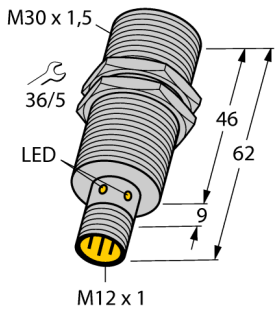
BL ident®

Read/write head
TB-EM30WD-H1147-Ex

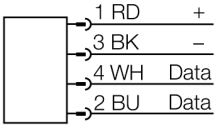
TURCK
Industrial Automation



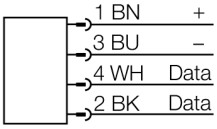
Type code	TB-EM30WD-H1147-Ex
Ident no.	7030385
Mounting condition	flush
Ambient temperature	-25…+70 °C in the explosion hazardous area see instruction leaflet
Storage temperature	in the explosion hazardous area see instruction leaflet
Device designation	Ⓔx II 3G Ex nA II T4 Gc II 3D Ex t IIIB T135°C Dc
Approval acc. to	TURCK Ex-10005M X
Operating voltage	10…30VDC
DC rated operational current	≤ 80 mA
Data transfer	inductive coupling
Operating frequency	13.56 MHz
Radio communication and protocol standards	ISO 15693
Read/write distance max.	45 mm
Output function	4-wire, read/write
Design	threaded barrel, M30 x 1.5
Dimensions	62
Housing diameter	30 mm
Housing material	Stainless steel, V2A (1.4301)
Material active face	Plastic, LCP
Connection	male, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 / IP69K
MTTF	391 years acc. to SN 29500 (Ed. 99) 20°C
Operating voltage	LED green

- **ATEX category II 3 G, Ex-zone 2**
- **ATEX category II 3 D, Ex-zone 22**
- **Threaded barrel, M30 x 1**
- **Stainless steel 1.4404**
- **Front cap made of liquid crystal polymer Vectra C130**
- **High protection class IP69K, for harsh environments**
- **Special double-lip seal**
- **Protection against all common acid and alkaline cleaning agents**
- **For the food industry**
- **Laser engraved label, permanently legible**
- **Every read/write head can communicate with a number of different TURCK data carriers.**
- **Powered and operated only via BL ident interface module**
- **Male M12 x 1, only for use with BL ident extension cable**

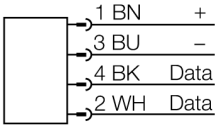
Connectors …/S2503



Connectors …/S2500



Connectors …/S2501



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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 data carrier.

The read/write distances mentioned here only represent standard values measured under laboratory conditions.

The read/write distances of the data carriers 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 read/write on-the-fly!

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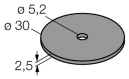
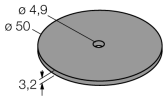
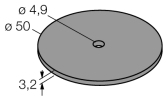
Data carrier

Dimensions	Type designation Ident - no.	Read-write distance Recommend-ed (mm)	 max. [mm]	Transfer zone length max. [mm]	 width offset max. [mm]	Minimum dis-tance between two read-write heads [mm]
	**TW-R16-B128-EX** 7030241	12	23	20	10	90
	**TW-R20-B128-EX** 7030242 **TW-R20-K2-EX** 7030245	15 15	27 22	20 20	10 10	90 90
	**TW-R30-B128-EX** 7030243 **TW-R30-K2-EX** 7030246	13 15	30 27	32 32	16 16	90 90
	**TW-R50-B128-EX** 7030244	20	43	46	23	90
	**TW-R50-K2-EX** 7030247	15	33	36	18	90

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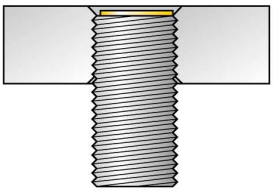
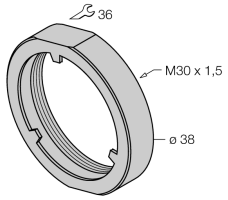
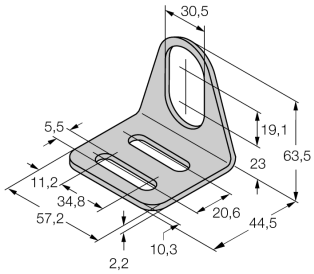
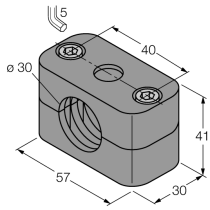
Mounting instructions

Diameter of the active area B	Ø 30
Width of the active face B	30

flush mounting



Accessories

Type code	Ident no.	Description	Dimension drawing
PN-M30	6905308	Protective nut for M30 x 1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303)	
MW-30	6945005	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-30	6901319	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	

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Operating manual

Intended use

Dieses Gerät erfüllt die Richtlinie 94/9/EG und ist gemäß EN60079-0, -15 und EN60079-31 geeignet für den Einsatz im explosionsgefährdeten Bereich.

For use in explosion hazardous areas conform to classification

II 3 G and II 3 D (Group II, Category 3 G, electrical equipment for gaseous atmospheres and category 3 D, electrical equipment for dust atmospheres).

Marking (see device or technical data sheet)

Ⓔx II 3G und Ex nA II T4 Gc nach EN60079-0:2009 und EN60079-15:2005 und Ⓔx II 3D Ex t IIIB T135°C Dc nach EN60079-31:2009

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

Concerning applications of the category 3D, dust must not be conductive.

Special conditions for safe operation

Special conditions indicated with the X in the approval should be observed to ensure safe operation.
Do not connect or disconnect the plug connection or cable in energized state. When used in dust explosive hazarous areas, the plug connection has to be secured with a safety clip being only removable with a tool.
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 against temporary interferences have to be undertaken, to protect the supply voltage against an excess of rated voltage by 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.

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