Product family overview

IMP

High-pressure-resistant sensors for hydraulic applications

SICK
Sensor Intelligence.

Technical data overview

Housing	Cylindrical thread design
Thread size	M5 x 0.5 M8 x 1 M12 x 1 M14 x 1.5
Housing diameter	Ø 5 mm ... Ø 14 mm (depending on type)
Sensing range S_n	1 mm ... 3 mm (depending on type)
Electrical wiring	DC 3-wire / DC 4-wire (depending on type)
Housing material	Phynox Stainless steel V2A Stainless steel V4A (depending on type)
Enclosure rating	IP68
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Product description

The inductive, high-pressure-resistant IMP sensors are perfectly suited for the query of end positions in hydraulic cylinders. The use of state-of-the-art ASIC and manufacturing technologies from SICK sets new standards in installation size, service life and load capability for the sensors. Due to the stable stainless steel housing and an active high-performance ceramic surface, they are pressure-resistant up to 500 bar. Above-average system throughput is a matter of course for the range of models M5, M8, M12 and M14 thanks to 1 million tested pressure cycles.

At a glance

- Types: M5, M8, M12 and M14
- Extended sensing ranges: 1 mm to 3 mm
- Electrical configuration: DC 3- and 4-wire
- Enclosure rating: IP 68
- Temperature range: –25 °C to +100 °C
- Stainless steel housing with active surface made from stable high-performance ceramic
- Pressure resistant up to 500 bar, gas-tight front
- Expected service life of up to 1 million pressure cycles

Your benefits

- Reduced maintenance costs
- Extremely resilient and durable
- Up to 50 times longer service life compared to conventional sensors under pressure cycles
- Simple compensation of cylinder tolerances
- Simple integration due to small design
- Controlled piston deceleration
- Increased piston service life due to collision prevention at the end of the work cycle

Ordering information

Other models and accessories ➜ www.sick.com/IMP

- **Sub product family:** IMP05
- **Cylindrical thread design:** M5
- **Installation type:** flush
- **Electrical wiring:** DC 3-wire
- **Sensing range S_n:** 1 mm
- **Switching output:** PNP
- **Output function:** NO
- **Special features:** high pressure resistant, Temperature resistance

Connection type	Type	Part no.
Cable with connector M8, 3-pin, with knurled nuts, 0.3 m	IMP05-01BPSVR9S	6071960
Cable, 3-wire, 2 m	IMP05-01BPSVU2S	6050109

- **Sub product family:** IMP08
- **Cylindrical thread design:** M8
- **Installation type:** flush
- **Electrical wiring:** DC 3-wire
- **Sensing range S_n:** 1.5 mm
- **Output function:** NO
- **Special features:** high pressure resistant, Temperature resistance
- **Connection type:** Cable, 3-wire, 2 m

Switching output	Type	Part no.
NPN	IMP08-1B5NSVU2S	6050112
PNP	IMP08-1B5PSVU2S	6050111

- **Sub product family:** IMP12
- **Cylindrical thread design:** M12
- **Installation type:** flush
- **Sensing range S_n:** 1.5 mm
- **Connection type:** male connector M12, 4-pin

Electrical wiring	Switching output	Output function	Special features	Type	Part no.
DC 3-wire	NPN	NC	High pressure resistant	IMP12-1B5NOVC0B	6050116
				IMP12-1B5NOVC0C	6050122
				IMP12-1B5NOVC0D	6050128
				IMP12-1B5NOVC0F	6050134
		NO	High pressure resistant	IMP12-1B5NSVC0B	6050115
				IMP12-1B5NSVC0C	6050121
				IMP12-1B5NSVC0D	6050127
				IMP12-1B5NSVC0F	6050133
	PNP	NC	High pressure resistant	IMP12-1B5POVC0B	6050114
				IMP12-1B5POVC0C	6050120
				IMP12-1B5POVC0D	6050126
				IMP12-1B5POVC0F	6050132
		NO	High pressure resistant	IMP12-1B5PSVC0B	6050113
				IMP12-1B5PSVC0C	6050119
				IMP12-1B5PSVC0D	6050125
				IMP12-1B5PSVC0F	6050131
DC 4-wire	NPN	Complementary	High pressure resistant, Temperature resistance	IMP12-1B5NPVC0B	6050118
				IMP12-1B5NPVC0C	6050124
				IMP12-1B5NPVC0D	6050130
				IMP12-1B5NPVC0F	6050136
	PNP	Complementary		IMP12-1B5PPVC0B	6050117
				IMP12-1B5PPVC0C	6050123
				IMP12-1B5PPVC0D	6050129
				IMP12-1B5PPVC0F	6050135

- **Sub product family:** IMP14
- **Cylindrical thread design:** M14
- **Installation type:** flush
- **Electrical wiring:** DC 3-wire
- **Sensing range S_n:** 3 mm
- **Special features:** high pressure resistant
- **Connection type:** male connector M12, 4-pin

Switching output	Output function	Type	Part no.
NPN	NC	IMP14-03BNOVC0S	6050140
	NO	IMP14-03BNSVC0S	6050139
PNP	NC	IMP14-03BPOVC0S	6050138
	NO	IMP14-03BPSVC0S	6050137

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. 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.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our 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 us a reliable supplier and development partner.

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

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com