



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				

	 <p>CM12/CM18/CM30</p>	 <p>CM PTFE</p>	
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			
	<ul style="list-style-type: none"> • Detects powders, granulates, liquids and solids • High electromagnetic compatibility • Visual adjustment indicator • Ecolab certified (CM18/CM30) 	<ul style="list-style-type: none"> • 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	
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CQ4/CQ28/CQ35

Reliable capacitive proximity sensors enclosed in a rectangular housing



CQF

Reliable level measurement of water-based liquids

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)

6 mm ... 25 mm

Plastic

IP67 / IP68

Cable

Male connector

Cable with male connector

DC 3-wire / DC 4-wire

Rectangular

-

16 mm x 34 mm x 8 mm

≤ 6 mm

Plastic

IP67, IP68, IP69K

Cable / cable with male connector

DC 4-wire

- Detects powders, granulates, liquids and solids
- High electromagnetic compatibility



→ www.sick.com/CQ

- 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/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

NAMUR magnetic proximity sensors in a cylindrical housing for explosive areas



MQ10

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)



→ www.sick.com/MM_Namur

- 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/MQ

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 10,000 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing damage to the environment.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the customers need. In application centers in Europe, Asia, and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes SICK a reliable supplier and development partner.

Comprehensive services round out the offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

That is “Sensor Intelligence.”

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Detailed addresses and further locations → www.sick.com