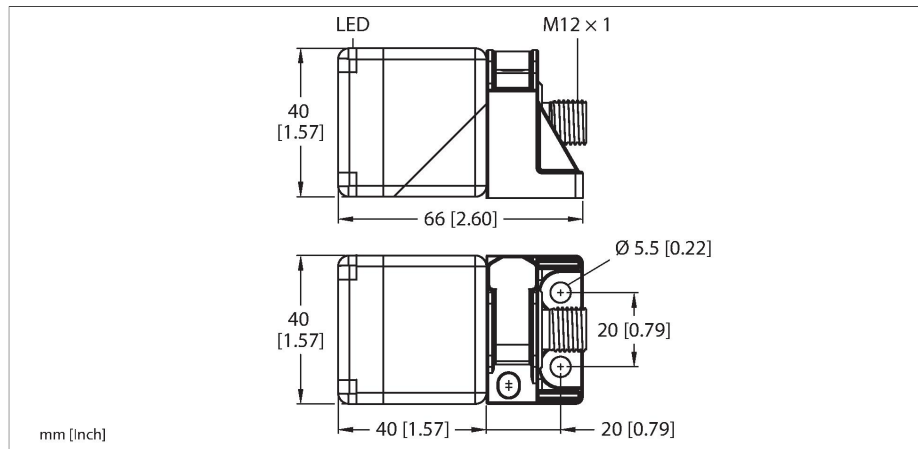


TN-Q40-IOL2-H1141

HF Read/Write Head – IO-Link



Technical data

Type	TN-Q40-IOL2-H1141
ID	100012163
Approvals	CE UKCA cULus
Radio approvals	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada
Electrical data	
Operating voltage	11...32 VDC
DC rated operational current	≤ 50 mA
inrush current	700 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
The following chip types are supported	NXP I-Code SLI-X NXP I-Code SLI-S NXP I-Code SLIX2 EM4233SLIC Fujitsu MB89R118
Wire breakage/Reverse polarity protection	yes
Output function	4-wire, Read/Write, IO-Link SIO Mode 2 × PNP
Mechanical data	
Mounting conditions	Non-flush
Ambient temperature	-25...+80 °C
Design	Rectangular, Q40
Dimensions	66 x 40 x 40 mm



Features

- Rectangular, height 40 mm
- The active face (yellow) can be positioned in five different orientations without the need for tools (quick toggle catch)
- Plastic, PBT-GF30-V0
- Process value in 32-byte IO-Link telegram
- Operation in SIO mode possible
- RSSI value output
- Alarm outputs, parameterizable (e.g. for RSSI threshold)
- Password function for accessing the tag (separate hardware must be used to enable the password function)
- Operating hours counter
- Male connector, M12 × 1, 4-pin

Pin Assignment



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.

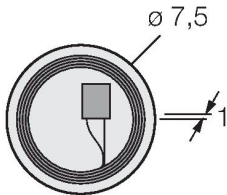
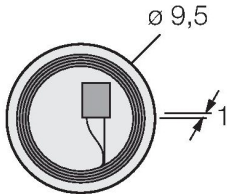
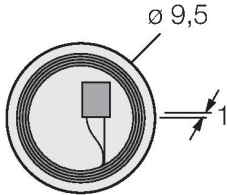
The read/write distances of the tags for mounting in metal TW-R**-M(MF) were determined in metal.

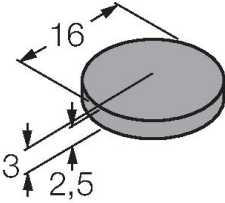
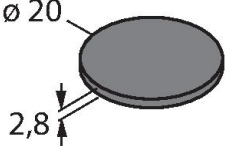
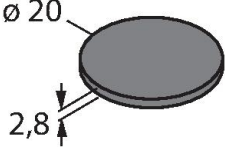
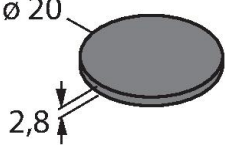
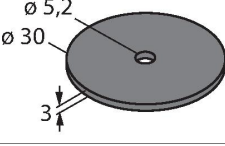
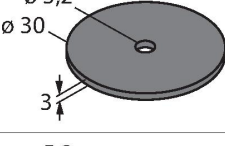
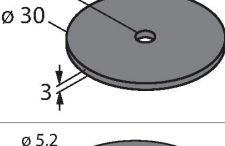
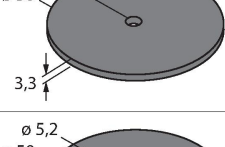
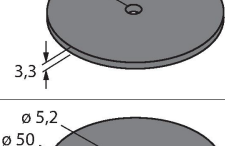
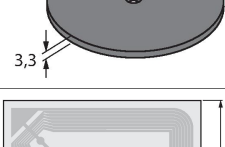
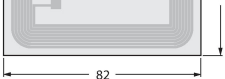
Attainable distances may vary by up to 30 % due to component tolerances, mounting conditions, ambient conditions and material qualities (especially when mounted in metal).

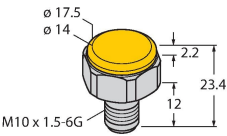
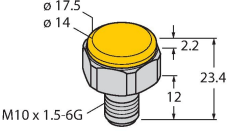
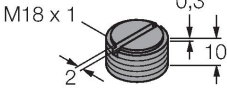
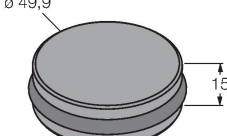
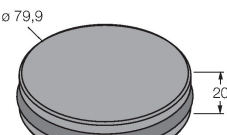
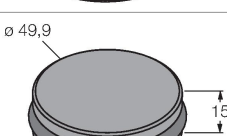
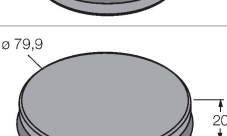
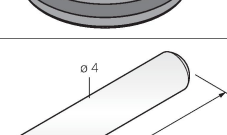
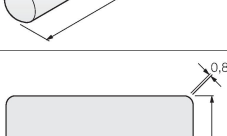
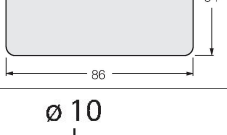
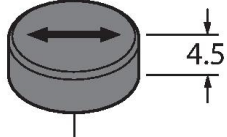
Technical data

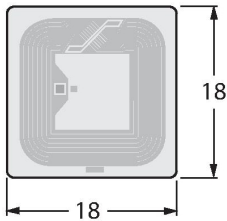
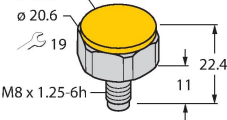
Testing of the application under real operating conditions is therefore essential, especially with on-the-fly reading and writing!

Housing material	Plastic, PBT
Active area material	Plastic, PBT, yellow
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
Electrical connection	M12 × 1
MTTF	756 years
Power-on indication	LED, Green
IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A
Programming	IO-Link, PACTware
Communication mode	COM 3 (230.4 kBaud)
Process data width	256 bit
Minimum cycle time	10 ms
Function pin 4	IO-Link/SIO
Function Pin 2	SIO
Transmission rate	230.4 kbaud
Packaging unit	1

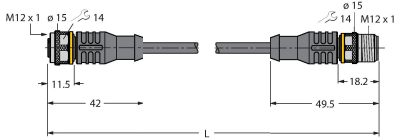
Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads
	Ident - no.	Recommended (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	
	TW-R7.5-B128 7030231	13	30	42	21	120
	TW-R9.5-B128 7030252	14	33	46	23	120
	TW-R9.5-K2 7030558	18	38	42	21	120

	TW-R16-B128 6900501	28	50	54	27	120
	TW-R20-B128 6900502	30	50	50	25	120
	TW-R20-B320 100005244	30	50	50	25	120
	TW-R20-K2 6900505	22	40	36	18	120
	TW-R30-B128 6900503	30	53	62	31	120
	TW-R30-B320 100005245	30	53	62	31	120
	TW-R30-K2 6900506	30	55	56	28	120
	TW-R50-B128 6900504	45	85	96	48	120
	TW-R50-B320 100005246	45	85	96	48	120
	TW-R50-K2 6900507	38	81	82	41	120
	TW-L80-50-P-B128 7030389	42	81	93	46	120

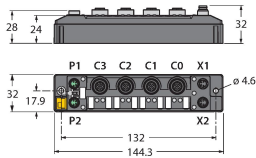
	TW-BS10X1.5-19-K2 6901380	8	23	30	15	120
	TW-BD10X1.5-19-K2 6901381	20	39	44	22	120
	TW-SPP18X1-B128 6901062	15	34	46	23	120
	TW-R50-M-B128 7030209	23	46	48	24	120
	TW-R80-M-B128 7030207	25	53	68	34	120
	TW-R50-M-K2 7030229	15	37	46	23	120
	TW-R80-M-K2 7030205	15	47	54	27	120
	TW-R4-22-B128 7030237	20	40	50	25	120
	TW-L86-54-C-B128 6900479	60	115	132	66	120
	TW-R10-M-B146 7030545	7	18	30	15	120
	TW-R12-M-B146 7030500	7	18	30	15	120

	TW-L18-18-F-B128 7030634	29	56	52	26	120
	TW-B58x1.25-19-K2 7030638	8	23	30	15	120

Accessories

Dimension drawing	Type	ID	
	RKC4.4T-2-RSC4.4T/TXL	6625608	Extension cable, M12 female connector, straight, 4-pin to M12 male connector, straight, 4-pin; cable length: 2 m, jacket material: PUR, black; cULus approval; other cable lengths and versions available, see www.turck.com

Accessories

Dimension drawing	Type	ID	
	TBEN-S2-4IOL	6814024	Compact multiprotocol I/O module, 4 IO-Link Master 1.1 Class A, 4 universal PNP digital channels 0.5 A