

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.

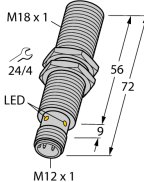
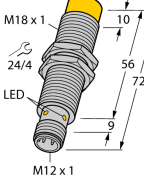
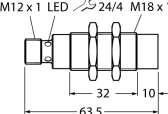
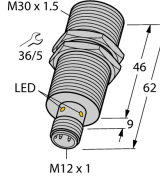
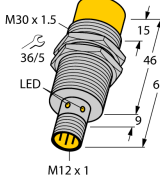
The read/write distances of data carriers suitable for mounting in/on metal were determined in/on metal.

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

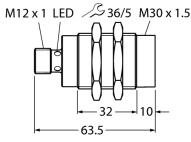
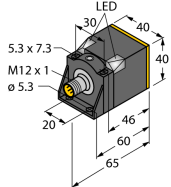
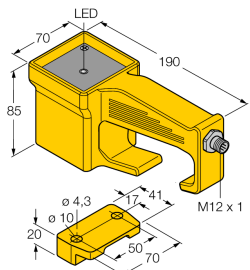
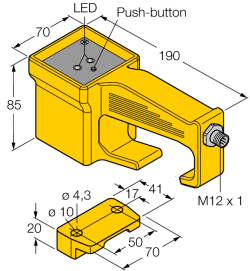
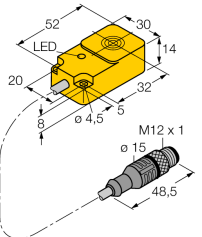
Testing of the application under real operating conditions is therefore essential, especially with read/write on-the-fly!

Type designation	TW-R30-B128
Ident-No.	6900503
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Ident. no.	6900503
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
Temperature of data carrier during read/write access	-40...+85 °C
Temperature of data carrier outside detection range	-40...+90 °C
	140, 1x100 h
Design	Hard tag, R30
Diameter	30 mm +/- 0.5 mm
Internal diameter	5.2 mm +/- 0.3 mm
Housing height	3 mm +/- 0.5 mm
Housing material	Plastic, PA6
Active area material	Plastic, PA6, black
Protection class	IP69K
Packaging unit	1

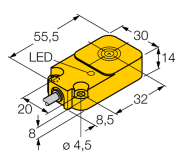
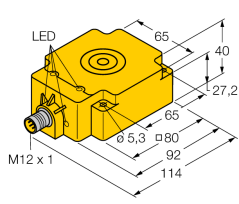
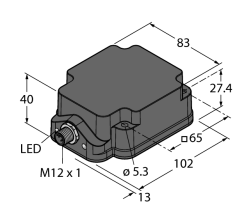
Read/write heads

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]	
	TB-M18-H1147 7030001	8	17	22	11	54
	TB-EM18WD-H1147 7030224	8	17	22	11	54
	TB-M18-H1147/C53 7030729	8	17	22	11	54
	TN-M18-H1147 7030002	10	25	34	17	54
	TN-EM18WD-H1147 7030223	10	25	34	17	54
	TN-M18-H1147/C53 7030728	10	25	34	17	54
	TN-M18-IOL-H1141 100000974	14	30	44	22	36
	TB-M30-H1147 7030003	13	30	32	16	90
	TB-EM30WD-H1147 7030221	13	30	32	16	90
	TB-M30-H1147/C53 7030731	13	30	32	16	90
	TN-M30-H1147 7030004	22	43	56	28	90
	TN-EM30WD-H1147 7030222	22	43	56	28	90
	TN-M30-H1147/C53 7030730	22	43	56	28	90

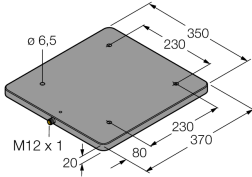
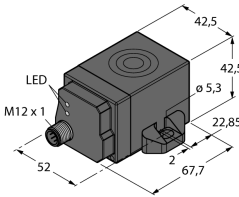
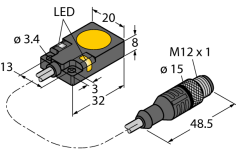
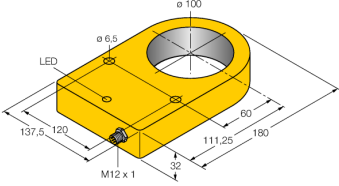
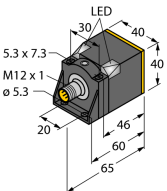
Read/write heads

Dimensions	Type designation Ident - no.	Read-write distance		Transfer zone		Minimum distance between two read-write heads [mm]
		Recommend- ed (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	
	TN-M30-IOL-H1141 100000975	24	49	56	28	60
	TN-CK40-H1147 7030006 TN-CK40-H1147/C53 7030732 TN-CK40-H1147/CS30171 100016067	30	53	62	31	120
	HT-IDENT-H1147 7030236	30	53	62	31	120
	HT-IDENT-H1187 7030238	30	53	62	31	120
	TN-Q14-0.15-RS4.47T 7030235 TN-Q14-0.15-RS4.47T/C53 7030779	22	43	56	28	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]	
	TN-Q14-0.1/C37 7030445 TN-Q14-0.55 100003964	22	43	56	28	90
	TN-Q80-H1147 7030007 TN-Q80-H1147/C53 100010648 TNLR-Q80-H1147 7030230 TNLR-Q80-H1147/C53 100010649	35	72	80	40	240
	TNSLR-Q80WD-H1147 7030418 TNSLR-Q80WD-H1147/C50 7030721 TNSLR-Q80WD-H1147/ C53 100001312	110	186	176	88	450
	TNLR-Q80L400-H1147 7030204	90	152	132	217	240
		TNLR-Q80L400-H1147L 7030234 TNLR-Q80L400-H1147L 7030234Lengthwise	90	152	132	217
		60	152	434	66	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]	
	TNLR-Q350-H1147 7030220	80	218	350	175	1110
	TNSLR-Q42TWD-H1147 7030424	60	115	116	58	240
	TNSLR-Q42TWD-H1147/C51 7030722	60	115	116	58	240
	TNSLR-Q42TWD-H1147/C53 7030733	60	115	116	58	240
	TNSLR-Q42TWD-H1147/C44 100009610	60	115	116	58	240
	TNSLR-Q42TWD-H1147/CS30171 100016068	60	115	116	58	240
	TB-Q08-0.15-RS4.47T 7030553	8	17	22	11	54
	TB-Q08-0.15-RS4.47T/C53 7030778	8	17	22	11	54
	TB-Q08-0.22-RS4.47T 100004092	8	17	22	11	54
	TB-Q08-0.15-RS4.47T/C43 7030675	8	17	22	11	54
	TN-S32XL-H1147 7030008	30	80	120	60	420
	TN-CK40-H1147/CS30171 100016067	30	53	62	31	120

Operating manual**Intended use**

This tag corresponds to the requirements for simple apparatus according to EN 60079-14, 5.12.2 and may, under certain conditions, be used in the Ex area. The requirements of EN 60079-14 must be observed in this case.