

# CM 30 Capacitive

## Capacitive Proximity Sensors



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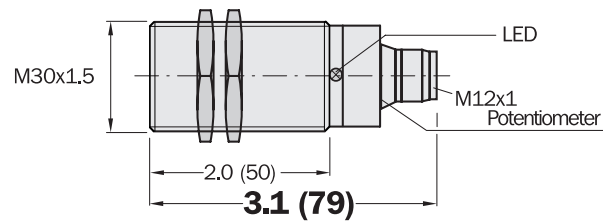
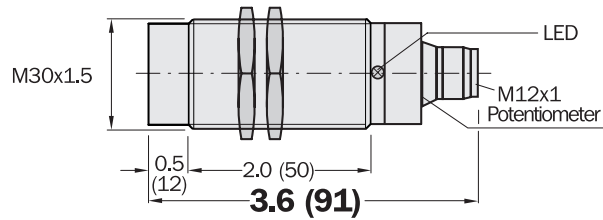
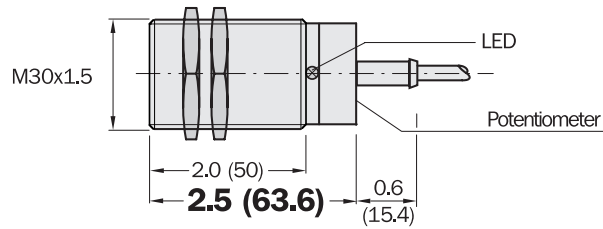
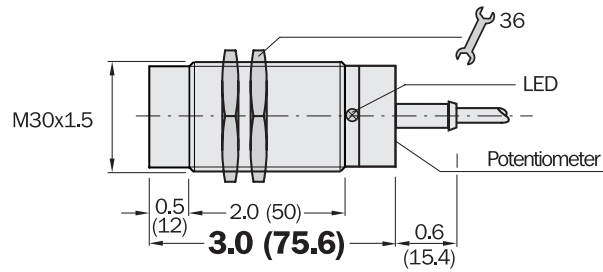


## Highlights

- High EMC-immunity
- Shielded or unshielded
- PNP output
- Adjustable sensing range
- Complementary output function
- Short-circuit protection (pulsed)
- Plastic housing with fine thread M30 x 1.5 mm
- Cable or connector
- Enclosure rating IP 67
- LED-status indicator

## Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	909
Mounting brackets	926, 927

## Electrical and Mechanical Data

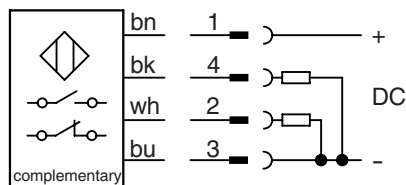
<b>Operating voltage</b> $U_b$	10...40 V DC
<b>Ripple</b> $U_{pp}$	$\leq 10\% U_b$
<b>Voltage drop</b> $U_b$	$\leq 2.5$ V
<b>Power consumption</b> (without load)	$\leq 10$ mA
<b>Continuous current</b> $I_a$	$\leq 200$ mA
<b>Time delay before availability</b> $t_v$	$\leq 100$ ms
<b>Hysteresis</b> H	4% - 20% of $s_r$
<b>Repeatability</b> R ( $U_b$ and $T_a$ constant)	$\leq 5\%$ of $s_r$
<b>Temperature drift</b>	$\pm 10\%$ of $s_r$
<b>EMC</b>	to EN 60 947-5-2
<b>Short circuit protection (pulsed)</b>	Yes
<b>Reverse polarity protection</b>	Yes
<b>Power-up pulse suppression</b>	Yes
<b>Enclosure rating</b> to EN 60529	IP 67
<b>Shock and vibration stress</b>	30 g, 11 ms, 10 to 55 Hz, 1 mm
<b>Ambient temperature</b> $T_a$	13...176°F (-25...80°C)
<b>Housing material</b>	Plastic
<b>Tightening torque</b>	7.5 Nm
<b>Connection cable</b>	PVC, 4 x 0.34 mm <sup>2</sup>

## Selection Table

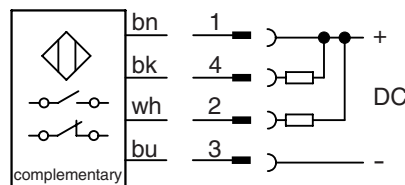
Sensing range $S_n$ in (mm)	Installation in metal	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
0.6 (16)		PNP	 complementary	50	Cable 2 m	CM30-16BPP-KW1	6 020 473
0.6 (16)		PNP	 complementary	50	Connector M12 x 1 mm	CM30-16BPP-KC1	6 020 475
0.6 (16)		NPN	 complementary	50	Cable 2 m	CM30-16BNP-KW1	6 021 459
0.6 (16)		NPN	 complementary	50	Connector M12 x 1 mm	CM30-16BNP-KC1	6 021 460
1.0 (25)		PNP	 complementary	50	Cable 2 m	CM30-25NPP-KW1	6 020 476
1.0 (25)		PNP	 complementary	50	Connector M12 x 1 mm	CM30-25NPP-KC1	6 020 477
1.0 (25)		NPN	 complementary	50	Cable 2 m	CM30-25NPN-KW1	6 021 461
1.0 (25)		NPN	 complementary	50	Connector M12 x 1 mm	CM30-25NPN-KC1	6 021 462

## 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

