

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



## Basic features

Antenna type	round
Approval/Conformity	CE FCC Part 15 IC RSS-210 WEEE

## Display/Operation

Function indicator	CP (Code tag present), LED yellow Power (ON), LED green Operating, LED green flashing
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## Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
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## Electrical data

Current consumption max. at 24 V DC	150 mA
EN 300330-1	Power Class 5
Operating voltage $U_b$	18...30 VDC Supports only LPS/ Class 2
Residual ripple max.	1.3 Vpp

## Environmental conditions

Ambient temperature	0...70 °C
Continuous shock load	yes
EN 60068-2-27, Shock	yes
EN 60068-2-32 Free fall	yes
EN 60068-2-6, Vibration	yes
Protection degree	IP67
Storage temperature	-20...85 °C

## Functional Characteristics

Supported data carrier types	DIN ISO 14443 DIN ISO 15693
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## Material

Housing material	Zinc, Die casting, nickel plated
Housing material, surface protection	nickel plated

## Mechanical data

Application weight	360.00 g
Dimension	40 x 15 x 105 mm
Installation	metal-free (clear zone)

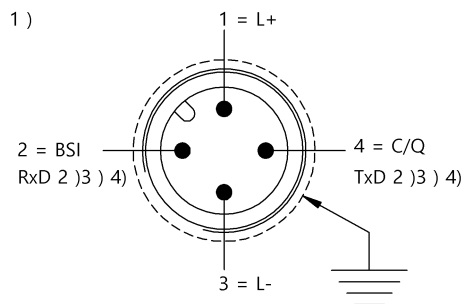
## Output/Interface

IO-Link version	1.1
Interface	IO-Link 1.1
Process data IN	10 bytes

## Remarks

For basic equipment: Accessories see [www.balluff.com](http://www.balluff.com)  
Values are under rated conditions unless otherwise specified.  
For installation in metal: Observe clear zone.

## Connector Drawings

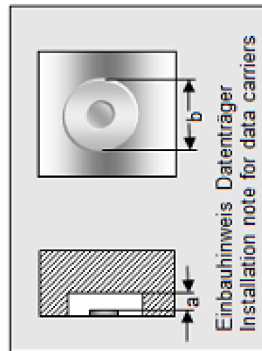


- 1 ) View towards connector
- 2) BSI service interface
- 3) Do not connect power
- 4) (Only for Balluff Service)

## Help Views

**BIS M-408-045-001-**

	BIS M-105-02/A	BIS M-122-02/A	BIS M-110-02/L	BIS M-111-02/L	BIS M-128-03/L
passende Datenträger Appropriate data carriers					
Abstand Datenträger zu Metall in mm ( a ) Data carrier distance to metal in mm	>10 >0	>10 >0	>25	>25	>25
Freizone Datenträger in mm ( b ) Data carrier clear zone in mm	>60 >60	>60 >60	>100	>100	>100
Schreibabstand in mm Write distance in mm	0-13 0-11	0-11 0-9	0-23	0-28	0-26
Leseabstand in mm Read distance in mm	0-13 0-11	0-11 0-9	0-23	0-28	0-26
Versatz in mm bei Abstand von	±10 ±8	±8 ±8	±15 ±15	±16 ±16	±15 ±15
	4 ±10 ±8	±8 ±7	±15 ±15	±16 ±16	±15 ±15
	5 ±10 ±8	±7 ±7	±15 ±15	±16 ±16	±15 ±15
	6 ±9 ±7	±7 ±6	±15 ±15	±16 ±16	±15 ±15
	7 ±9 ±7	±7 ±6	±15 ±15	±16 ±16	±15 ±15
	8 ±9 ±7	±7 ±6	±15 ±15	±16 ±16	±15 ±15
	9 ±9 ±7	±7 ±3	±15 ±15	±16 ±16	±15 ±15
	10 ±7 ±4	±4 ±4	±15 ±15	±16 ±16	±15 ±15
	11 ±7 ±4	±4 ±4	±12 ±12	±15 ±15	±13 ±13
	13 ±4		±12 ±12	±15 ±15	±13 ±13
	15		±12 ±12	±15 ±15	±13 ±13
	20		±12 ±12	±15 ±15	±13 ±13
	23		±5	±10 ±10	±5 ±5
	25			±10 ±10	±5 ±5
	26			±5 ±5	±5 ±5
	28			±5	
	35				
	40				
	45				
	50				
	55				



**BIS M-408-045-001-**

	BIS M-140-02/A- xx	BIS M-142-02/A- xx	BIS M-143-02/A- xx	BIS M-144-02/A- xx
passende Datenträger Appropriate data carriers				
Abstand Datenträger zu Metall in mm ( a ) Data carrier distance to metal in mm	>0	>0	>0	>0
Freizone Datenträger in mm ( b ) Data carrier clear zone in mm	>100	>100	>100	>100
Schreibabstand in mm Write distance in mm	0-22	0-22	0-13	0-22
Lesabstand in mm Read distance in mm	0-22	0-22	0-13	0-22
Versatz in mm bei Abstand von	0 ±13	±13	±10	±13
	5 ±13	±13	±10	±13
	10 ±13	±13	±9	±13
	13 ±11	±11	±5	±11
	15 ±11	±11		±11
	18 ±11	±11		±11
	20 ±7	±7		±7
	22 ±7	±7		±7
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