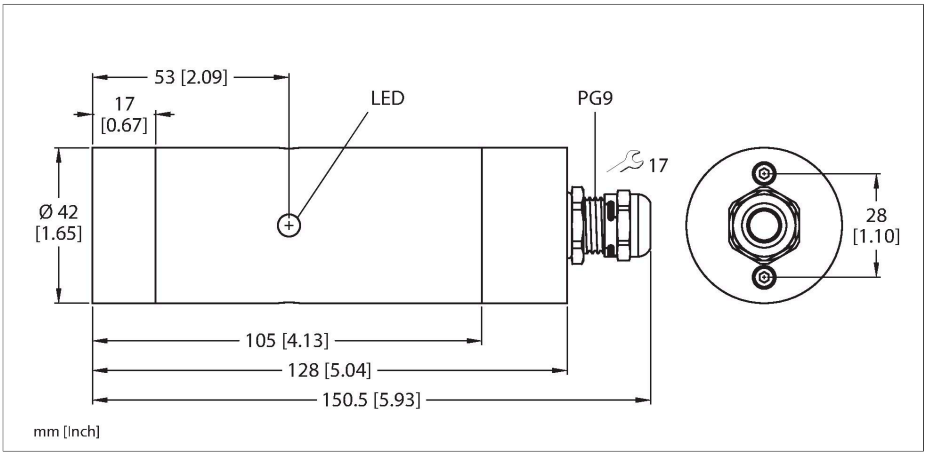
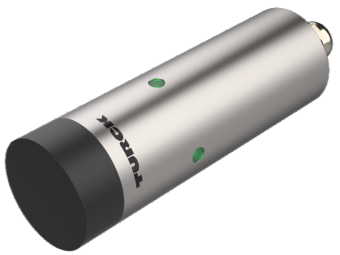
TN-R42TC-EX
HF Read/Write Head – For Explosion Hazardous Areas





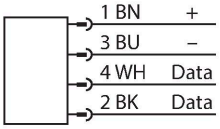
Technical data

Type	TN-R42TC-EX
ID	100020166
Remark to product	The device must be mounted, grounded, connected and commissioned in accordance with the standards applicable at the place of commissioning. EN60079-14 is to be used in the European Union. Examples of mounting and grounding materials to be used include: OBO Bettermann grounding bolt type 950OBO Bettermann band grounding clamp for EX zone 1/21, 2/22
Approvals	CE UKCA ATEX
Radio approvals (HF)	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada
Device marking	Ex II 2G Ex eb mb IIC T6 Gb Ex II 2D Ex tb IIIC T80 °C Db
Electrical data	
Operating voltage U_B	21.6…26.4 VDC
DC rated operating current I_e	≤ 70 mA
Data transfer	Inductive coupling
Technology	HF RFID
Operating frequency	13.56 MHz
Radio communication and protocol standards	ISO 15693 NFC Typ 5
Output function	4-wire, Read/Write

Features

- Smooth barrel
- Ex e terminal chamber with tension springs
- Housing made of V2A stainless steel
- Front cap made of liquid crystal polymer
- Laser-engraved label, permanently legible
- Plastic front cap (active face) must be free of metal (non-flush mounting)
- Powered and operated only via connection to BL ident interface module
- Electrical connection only via BL ident extension cable
- ATEX category II 2 G, Ex Zone 1
- ATEX category II 2 D, Ex Zone 21

Connector …/S2500



Functional principle

The HF read/write heads 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 head 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

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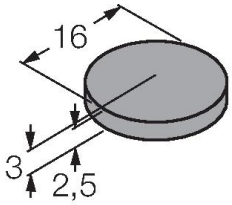
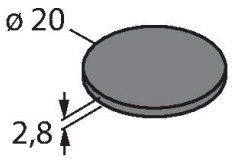
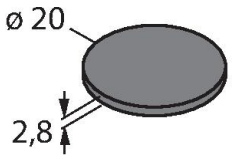
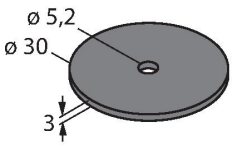
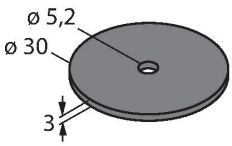
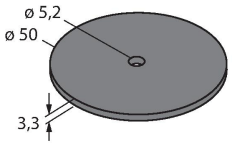
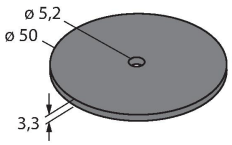
Technical data

Mechanical data	
Mounting conditions	Non-flush
Ambient temperature	-20…+40 °C
	For explosion hazardous areas see instruction leaflet
Design	Smooth barrel, R42TC
Dimensions	150.5 mm
Housing diameter	Ø 42 mm
Active area material	Plastic, PA6
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Electrical connection	Terminal chamber
Power-on indication	LED, Green
Fieldbus Protocol	Connection to RFID interface
Packaging unit	1

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!

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]
	**LOGI TAG 161 SLIX2** 100002353	20	38	44	22	120
	**IN TAG 200 SLIX** 100002354	22	40	34	17	120
	**IN TAG 200 2K FRAM** 100002358	17	31	32	16	120
	**IN TAG 300 SLIX2** 100002356	22	43	56	28	120
	**IN TAG 300 2K FRAM** 100002359	23	42	50	25	120
	**IN TAG 500 SLIX2** 100027728	40	72	76	38	120
	**IN TAG 500 2K FRAM** 100002360	30	58	76	38	120

Operating instructions

Intended use	The EC-type examination certificate and the operating instructions included in the delivery have to be read before commissioning and the included notes must be observed on all accounts.
For use in explosion hazardous areas conform to classification	II 2 G (Group II, Category 2 G, electrical equipment for gaseous atmospheres). II 2 D (Group II, Category 2 D, electrical equipment for dust atmospheres).
Marking (see device or technical data sheet)	Ⓔx II 2G Ex eb mb IIC T6 Gb acc. to EN60079-0:2018 and EN60079-7:2015 + A1:2018 and EN60079-18:2015/A1:2017 and EN60079-31:2014 Ⓔx II 2D Ex tb IIIC T80 °C Db as per EN60079-0:2018 and EN60079-7:2015 + A1:2018 and EN60079-18:2015/A1:2017 and EN60079-31:2014
Installation/Commissioning	These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas and if necessary, of the regulations applicable to safety-related systems.Please verify that the classification and the marking on the device comply with the actual application conditions.
Comments	The use of Turck RFID extension cables (…/S2500) with a length of up to 200 m to the RFID read/write head TN-R42TC-EX connection to Turck fieldbus components (product series BL20, BL67, TBEN-…) is possible under the following prerequisite.- A sufficiently dimensioned power supply with a stabilized output voltage of 24 VDC is used.- The voltage drop on the cable is taken into account in such a manner that the operating voltage range of the read/write head (10… 30 VDC) is not fallen short of at a current consumption of approx. 75 mA (DC resistance cable loop: 116 Ω/km).- Installing the cable taking into account avoiding interference (e.g. separate installation of the RFID cable of supply cables of motors; frequency converters etc.) and generally avoiding EMC influence (see also installation handbook HF, d101582).- In the explosion-hazardous area, the requirements with regard to the EN 60079-14 standard are observed. The suitability of all components for the customer-specific application must be checked using tests