

■ **FRAM memory 2 kbyte**

**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.

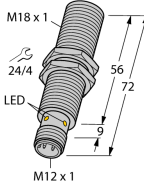
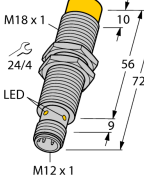
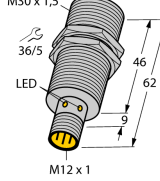
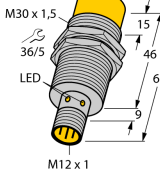
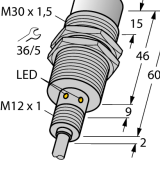
The read/write distances of data carriers suitable for mounting in/on metal were determined in/on metal.

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

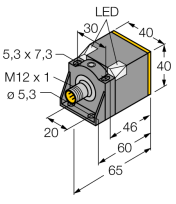
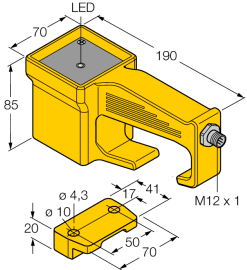
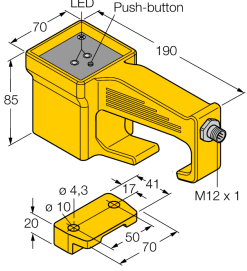
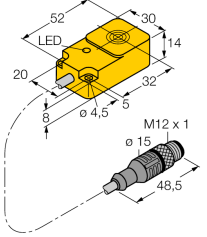
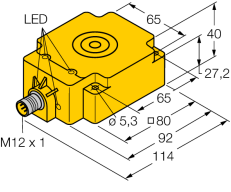
Testing of the application under real operating conditions is therefore essential, especially with read/write on-the-fly!

<b>Type code</b>	TW-R30-K2
Ident no.	6900506
<b>Data transfer</b>	inductive coupling
Operating frequency	13.56 MHz
Memory type	FRAM
Chip	Fujitsu MB89R118
Memory	2048 byte
Memory	read/write
Freely usable memory	2000 byte
Number of read operations	unlimited
Number of write operations	10 <sup>9</sup>
Typical read time	0.5 ms/byte
Typical write time	0.5 ms/byte
Radio communication and protocol standards	ISO 15693
<b>Minimum distance to metal</b>	10 mm
Ambient temperature	-25...+85 °C
Storage temperature	-45...+85 °C 140 °C, 1x100 h
<b>Design</b>	R30
Diameter	30 mm
Housing material	Plastic, PA
Material active face	Plastic, Black, PA
Protection class	IP69K
<b>Packaged quantity</b>	1

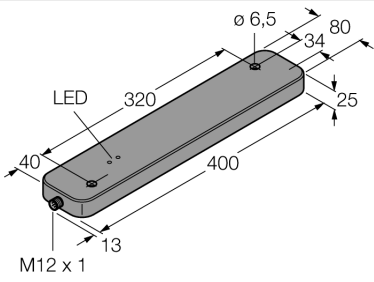
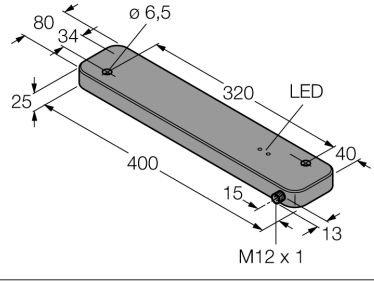
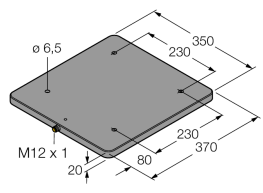
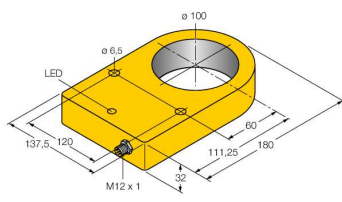
Read/write heads

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads [mm]
		Ident - no.	Recommend- ed (mm)	max. [mm]	length max. [mm]	
	<b>TB-M18-H1147</b> 7030001	6	14	18	9	54
	<b>TB-EM18WD-H1147</b> 7030224	6	14	18	9	54
	<b>TN-M18-H1147</b> 7030002	16	31	32	16	54
	<b>TN-EM18WD-H1147</b> 7030223	16	31	32	16	54
	<b>TB-M30-H1147</b> 7030003	15	27	32	16	90
	<b>TB-EM30WD-H1147</b> 7030221	15	27	32	16	90
	<b>TN-M30-H1147</b> 7030004	23	42	50	25	90
	<b>TN-EM30WD-H1147</b> 7030222	23	42	50	25	90
	<b>TN-M30-0.15-RS4.47T</b> 7030444	23	42	50	25	90

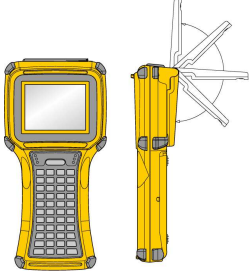

Read/write heads

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads [mm]
		Ident - no.	Recommend- ed (mm)	max. [mm]	length max. [mm]	
	<b>TN-CK40-H1147</b> 7030006	30	55	56	28	120
		<b>HT-IDENT-H1147</b> 7030236	30	55	56	28
	<b>HT-IDENT-H1187</b> 7030238	30	55	56	28	120
	<b>TN-Q14-0.15-RS4.47T</b> 7030235	23	42	50	25	90
	<b>Q14-R/W-OPEN-PCB/C37</b> 7030445	23	42	50	25	90
		<b>TN-Q80-H1147</b> 7030007	35	67	80	40
	<b>TNLR-Q80-H1147</b> 7030230	60	98	104	52	240

Read/write heads

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads [mm]
		Ident - no.	Recommend- ed (mm)	max. [mm]	length max. [mm]	
	<b>TNLR-Q80L400-H1147</b> 7030204 Lengthwise	50	122	416	50	240
	<b>TNLR-Q80L400-H1147</b> 7030204	70	122	100	208	240
	<b>TNLR-Q80L400-H1147L</b> 7030234	70	122	100	208	240
	<b>TNLR-Q80L400-H1147L</b> 7030234 Lengthwise	50	122	416	50	240
	<b>TNLR-Q350-H1147</b> 7030220	100	250	380	190	1110
	<b>TN-S32XL-H1147</b> 7030008	30	82	132	66	420

Compatible handhelds

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