CAPACITIVE AND MAGNETIC PROXIMITY SENSORS

PRODUCTS AT A GLANCE
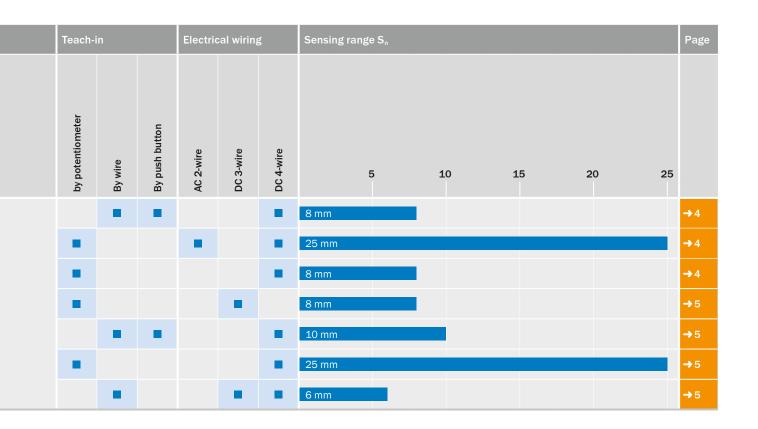
Capacitive proximity sensors, magnetic proximity sensors
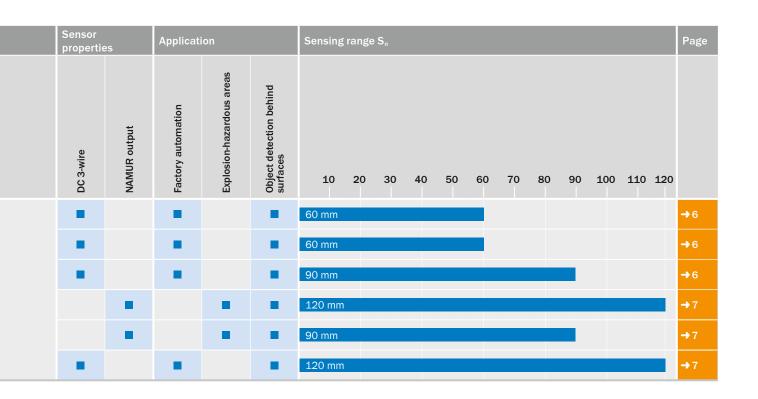
CAPACITATIVE PROXIMITY SENSORS

Product family		Housing		Housing material	Special features					
		Cylindrical threaded	Rectangular	Plastic	IP69K	PTFE-coating	Compensation of adhesions	Increased switching frequency	Visual adjustment indicator	
	CM12	■		■					■	
	CM18/CM30	■		■	■				■	
	CM PTFE	■		■		■				
	CQ4		■	■				■		
	CQ28		■	■						
	CQ35		■	■						
	CQF		■	■	■		■			

MAGNETIC PROXIMITY SENSORS

Product family		Housing		Size				Housing material			
		Cylindrical threaded	Rectangular	M8	M12	M18	10.3 mm x 37 mm x 16 mm	Nickel plated brass	Stainless steel	Plastic, VISTAL®	
	MM08	■		■				■			
	MM12	■			■			■			
	MM18	■				■		■	■		
	MM12 Namur	■			■			■			
	MM18 Namur	■				■		■			
	MQ10		■				■			■	

Teach-in			Electrical wiring			Sensing range S_n	Page
by potentiometer	By wire	By push button	AC 2-wire	DC 3-wire	DC 4-wire	5 10 15 20 25	
	■	■			■	8 mm	→ 4
■			■		■	25 mm	→ 4
■					■	8 mm	→ 4
■				■		8 mm	→ 5
	■	■			■	10 mm	→ 5
■					■	25 mm	→ 5
	■			■	■	6 mm	→ 5

Sensor properties		Application			Sensing range S_n	Page
DC 3-wire	NAMUR output	Factory automation	Explosion-hazardous areas	Object detection behind surfaces	10 20 30 40 50 60 70 80 90 100 110 120	
■		■		■	60 mm	→ 6
■		■		■	60 mm	→ 6
■		■		■	90 mm	→ 6
	■		■	■	120 mm	→ 7
	■		■	■	90 mm	→ 7
■		■		■	120 mm	→ 7

	CM12/CM18/CM30	CM PTFE
	Tried-and-tested sensors for object detection and level measurement	Sensors in cylindrical PTFE-housing that withstand tough environments

Technical data overview

Housing	Cylindrical thread design	Cylindrical thread design
Thread size	M12 x 1 M18 x 1 M30 x 1.5	M18 x 1
Dimensions (W x H x D)	–	–
Sensing range S_n	6 mm … 25 mm	≤ 8 mm
Housing material	Plastic	PTFE coating
Enclosure rating	IP68 IP69K IP67	IP67
Connection	Male connector / cable	Cable
Electrical wiring	DC 4-wire / AC 2-wire	DC 4-wire

At a glance

	• Detects powders, granulates, liquids and solids • High electromagnetic compatibility • Visual adjustment indicator • Ecolab certified (CM18/CM30)	• Use in aggressive environmental conditions • Housing material made from PTFE • Detects powders, granulates, liquids and solids • High electromagnetic compatibility

Detailed information	➜ www.sick.com/CM	➜ www.sick.com/CM_PTFE

	CQ4/CQ28/CQ35	CQF
	Reliable capacitive proximity sensors enclosed in a rectangular housing	Reliable level measurement of water-based liquids
	Rectangular	Rectangular
	–	–
	16 mm x 39.5 mm x 12 mm (CQ4) 28 mm x 46 mm x 5.5 mm (CQ28) 35 mm x 69.5 mm x 15 mm (CQ35)	16 mm x 34 mm x 8 mm
	6 mm … 25 mm	≤ 6 mm
	Plastic	Plastic
	IP67 / IP68	IP67, IP68, IP69K
	Cable Male connector Cable with male connector	Cable / cable with male connector
	DC 3-wire / DC 4-wire	DC 4-wire

• Detects powders, granulates, liquids and solids • High electromagnetic compatibility	• Detects liquids with a conductivity of up to 50 mS/cm • Compensation of foam, moisture and adhesions • Flexible and easy installation – thanks to the supplied mounting bracket • Ecolab certified
➜ www.sick.com/CQ	➜ www.sick.com/CQF

MM08/MM12/MM18

Magnetic proximity sensors in common M8, M12, and M18 cylindrical housing

Technical data overview

Housing	Cylindrical thread design
Thread size	M8 x 1 M12 x 1 M18 x 1
Housing	–
Sensing range S_n	45 mm … 120 mm
Magnetic field sensitivity, min.	0.4 mT … 1 mT
Housing material	Nickel-plated brass / V4A (1.4404, 316L)
Enclosure rating	IP67
Connection	Connector M8, 3-pin / Cable, 3-wire / male connector M12, 4-pin

At a glance

- Electrical configuration: DC 3-wire
- Temperature range: –25 °C to +75 °C
- Plastic sensing face
- Reliable detection of permanent magnets through non-ferromagnetic materials such as stainless steel, aluminum, plastic or wood
- Solves high-temperature applications by installing the permanent magnet in the high-temperature area and the sensor behind an insulated area

Detailed information

→ www.sick.com/MM

MM12 Namur/MM18 Namur	MQ10
NAMUR magnetic proximity sensors in a cylindrical housing for explosive areas	Magnetic proximity sensors in a rectangular housing

Cylindrical thread design	Rectangular
M12 x 1	–
M18 x 1	
–	10 mm x 28 mm x 16 mm
60 mm ... 120 mm	≤ 60 mm
≤ 0.4 mT ... ≤ 1 mT	≤ 1 mT
Nickel-plated brass	VISTAL®
IP67	IP67
Male connector M12, 4-pin / Cable, 2-wire / Cable with connector M9, 5-pin, with knurled nuts	Connector M8, 3-pin / Cable, 3-wire / Cable with connector M12, 3-pin

• Electrical configuration: NAMUR • Temperature range: –25 °C to +70 °C • Plastic sensing face • Reliable detection of permanent magnets through non-ferromagnetic materials such as stainless steel, aluminum, plastic or wood • NAMUR design for usage in explosion-hazardous areas (EX II 1G/1D und EX II 2G)	• Electrical configuration: DC, 3-wire • Temperature range: –25 °C to +75 °C • Tough VISTAL™ housing • Reliable detection of permanent magnets through non-ferromagnetic materials such as stainless steel, aluminum, plastic or wood • Solves high-temperature applications by installing the permanent magnet in the high-temperature area and the sensor behind an insulated area
➜ www.sick.com/MM_Namur	➜ www.sick.com/MQ

SICK AT A GLANCE

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SICK AG | Waldkirch | Germany | www.sick.com

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