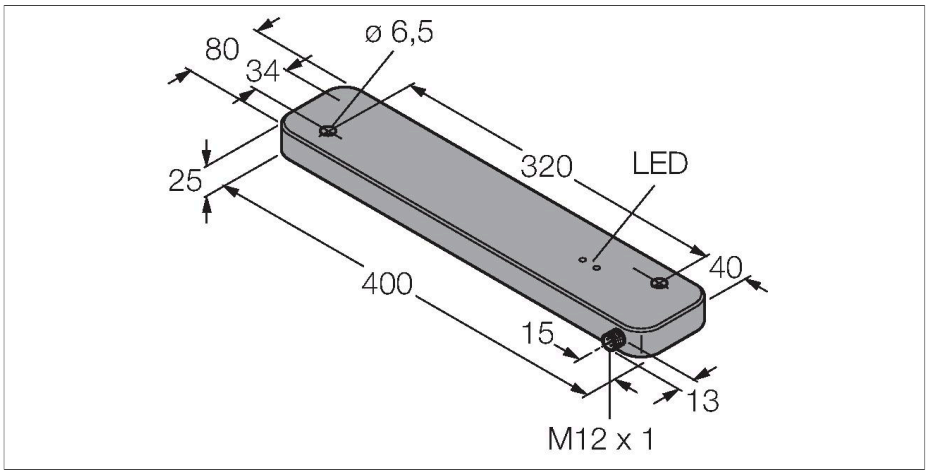
TNLR-Q80L400-H1147L
HF Read/Write Head



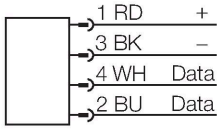
Technical data

Type	TNLR-Q80L400-H1147L
ID	7030234
Remark to product	For roller conveyors (vertical or horizontal orientation)
Approvals	CE UKCA
Radio approvals	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada RCM: Australia/New Zealand
Electrical data	
Operating voltage	19.2…28.8 VDC
DC rated operational current	≤ 230 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.	345 mm
Output function	4-wire, Read/Write
Mechanical data	
Mounting conditions	Non-flush, partially embeddable
Ambient temperature	-25…+70 °C
Design	Rectangular, Q80L400
Dimensions	400 x 80 x 25 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, black
Vibration resistance	55 Hz (1 mm)

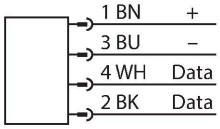
Features

- For roller conveyors
- The approach direction of the tag can be both, diagonal as well as longitudinal to the read/write head.
- Rectangular, 80 x 400 mm, height 25 mm
- Active face on top
- Plastic, PBT-GF30-VO
- Powered and operated only via connection to BL ident interface module
- M12 × 1 connector, connection only via BL ident extension cable

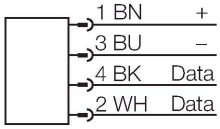
…/S2503 Connectors



…/S2500 Connectors



…/S2501 Connectors

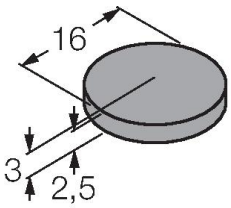
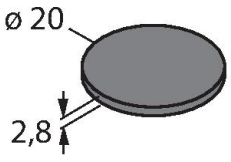
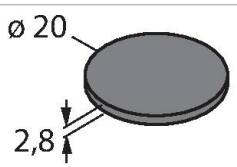
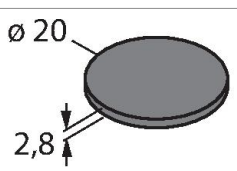


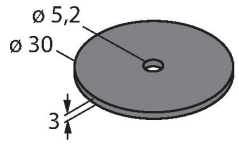
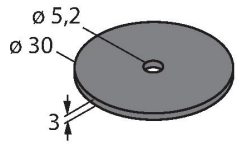
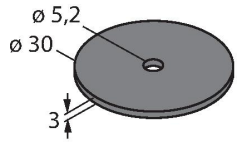
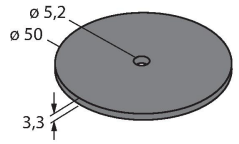
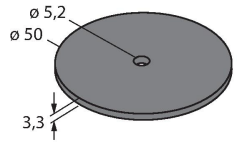
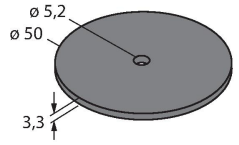
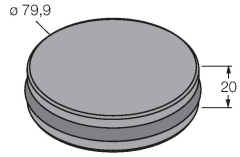
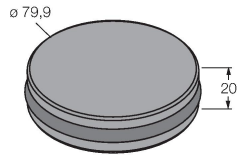
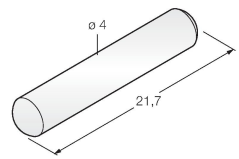
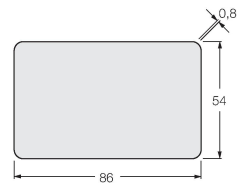
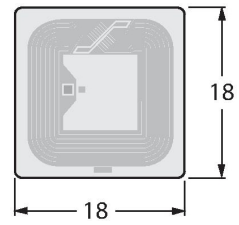
Technical data

Shock resistance	30 g (11 ms)
Protection class	IP67
Electrical connection	M12 × 1
MTTF	121 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Diagnostic display	Functional description of the orange range-restricted LED: If the read/write head is supplied with voltage, it briefly checks to see whether its resonance frequency is affected by surrounding metal. If this is the case, the resonant circuit off-tunes its frequency to reach again the (optimum) resonance frequency. However, this is only possible within a certain range. If too much metal is in the environment, the read/write head cannot re-tune or the surrounding metal takes too much energy from the field and due to the reduced range the communication between the read/write head and the tag (tag) is cut off (the orange range-restricted-LED lights up). If the LED is off, this does not mean conversely, that no reduction in range occurs. The lit LED is rather an indication of too much metal in the environment and a greatly reduced range (about 50% less).
Packaging unit	1

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!

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-R16-B128** 6900501	50	95	74	205	240
	**TW-R20-B128** 6900502	60	102	86	202	240
	**TW-R20-B320** 100005244	60	102	86	202	240
	**TW-R20-K2** 6900505	15	64	70	195	240

	**TW-R30-B128** 6900503	90	152	132	217	240
	**TW-R30-B320** 100005245	90	152	132	217	240
	**TW-R30-K2** 6900506	70	122	100	208	240
	**TW-R50-B128** 6900504	150	256	230	242	240
	**TW-R50-B320** 100005246	150	256	230	242	240
	**TW-R50-K2** 6900507	120	216	190	233	240
	**TW-R80-M-B128** 7030207	40	77	56	199	240
	**TW-R80-M-K2** 7030205	30	77	64	195	240
	**TW-R4-22-B128** 7030237	40	78	68	184	240
	**TW-L86-54-C-B128** 6900479	200	345	306	242	240
	**TW-L18-18-F-B128** 7030634	60	128	116	58	240