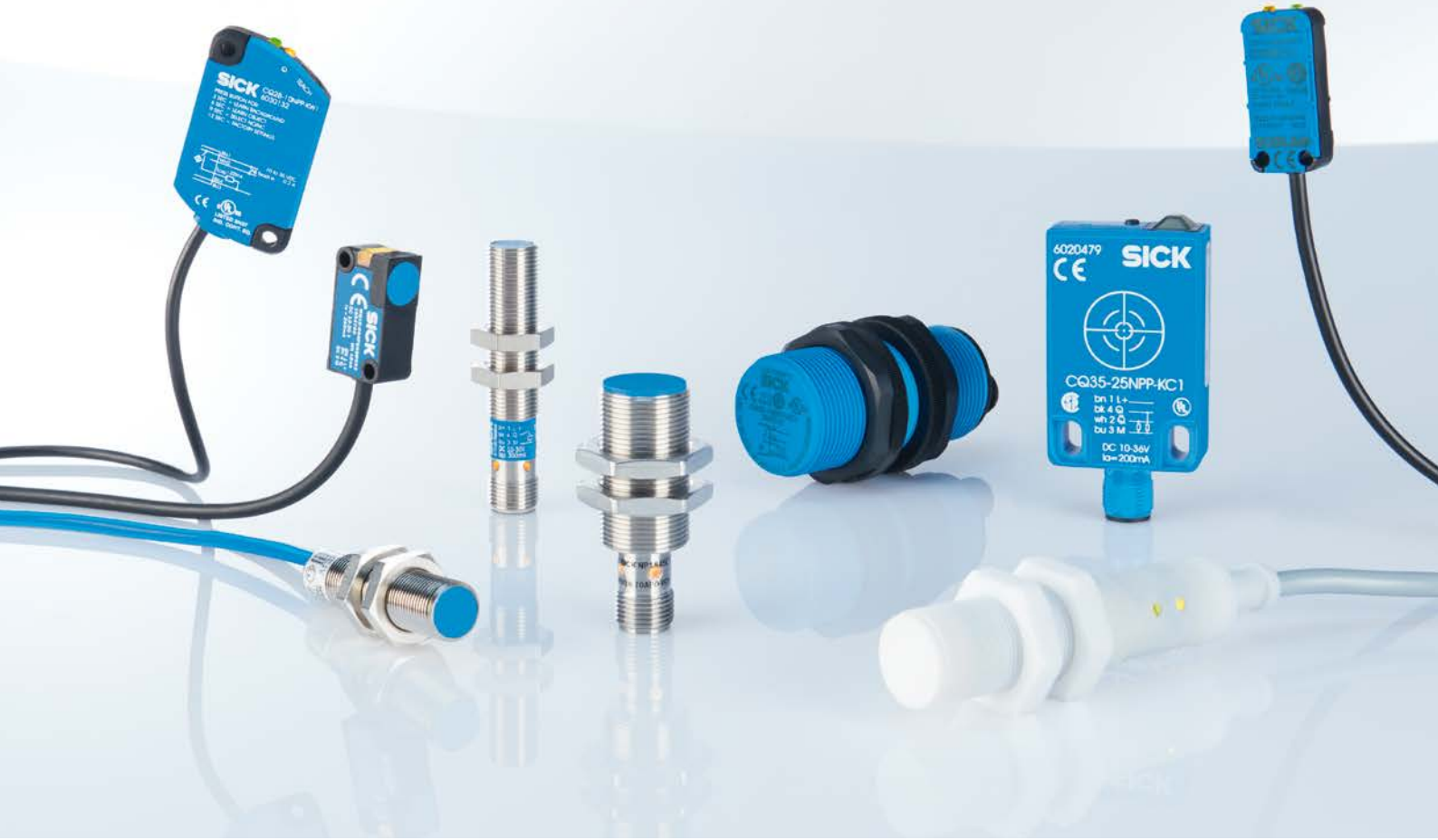

CAPACITIVE AND MAGNETIC PROXIMITY SENSORS

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	IO-Link V1.1
	CM12	■		■					■	
	CM18/CM30	■		■	■				■	
	CMB18/CMB30	■		■	■				■	■
	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		■				■			■

8025830/2022-08-03
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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
■	■				■	25 mm	→ 4
■					■	8 mm	→ 5
■				■		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	**CMB18/CMB30**	
	Tried-and-tested sensors for object detection and level measurement	Rugged and smart capacitive sensors	
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 M30 x 1.5	
Dimensions (W x H x D)	–		
Sensing range S_n	6 mm ... 25 mm	0 mm ... 25 mm	
Housing material	Plastic	Plastic PBT	
Enclosure rating	IP68 IP69K IP67	IP67 IP68 IP69K	
Connection	Male connector / cable	Male connector / cable	
Electrical wiring	DC 4-wire / AC 2-wire	DC 4-wire	
Communication interface		IO-Link V1.1	
At a glance			
	• Detects powders, granulates, liquids and solids • High electromagnetic compatibility • Visual adjustment indicator • Ecolab certified (CM18/CM30)	• Detects powders, granulates, liquids and solids • IO-Link V1.1 • Detection signal available as digit value in process data • Material differentiation or derivation of the distance value possible • High electromagnetic compatibility • Visual adjustment indicator • Ecolab certified	
Detailed information	➜ www.sick.com/CM	➜ www.sick.com/CMB	

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	CM PTFE	CQ4/CQ28/CQ35	CQF
			
	Sensors in cylindrical PTFE-housing that withstand tough environments	Reliable capacitive proximity sensors enclosed in a rectangular housing	Reliable level measurement of water-based liquids
	Cylindrical thread design	Rectangular	Rectangular
	M18 x 1	–	–
	–	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
	≤ 8 mm	6 mm ... 25 mm	≤ 6 mm
	PTFE coating	Plastic	Plastic
	IP67	IP67 / IP68	IP67, IP68, IP69K
	Cable	Cable Male connector Cable with male connector	Cable / cable with male connector
	DC 4-wire	DC 3-wire / DC 4-wire	DC 4-wire
	• Use in aggressive environmental conditions • Housing material made from PTFE • Detects powders, granulates, liquids and solids • High electromagnetic compatibility	• 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/CM_PTFE	➜ 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

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	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

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SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 11,000 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**

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