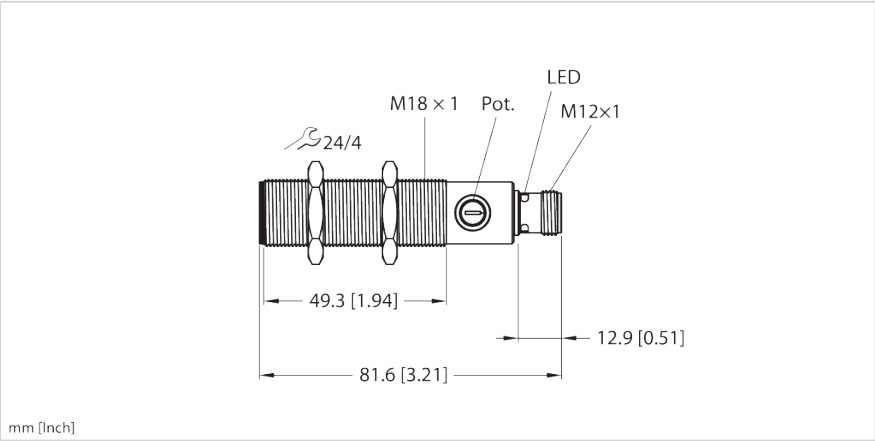
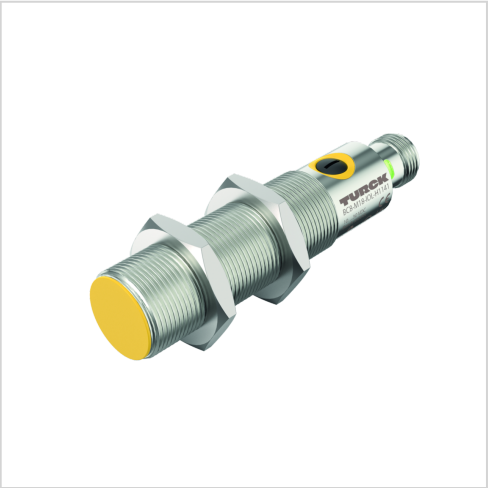
BC8-M18-IOL-H1141

Capacitive sensor





Typ	BC8-M18-IOL-H1141
Ident-No.	100050174

Technical data

General data	
Measuring principle	Capacitive
Application area	
Medium temperature	-40…+85 °C
Medium	Bulk goods, liquids
Detection area/measuring range	
Rated switching distance (flush)	8 mm
Rated switching distance (non-flush)	8 mm
Secured operating distance	≤ (0.72 × Sn) mm
Power supply	
Operating voltage U_B	10...30 VDC
	In IO-Link mode
Operating voltage U_B	18...30 VDC
	In SIO mode
Voltage drop at I_e	≤ 1 V
Electrical data	
Output function	4-wire, NO/NC programmable, PNP/ NPN
Short-circuit protection	yes, cyclic
Wire break/reverse polarity protection	yes

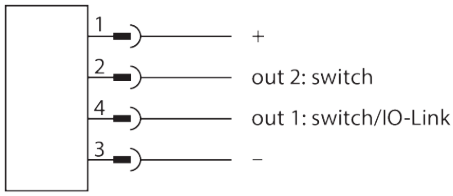
Features

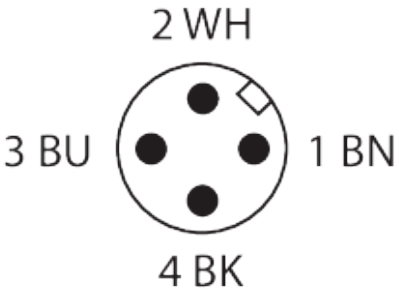
- M18 × 1 threaded barrel
- Plastic, PA12-GF30
- Digital potentiometer
- Three different teach functions
- Can be parameterized via IOL
- Two switching outputs, can be parameterized independently
- Highly visible LED

Technical data

DC rated operational current	≤ 200 mA
Insulation class	III
Oscillation frequency	According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1…2.0 MHz
Switching frequency	≤100 Hz
Interfaces	
Communication protocol	IO-Link
Outputs	
Number of digital outputs	2
Output 1	IO-Link/switching output
Output 2	Switching output
Accuracy/deviation	
Hysteresis	1 % v. E...15 % v. E.
Temperature drift	Typical 20 %
Repeat accuracy	≤ 0,5 % v. E.
IO-Link	
IO-Link specification	V1.1, Smart Sensor Profile
Transmission physics	corresponds to 3-wire physics (PHY2)
SIO mode-compatible	Yes
Transmission rate	COM 3
Process data width	32 bit
Measured value information	12 bit
Frame type	2.2
Programming	FDT/DTM
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Threaded barrel, M18 x 1
Construction type designation	M18
Dimensions	18 mm x 82 mm
Housing color	Black/yellow
Housing material	Metal/plastic, CuZn
Active area material	PA12-GF30, yellow
End cap	Plastic, PA12-GF30
Admissible pressure on front cap	≤5 bar
Max. tightening torque of housing nut	25 Nm
Electrical connection	Connector, M12 × 1
Number of pins	4

Wiring Diagram





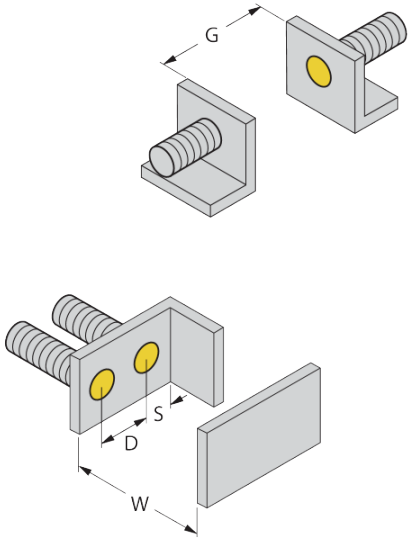
Functional principle

Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

Technical data

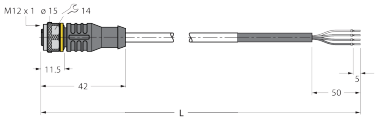
Thread size	M18 x 1
Mounting conditions	Flush
Environmental conditions	
Ambient temperature	-40...+105 °C
Shock resistance	15 g (11 ms)
Vibration resistance	Log sweep from 10 Hz to 150 Hz, 20 cycles at 5 g, 1.0 oct/min, all 3 axes
Protection class	IP67
Tests/approvals	
MTTF	acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Power-on indication	Green
Switching state	3 × LEDs, Green/yellow/red
Setting 1	connection programmable

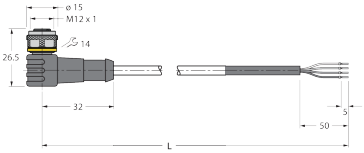
Installation instructions

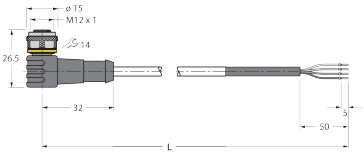


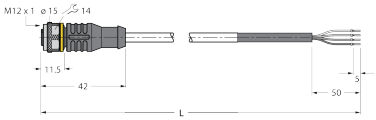
Distance D: 36 mm
Distance W: 15 mm
Distance S: 27 mm
Distance G: 30 mm
Installation information:
The given minimum distances have been checked against the standard switching distance.
Should the sensitivity of the sensor be changed, these data sheet specifications no longer apply.

Connectivity accessories

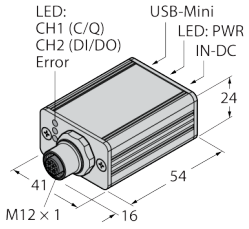
RKC4.4T-2/TXL	6625503
	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval

WKC4.4T-2/TXL	6625515
	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval

WKC4.4T-2/TEL	6625025
	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

RKC4.4T-2/TEL	6625013
	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

Functional accessories

USB-2-IOL-0002	6825482
	IO-Link Master with integrated USB port