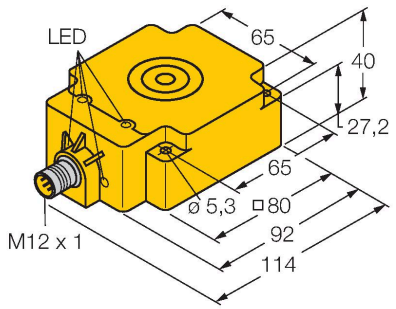
TN-Q80-H1147/C53
HF Read/Write Head – For Bus Line Topology with TBEN-*



Technical data

Type	TN-Q80-H1147/C53
ID	100010648
Approvals	CE UKCA UL
Radio approvals (HF)	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA RCM: Australia/New Zealand SRRC: PR China
Electrical data	
Operating voltage	10…30 VDC
DC rated operational current	≤ 80 mA
inrush current	1000 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.	146 mm
Output function	4-wire, Read/Write
Suitable for bus mode to TBEN-*.	Yes
Mechanical data	
Mounting conditions	Non-flush, partially embeddable
Ambient temperature	-25…+70 °C
Design	Rectangular, Q80
Dimensions	92 x 80 x 40 mm

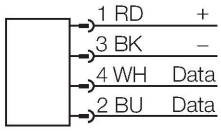
Features

- Rectangular, height 40 mm
- Active face on top
- Plastic, PBT-GF30-VO
- 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
- M12 × 1 connector, connection only via BL ident extension cable

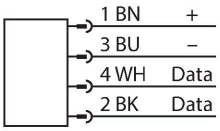
…/S2503 Connectors

Technical data

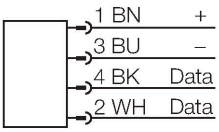
Housing material	Plastic, PBT-GF30-V0, Yellow
Active area material	Plastic
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	248 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Packaging unit	1



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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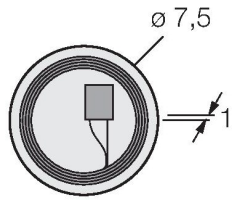
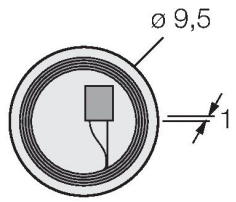
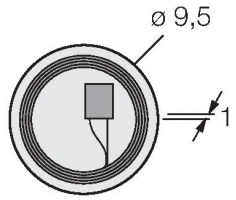
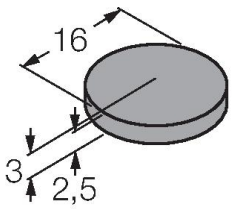
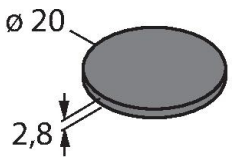
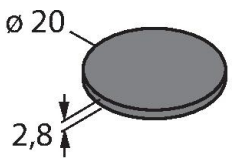
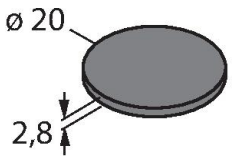
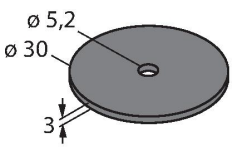
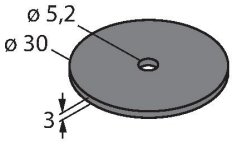
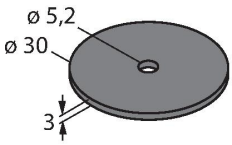
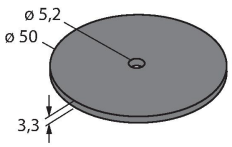
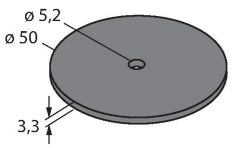
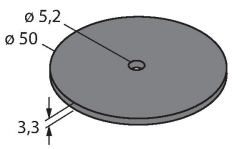
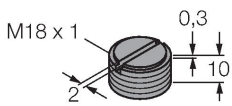
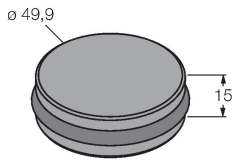
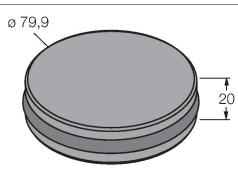
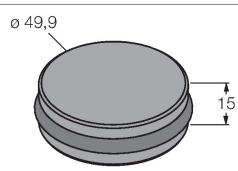
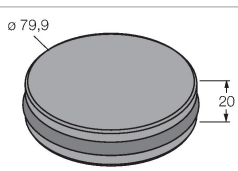
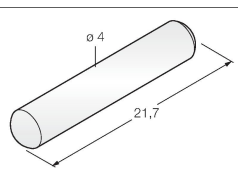
Mounting instructions/Description

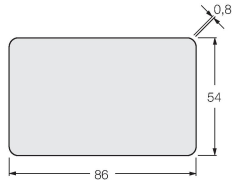
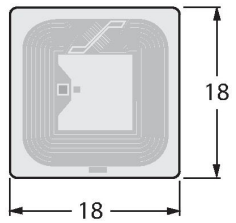
Width active area B	80 mm

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

LED	Color	Status	Meaning
1	OFF	OFF	Operating voltage switched off
	GREEN	ON	Operating voltage switched on
	GREEN	FLASHING (1 Hz)	HF field switched off
	GREEN	FLASHING (2 Hz)	Tag in detection range

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	10	34	62	31	240
	**TW-R9.5-B128** 7030252	11	37	68	34	240
	**TW-R9.5-K2** 7030558	17	46	62	31	240
	**TW-R16-B128** 6900501	20	52	60	30	240
	**TW-R20-B128** 6900502	35	65	72	36	240
	**TW-R20-B320** 100005244	35	65	72		
	**TW-R20-K2** 6900505	25	52	70	35	240
	**TW-R30-B128** 6900503	35	72	80	40	240

	**TW-R30-B320** 100005245	35	72	80	40	240
	**TW-R30-K2** 6900506	35	67	80	40	240
	**TW-R50-B128** 6900504	65	118	120	60	240
	**TW-R50-B320** 100005246	65	118	120	60	240
	**TW-R50-K2** 6900507	50	100	110	55	240
	**TW-SPP18X1-B128** 6901062					240
	**TW-R50-M-B128** 7030209	25	53	66	33	240
	**TW-R80-M-B128** 7030207	40	76	76	38	240
	**TW-R50-M-K2** 7030229	15	41	58	38	240
	**TW-R80-M-K2** 7030205	20	55	64	32	240
	**TW-R4-22-B128** 7030237	20	48	68	34	240

	**TW-L86-54-C-B128** 6900479	70	146	158	78	240
	**TW-L18-18-F-B128** 7030634	35	71	78	39	240

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