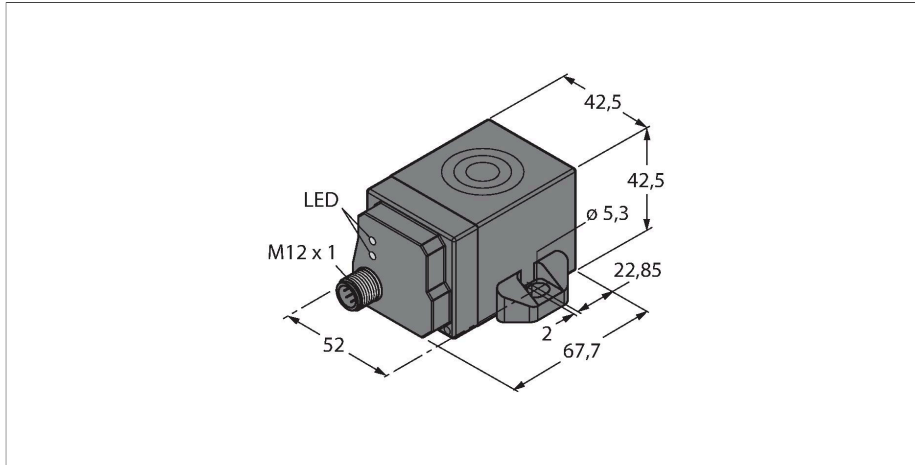


# TNSLR-Q42TWD-H1147/C53

## HF Read/Write Head – For Bus Line Topology with TBEN-\*



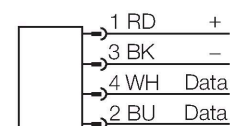
### Technical data

Type	TNSLR-Q42TWD-H1147/C53
ID	7030733
Approvals	CE UKCA UL
Radio approvals	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada MIC: Japan EU/RED: Europe
<b>Electrical data</b>	
Operating voltage	19.2...28.8 VDC
DC rated operational current	≤ 110 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.	215 mm
Output function	4-wire, Read/Write
Suitable for bus mode to TBEN-*	Yes
<b>Mechanical data</b>	
Mounting conditions	Non-flush, partially embeddable
Ambient temperature	-25...+70 °C
Design	Rectangular, Q42
Dimensions	67.7 x 42.5 x 42.5 mm
Housing material	Plastic, PA12-GF30, Black
Active area material	Plastic, black
Vibration resistance	55 Hz (1 mm)

### Features

- Rectangular, height 42.5 mm
- Active face on top
- Plastic, PA12-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 can be parameterized
- Powered and operated only via connection to BL ident interface module
- M12 × 1 connector, connection only via BL ident extension cable

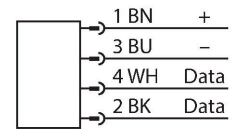
### .../S2503 Connectors



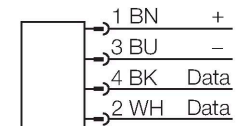
## Technical data

Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
Electrical connection	M12 × 1
MTTF	201 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Packaging unit	1

## .../S2500 Connectors



## .../S2501 Connectors



## 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\*\*-(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!

## Mounting instructions/Description

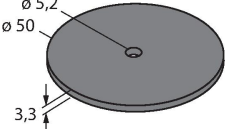
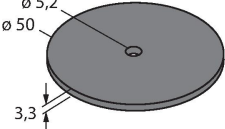
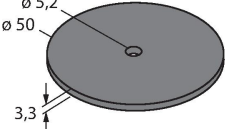
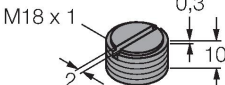
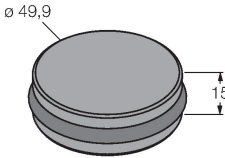
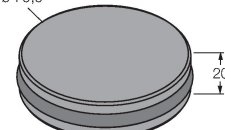
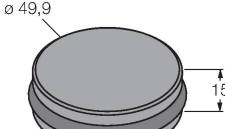
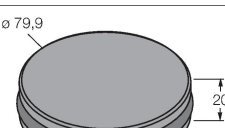
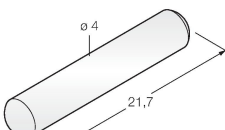
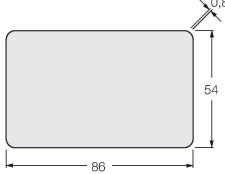
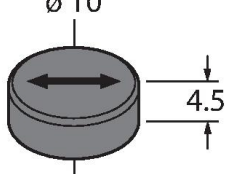


Width active area 42 mm  
B

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 [mm]
		Recommended (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	
	Ident - no.					

	<b>TW-R7.5-B128</b> 7030231	20	41	60	30	240
	<b>TW-R9.5-B128</b> 7030252	22	45	66	33	240
	<b>TW-R9.5-K2</b> 7030558	36	70	74	37	240
	<b>TW-R16-B128</b> 6900501	50	85	90	45	240
	<b>TW-R20-B128</b> 6900502	50	88	92	47	240
	<b>TW-R20-B320</b> 100005244	50	88	92	47	240
	<b>TW-R20-K2</b> 6900505	40	75	84	42	240
	<b>TW-R30-B128</b> 6900503	60	115	116	58	240
	<b>TW-R30-B320</b> 100005245	60	115	116	58	240
	<b>TW-R30-K2</b> 6900506	60	98	104	52	240

	<b>TW-R50-B128</b> 6900504	80	165	168	84	240
	<b>TW-R50-B320</b> 100005246	80	165	168	84	240
	<b>TW-R50-K2</b> 6900507	90	144	150	75	240
	<b>TW-SPP18X1-B128</b> 6901062	30	66	80	40	240
	<b>TW-R50-M-B128</b> 7030209	35	58	64	32	240
	<b>TW-R80-M-B128</b> 7030207	50	90	90	45	240
	<b>TW-R50-M-K2</b> 7030229	30	58	76	38	240
	<b>TW-R80-M-K2</b> 7030205	35	78	80	40	240
	<b>TW-R4-22-B128</b> 7030237	40	73	86	43	240
	<b>TW-L86-54-C-B128</b> 6900479	120	215	214	107	240
	<b>TW-R10-M-B146</b> 7030545	20	42	75	37	240

	<b>TW-R12-M-B146</b> 7030500	22	44	77	38	240
	<b>TW-BS10X1.5-19-K2</b> 6901380	20	42	44	22	240
	<b>TW-BS8X1.25-19-K2</b> 7030638	20	42	44	22	240
	<b>TW-L18-18-F-B128</b> 7030634	55	103	100	50	240
	<b>TW-Q51WH-HT-B128</b> 7030661	108	194	192	96	240
	<b>TW-BS8X1.25-19-K9/C55</b> 100000368	23	45	46	23	240

## Accessories

Dimension drawing	Type	ID	
	RSE57-TR2/RFID	6934908	Terminating resistor to build an RFID line topology
	VT2-FKM5-FKM5-FSM5	6930573	T-splitter to build an RFID line topology
	VB2-FKM5-FSM5.205-FSM5.305/S2550	6936821	Y-splitter for re-powering a supply voltage for the RFID bus topology
	RK4.5T-2-RS4.5T/S2503	7030331	BL ident cable, M12 female connector, straight to M12 male connector, straight, cable length: 2 m, jacket material: PUR, black; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>