



MASQ47-36PEKU1SA10

MAS

MAGNETIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
MASQ47-36PEKU1SA10	1113979

Other models and accessories → www.sick.com/MAS



Detailed technical data

Features

Dimensions	47 mm x 47 mm x 10 mm
Measuring range	0° ... 360°
Resolution	12 bit
Linearity error, typ.	± 1°
Repeatability	< 0.3° ¹⁾
Number of adjustable angles	32
Sampling rate	900 Hz
Switching output	3 x PNP or IO-Link mode 2 x PNP
Output function	Programmable (factory setting: normally open contact)
Electrical wiring	DC 5-wire
Working distance	1.5 mm ... 4 mm ²⁾
Magnetic misalignment	± 0.2 mm
Indication	
	LED green
	Static on: power on Flashing: IO-Link mode Flashing: find device activated
	LED yellow
	Q1 (pin4) permanently on: contact closed Flashing: find device activated Flashing: Magnet too far away
	LED yellow 1
	Q2 (pin2) permanently on: contact closed Flashing: find device activated Flashing: Magnet too far away
	LED yellow 2
	Q3 (pin5) permanently on: contact closed Flashing: find device activated Flashing: Magnet too far away

¹⁾ Ub and Ta constant.

²⁾ This specification is measured with the magnets listed under accessories. The value may vary if other magnets are used.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Residual ripple	10 %
Voltage drop	$\leq 2 \text{ V}^{1)}$
Current consumption	$\leq 30 \text{ mA}^{2)}$
Continuous current I_a	$\leq 200 \text{ mA}^{3)}$
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Connection type	Cable with male connector
Material, cable	PUR
Conductor cross section	0.34 mm ²
Cable diameter	4.8 mm
Housing material	Plastic (PPS)
Tightening torque	Typ. 1 Nm
Protection class	III
MTTFd: mean time to dangerous failure	722 years
UL File No.	E181493
DC_{avg}	0 %

1) At I_a max.

2) Without load.

3) Per output.

Communication interface

Communication interface	IO-Link V1.1
Communication Interface detail	COM3 (230,4 kBaud)
Cycle time	$\geq 1 \text{ ms}$
Process data length	4 Byte
Process data structure	See "Addendum to operating instructions document number 8024987"
Factory setting	Angle ranges: 0...120 Qint1 = Q1, 120...240 Qint2 = Q2, 240...359.9 Qint3 = Q3 Output: normally open contact Time delay: deactivated

Ambient data

EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V _{eff} EN 61000-4-4 burst: 2 kV EN 61000-4-6 HF wire-bound: 10 V _{eff}
Enclosure rating	IP67 (EN 60529) ¹⁾ IP68 (EN 60529) ¹⁾
Operating temperature range	-40 °C ... +80 °C
Resistance to shocks	100 g, 6 shocks, 6 ms (EN 60068-2-27) Continuous shock 40 g, 6 ms, 8,000 shocks (EN 60068-2-29)

1) IPx8 = 168h, 1m.

Resistance to vibration	15 g, 5 Hz ... 2,000 Hz, 120 minutes (EN 60068-2-6)
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¹⁾ IPx8 = 168h, 1m.

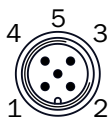
Smart Task

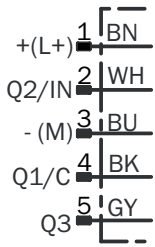
Smart Task name	Base logics
Timer function	Deactivated On delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes
Switching signal	
Switching signal Q _{L1}	Switching output
Switching signal Q _{L2}	Switching output
Switching signal Q _{L3}	Switching output

Classifications

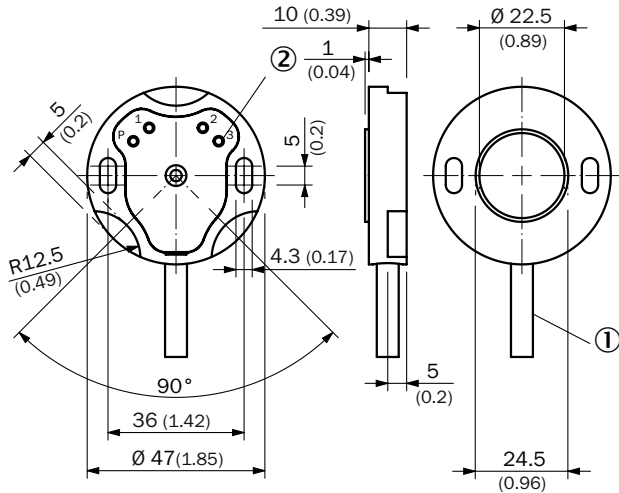
eCl@ss 5.0	27270502
eCl@ss 5.1.4	27270502
eCl@ss 6.0	27270590
eCl@ss 6.2	27270590
eCl@ss 7.0	27270502
eCl@ss 8.0	27270502
eCl@ss 8.1	27270502
eCl@ss 9.0	27270502
eCl@ss 10.0	27270502
eCl@ss 11.0	27270502
eCl@ss 12.0	27270502
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486
ETIM 8.0	EC001486
UNSPSC 16.0901	41112113

Connection diagram








Dimensional drawing (Dimensions in mm (inch))




- ① Connection
- ② LED, (4 x)

Recommended accessories

Other models and accessories → www.sick.com/MAS

	Brief description	Type	Part no.
Connection modules			
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
Magnets			
	Neodym [®] - Note: Direct or indirect sale of the Neodym magnets we supply or end products manufactured from these magnets is prohibited in the following countries: USA, Canada and Japan.	MAG-1005-N	5344197
	Magnet with bracket, Neodym [®] - Note: Direct or indirect sale of the Neodym magnets we supply or end products manufactured from these magnets is prohibited in the following countries: USA, Canada and Japan.	MAGH-1004-N	2126478
	Magnet with bracket, samarium cobalt	MAGH-1004-SMCO	2131041

	Brief description	Type	Part no.
Sensor Integration Gateway			
	<ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, PROFINET, REST API, MQTT, OPC UA • Product category: IO-Link Master 	SIG350-0004AP100	6076871
	<ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, EtherNet/IP™, REST API, MQTT, OPC UA • Product category: IO-Link Master 	SIG350-0005AP100	6076923
	<ul style="list-style-type: none"> • Further functions: Web server integrated, IIoT interface available (dual talk) • Logic editor: no • Communication interface: IO-Link, Ethernet, EtherCAT®, REST API, MQTT, OPC UA • Product category: IO-Link Master 	SIG350-0006AP100	6076924

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:

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