4	±7
at distance	3 mm	±2	±3	±2,5	±2,5	±3	±5	±3	±3	±5	±7	±4	±7
	5 mm		±3		±2,5	±3	±5	±3	±3	±6	±5	±4	±6
	7 mm					±5			±5	±5	±6	±4	
Dynamic mode*													
Read distance in mm						4-8		4-6	4-8	6-8	3-8		
V _{max} to read 1 bytes in m/min						15		9	20	12	20		

Please indicate cable length in ordering code!
Standard length
05 = Length 5 m,
10 = Length 10 m,
20 = Length 20 m

* Dynamic mode only possible for BIS C-60R-003

The BIS C-60R-001-08P-__ read-only system is designed for simple applications of the BIS C read/write system. It is supplied as a read-only system and provides the 8 bits of information without any additional components in parallel format. Three bytes per value are always used starting at Address 0.

The remaining bytes on the data carrier can be used for other purposes with the appropriate processors. For this function the bytes on the data carrier (starting at Address 0) must be pre-programmed before a read operation can take place.

To easily program the data carrier a processor with serial port and Balluff 007 protocol are used. Programming is easy and fast using the free BISCOMRW software downloadable from the Balluff Web site at www.balluff.com.

The simplest
8-bit reading system

Industrial RFID Systems BIS C

8-bit Processor for Read-Only Mode

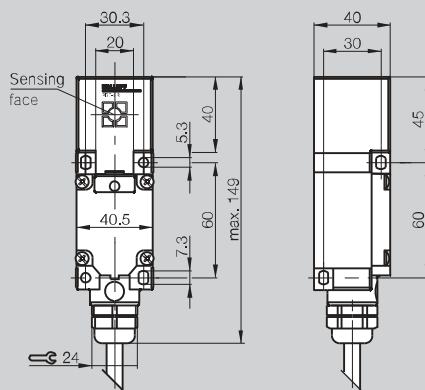
40x40x149

read

round

330 g

PI0316a



BIS C-61R-001-08P-PU-05

24 V DC +10/-20 %

(incl. ripple)

max. 300 mA without load

max. 50 mA

≤ 1.5 V

≤ 0.08 mA

0...+50 °C

IP 67

20 Nm

non-flush

CuZn nickel plated/PA

2 × 0.5 mm² and 9 × 0.18 mm²

yes

BIS C

- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode**
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

BIS C-121-04 BIS C-122-04 flush	BIS C-121-04 BIS C-122-04 non-flush	BIS C-103-05 flush	BIS C-103-05 non-flush	BIS C-130-05 flush	BIS C-130-05 non-flush	BIS C-100-05 flush	BIS C-100-05 non-flush	BIS C-128-05 flush	BIS C-128-05 non-flush	BIS C-117/A flush	BIS C-117/L non-flush	BIS C-104-11 flush non-flush	BIS C-108-11 flush	BIS C-108-11 non-flush
0-2	1-4	0-3	1-4	0-4	1-7	0-4	1-5	0-3	3-7	1-7	1-7	1-4	0-5	1-7
±2	±3	±3	±2,5	±3	±4	±2,5	±3	±5	±7	±5	±7	±4	±7	±7
	±3		±2,5	±3	±5	±3	±3		±6	±5	±6	±4	±6	±6

more added value

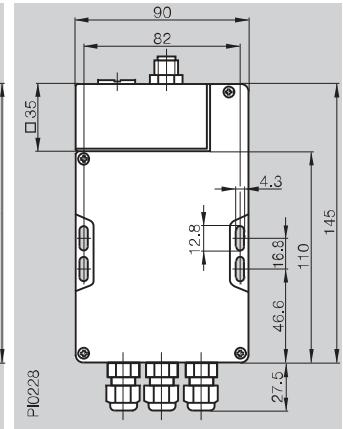
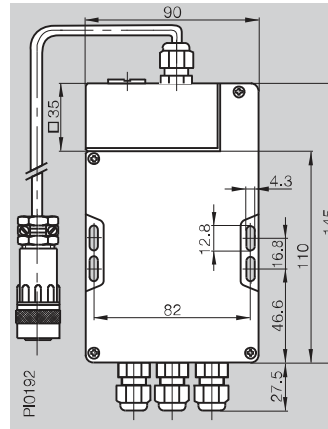
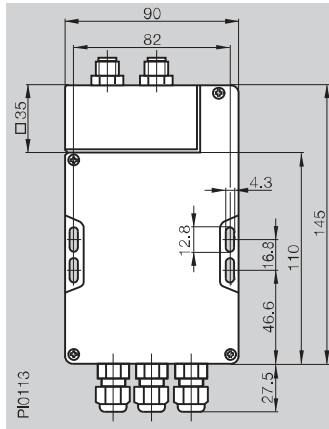
For simple applications
where read functions are sufficient.



Industrial RFID Systems BIS C

Processors

Description	BIS C-600-_-650-_-KL1	BIS C-600-_-670-_-KL1	BIS C-600-_-654-_-KL1
Function	read/write	read/write	read/write
Antenna type			



Supply voltage	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$
Ripple	$\leq 10\%$	$\leq 10\%$	$\leq 10\%$
Current	≤ 400 mA	≤ 400 mA	≤ 400 mA
Operating temperature	0...+60 °C	0...+60 °C	0...+60 °C
Storage temperature	0...+60 °C	0...+60 °C	0...+60 °C
Protection per IEC 60529	IP 65	IP 65	IP 65
Read/write head ports	2 external	1 external	1 external/special
Control inputs	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC
Control outputs	4 (via opto-coupler), 24 V DC	4 (via opto-coupler), 24 V DC	4 (via opto-coupler), 24 V DC
Connection type	Terminals 3 \times Pg 9	Terminals 3 \times Pg 9	Terminals 3 \times Pg 9

Description interface/software:			
RS232/Balluff dialog	BIS C-600-007-650-00-KL1	BIS C-600-007-670-00-KL1	BIS C-600-007-654-00-KL1
RS422/RS485, 4-wire, Point-to-Point/Balluff dialog	BIS C-600-007-650-02-KL1	BIS C-600-007-670-02-KL1	BIS C-600-007-654-02-KL1

Accessories included	Configuration software	Configuration software	Configuration software
Accessories (please order separately)			

The **compact class BIS C-6_ _** with its reduced dimensions and various interface options can be used wherever ambient conditions require higher protection.

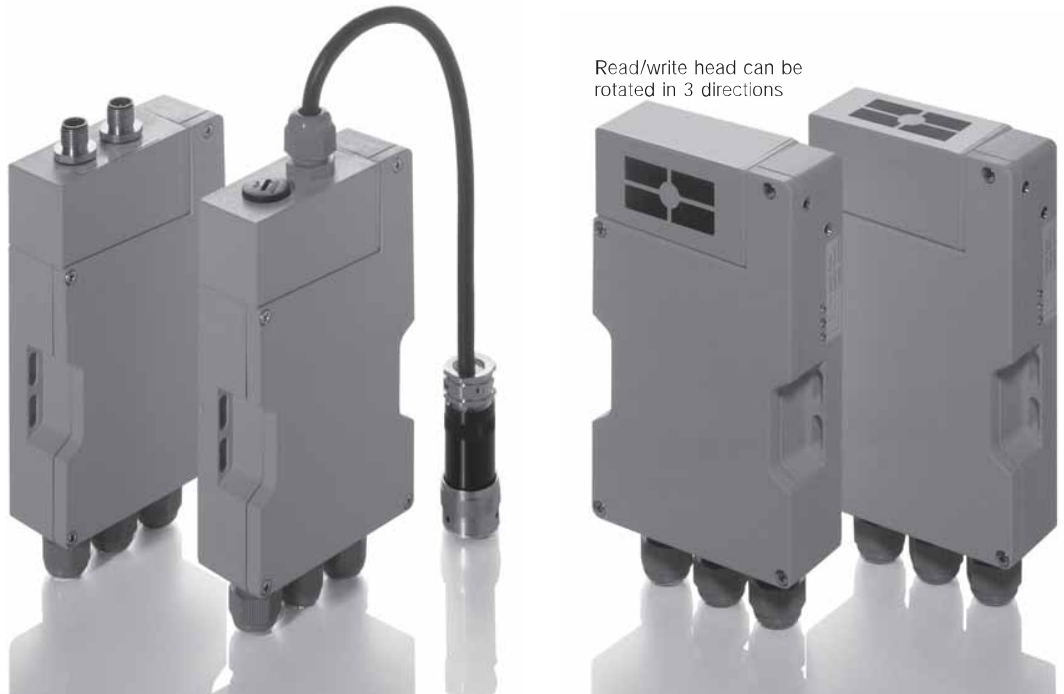
The devices are ideal for IP 65 and applications involving media that is not aggressive to PS plastic.

Small, compact, flexible and economical



Adapter or antenna can be rotated in 3 directions

for read/write head
BIS C-355/05-S92



Serial

Industrial RFID Systems BIS C Processors

BIS C-600-_-_-652-_-_-KL1

read/write
round

BIS C-600-_-_-653-_-_-KL1

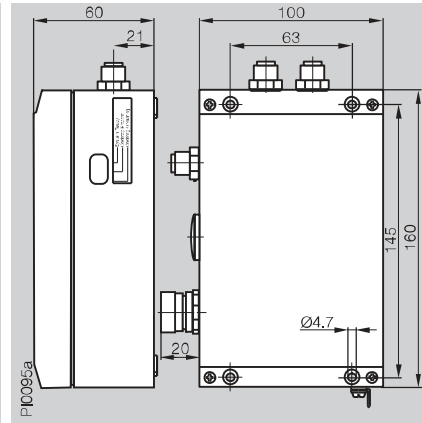
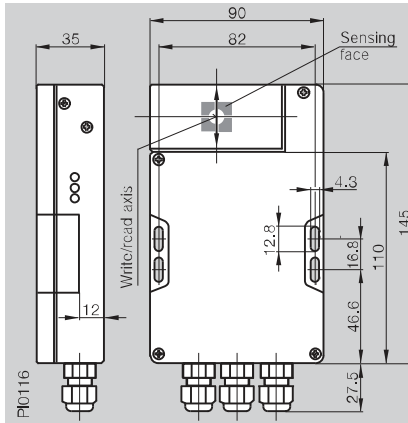
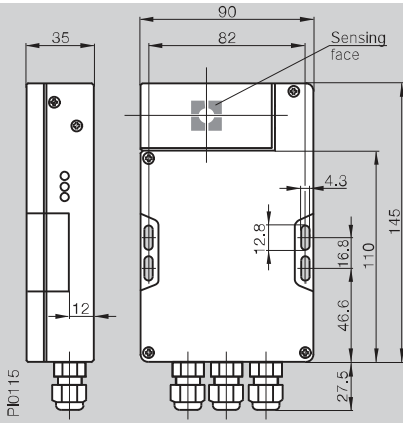
read/write
Rod

BIS C-620-_-_-050-_-_-ST2

read/write

BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld Accessories
Read/Write Gun
Installation Notes
Read/Write Times



24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

1 internal, 1 external

1 (via opto-coupler), 24 V DC

4 (via opto-coupler), 24 V DC

Terminals 3 × Pg 9

24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

1 internal, 1 external

1 (via opto-coupler), 24 V DC

4 (via opto-coupler), 24 V DC

Terminals 3 × Pg 9

24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

2 external

1 connector round 9-pin

1 connector round 5-pin

Read/write heads BIS C-3_ _

Exception: BIS C-350

BIS C-600-007-652-00-KL1

BIS C-600-007-652-02-KL1

BIS C-600-007-653-00-KL1

BIS C-600-007-653-02-KL1

BIS C-620-007-050-00-ST2

BIS C-620-007-050-02-ST2

Configuration software

Configuration software

Configuration software

Connector page 200

more added value

Serial connection -
for simple integration in any controller



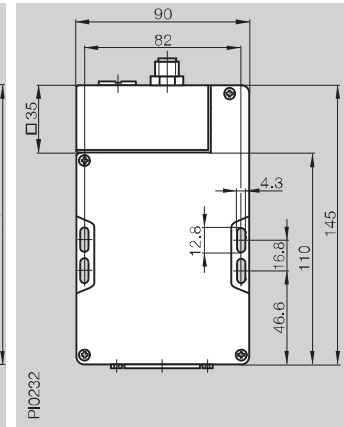
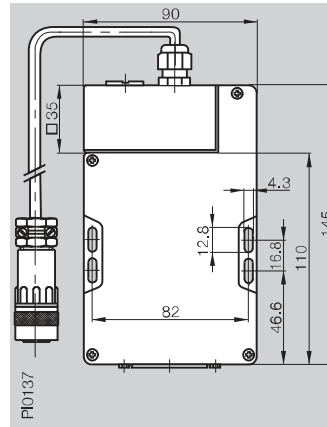
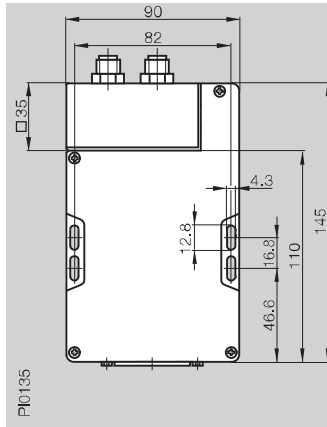
Processor unit **BIS C-62_** enclosed in a robust metal housing is suitable for applications requiring degree of protection IP 65. Flexible interface versions and the option of connecting two read/write heads to a single unit are ideal.

The special housing provides effective protection against environmental influences and aggressive media. Impacts do not affect the degree of protection.

Industrial RFID Systems BIS C

Processors

Description	BIS C-605-__-650-05-ST4	BIS C-605-__-670-05-ST4	BIS C-605-__-654-05-ST4
Function	read/write	read/write	read/write
Antenna type			



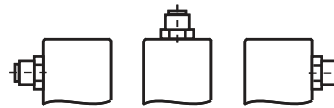
Supply voltage	24 V DC \pm 20 %	24 V DC \pm 20 %	24 V DC \pm 20 %
Ripple	\leq 10 %	\leq 10 %	\leq 10 %
Current	\leq 400 mA	\leq 400 mA	\leq 400 mA
Operating temperature	0...+60 °C	0...+60 °C	0...+60 °C
Storage temperature	0...+60 °C	0...+60 °C	0...+60 °C
Protection per IEC 60529	IP 54	IP 54	IP 54
Read/write head ports	2 external	1 external	1 external
Control inputs	4 (via opto-coupler), 24 V DC	4 (via opto-coupler), 24 V DC	4 (via opto-coupler), 24 V DC
Control outputs	13 (via opto-coupler), 24 V DC	13 (via opto-coupler), 24 V DC	13 (via opto-coupler), 24 V DC
Connection type	MIN Sub D 25-pin	MIN Sub D 25-pin	MIN Sub D 25-pin
Description interface/software:			
Parallel	BIS C-605-027-650-05-ST4	BIS C-605-027-670-05-ST4	BIS C-605-027-654-05-ST4
Accessories included	Configuration software	Configuration software	Configuration software
Accessories (please order separately)	Connector page 197	Connector page 197	Connector page 197

The **compact class BIS C-6_ _** with its reduced dimensions and various interface options can be used wherever ambient conditions do not require higher protection.

Small, compact, flexible and economical

Advantages of the BIS C-605 parallel version

The parallel interface is a "read only" interface. Writing is therefore not possible in parallel mode. However, the processor unit can write a single piece of bit information (OK/NOK, large/small, version 1/version 2) to the data carrier. Bit information is transmitted in the form of a separate output signal.



Adapter or antenna can be rotated in 3 directions

for read/write head
BIS C-355/05-S92

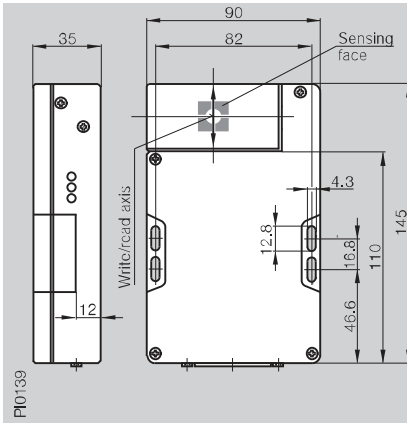
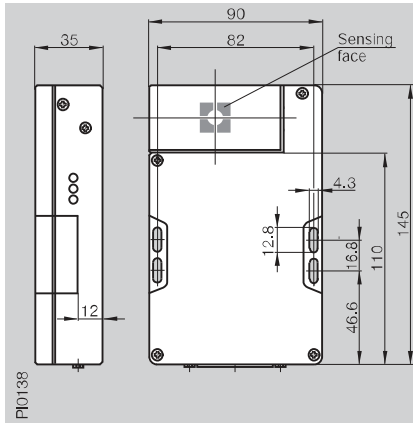


BIS C-605-___-652-05-ST4

read/write
round

BIS C-605-___-653-05-ST4

read/write
Stab



24 V DC $\pm 20\%$

$\leq 10\%$

$\leq 400\text{ mA}$

0...+60 °C

0...+60 °C

IP 54

1 internal

4 (via opto-coupler), 24 V DC

13 (via opto-coupler), 24 V DC

MIN Sub D 25-pin

24 V DC $\pm 20\%$

$\leq 10\%$

$\leq 400\text{ mA}$

0...+60 °C

0...+60 °C

IP 54

1 internal

4 (via opto-coupler), 24 V DC

13 (via opto-coupler), 24 V DC

MIN Sub D 25-pin

BIS C-605-027-652-05-ST4

Configuration software
Connector page 197

BIS C-605-027-653-05-ST4

Configuration software
Connector page 197

BIS C

- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

more added value

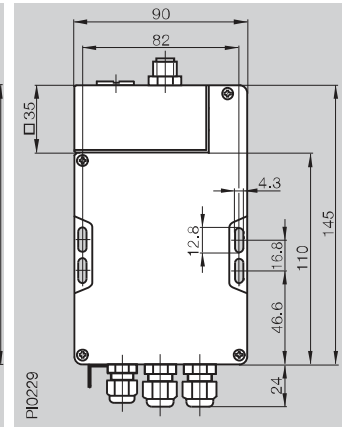
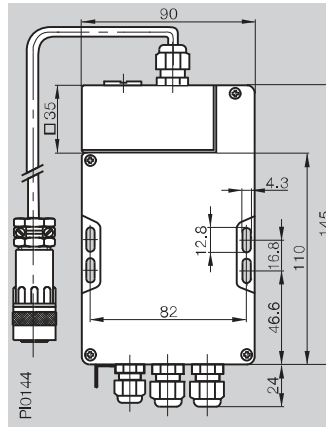
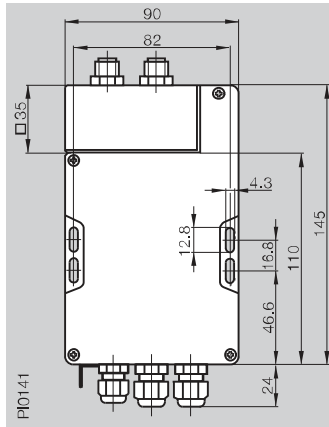
For applications with no controller:
for direct activation of actuators, switches, etc.



Industrial RFID Systems BIS C

Processors

Description	BIS C-6001-___-650-03-KL2	BIS C-6001-___-670-03-KL2	BIS C-6001-___-654-03-KL2
Function	read/write	read/write	read/write
Antenna type			



Supply voltage	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$
Ripple	$\leq 10\%$	$\leq 10\%$	$\leq 10\%$
Current	≤ 400 mA	≤ 400 mA	≤ 400 mA
Operating temperature	0...+50 °C	0...+50 °C	0...+50 °C
Storage temperature	0...+50 °C	0...+50 °C	0...+50 °C
Protection per IEC 60529	IP 65	IP 65	IP 65
Read/write head ports	2 external	1 external	1 external
Control inputs	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC
Connection type	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11
Description interface/software:			
Service interface RS232	ja	ja	ja
INTERBUS	BIS C-6001-023-650-03-KL2	BIS C-6001-023-670-03-KL2	BIS C-6001-023-654-03-KL2
INTERBUS (with memory-optimized data carrier processing)	BIS C-6001-029-650-03-KL2	BIS C-6001-029-670-03-KL2	BIS C-6001-029-654-03-KL2

The **compact class BIS C-600_** with its reduced dimensions and various interface options can be used wherever ambient conditions require higher protection.

The devices are ideal for IP 65 and applications involving media that is not aggressive to PS plastic.

Small, compact, flexible and economical

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

- Data width on the bus, 16 bytes
- Service friendly, all parameter data are stored in an exchangeable memory
- Compatible with BIS C-601 device family
- Accepts all read/write heads
- Compatible with entire BIS C system



Adapter or antenna can be rotated in 3 directions

for read/write head
BIS C-355/___-S92

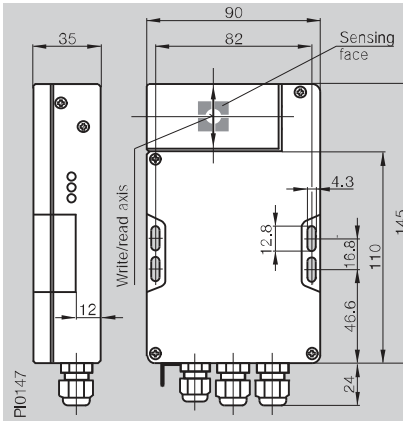
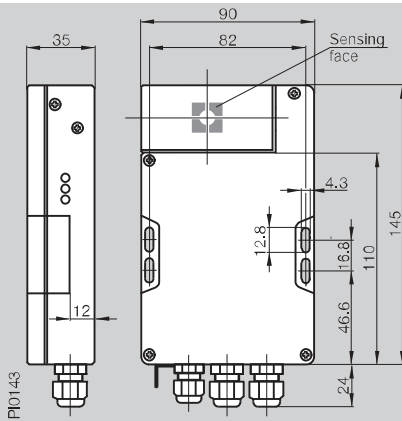


BIS C-6001-___-652-03-KL2

read/write
round

BIS C-6001-___-653-03-KL2

read/write
Rod



24 V DC $\pm 20\%$

$\leq 10\%$

≤ 400 mA

0...+50 °C

0...+50 °C

IP 65

1 internal

1 (via opto-coupler), 24 V DC

Terminals 1 \times Pg 9

Terminals 2 \times Pg 11

24 V DC $\pm 20\%$

$\leq 10\%$

≤ 400 mA

0...+50 °C

0...+50 °C

IP 65

1 internal

1 (via opto-coupler), 24 V DC

Terminals 1 \times Pg 9

Terminals 2 \times Pg 11

ja

BIS C-6001-023-652-03-KL2

BIS C-6001-029-652-03-KL2

ja

BIS C-6001-023-653-03-KL2

BIS C-6001-029-653-03-KL2

BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld
Accessories
Read/Write Gun
Installation Notes
Read/Write Times



Read/write head can be rotated in 3 directions

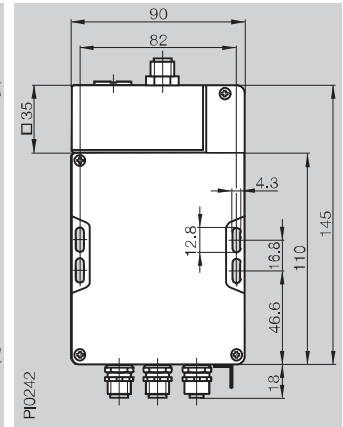
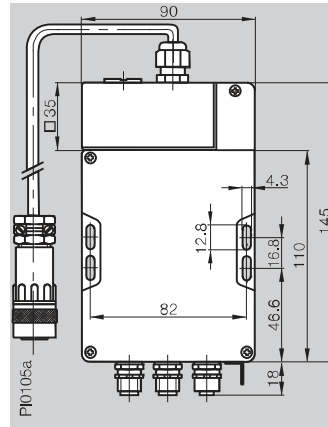
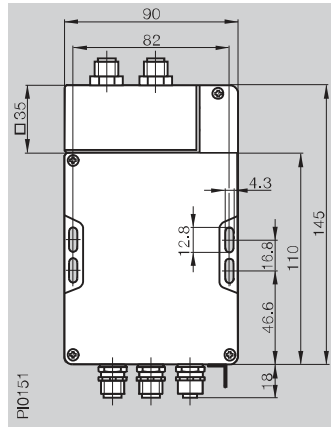
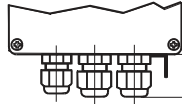


Industrial RFID Systems BIS C Processors

Description	BIS C-6002-_-650-03-_-	BIS C-6002-_-670-03-_-	BIS C-6002-_-654-03-_-
Function	read/write	read/write	read/write
Antenna type			



Version KL2



Supply voltage	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$
Ripple	$\leq 10\%$	$\leq 10\%$	$\leq 10\%$
Current	≤ 400 mA	≤ 400 mA	≤ 400 mA
Operating temperature	0...+50 °C	0...+50 °C	0...+50 °C
Storage temperature	0...+50 °C	0...+50 °C	0...+50 °C
Protection per IEC 60529	IP 65	IP 65	IP 65
Read/write head ports	2 external	1 external	1 external
Control inputs	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC	1 (via opto-coupler), 24 V DC
Control outputs	2 (via opto-coupler), 24 V DC	2 (via opto-coupler), 24 V DC	2 (via opto-coupler), 24 V DC
Connection type clamp terminals KL2	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11	Terminals 1 \times Pg 9 Terminals 2 \times Pg 11
Connection version ST11	2 connector round 5-pin, B-coded 1 connector round 5-pin	2 connector round 5-pin, B-coded 1 connector round 5-pin	2 connector round 5-pin, B-coded 1 connector round 5-pin
Description interface/software:			
Service interface RS232	yes	yes	yes
PROFIBUS-DP	BIS C-6002-019-650-03-ST11	BIS C-6002-019-670-03-ST11	BIS C-6002-019-654-03-ST11
PROFIBUS-DP/memory optimization with connector	BIS C-6002-028-650-03-ST11	BIS C-6002-028-670-03-ST11	BIS C-6002-028-654-03-ST11
PROFIBUS-DP	BIS C-6002-019-650-03-KL2	BIS C-6002-019-670-03-KL2	BIS C-6002-019-654-03-KL2
PROFIBUS-DP/memory optimization with PG fitting	BIS C-6002-028-650-03-KL2	BIS C-6002-028-670-03-KL2	BIS C-6002-028-654-03-KL2
Accessories included	Software GSD file	Software GSD file	Software GSD file
Accessories (please order separately)	Connector page 200/201	Connector page 200/201	Connector page 200/201

for read/write head
BIS C-355/_-S92

The **compact class BIS C-600 _** with its reduced dimensions and various interface options can be used wherever ambient conditions require higher protection. Small, compact, flexible and economical

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

- Selectable division of the data width on the PROFIBUS-DP, from 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
- Compatible with BIS C-602 device family
- Accepts all read/write heads
- Compatible with entire BIS C system



Adapter or antenna can be rotated in 3 directions

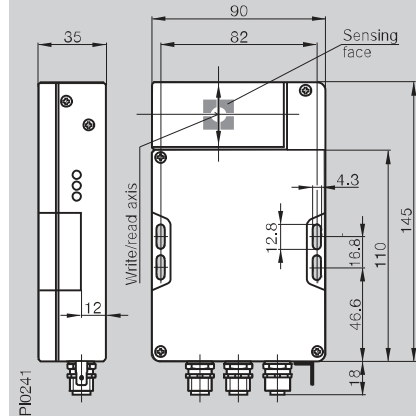
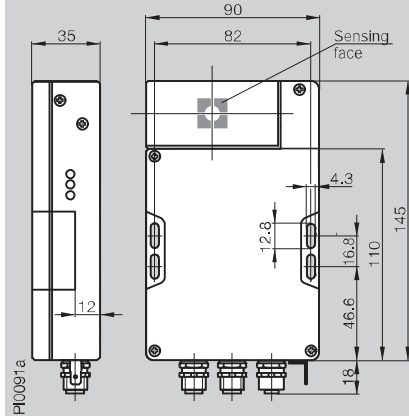
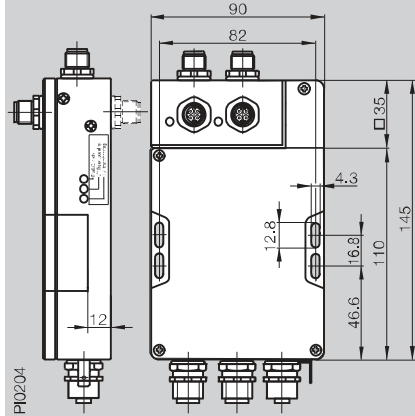


Recommended type ST11

BIS C-6002-...-655-03-...-...
read/write

BIS C-6002-...-652-03-...-...
read/write
round

BIS C-6002-...-653-03-...-...
read/write
Rod



BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld
Accessories
Read/Write Gun
Installation Notes
Read/Write Times

24 V DC $\pm 20\%$
 $\leq 10\%$
 $\leq 400\text{ mA}$
0...+50 °C
0...+50 °C
IP 65
4 external

1 (via opto-coupler), 24 V DC
2 (via opto-coupler), 24 V DC
Terminals 1 \times Pg 9
Terminals 2 \times Pg 11
2 connector round 5-pin, B-coded
1 connector round 5-pin

24 V DC $\pm 20\%$
 $\leq 10\%$
 $\leq 400\text{ mA}$
0...+50 °C
0...+50 °C
IP 65
1 internal

1 (via opto-coupler), 24 V DC
2 (via opto-coupler), 24 V DC
Terminals 1 \times Pg 9
Terminals 2 \times Pg 11
2 connector round 5-pin, B-coded
1 connector round 5-pin

24 V DC $\pm 20\%$
 $\leq 10\%$
 $\leq 400\text{ mA}$
0...+50 °C
0...+50 °C
IP 65
1 internal

1 (via opto-coupler), 24 V DC
2 (via opto-coupler), 24 V DC
Terminals 1 \times Pg 9
Terminals 2 \times Pg 11
2 connector round 5-pin, B-coded
1 connector round 5-pin

yes

BIS C-6002-019-655-03-ST11

BIS C-6002-019-655-03-KL2

yes

BIS C-6002-019-652-03-ST11
BIS C-6002-028-652-03-ST11

BIS C-6002-019-652-03-KL2
BIS C-6002-028-652-03-KL2

yes

BIS C-6002-019-653-03-ST11
BIS C-6002-028-653-03-ST11

BIS C-6002-019-653-03-KL2
BIS C-6002-028-653-03-KL2

Software GSD file
Connector page 200/201

Software GSD file
Connector page 200/201

Software GSD file
Connector page 200/201



Read/write head can be rotated in 3 directions



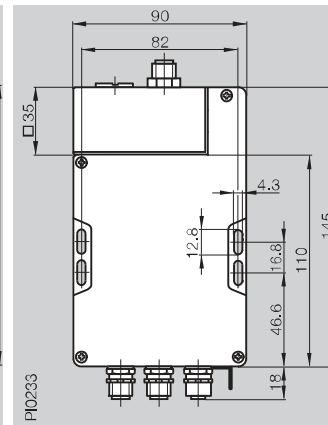
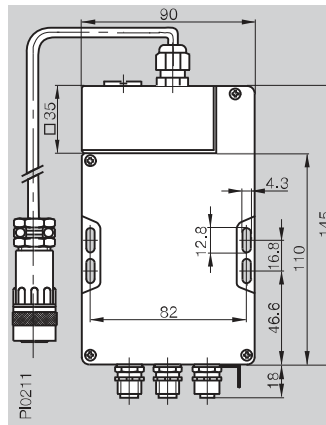
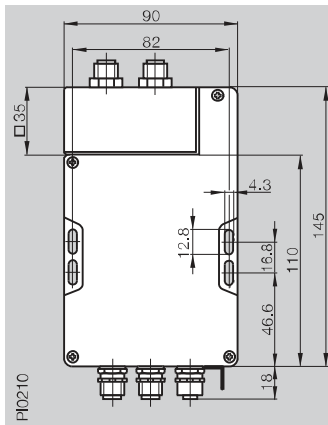
**Threaded cover
BKS 12-CS-01**
coded for M12 B
connector type



Industrial RFID Systems BIS C

Processors

Description	BIS C-6003-_-650-03-ST12	BIS C-6003-_-670-03-ST12	BIS C-6003-_-654-03-ST12
Function	read/write	read/write	read/write
Antenna type			



Supply voltage	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$	24 V DC $\pm 20\%$
Ripple	$\leq 10\%$	$\leq 10\%$	$\leq 10\%$
Current	≤ 400 mA	≤ 400 mA	≤ 400 mA
Operating temperature	0...+60 °C	0...+60 °C	0...+60 °C
Storage temperature	0...+60 °C	0...+60 °C	0...+60 °C
Protection per IEC 60529	IP 65	IP 65	IP 65
Read/write head ports	2 external	1 external	1 external
Connection type	3 connector round 5-pin	3 connector round 5-pin	3 connector round 5-pin

Description interface/software:			
Service interface RS232	yes	yes	yes
DeviceNet™	BIS C-6003-025-650-03-ST12	BIS C-6003-025-670-03-ST12	BIS C-6003-025-654-03-ST12
Accessories included	Software EDS file	Software EDS file	Software EDS file
Accessories (please order separately)	Connector page 200/204/205	Connector page 200/204/205	Connector page 200/204/205

The **compact class BIS C-600_** with its reduced dimensions and various interface options can be used wherever ambient conditions require higher protection.

The devices are ideal for IP 65 and applications involving media that is not aggressive to PS plastic.

Small, compact, flexible and economical

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
- Compatible with entire BIS C system



Adapter or antenna can be rotated in 3 directions

for read/write head
BIS C-355/_-S92



BIS C-6003-_-655-03-ST12

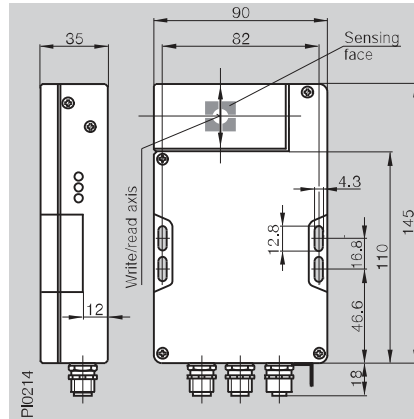
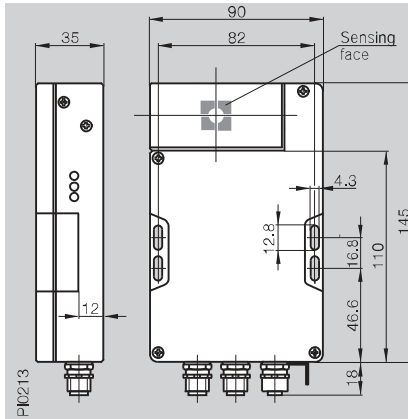
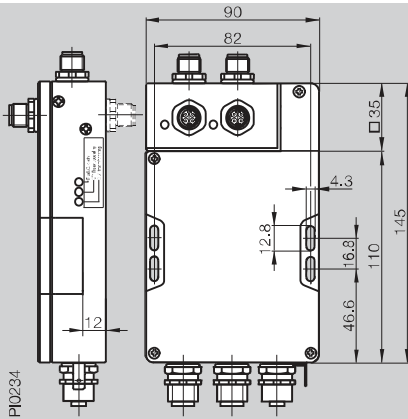
read/write
round

BIS C-6003-_-652-03-ST12

read/write
round

BIS C-6003-_-653-03-ST12

read/write
Rod



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

4 external

3 connector round 5-pin

24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

1 internal

3 connector round 5-pin

24 V DC ±20 %

≤ 10 %

≤ 400 mA

0...+60 °C

0...+60 °C

IP 65

1 internal

3 connector round 5-pin

yes

BIS C-6003-025-655-03-ST12

yes

BIS C-6003-025-652-03-ST12

yes

BIS C-6003-025-653-03-ST12

Software EDS file

Connector page 200/204/205

Software EDS file

Connector page 200/204/205

Software EDS file

Connector page 200/204/205

Read/write head can be rotated in 3 directions



more added value

In robust metal housing

Description	
Function	



Supply voltage	
Ripple	
Current	
Operating temperature	
Storage temperature	
Protection per IEC 60529	
Read/write head ports	
Service interface RS232	
Connection type	

Connection for	
Description interface/software:	
PROFIBUS-DP	
PROFIBUS-DP (with memory optimized data carrier processing)	
Accessories included	
Accessories (please order separately)	

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



Threaded cover BKS 23-CS-00
for M23 connector
IP 65 protective cover for unused connectors!

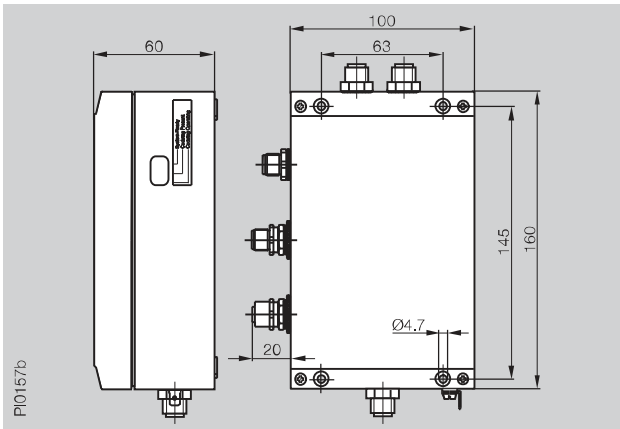
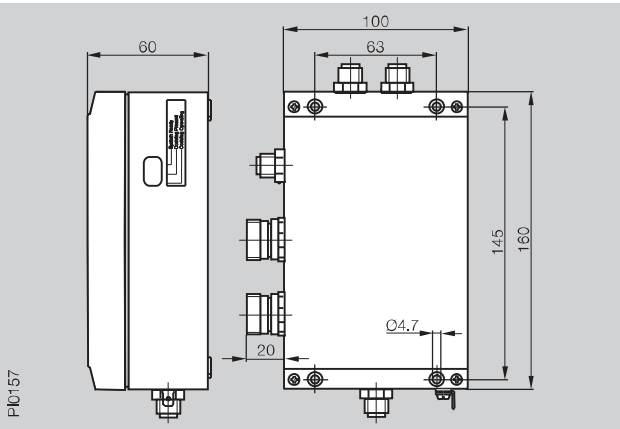


BIS C-6022-__-050-03-ST10
read/write

BIS C-6022-__-050-03-ST14
read/write



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times



24 V DC $\pm 20\%$
 $\leq 10\%$
 $\leq 400\text{ mA}$
 $0\dots+50\text{ }^\circ\text{C}$
 $0\dots+50\text{ }^\circ\text{C}$
 IP 65
 2 extern
 ja

2 connectors round 12-pin,
 1 connector round 5-pin
 1 connector round 4-pin
 Read/write heads BIS C-3_ _
 Exception: BIS C-350/BIS C-355

Connector round 5-pin, B-coded,
 1 connector round 5-pin
 1 connector round 4-pin
 Read/write heads BIS C-3_ _
 Exception: BIS C-350/BIS C-355

BIS C-6022-019-050-03-ST10
 BIS C-6022-028-050-03-ST10

BIS C-6022-019-050-03-ST14
 BIS C-6022-028-050-03-ST14

Software GSD file
 BKS 23-CS-00
 Connector page 200

Software GSD file
 BKS 12-CS-01
 Connector page 200/201



**Threaded cover
 BKS 12-CS-01**
 coded for M12 B
 connector type

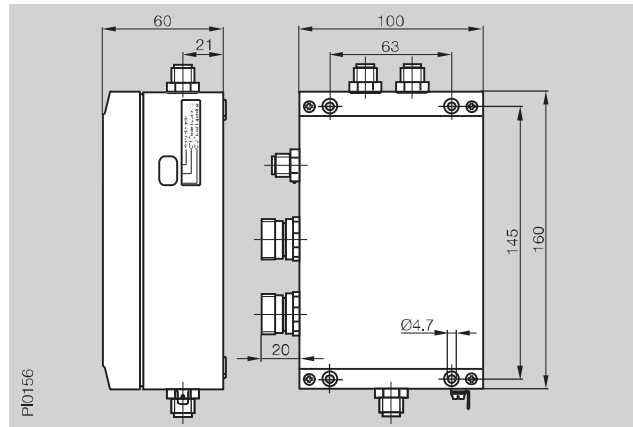


Industrial RFID Systems BIS C

Processors

INTERBUS

Description	BIS C-6021-__-050-03-ST8
Function	read/write

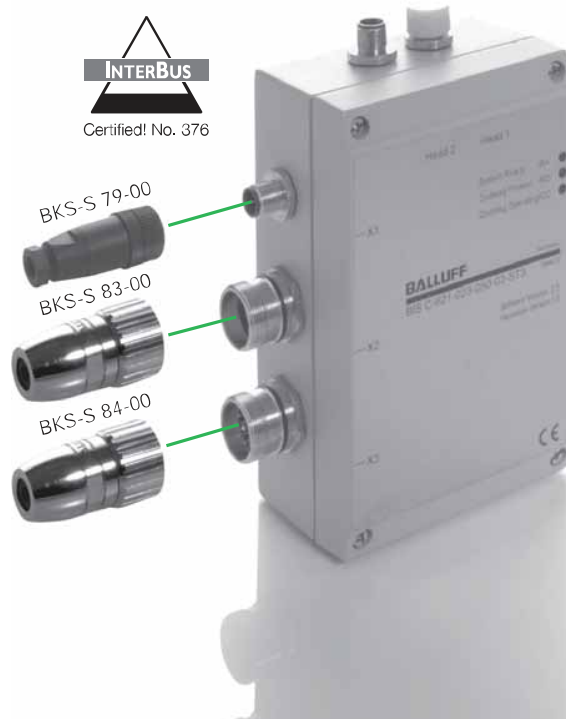


Supply voltage	24 V DC $\pm 20\%$
Ripple	$\leq 10\%$
Current	$\leq 400\text{ mA}$
Operating temperature	0...+60 °C
Storage temperature	0...+60 °C
Protection per IEC 60529	IP 65
Read/write head ports	2 external
Service interface RS232	yes
Connection type	2 connector round 9-pin 1 connector round 5-pin 1 connector round 4-pin
Connection for	Read/write heads BIS C-3__ Exception: BIS C-350/BIS C-355
Description interface/software:	
INTERBUS, remote bus subscriber	BIS C-6021-023-050-03-ST9
INTERBUS, remote bus subscriber with 2M Baud	BIS C-6021-023-050-03-ST9M
INTERBUS, remote bus subscriber (with memory optimized data carrier processing)	BIS C-6021-029-050-03-ST9
INTERBUS, installation bus	BIS C-6021-023-050-03-ST8
INTERBUS, installation bus with 2M baud	BIS C-6021-023-050-03-ST8M
INTERBUS, installation bus (with memory optimized data carrier processing)	BIS C-6021-029-050-03-ST8
Accessories (please order separately)	BKS 23-CS-00 Connector page 200

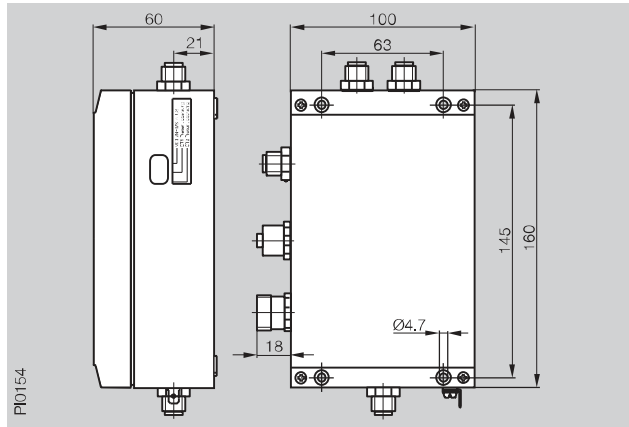
Cost-effective identification – operate 2 read/write heads simultaneously!



Threaded cover
BKS 23-CS-00
for M23 connector
IP 65 protective cover for unused connectors!



Description	BIS C-6023-___-050-03-ST13
Function	read/write



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

Supply voltage	24 V DC ±20 %
Ripple	≤ 10 %
Current	≤ 400 mA
Operating temperature	0...+50 °C
Storage temperature	0...+50 °C
Protection per IEC 60529	IP 65
Read/write head ports	2 external
Service interface RS232	yes
Connection type	3 connector round 5-pin 1 connector round 4-pin
Connection for	Read/write heads BIS C-3_ _ Exception: BIS C-350/BIS C-355
Description interface/software:	
DeviceNet	BIS C-6023-025-050-03-ST13
Accessories included	Software ESD-file
Accessories (please order separately)	BIS-C -623 threaded cover 7/8" Connector page 200 Termination resistor page 203

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

more added value

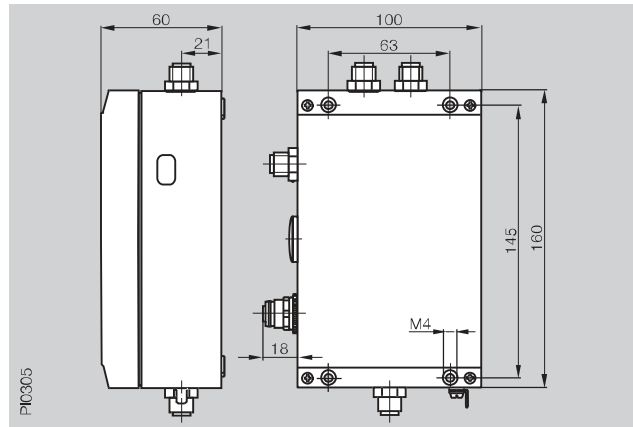
In robust metal housing



Threaded cover BIS C-623
for 7/8" connection
IP 65 protective threaded cover for unused connectors!



Description	BIS C-6026-___-050-06-ST19
Function	read/write

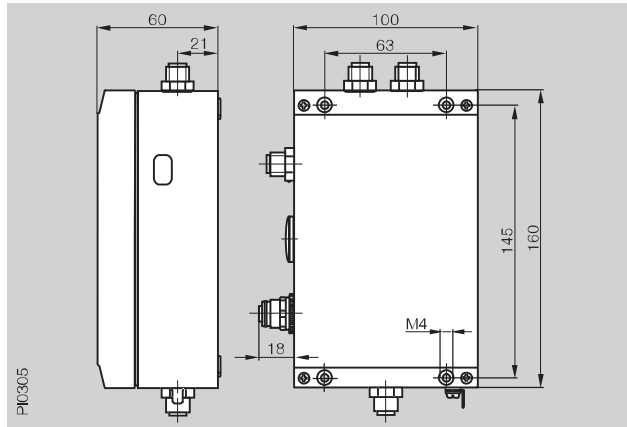


Supply voltage	24 V DC \pm 20 %
Ripple	\leq 10 %
Current	\leq 400 mA
Operating temperature	0...+60 °C
Storage temperature	0...+60 °C
Protection per IEC 60529	IP 65
Read/write head ports	2 external
Service interface RS232	yes
Connection type	Connector round 5-pin, D-coded 1 connector 5-pin 1 connector 4-pin
Connection for	Read/write heads BIS C-3_ _ Exception BIS C-350 and BIS C-355
Description interface/software:	
EtherNet/IP	BIS C-6026-034-050-06-ST19
Accessories included	Configuration software
Accessories (please order separately)	Connectors page 200/202

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



Description	BIS C-6027-___-050-06-ST19
Function	read/write



BIS C

- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

Supply voltage	24 V DC ±20 %
Ripple	≤ 10 %
Current	≤ 400 mA
Operating temperature	0...+50 °C
Storage temperature	0...+50 °C
Protection per IEC 60529	IP 65
Read/write head ports	2 external
Service interface RS232	yes
Connection type	Connector round 5-pin, D-coded 1 connector 5-pin 1 connector 4-pin
Connection for	Read/write heads BIS C-3_ _ Exception BIS C-350 and BIS C-355
Description interface/software:	
EtherNet with standard TCP/IP protocol	BIS C-6027-039-050-06-ST19
Accessories included	Configuration software
Accessories (please order separately)	Connectors page 200/202

more added value

Particularly robust, suitable for tough applications



Order accessories separately!
Adapter cable for EtherNet from M12 D-coded to coupling RJ45/RJ45
BIS C-526-PVC-00.5
page 202

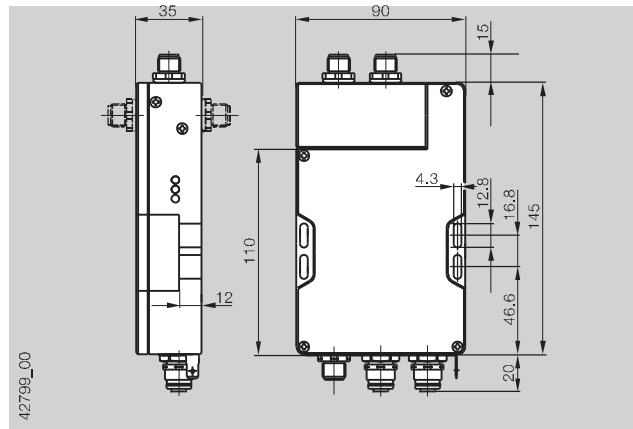


Industrial RFID Systems BIS C

Processors

PROFINET

Description	BIS C-6008-___-650-06-ST23
Function	read/write
Housing material	ABS



Supply voltage	24 V DC $\pm 10\%$
Ripple	$\leq 10\%$
Current	$\leq 400\text{ mA}$
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	yes internal
Connection type	Connector round 5-pin, A-coded 2 connector 4-pin, D-coded
Connection for	Read/write heads BIS C-3_ _ Exception BIS C-350 and BIS C-355
Description interface/software:	
PROFINET RT with IRT-capable 2-PORT switch	BIS C-6008-048-650-06-ST23
Accessories included	Configuration software
Accessories (please order separately)	Connectors page 200/202

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



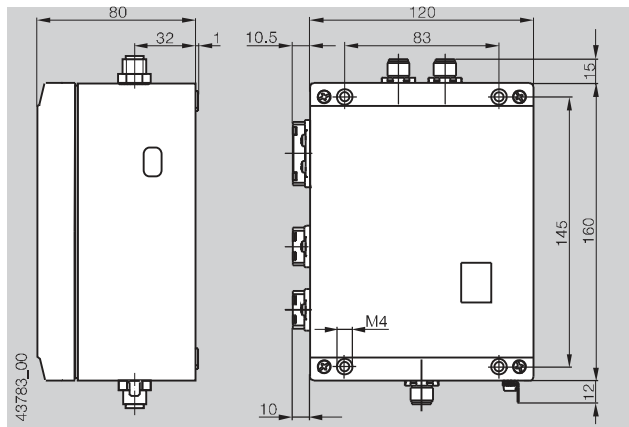
Adapter oder Antenne in
3 Positionen drehbar



Please order accessories separately!
Adapter cable for
PROFINET from M12 D-coded
to coupling RJ45/RJ45
BIS C-526-PVC-00.5
page 202



Description	BIS C-6028-048-050-06-ST22
Function	read/write
Housing material	Al



Supply voltage	24 V DC $\pm 10\%$
Ripple	$\leq 10\%$
Current	$\leq 400\text{ mA}$
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	yes
Connection type	1 connector 5-pin, Push-pull AIDA 2 connector 8-pin, Push-pull RJ45 AIDA Connector round 4-pin
Connection for	Read/write heads BIS C-3_ _ Exception BIS C-350 and BIS C-355
Description interface/software:	BIS C-6028-048-050-06-ST22
PROFINET RT with IRT-capable 2-PORT switch	
Accessories included	Configuration software



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors**
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes
- Read/Write Times

more added value

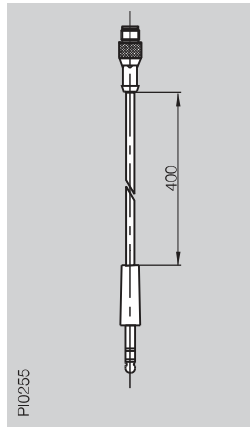
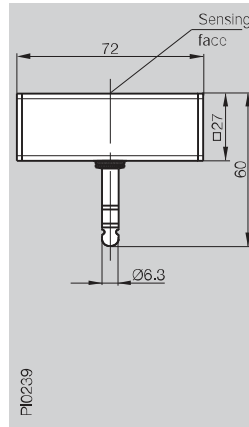
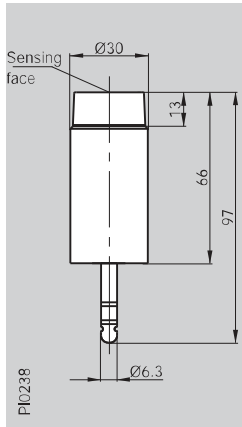
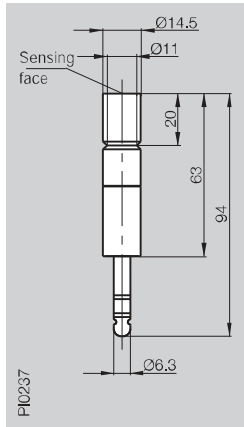
The robust version for connection to ProfiNet with AIDA standard (Automation Initiative of German Domestic Automobile Manufacturers)



Industrial RFID Systems BIS C

Read/Write Heads

Dimensions	Ø 14.5×63	Ø 30×66	72×27×27	
Housing material	CuZn	POM	PVC	
Antenna type	round	round	Rod	
Function	Read/write head	Read/write head	Read/write head	Adapter cable



Ordering code	BIS C-851	BIS C-852	BIS C-853	BIS C-850
Operating temperature	0...+70 °C	0...+70 °C	0...+60 °C	0...+70 °C
Storage temperature	-20...+85 °C	-20...+85 °C	-20...+60 °C	-20...+85 °C
Protection per IEC 60529	IP 67	IP 67	IP 67	IP 67
Read head connection	6.3 mm jack socket	6.3 mm jack socket	6.3 mm jack socket	6.3 mm jack socket
Connection to	BIS C-810 BIS C-820 BIS C-720	BIS C-810 BIS C-820 BIS C-720	BIS C-810 BIS C-820 BIS C-720	BIS C-810 BIS C-820 BIS C-720
Appropriate data carriers	BIS C-100__ BIS C-103__ BIS C-105__ BIS C-121__ BIS C-122__	BIS C-100__ BIS C-104__ BIS C-108__ BIS C-117__ BIS C-128__ BIS C-130__ BIS C-190__ BIS C-191__	BIS C-150__/A	

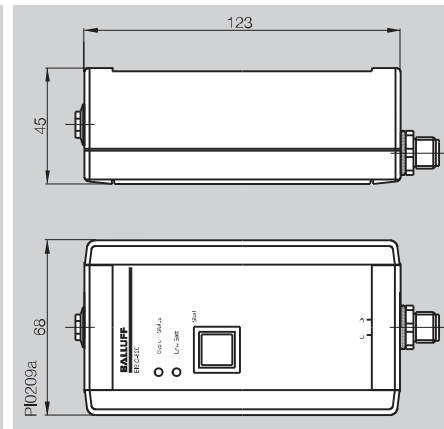
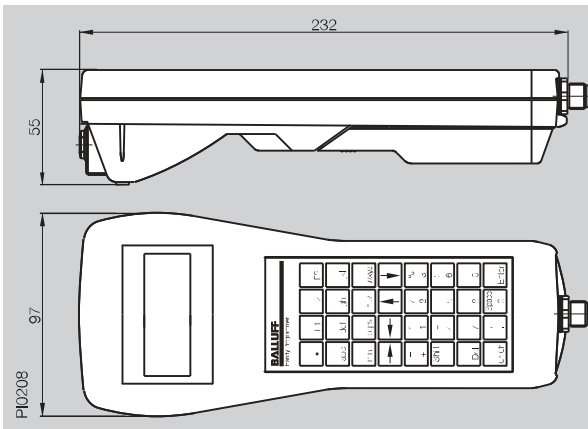
Adapter cable for handy programmer or portable device and all read/write heads with M12 connector.



Industrial RFID Systems BIS C

Handy Programmer

Function	read/write	read/write
Housing material	ABS	ABS



BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld
Accessories
Read/Write Gun
Installation Notes
Read/Write Times

Ordering code	BIS C-810-0-003	BIS C-820-0-004-D
Keyboard	32 buttons, alphanumeric	1 key
Display	LCD-display, 20 characters/4 line	2 LED status/battery
Current	2.4 V rechargeable battery pack NiMH	2x R6 AA rechargeable NiMH
Capacity	1500 mA/h	800 mA/h
Interface	RS232/Balluff Dialog	RS232/Balluff Dialog
Operating temperature	0...+50 °C	0...+50 °C
Protection per IEC 60529	IP 40	IP 40
Read head connection	1x 6.3 mm jack socket	1x 6.3 mm jack socket
Accessories	Carrying case included	

For maximum flexibility

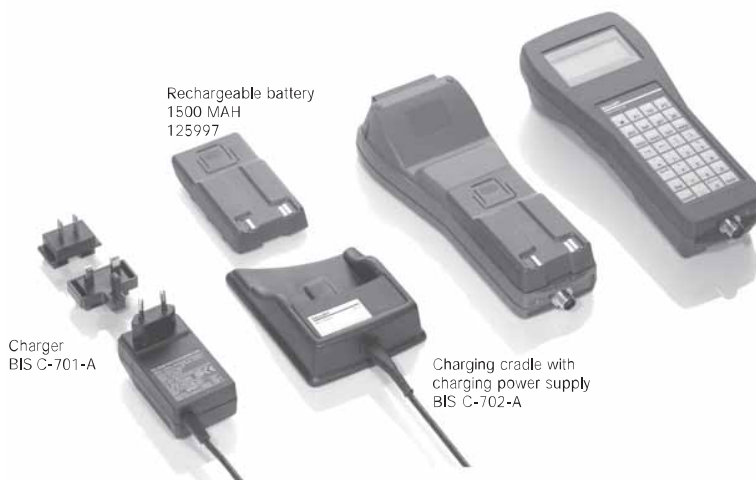
The handy programmer with read/write function helps you stay mobile and independent. Benefit from increased mobility during repair work, for example. Needless to say, the handy programmer is fitted with an interface for connection to a PC.

Option of customizing menu buttons.



BIS C-522-PVC-02

Please order accessories separately!
RS232 adapter cable
BIS C-522-PVC-02
BIS C-524-PVC-01,5
page 195



Industrial RFID Systems BIS C

Handheld

For enhanced operating convenience

Allows portable writing and reading of BIS L data carriers.

- Easy operation thanks to
- Touchscreen with large Windows CE® color display and
 - Pre-installed Balluff software and keyboard or stylus.

Ideal for poor light conditions and challenging environments! Data transfer via optional WLAN, Bluetooth or wired USB. The handheld is also modular for expandability.

Additional convenience

A pistol grip is provided for ergonomic comfort.



Handheld Standard
BIS C-870-1-008-x-000
 Includes charger and stylus

Function	
Housing material	



Standard	Ordering code
Standard + WLAN (802.11b&g)	Ordering code
Standard + Barcode Scanner	Ordering code
Standard + WLAN (802.11b&g) + Barcode Scanner	Ordering code

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	

Industrial RFID Systems BIS C

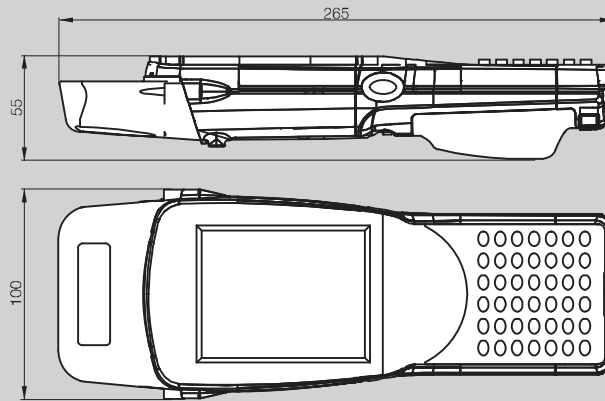
Handheld

read/write
ABS

BIS C

Range of Applications
Selection Criteria
Data Carriers
Read/Write Heads
Read/Write Heads with Connector
Read/Write Heads
Data Couplers
Integratable Read/Write Heads
Integratable Adapter
8-bit Processor for Read-Only Mode
Processors
Read/Write Heads
Handy Programmer
Handheld
Accessories
Read/Write Gun
Installation Notes
Read/Write Times

43976_00a



BIS C-870-1-008-x-000
BIS C-870-1-008-x-001
BIS C-870-1-008-x-002
BIS C-870-1-008-x-004

52 buttons, alphanumeric
TFT Touchscreen display
3.7 V rechargeable battery pack
4000 mA/h
RS232/Balluff Dialog
-10...+50 °C
IP 65
Integrated
Charging power supply and stylus
BIS C-1 ...
Docking Station and Pistol Grip



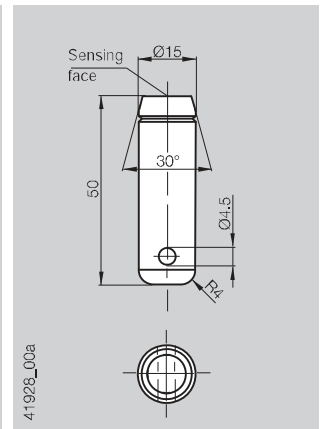
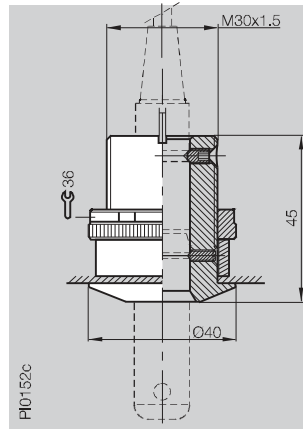
Docking Station with power supply
11023834

Pistol Grip
11023836

Industrial RFID-Systeme

Accessories

Version	Access protection	Data carrier
Use	Attachment for read/write head BIS C-300	
Ordering code	BIS C-300-ZA1	BIS C-122-04/L-ZC1
Degree of protection as per		IP 67
Ambient operating temperature	0...+70 °C	-25...+70 °C
Storage temperature	-20...+85 °C	-25...+85 °C



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, INTERBUS, 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 to you

Simple upgrade and rapid replacement without modifying 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.

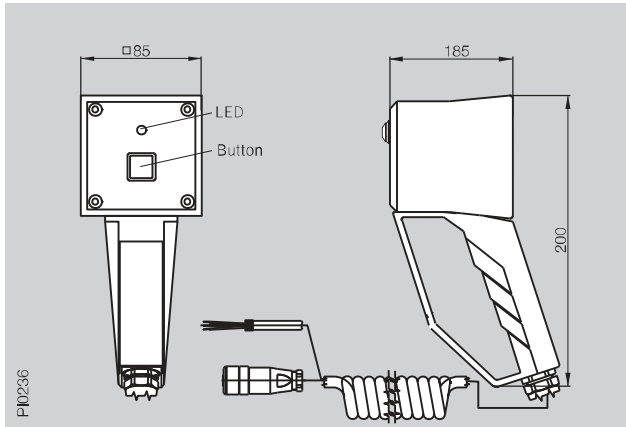


Electronic key for access control. Easy to implement using the "RFID key"

Industrial RFID Systems BIS C

Read/Write Gun

Housing material	PA 66



Ordering code	BIS C-720-01-03
Keyboard	1 key
Display	1 LED
Ambient operating temperature	0...+70 °C
Storage temperature	-20...+85 °C
Protection per DIN 40 050	IP 40
Read head connection	6.3 mm jack socket
Coiled cable extended	3 m
Connection to	Processor and PLC



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories**
- Read/Write Gun**
- Installation Notes
- Read/Write Times

Outstanding operating comfort

Benefit from the advantages of the ergonomic pistol grip with the option of attaching three different read/write heads. The pistol grip rests snugly in your hand while you activate a read/write function at the press of a button. LEDs and an integral buzzer signal the end of the read/write process.



Installation in Steel Clear zone dimensions

Data carrier	Fig.	Dimensions (in mm)			
		A	B	C	D
BIS C-100-05/A	-	0	0	0	0
BIS C-103-__/_/A	-	0	0	0	0
BIS C-104-__/_/A	-	0	0	0	0
BIS C-105-__/_/A	-	0	0	0	0
BIS C-108-__/_/L	-	0	0	0	0
BIS C-117-05/A	-	0	0	0	0
BIS C-117-05/L	5	60	-	-	20
BIS C-121-04/L	-	0	0	0	0
BIS C-122-__/_/L	-	0	0	0	0
BIS C-127-05/L	4	30	30	-	30
BIS C-128-__/_/L	5	60	-	-	20
BIS C-130-05/L	5	70	-	-	2
BIS C-133-__/_/L	-	0	0	0	0
BIS C-134-__/_/L	2	70	-	11	-
BIS C-150-__/_/A	1	20	20	22	-
BIS C-190-__/_/L	3	20	17	20	-
BIS C-191-__/_/L	3	9	27	9	-

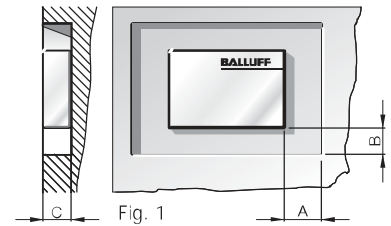


Fig. 1

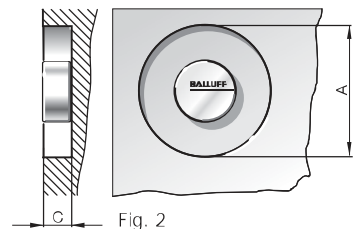


Fig. 2

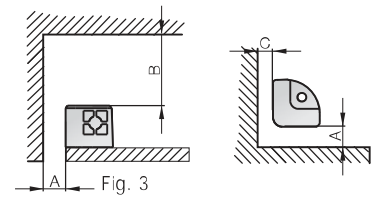


Fig. 3

Read/write head	Fig.	Dimensions (in mm)		
		A	B	C
BIS C-300	-	0	0	0
BIS C-302	-	0	0	0
BIS C-305	-	0	0	0
BIS C-306	-	0	0	0
BIS C-310	2	60	-	13
BIS C-315	-	0	0	0
BIS C-318	1	50	50	30
BIS C-319	2	50	-	35
BIS C-323	2	60	-	13
BIS C-324	1	0	0	0
BIS C-325	2	0	0	0
BIS C-326	2	80	-	35
BIS C-327	1	50	50	20
BIS C-328	1	50	50	20
BIS C-350	1	60	50	60
BIS C-351	1	100	60	50

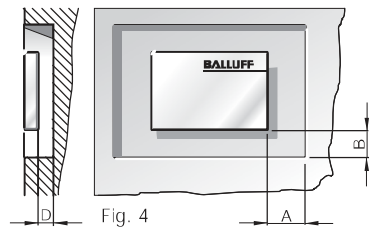


Fig. 4

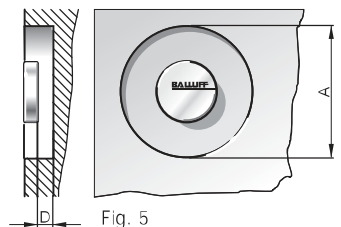


Fig. 5

Note

Depending on the combination of read/write head and data carrier, clear zone dimension A and B should always be selected for the larger of the components.

Installation in Aluminum

With Clear Zone, Static Operation

When installing components in aluminum, provide clear zones for trouble-free operation.

In static mode a clear zone depth in aluminum of at least 10 mm must be maintained. Fig. 1

Clear zone dimension **A** corresponds to the diameter of the larger communication partner (data carrier or read/write head) plus the maximum possible offset (see specification for read/write head). Fig. 2

When combined with read/write heads BIS C-318, 327, 328, 350, 351 and 355 dimension **B** and **C** are calculated from the length and width of the larger communication partner (data carrier or read/write head) plus the maximum permissible offset (see specification for read/write head). Fig. 3

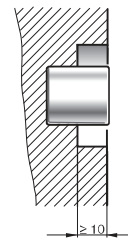


Fig. 1

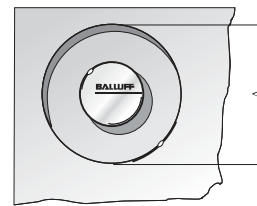


Fig. 2

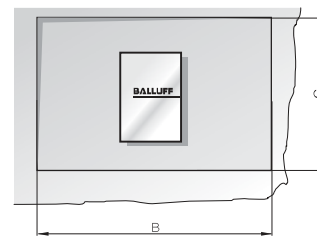


Fig. 3

With Clear Zone, Dynamic Operation

In dynamic mode a clear zone depth in aluminum of at least 10 mm must be maintained. Fig. 1

Clear zone dimension **A** corresponds to $2 \times$ the diameter of the larger communication partner + $1 \times$ the diameter of the smaller communication partner. Clear zone dimension **C** corresponds to the diameter of the larger communication partner plus the corresponding maximum offset (see specification for read/write head). Fig. 4

When combined with read/write heads BIS C-318, 327, 328, 350, 351 and 355 dimension **B** is calculated from $2 \times$ the read/write path (see specification for read/write heads) + the width of the data carrier. Clear zone dimension **C** corresponds to the read/write head length plus the corresponding maximum offset (see specification for read/write head). Fig. 5

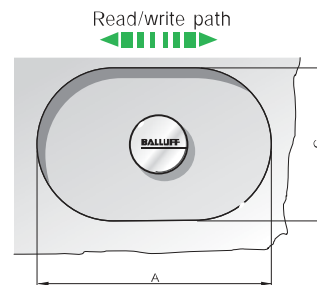


Fig. 4

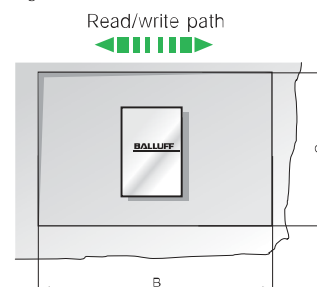
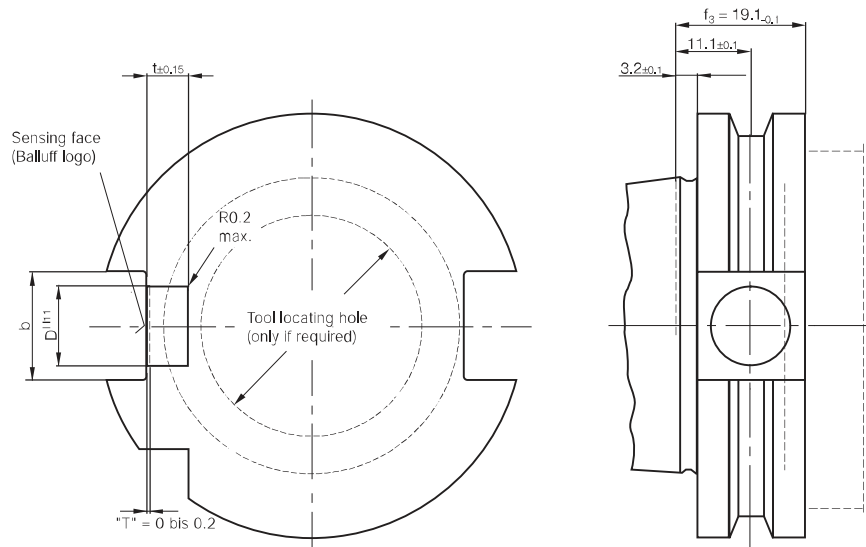


Fig. 5

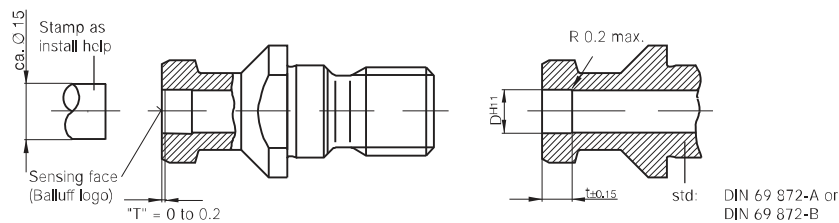
Einbau in Steilkegel

	Data carrier BIS C-122			Data carrier BIS C-103			Data carrier BIS C-105		
	D ^{H11}	t±0,15	U/min. max.	D ^{H11}	t±0,15	U/min. max.	D ^{H11}	t±0,15	U/min. max.
Taper DIN 69 871-A									
Nr. 30	10	4,65	90000	12	8,15	68000	12	6,15	68000
Nr. 40	10	4,65	75000	12	8,15	54000	12	6,15	54000
Nr. 45	10	4,65	66000	12	8,15	43000	12	6,15	43000
Nr. 50	10	4,65	59000	12	8,15	33000	12	6,15	33000



Installation in Retention Knob

	Data carrier BIS C-122		Data carrier BIS C-103		Data carrier BIS C-105	
	D ^{H11}	t±0,15	D ^{H11}	t±0,15	D ^{H11}	t±0,15
Taper DIN 69 871-A						
Nr. 30	-	-	-	-	-	-
Nr. 40	10	4,65	-	-	-	-
Nr. 45	10	4,65	12	8,15	12	6,15
Nr. 50	10	4,65	12	8,15	12	6,15



Installation

1. Degrease gluing surfaces.
2. Apply a bead of glue (e. g. UHU-Plus 300) approximately 3 mm wide around the perimeter of the data carrier housing. Note manufacturer's instructions!
3. Press in data carrier housing by hand. Note dimension "T"!
4. Remove excess glue.
5. Allow to harden.

Industrial RFID Systems BIS C

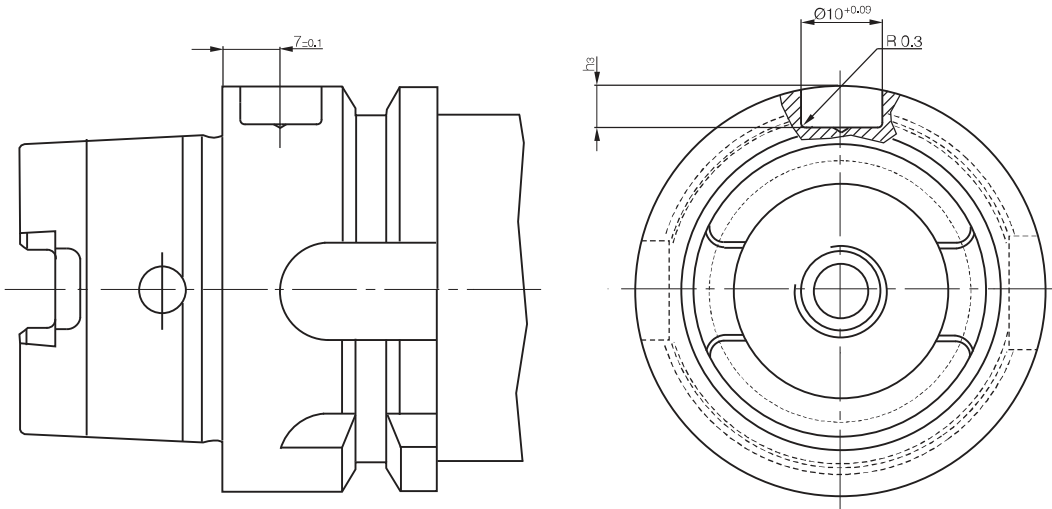
Installation Notes



- Range of Applications
- Selection Criteria
- Data Carriers
- Read/Write Heads
- Read/Write Heads with Connector
- Read/Write Heads
- Data Couplers
- Integratable Read/Write Heads
- Integratable Adapter
- 8-bit Processor for Read-Only Mode
- Processors
- Read/Write Heads
- Handy Programmer
- Handheld
- Accessories
- Read/Write Gun
- Installation Notes**
- Read/Write Times

Installation in HSK Taper

HSK Form A ISO/DIS 12164-1	Data carrier BIS C-122	
	$h_3 + 0,20$	U/min. max.
32	5,4	96000
40	5,2	80000
50	5,1	75000
63	5	65000
80	4,9	57000
100	4,9	48000



Mechanical Strength

Data carriers and read/write heads

Ordering code	BIS C-1_ _ , BIS C-3_ _
Shock load	100 g/6 ms per EN 60068-2-27 and 100 g/2 ms per EN 60068-2-29
Vibration	20 g, 10...2000 Hz per EN 60068-2-6
Values apply to data carriers BIS C-1_ _ and read/write heads BIS C-3_ _ except for the non-potted read/write heads BIS C-350, BIS C-351, BIS C-352 and BIS C-355.	

Processors and non-potted read/write heads

Ordering code	BIS C-6_ _ , BIS C-350, BIS C-351, BIS C-352, BIS C-355
Shock load	15 g/11 ms per EN 60068-2-27 and 15 g/6 ms per EN 60068-2-29
Vibration	5 g, 10...150 Hz per EN 60068-2-6

Industrial RFID Systems BIS C

Read/Write Times

Read Times in Static Mode

For double read and compare:

Data carrier with 32-bytes blocks	
Bytes	Read time [ms]
from 0 up to 31	110
for each additional 32 bytes started	
add an additional	120
from 0 up to 255	= 950

Data carrier with 64-bytes blocks	
Bytes	Read time [ms]
from 0 up to 63	220
for each additional 64 bytes started	
add an additional	230
from 0 up to 2047	= 7350

Write Times in Static Mode

Includes checking and comparing:

Data carrier with 32-bytes blocks	
Bytes	Write time [ms]
from 0 up to 31	$110 + n \times 10$
≥ 32	$y \times 120 + n \times 10$
from 0 up to 255	= max. 3510

Data carrier with 64-bytes blocks	
Bytes	Write time [ms]
from 0 up to 63	$220 + n \times 10$
≥ 64	$y \times 230 + n \times 10$
from 0 up to 2047	= max. 27830

n = number of contiguous bytes to be programmed

y = number of blocks to be processed

Example:

Write 17 bytes starting at address 187. Data carrier block size = 32 bytes.

Blocks 5 and 6 are processed, since the start address 187 is in block 5 and end address 204 is in block 6.

$$t = 2 \times 120 + 17 \times 10 = \mathbf{410 \text{ ms}}$$

Read Times in Dynamic Mode

Read times within the 1st block for double read and compare:

The time indicated apply after the data carrier has been recognized. If the tag has not been recognized, an additional 30 ms must be added to allow for creating the energy field necessary to recognize the Data carrier.

Data carrier with 32-bytes blocks	
Bytes	Read time [ms]
from 0 up to 3	14
for each additional bytes	3.5
from 0 up to 31	112

Data carrier with 64-bytes blocks	
Bytes	Read time [ms]
from 0 up to 3	14
for each additional bytes	3.5
from 0 up to 64	224

Example:

Read 11 bytes starting at address 9, i. e. the highest address to be read is 20 (use for "m" in the formula).

$$t = 14 \text{ ms} + (m - 3) \times 3.5 \text{ ms} = \mathbf{73.5 \text{ ms}}$$

In the internal memory organization of the data carrier, a distinction is made between the two block sizes 32 and 64 bytes (also referred to as 'page size').

Memory Organization

Memory size up to 1023 bytes = 32 bytes per block

Memory size 2047 bytes and larger = 64 bytes per block