

- ATEX category II 2 G, Ex-zone 1
- ATEX category II 2 D, Ex-zone 21
- EEPROM, memory 128 byte

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 and free from any influences caused by materials.

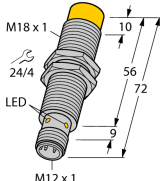
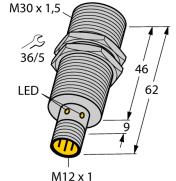
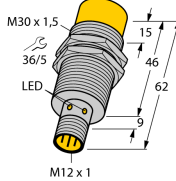
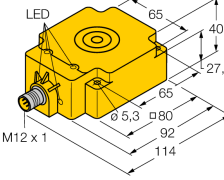
The read/write distances of data carriers suitable for mounting in/on metal were determined in/on metal.

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

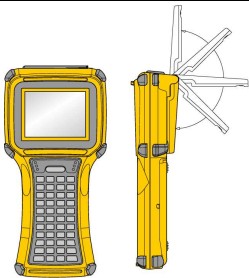
Testing of the application under real operating conditions is therefore essential, especially with read/write on-the-fly!

Type code	TW-R50-B128-Ex
Ident no.	7030244
Data transfer	inductive coupling
Operating frequency	13.56 MHz
Memory type	EEPROM
Chip	NXP I-Code SLI/SL2
Memory	128 byte
Memory	read/write
Freely usable memory	112 byte
Number of read operations	unlimited
Number of write operations	10 ⁵
Typical read time	2 ms/byte
Typical write time	3 ms/byte
Radio communication and protocol standards	ISO 15693
Minimum distance to metal	10 mm
Ambient temperature	-25...+85 °C
Storage temperature	-45...+85 °C
	140 °C, 1x100 h
	in the explosion hazardous area see instruction leaflet
Device designation	Ex II 2 G Ex ia IIC T4/T6 II 2D Ex iaD 21
	T110°C
Approval acc. to	BVS 09 ATEX E 036 X
Design	R50
Diameter	50 mm
Housing material	Plastic, PA
Material active face	Plastic, Black, PA
Protection class	IP69K
Packaged quantity	1
Special features	ATEX

Read/write heads

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads
	Ident - no.	Recommend- ed (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	[mm]
	TN-EM18WD-H1147-Ex 7030382	20	41	70	35	54
	TN-EM18WD-H1147/S1126-EX 7030384	20	41	70	35	54
	TB-EM30WD-H1147-Ex 7030385	20	43	46	23	90
	TB-EM30WD-H1147/S1126-EX 7030387	20	43	46	23	90
	TN-EM30WD-H1147-Ex 7030386	40	72	76	38	90
	TN-EM30WD-H1147/S1126-EX 7030388	40	72	76	38	90
	TN-Q80-H1147-EX 7030302	65	118	120	60	240
	TNLR-Q80-H1147-EX 7030303	80	165	168	84	240

Compatible handhelds

	PD-IDENT 1542331 Handheld for mobile reading and writing on data carriers.
	PDA-IDENT 1542344 The handheld can be used with two different antennas. Internal antenna, PDA-IDENT-IA, 1542345 External antenna, PDA-IDENT-EA, 1542346

Operating manual

Intended use

This device fulfils the directive 94/9/EC and is suited for use in explosion hazardous areas as per EN60079-0, -11 and EN61241-0, -11

For use in explosion hazardous areas conform to classification

II 2 G and II 2 D (Group II, Category 2 G, electrical equipment for gaseous atmospheres and category 2 D, electrical equipment for dust atmospheres)

Marking (see device or technical data sheet)

Ⓔ II 2 G and Ex air IIC T4/T6 and EN60079-0:2006 and EN60079-11:2007 and Ⓔ II 2 D Ex aid 21 T110°C and EN61241-0:2006 and EN61241-11:2006

Local admissible ambient temperature

As ATEX category II 2 G electrical equipment -45...+55°C for T6, -45...+85°C for T4 and as category II 2 D -45...+85°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

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.

Special conditions for safe operation

Special conditions indicated with the X in the approval should be observed to ensure safe operation.

Data carriers applied in explosion hazardous area should only be read and written to with devices which are approved for this area.

In order to observe the admissible surface temperature of the data carriers, the strength of allowed electromagnetic fields should be limited.

Maximum values should comply with the safety and occupational health regulations. The regulation BGV B11 of the BGFE for electromagnetic fields is applied in Germany.

The data carriers should not be damaged when mounted or dismounted. Please also ensure that the label is clearly visible for later inspection when mounted. To avoid possible electrostatic discharge, 50 mm Ø data carriers should be mounted with only one freely accessible side. Due to possible electrostatic discharge, all mounting screws and brackets for data carriers should be earthed safely when applied in the hazardous dust explosive area. If this is not possible, because the data carrier is mobile for example, use plastic screws and brackets.

In hazardous dust explosive areas metal screws and brackets for data carriers have to be earthed safely. Static charge caused by cleaning, friction or other forms of charge separation has to be avoided.

Data carriers approved for temperature class T6 (-45°C ... +55°C) and T4 (-45°C ... +85°C) can be applied in hazardous gas explosive areas.

The data carriers can be applied in hazardous dust explosive areas at ambient temperatures of -45°C to +85°C

service / maintenance

Servicing is not required. Defective data carriers have to be replaced, repair is not possible. Mechanically damaged data carriers must be removed.