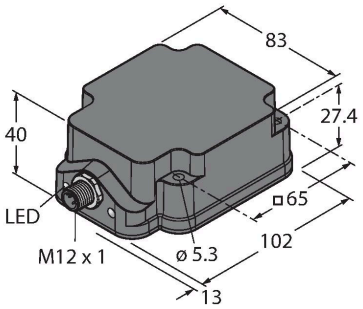
TNSLR-Q80WD-H1147/C53
HF Read/Write Head – For Bus Line Topology with TBEN-*



Technical data

Type	TNSLR-Q80WD-H1147/C53
ID	100001312
Remark to product	Wash-Down (IP69K), very long range
Approvals	CE UKCA UL
Radio approvals (HF)	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada MIC: Japan RCM: Australia/New Zealand SRRC: PR China KC: South Korea
Electrical data	
Operating voltage U_B	19.2…28.8 VDC
DC rated operating current I_e	≤ 90 mA
inrush current	1200 mA For: 1 ms
Data transfer	Inductive coupling
Technology	HF RFID
Operating frequency	13.56 MHz
Radio communication and protocol standards	ISO 15693 NFC Typ 5
Read/Write distance max.	280 mm
Output function	4-wire, Read/Write
Suitable for bus mode to TBEN-*.	Yes
Mechanical data	
Mounting conditions	Non-flush, partially embeddable

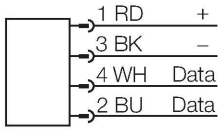
Features

- Rectangular, height 40 mm
- Active face on top
- Plastic, PPS-GF30
- Device without end termination
- Device may only be operated in line topology TBEN-S*-2RFID-* or TBEN-L*-4RFID-*
- Max. 32 nodes per line or connection permitted
- Use a corresponding terminating resistor (see accessories)
- Observe the performance of the power supply, especially when turned on, and the maximum current carrying capacity of the cables
- Observe the voltage drop on the line
- The maximum possible length of the spur line is 2 m
- The maximum possible length of the bus is 50 m
- By default, a command can only be processed by one read/write head, making HF bus mode suitable for static applications and slow dynamic applications
- In continuous HF bus mode, a command is executed simultaneously on all read/write heads in a bus topology. The recorded data is stored in the ring buffer of the module
- The read/write head is automatically assigned an address
- For different application requirements, the address and can be parameterized
- Powered and operated only via connection to BL ident interface module
- Electrical connection only via BL ident extension cable

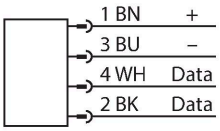
…/S2503 Connectors

Technical data

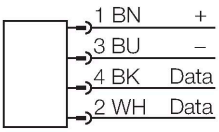
Ambient temperature	-25…+70 °C
Design	Rectangular, Q80WD
Dimensions	102 x 83 x 40 mm
Housing material	Plastic, Black
Active area material	Plastic, PPS-GF30, black
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
Electrical connection	M12 × 1
Power-on indication	LED, Green
Diagnostic display	Function of the orange "range restricted" LED: If the read/write head is supplied with power, it checks whether the range is affected by the metal surrounding the read/write head. If this is the case, the read/write head adjusts its frequency, but this is only possible within a certain range. If there is too much metal in the environment, the read/write head can no longer re-tune and, due to the reduced range, the communication between the read/write head and the tag is cut off (the orange "range restricted" LED lights up). However, if the LED is off, this does not mean that the range is not reduced. Rather, the lit LED is an indication of too much metal in the environment and a greatly reduced range (about 50 % less). The detuning is also graphically displayed in TAS (Turck Automation Suite, available free of charge at www.turck.com) via the connected interface.
Fieldbus Protocol	Connection to RFID interface
Packaging unit	1



Connector …/S2500



Connector …/S2501



Functional principle

The HF read/write devices operating at a frequency of 13.56 MHz form a transmission zone, the size of which (0…500 mm) varies depending on the combination of read/write device and tag used.
The read/write distances mentioned here only represent standard values measured under laboratory conditions, free from any influences caused by surrounding materials.
The read/write distances of the tags for mounting in metal TW-R**-M(MF) were determined in metal.
Attainable distances may vary by up to 30 % due to component tolerances, mounting conditions, ambient conditions and material qualities (especially when mounted in metal). Testing of the application under real operating conditions is therefore essential, especially with on-the-fly reading and writing!

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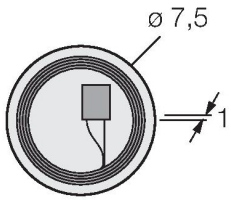
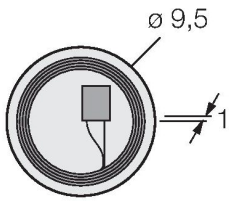
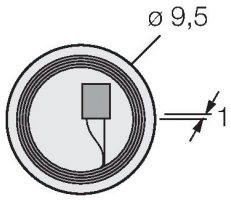
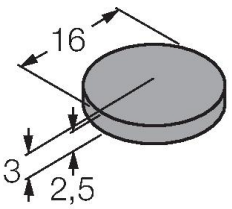
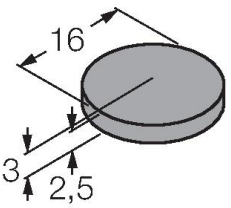
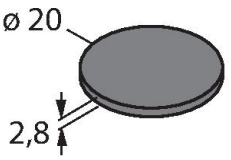
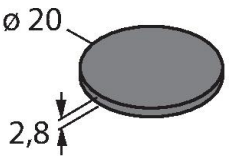
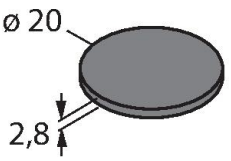
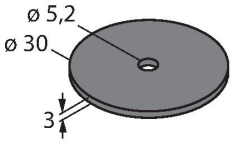
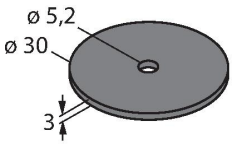
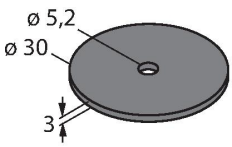
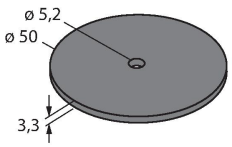
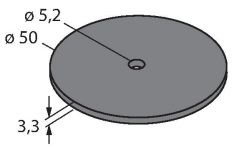
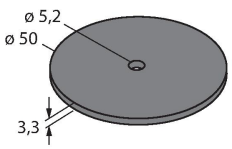
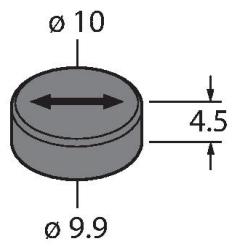
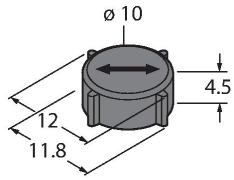
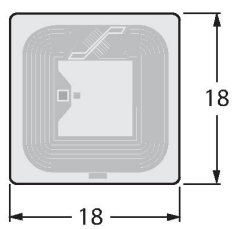
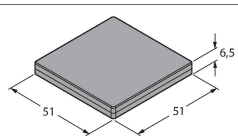
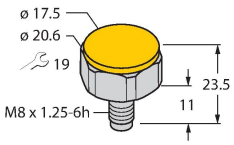
Mounting instructions/Description

This figure illustrates an example of operating a read/write head in a compact multiprotocol I/O module TBEN-S*-2RFID-* or TBEN-L*-4RFID-* in a line topology

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads
	Ident - no.	Recommended (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	[mm]
	**TW-R7.5-B128** 7030231	48	95	104	52	450
	**TW-R9.5-B128** 7030252	50	100	106	53	450
	**TW-R9.5-K2** 7030558	48	97	106	53	450
	**TW-R16-B128** 6900501	75	146	144	72	450
	**TW-R16-K2** 7030410	48	97	106	53	450
	**TW-R20-B128** 6900502	74	140	140	70	450
	**TW-R20-B320** 100005244	74	140	140	70	450
	**TW-R20-K2** 6900505	68	130	132	66	450

	**TW-R30-B128** 6900503	110	186	176	88	450
	**TW-R30-B320** 100005245	110	186	176	88	450
	**TW-R30-K2** 6900506	74	138	136	68	450
	**TW-R50-B128** 6900504	134	240	228	114	450
	**TW-R50-B320** 100005246	134	240	228	114	450
	**TW-R50-K2** 6900507	120	218	208	104	450
	**TW-R10-M-B146** 7030545	25	52	80	40	450
	**TW-R12-M-B146** 7030500	28	55	86	43	450
	**TW-L18-18-F-B128** 7030634	73	136	132	76	450
	**TW-Q51WH-HT-B128** 7030661	145	260	250	125	450

	**TW-BS8X1.25-19-K9/C55** 100000368	23	56	72	36	450