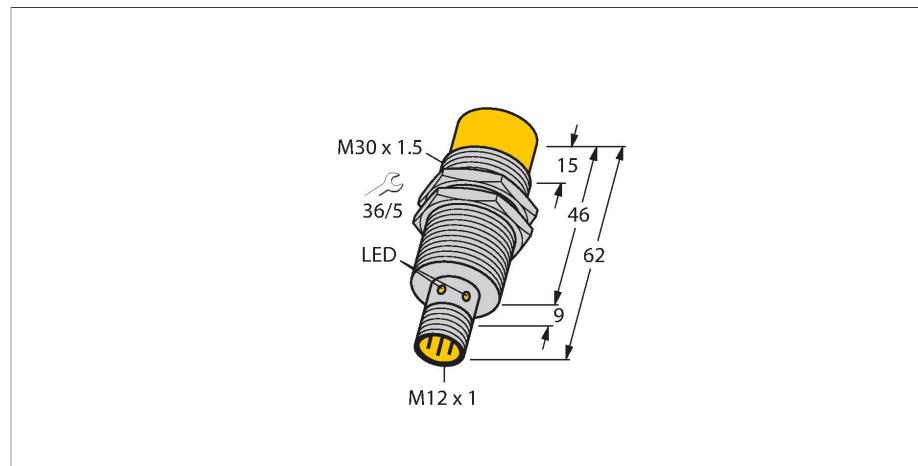


TN-EM30WD-H1147-EX

HF Read/Write Head – For Explosion Hazardous Areas or Areas with Extreme Requirements (e.g. Food Industry)



Technical data

Type	TN-EM30WD-H1147-EX
ID	7030386
Approvals	CE UKCA UL FDA ATEX
Radio approvals (HF)	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA IC: Canada
Device marking	EX II 3G Ex ec IIC T4 Gc II 3D Ex tc IIIB T135 °C Dc
Approval acc. to	TURCK Ex-10005M X
Electrical data	
Operating voltage U_B	10...30 VDC
DC rated operating current I_e	≤ 75 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
Read/Write distance max.	77 mm
Output function	4-wire, Read/Write
Mechanical data	
Mounting conditions	Non-flush



Features

- M30 × 1.5 threaded tube
- Stainless steel 1.4404
- Front cap made of liquid crystal polymer
- High protection class IP69K for harsh environments
- Special double-lip seal
- Protection against all common acidic and alkaline cleaning agents
- Suitable for applications in the food industry
- Laser-engraved label, permanently legible
- Powered and operated only via connection to BL ident interface module
- M12 × 1 connector, connection only via BL ident extension cable
- ATEX category II 3 G, Ex zone 2
- ATEX category II 3 D, Ex zone 22

.../S2503 Connectors



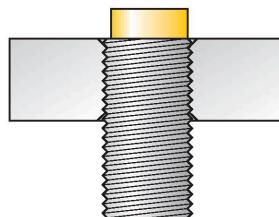
Connector .../S2500



Technical data

Ambient temperature	-25...+70 °C
	For explosion hazardous areas see instruction leaflet
Design	Threaded barrel, M30 x 1.5
Dimensions	62 mm
Housing diameter	Ø 30 mm
Housing material	Stainless steel, 1.4404 (AISI 316L)
Active area material	Plastic, LCP
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
Electrical connection	Connector, M12 x 1
MTTF	391 years acc. to SN 29500 (Ed. 99) 20 °C
Power-on indication	LED, Green
Included in delivery	SC-M12/3GD
Fieldbus Protocol	Connection to RFID interface
Packaging unit	1

Mounting instructions/Description

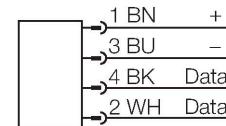


Diameter active area B Ø 30 mm

Width active area B 30 mm

non-flush mounting

Connector .../S2501



Functional principle

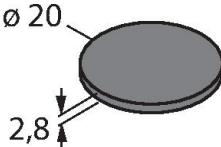
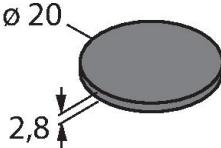
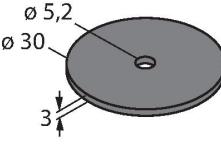
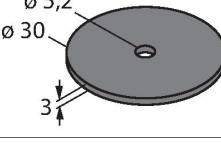
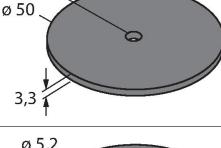
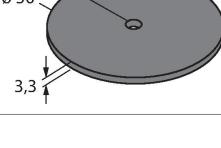
The HF read/write devices operating at a frequency of 13.56 MHz form a transmission zone, the size of which (0...500 mm) varies depending on the combination of read/write device and tag used.

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!

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]
	IN TAG 200 SLIX2 100037960	22	40	34	17	90
	IN TAG 200 2K FRAM 100002358	17	31	32	16	90
	IN TAG 300 SLIX2 100002356	22	43	56	28	90
	IN TAG 300 2K FRAM 100002359	23	42	50	25	90
	IN TAG 500 SLIX 100027728	40	72	76	38	90
	IN TAG 500 2K FRAM 100002360	30	58	76	38	90

Operating instructions

Intended use

For use in explosion hazardous areas conform to classification	This device complies with Directive 2014/34/EC and UK SI 2016/1107 and is suitable for use in explosion-hazardous areas in accordance with EN 60079-0:2018, EN 60079-31:2014 and EN IEC 60079-7:2015+A1:2018.
Marking (see device or technical data sheet)	Ex II 3G and Ex ec IIC T4 Gc acc. to EN60079-0:2018 and EN60079-31:2014 and Ex II 3D Ex tc IIIB T135 °C Dc acc. to EN60079-31:2014 and EN IEC 60079-7:2015+A1:2018
Local admissible ambient temperature	-25...+70 °C
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.
Installation and mounting instructions	In Category 3D applications: The dust must not be conductive.
Special conditions for safe operation	The sensors are equipped with the safety clip SC-M12/3DG to protect against random disconnect. Do not disconnect the plug-in connection or cable under voltage. Please attach a warning label permanently in an appropriate fashion in close proximity to the plug-in connection with the following inscription: Nicht unter Spannung trennen / Do not separate when energized. The device must be protected against any kind of mechanical damage. The read/write head should be protected against ultraviolet light. External measures must be taken for the supply circuit to prevent the rated voltage being exceeded by transient disturbances of more than 40%.
Service/Maintenance	Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.