

CM 18 Capacitive

Capacitive Proximity Sensors



Highlights

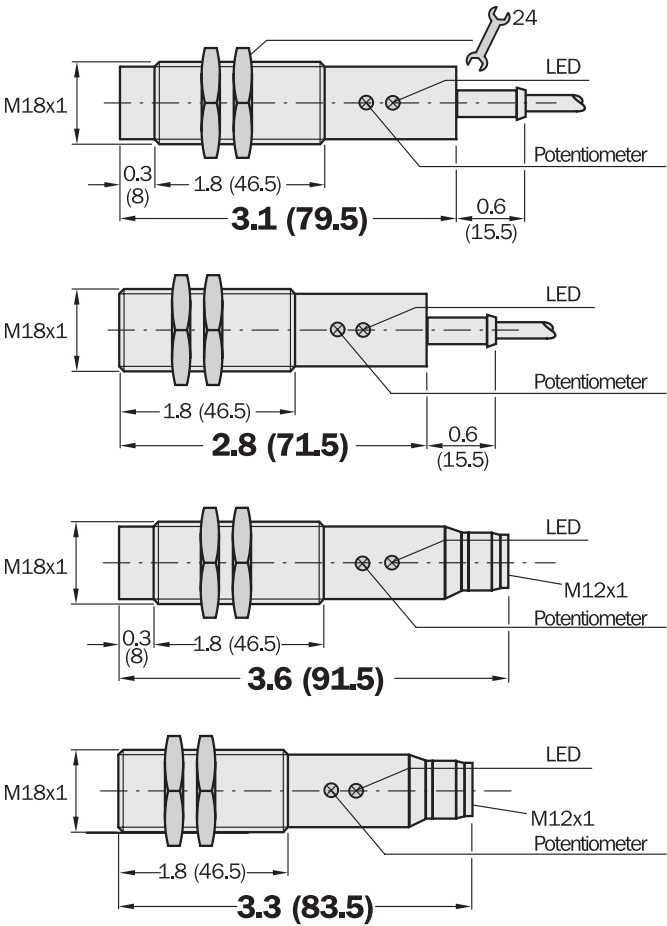
- High EMC-immunity
- Shielded or unshielded
- PNP or NPN output
- Adjustable sensing range
- Complementary output function
- Short-circuit protection (pulsed)
- Plastic housing with fine thread M18 x 1 mm• Cable or connector
- Enclosure rating IP 67
- LED-status indicator

CM 18 Capacitive



Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	909
Mounting brackets	925, 926

Electrical and Mechanical Data

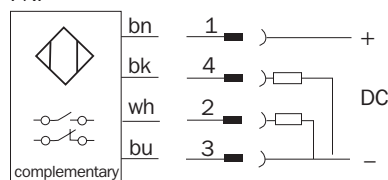
Operating voltage U_b	10...40 V DC
Ripple U_{pp}	$\leq 10\%$ of U_b
Voltage drop U_b	≤ 2.5 V
Power consumption (without load)	≤ 10 mA
Continuous current I_a	≤ 200 mA
Time delay before availability t_v	≤ 100 ms
Hysteresis H	4% - 20% of s_r
Repeatability R (U_b and T_a constant)	$\leq 5\%$ of s_r
Temperature drift	$\pm 10\%$ of s_r
EMC	to EN 60 947-5-2
Short circuit protection (pulsed)	Yes
Reverse polarity protection	Yes
Power-up pulse suppression	Yes
Enclosure rating to EN 60529	IP 67
Shock and vibration stress	30 g, 11 ms, 10 to 55 Hz, 1 mm
Ambient temperature T_a	13...176°F (-25...80°C)
Housing material	Plastic
Tightening torque	2.6 Nm
Connection cable	PVC, 4 x 0.34 mm ²

Selection Table

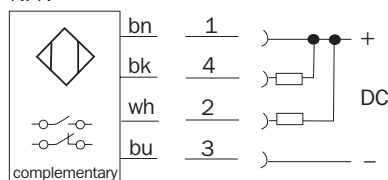
Sensing range S_n in (mm)	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
0.3 (8)		PNP	 complementary	30	Cable 2 m	CM18-08BPP-KW1	6 020 136
0.3 (8)		PNP	 complementary	30	Connector M12 x 1 mm	CM18-08BPP-KC1	6 020 388
0.3 (8)		NPN	 complementary	30	Cable 2 m	CM18-08BNP-KW1	6 020 389
0.3 (8)		NPN	 complementary	30	Connector M12 x 1 mm	CM18-08BNP-KC1	6 020 410
0.5 (12)		PNP	 complementary	30	Cable 2 m	CM18-12NPP-KW1	6 021 455
0.5 (12)		PNP	 complementary	30	Connector M12 x 1 mm	CM18-12NPP-KC1	6 021 456
0.5 (12)		NPN	 complementary	30	Cable 2 m	CM18-12NNP-KW1	6 021 457
0.5 (12)		NPN	 complementary	30	Connector M12 x 1 mm	CM18-12NNP-KC1	6 021 458

Connection Diagram

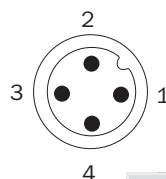
PNP



NPN



Wire Color	Contact	Assignment
bn brown	1	+ V DC
bk black	4	NO
wh white	2	NC
bu blue	3	- V DC



CM 18-PTFE Capacitive

Capacitive Proximity Sensors



Highlights

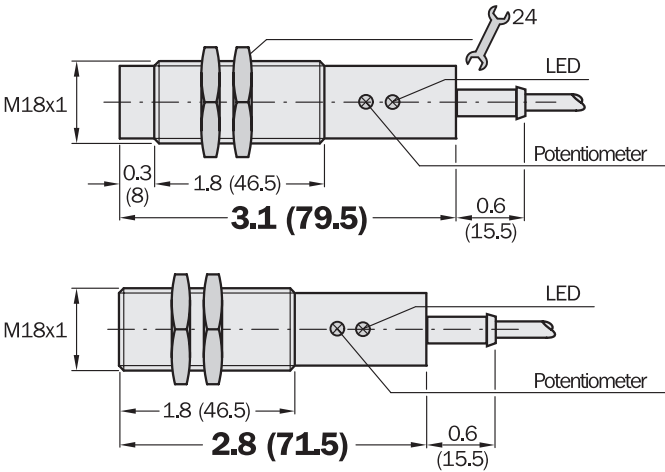
- High EMC-immunity
- Shielded
- PNP or NPN output
- Adjustable sensing range
- Complementary output function
- Short-circuit protection (pulsed)
- PTFE housing with fine thread M18 x 1 mm, PVC cable
- Enclosure rating IP 67
- LED-status indicator

CM 18 Capacitive



Dimensional Drawing

dimensions in inches (mm)

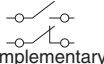
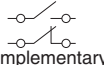


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Electrical and Mechanical Data

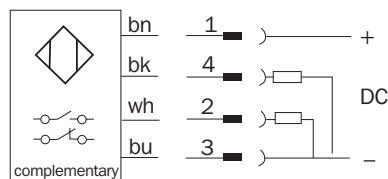
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EMC	to EN 60 947-5-2
Short circuit protection (pulsed)	Yes
Reverse polarity protection	Yes
Power-up pulse suppression	Yes
Enclosure rating to EN 60529	IP 67
Shock and vibration stress	30 g, 11 ms, 10 to 55 Hz, 1 mm
Ambient temperature T_a	13...140°F (-25...60°C)
Housing material	PTFE
Tightening torque	2.6 Nm
Connection cable	PVC, 4 x 0.34 mm ²

Selection Table

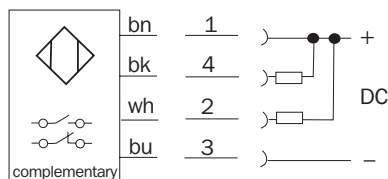
Sensing range S_n in (mm)	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
0.3 (8)		PNP	 complementary	30	Cable 2 m	CM18-08BPP-TWO	6 026 195
0.3 (8)		NPN	 complementary	30	Cable 2 m	CM18-08BNP-TWO	6 026 194

Connection Diagram

PNP



NPN



Wire Color	Contact	Assignment
bn brown	1	+ V DC
bk black	4	NO
wh white	2	NC
bu blue	3	- V DC

