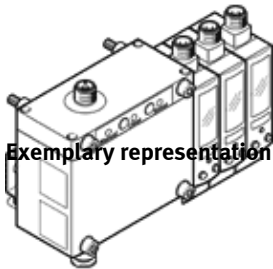# air gap sensor
SOPA-...
Part number: 549902

FESTO

For contactless distance sensing.

Exemplary representation

Data sheet

Overall data sheet – Individual values depend upon your configuration.

Feature	Value
Authorisation	RCM Mark
	c UL us - Recognized (OL)
CE mark (see declaration of conformity)	to EU directive for EMC
	in accordance with EU RoHS directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC
	To UK RoHS instructions
KC mark	KC-EMV
Materials note	Conforms to RoHS
Detected variable	Distance
Measuring principle	pneumatic
Sensing range	20 ... 200 µm
Operating pressure	4 ... 7 bar
Supply pressure	0.8 ... 1.6 bar
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
Ambient temperature	0 ... 50 °C
Repetition accuracy in ± µm	2.5 µm
Switch output	2xNPN
	2xPNP
	PNP/NPN, switchable
Switching function	Window comparator
	Threshold value with variable hysteresis
Switching element function	N/C or N/O contact, switchable
Max. output current	100 mA
Analogue output	0 - 10 V
	4 - 20 mA
	1 - 5 V
Start value distance characteristic curve	0 µm
End value distance characteristic curve	300 µm
Rise time	22 ms
Max. load resistance, current output	500 Ohm
Min. load resistance, voltage output	20 kOhm
Short circuit strength	Yes
Protocol	IO-Link
IO-Link, protocol	Device V 1.1
IO-Link, profile	Smart sensor profile
IO-Link, function classes	Process Data Variable (PDV)
	Identification
	diagnosis
	Teach channel
	Switching signal channel (SSC)

Feature	Value
IO-Link, communication mode	COM2 (38,4 kBaud)
IO-Link, SIO mode support	Yes
IO-Link, port type	A
IO-Link, process data width OUT	0 Byte
IO-Link, process data width IN	2 Byte
IO-Link, process data content IN	2-bit SSC (distance monitoring)
	1-bit SSC (supply pressure monitoring)
	10-bit PDV (distance)
IO-Link, Service data contents IN	14-bit supply pressure
IO-Link, minimum cycle time	3 ms
IO-Link, data memory required	‹ 500 Byte
Operating voltage range DC	15 ... 30 V
Max. current consumption	150 ... 1,100 mA
Polarity protected	for all electrical connections
Electrical connection 1, connection type	Plug
Electrical connection 1, connection technology	M12x1, A-coded in accordance with EN 61076-2-101
Electrical connection 1, number of pins/wires	5
Electrical connection 1, type of mounting	Screw lock
Mounting type	with through hole
	with top-hat rail
	with wall/surface fixing
	Optional
Pneumatic connection	QS-6
Product weight	60 ... 690 g
Material housing	Anodised aluminium
	PA-reinforced
Type of display	Illuminated LCD, multicoloured
Setting options	IO-Link
	Teach-In
	Via display and buttons
Protection against manipulation	Electronic locking
Protection class	IP65
Corrosion resistance classification CRC	2 - Moderate corrosion stress
PWIS conformity	VDMA24364-C1-L