

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.

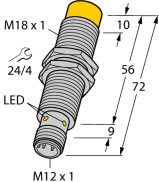
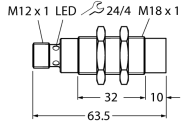
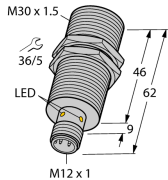
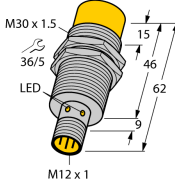
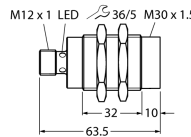
The read/write distances of data carriers suitable for mounting in/on metal were determined in/on metal.

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

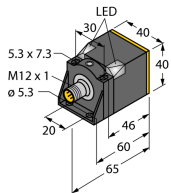
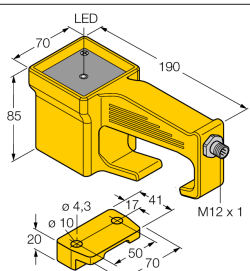
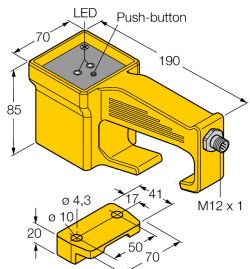
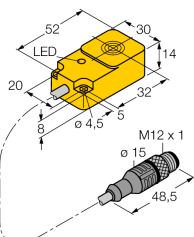
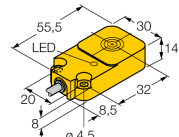
Testing of the application under real operating conditions is therefore essential, especially with read/write on-the-fly!

Type designation	TW-R50-K2
Ident-No.	6900507
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Ident. no.	6900507
Data transfer	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 ¹⁰
Typical read time	0.5 ms/byte
Typical write time	0.5 ms/byte
Radio communication and protocol standards	ISO 15693
Minimum distance to metal	10 mm
Temperature of data carrier during read/write access	-25...+85 °C
Temperature of data carrier outside detection range	-45...+85 °C
	140, 1x100 h
Design	Hard tag, R50
Diameter	50 mm +/- 0.5 mm
Internal diameter	5.2 mm +/- 0.3 mm
Housing height	3.3 mm +/- 0.5 mm
Housing material	Plastic, PA6
Active area material	Plastic, PA6, black
Protection class	IP69K
Packaging unit	1

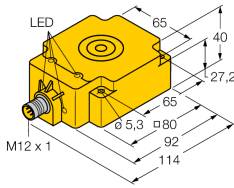
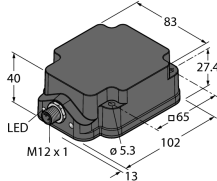
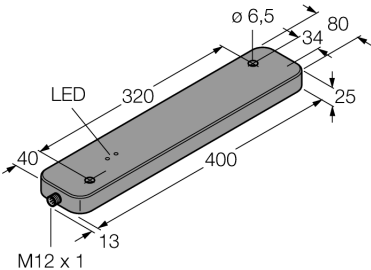
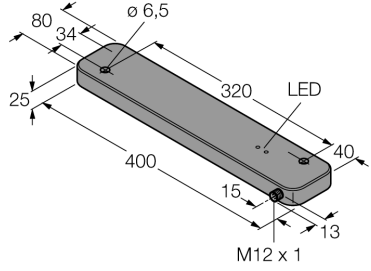
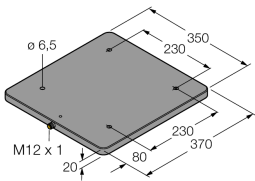
Read/write heads

Dimensions	Type designation	Read-write distance		Transfer zone		Minimum distance between two read-write heads
	Ident - no.	Recommend-ed (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	[mm]
	TN-M18-H1147 7030002	12	30	60	30	54
	TN-EM18WD-H1147 7030223	12	30	60	30	54
	TN-M18-H1147/C53 7030728	12	30	60	30	54
	TN-M18-IOL-H1141 100000974	16	36	48	24	36
	TB-M30-H1147 7030003	15	33	36	18	90
	TB-EM30WD-H1147 7030221	15	33	36	18	90
	TN-M30-H1147 7030004	30	58	76	38	90
	TN-EM30WD-H1147 7030222	30	58	76	38	90
	TN-M30-H1147/C53 7030730	30	58	76	38	90
	TN-M30-IOL-H1141 100000975	28	58	68	34	60

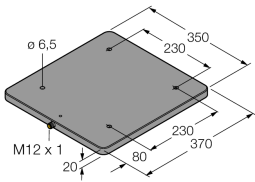
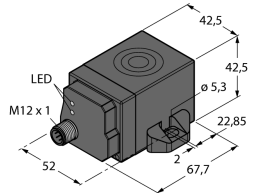
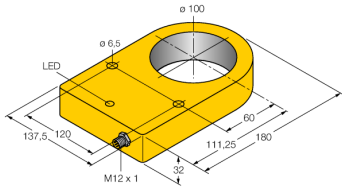
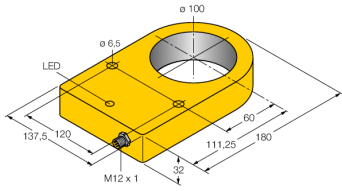
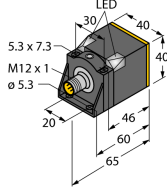
Read/write heads

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-CK40-H1147 7030006	38	81	82	41	120
	TN-CK40-H1147/C53 7030732	38	81	82	41	120
	TN-CK40-H1147/CS30171 100016067	38	81	82	41	120
	HT-IDENT-H1147 7030236	38	81	82	41	120
	HT-IDENT-H1187 7030238	38	81	82	41	120
	TN-Q14-0.15-RS4.47T 7030235	30	58	76	38	90
	TN-Q14-0.15-RS4.47T/C53 7030779	30	58	76	38	90
	TN-Q14-0.1/C37 7030445	30	58	76	38	90
	TN-Q14-0.55 100003964	30	58	76	38	90

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-Q80-H1147 7030007	50	100	110	55	240
	TN-Q80-H1147/C53 100010648	50	100	110	55	240
	TNLR-Q80-H1147 7030230	90	144	150	75	240
	TNLR-Q80-H1147/C53 100010649	90	144	150	75	240
	TNSLR-Q80WD-H1147 7030418	120	218	208	104	450
	TNSLR-Q80WD-H1147/C50 7030721	120	218	208	104	450
	TNSLR-Q80WD-H1147/ C53 100001312	120	218	208	104	450
	TNLR-Q80L400-H1147 7030204	120	216	190	233	240
	TNLR-Q80L400-H1147L 7030234	120	216	190	233	240
	TNLR-Q80L400-H1147L 7030234Lengthwise	90	216	466	95	240
	TNLR-Q350-H1147 7030220	200	405	480	240	1110

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]
	TNSLR-Q350-H1147	210	400	480	240	1110
	7030454					
	TNSLR-Q42TWD-H1147	90	144	150	75	240
	7030424					
	TNSLR-Q42TWD-H1147/C51	90	144	150	75	240
	7030722					
	TNSLR-Q42TWD-H1147/C53	90	144	150	75	240
	7030733					
	TNSLR-Q42TWD-H1147/C44	90	144	150	75	240
	100009610					
	TNSLR-Q42TWD-H1147/CS30171	90	144	150	75	240
	100016068					
	TN-S32XL-H1147	60	128	160	80	420
	7030008					
	TN-CK40-H1147/CS30171	38	81	82	41	120
	100016067					

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.