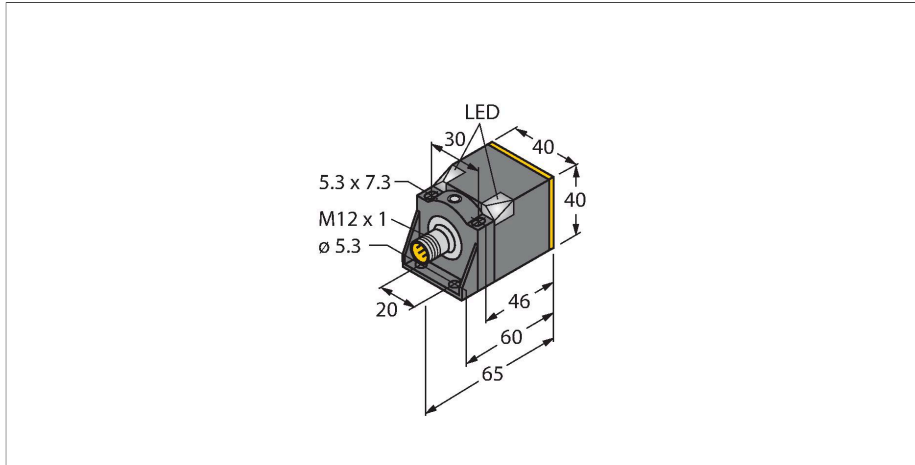


TN-CK40-H1147/C53

HF Read/Write Head – For Bus Line Topology with TBEN-*



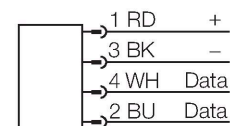
Technical data

Type	TN-CK40-H1147/C53
ID	7030732
Approvals	CE UKCA UL
Radio approvals	EU/RED: Europe UK SI 2017/1206: United Kingdom FCC: USA
Electrical data	
Operating voltage	10...30 VDC
DC rated operational current	≤ 80 mA
inrush current	1000 mA For: 1 ms
Data transfer	Inductive coupling
Technology	HF RFID
Operating frequency	13.56 MHz
Radio communication and protocol standards	ISO 15693 NFC Typ 5
Read/Write distance max.	115 mm
Output function	4-wire, Read/Write
Suitable for bus mode to TBEN-*	Yes
Mechanical data	
Mounting conditions	Non-flush, partially embeddable
Ambient temperature	-25...+70 °C
Design	Rectangular, CK40
Dimensions	65 x 40 x 40 mm
Housing diameter	Ø 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PA6-GF30, yellow
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)

Features

- Rectangular, height 40 mm
- The active face (yellow) can be positioned in five different orientations
- Plastic, PBT-GF30-V0
- Device without end termination
- Device may only be operated in line topology TBEN-S*-2RFID-* or TBEN-L*-4RFID-*
- Max. 32 nodes per line or connection permitted
- Use a corresponding terminating resistor (see accessories)
- Observe the performance of the power supply, especially when turned on, and the maximum current carrying capacity of the cables
- Observe the voltage drop on the line
- The maximum possible length of the spur line is 2 m
- The maximum possible length of the bus is 50 m
- By default, a command can only be processed by one read/write head, making HF bus mode suitable for static applications and slow dynamic applications
- In continuous HF bus mode, a command is executed simultaneously on all read/write heads in a bus topology. The recorded data is stored in the ring buffer of the module
- The read/write head is automatically assigned an address
- For different application requirements, the address and can be parameterized
- Powered and operated only via connection to BL ident interface module
- M12 × 1 connector, connection only via BL ident extension cable

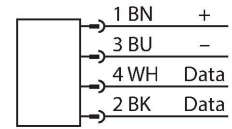
.../S2503 Connectors



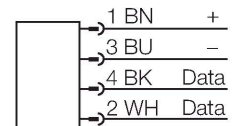
Technical data

Protection class	IP67
Electrical connection	M12 × 1
MTTF	248 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Included in delivery	BS4-CK40
Packaging unit	1

.../S2500 Connectors



.../S2501 Connectors



Functional principle

The HF read/write devices 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 device and tag used.

The read/write distances mentioned here only represent standard values measured under laboratory conditions, free from any influences caused by surrounding materials.

The read/write distances of the tags for mounting in metal TW-R**-(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 on-the-fly reading and writing!

Mounting instructions/Description



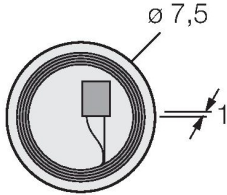
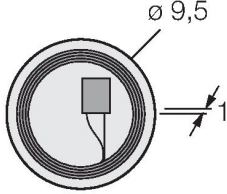
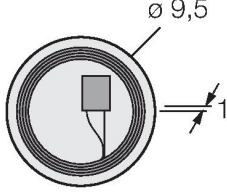
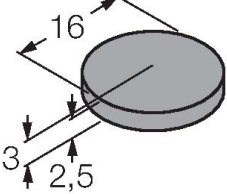
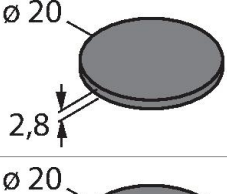
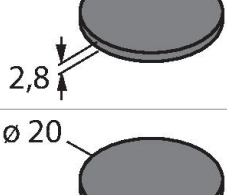
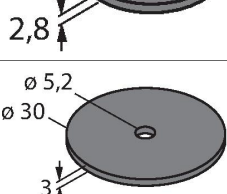
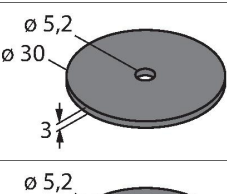
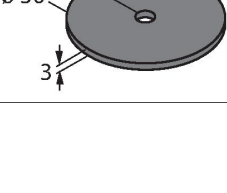

Diameter active area B \varnothing 40 mm

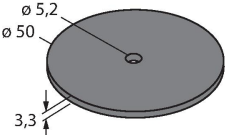
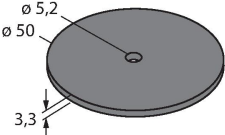
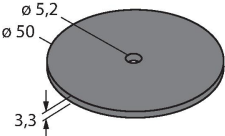
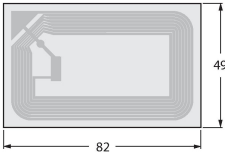
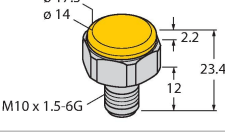
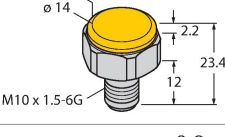
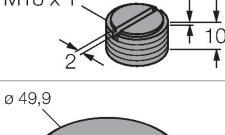
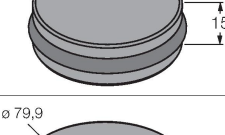
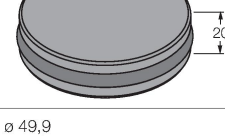
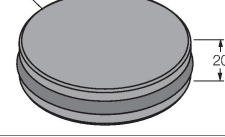
Width active area B 40 mm

This figure illustrates an example of operating a read/write head in a compact multiprotocol I/O module TBEN-S*-2RFID-* or TBEN-L*-4RFID-* in a line topology

LED	Color	Status	Meaning
1	AUS	AUS	Betriebsspannung ausgeschaltet
	GRÜN	AN	Betriebsspannung eingeschaltet
	GRÜN	BLINKEND (1 Hz)	HF-Feld ausgeschaltet
	GRÜN	BLINKEND (2 Hz)	Datenträger im Erfassungsbereich

Dimensions	Type designation	Read-write distance	Transfer zone	Minimum distance between two read-write heads
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	Ident - no.	Recommended (mm)	max. [mm]	length max. [mm]	width offset max. [mm]	[mm]
	TW-R7.5-B128 7030231	13	30	42	21	120
	TW-R9.5-B128 7030252	14	33	46	23	120
	TW-R9.5-K2 7030558	18	38	42	21	120
	TW-R16-B128 6900501	28	50	54	27	120
	TW-R20-B128 6900502	30	50	50	25	120
	TW-R20-B320 100005244	30	50	50	25	120
	TW-R20-K2 6900505	22	40	36	18	120
	TW-R30-B128 6900503	30	53	62	31	120
	TW-R30-B320 100005245	30	53	62	31	120
	TW-R30-K2 6900506	30	55	56	28	120

	TW-R50-B128 6900504	45	85	96	48	120
	TW-R50-B320 100005246	45	85	96	48	120
	TW-R50-K2 6900507	38	81	82	41	120
	TW-L80-50-P-B128 7030389	42	81	93	46	120
	TW-B510X1.5-19-K2 6901380	8	23	30	15	120
	TW-BD10X1.5-19-K2 6901381	20	39	44	22	120
	TW-SPP18X1-B128 6901062	15	34	46	23	120
	TW-R50-M-B128 7030209	23	46	48	24	120
	TW-R80-M-B128 7030207	25	53	68	34	120
	TW-R50-M-K2 7030229	15	37	46	23	120
	TW-R80-M-K2 7030205	15	47	54	27	120
	TW-R4-22-B128 7030237	20	40	50	25	120

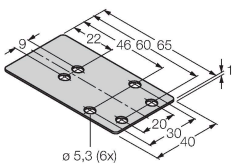
	TW-L86-54-C-B128 6900479	60	115	132	66	120
	TW-R10-M-B146 7030545	7	18	30	15	120
	TW-R12-M-B146 7030500	7	18	30	15	120
	TW-L18-18-F-B128 7030634	29	56	52	26	120
	TW-BS8x1.25-19-K2 7030638	8	23	30	15	120

Accessories

MF-CK40-1S

6900481

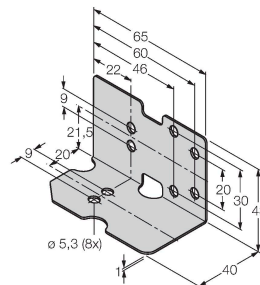
Protective frame (one side)
rectangular CK40



MF-CK40-2S

6900482

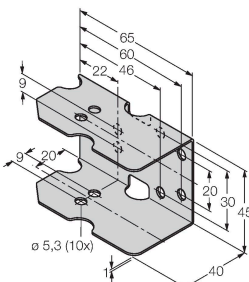
Protective frame (angle) for
rectangular CK40



MF-CK40-3S

6900483

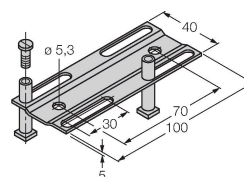
Protective frame (U profile) CK40



JS025/037

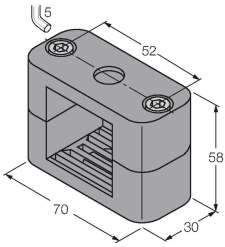
69429

Adjusting bar for rectangular housings
CK/CP40; material: VA 1.4301



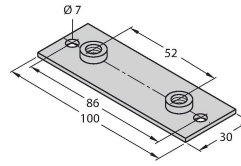
BSS-CP40 6901318

Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene



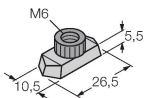
BSS-SPV5 6901324

Weld-on plate for BSS mounting brackets



BSS-TSM 2 pcs 6901323

DIN rail nut for BSS and BSM mounting clips, for mounting on DIN rails

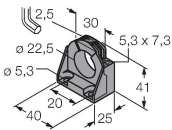


T-CK40-T-FC A5202

Kein Maßbild vorhanden/
No dimension drawing available

BS4-CK40 6946006

Fixing clamp; material trogamide



Accessories

Dimension drawing	Type	ID	
	RSE57-TR2/RFID	6934908	Terminating resistor to build an RFID line topology
	VT2-FKM5-FKM5-FSM5	6930573	T-splitter to build an RFID line topology
	VB2-FKM5-FSM5.205-FSM5.305/S2550	6936821	Y-splitter for re-powering a supply voltage for the RFID bus topology
	RK4.5T-2-RS4.5T/S2503	7030331	BL ident cable, M12 female connector, straight to M12 male connector, straight, cable length: 2 m, jacket material: PUR, black; other cable lengths and qualities available, see www.turck.com