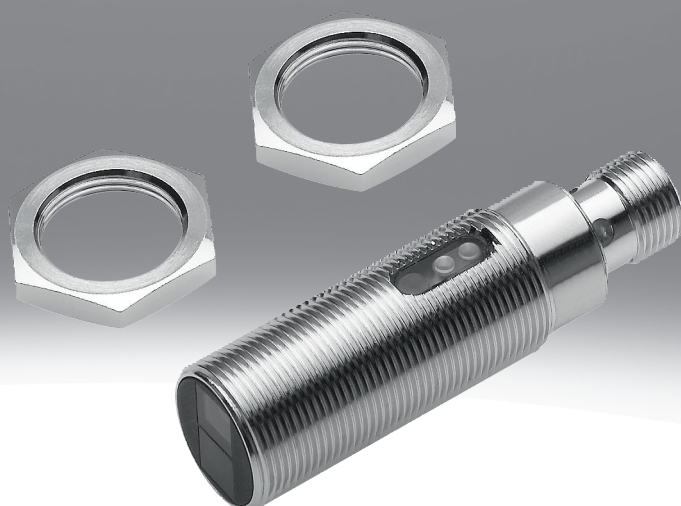


Optoelectronic sensor SOEG-RS/RT

FESTO



Type code

001	Series	
SOEG	Standard sensor, optoelectronic	
002	Sensor function	
RSP	Retro-reflective sensor	
RT	Diffuse sensor	
RTH	Diffuse sensor with background suppression	
003	Design type	
M12	Round, M12	
M18	Round, M18, beam exit straight	

004	Switching output	
NA	NPN, antivalent	
NS	3-wire NPN N/O contact	
PA	PNP, antivalent	
PS	3-wire PNP N/O contact	
005	Electrical connection	
S	Plug	
K	Cable	
006	Display	
2L	2 light emitting diodes	

Datasheet

General technical data SOEG-RSP diffuse sensor

Size	M12x1	M18x1
Design	Round	
Type of mounting	Via lock nut	
Tightening torque	10 Nm	20 Nm
Measured variable	Position	
Measuring principle	Optoelectronic	
Measurement method	Retro-reflective sensor	
Operating distance	1,500 mm	2,000 mm
Type of light	Red polarised	

General technical data SOEG-RT diffuse sensor

Size	M12	M18
Design	Round	
Type of mounting	Via lock nut	
Tightening torque	10 Nm	20 Nm
Mounting position	optional	
Measured variable	Position	
Measuring principle	Optoelectronic	
Measurement method	Diffuse sensor	
Operating distance	70 ... 300 mm	40 ... 600 mm
Type of light	Red	
Setting options	Potentiometer	
Setting range lower limit	70 mm	40 mm
Setting range upper limit	300 mm	600 mm

General technical data SOEG-RTH diffuse sensor

Size	M18x1	
Design	Round	
Type of mounting	Via lock nut	
Tightening torque	20 Nm	
Measured variable	Position	
Measuring principle	Optoelectronic	
Measurement method	Diffuse sensor with background suppression	
Operating distance	10 ... 120 mm	
Type of light	Red	
Setting options	Potentiometer	
Setting range lower limit	10 mm	
Setting range upper limit	120 mm	

Electrical data SOEG-RSP diffuse sensor

Electrical connection	3-wire, Cable	3-pin, M12x1, Plugs
Operational voltage range DC	10 ... 36 V	
Voltage drop	≤2	
Max. output current	200 mA	
No-load supply current	15 mA	
Max. switching frequency	1,000 Hz	
Residual ripple	20%	
Switching status indication	Yellow LED	
Function reserve indication	Green LED	
Short circuit current rating	Pulsed	
Reverse polarity protection	For all electrical connections	
Degree of protection	IP65, IP67	
Switching output	NPN, PNP	
Switching element function	Dark switching	

Datasheet

Electrical data SOEG-RT diffuse sensor

Electrical connection	4-wire, Cable	3-wire, Cable	3-pin, M12x1, Plugs	4-pin, M12x1, Plugs
Operational voltage range DC	10 ... 36 V			
Voltage drop	2			
Max. output current	200 mA			
No-load supply current	20 mA	15 mA	20 mA	
Max. switching frequency	1,000 Hz			
Residual ripple	20%			
Switching status indication	Yellow LED			
Function reserve indication	Green LED			
Short circuit current rating	Pulsed			
Reverse polarity protection	For all electrical connections			
Degree of protection	IP65, IP67			
Switching output	NPN, PNP			
Switching element function	Antivalent	Light switching		Antivalent
Hysteresis	60 mm	30 mm		60 mm

Electrical data SOEG-RTH diffuse sensor

Electrical connection	3-pin, M12x1, Plugs	3-wire, Cable
Operational voltage range DC	10 ... 36 V	
Voltage drop	≤2	
Max. output current	200 mA	
No-load supply current	25 mA	
Max. switching frequency	500 Hz	
Residual ripple	20%	
Switching status indication	Yellow LED	
Function reserve indication	Green LED	
Short circuit current rating	Pulsed	
Reverse polarity protection	For all electrical connections	
Degree of protection	IP65, IP67	
Switching output	NPN, PNP	
Switching element function	Light switching	

Operating and environmental conditions SOEG-RSP diffuse sensor

Ambient temperature	-25 ... 55°C
Ambient temperature with moving cable	-5 ... 55°C
CE mark (see declaration of conformity)	To EU EMC Directive, In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK RoHS instructions
Conforms to standard	EN 60947-5-2
Approval	RCM trademark, c UL us listed (OL)
Corrosion resistance class CRC ¹⁾	1 - Low corrosion stress
LABS (PWIS) conformity	VDMA24364-B2-L

¹⁾ More information www.festo.com/x/topic/crc

Datasheet

Operating and environmental conditions SOEG-RT diffuse sensor

Ambient temperature	-25 ... 55°C
Ambient temperature with moving cable	-5 ... 55°C
CE mark (see declaration of conformity)	To EU EMC Directive, In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK RoHS instructions
Conforms to standard	EN 60947-5-2
Approval	RCM trademark, c UL us listed (OL)
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364 zone III

1) More information www.festo.com/x/topic/crc

Operating and environmental conditions SOEG-RTH diffuse sensor

Ambient temperature	-25 ... 55°C
Ambient temperature with moving cable	-5 ... 55°C
CE mark (see declaration of conformity)	To EU EMC Directive, In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC, To UK RoHS instructions
Conforms to standard	EN 60947-5-2
Approval	RCM trademark, c UL us listed (OL)
Corrosion resistance class CRC ¹⁾	1 - Low corrosion stress
LABS (PWIS) conformity	VDMA24364-B2-L

1) More information www.festo.com/x/topic/crc

Material SOEG-RSP diffuse sensor

Material housing	Brass, Chrome-plated
Material cable sheath	TPE-U(PUR)

Material SOEG-RT diffuse sensor

Material housing	Brass, Chrome-plated
Material cable sheath	TPE-U(PUR)
Material insulating sheath	PVC

Material SOEG-RTH diffuse sensor

Material housing	Brass, Chrome-plated
Material cable sheath	TPE-U(PUR)

Ordering data

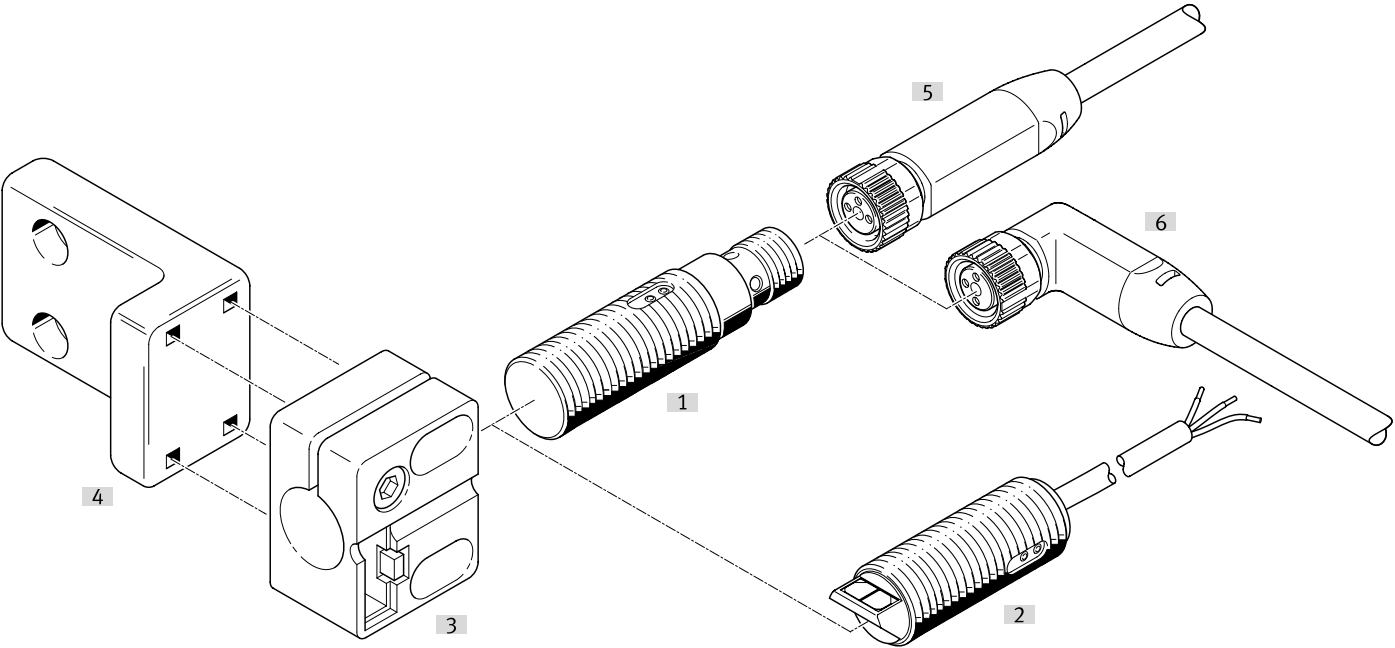
SOEG_RT diffuse sensor					
Operating distance	Electrical connection	Cable length	Product weight	Part no.	Type
40 ... 600 mm	4-wire, Cable	2.5 m	121 g	547912	SOEG-RT-M18-PA-K-2L
				547910	SOEG-RT-M18-NA-K-2L
	4-pin, M12x1, Plugs		53 g	547911	SOEG-RT-M18-NA-S-2L
				547913	SOEG-RT-M18-PA-S-2L
70 ... 300 mm	3-wire, Cable	2.5 m	100 g	547906	SOEG-RT-M12-NS-K-2L
				547908	SOEG-RT-M12-PS-K-2L
	3-pin, M12x1, Plugs		20 g	547909	SOEG-RT-M12-PS-S-2L
				547907	SOEG-RT-M12-NS-S-2L

SOEG_RSP retro-reflective sensor					
Operating distance	Electrical connection	Cable length	Product weight	Part no.	Type
1,500 mm	3-wire, Cable	2.5 m	100 g	537683	SOEG-RSP-M12-PS-K-2L
				537685	SOEG-RSP-M12-NS-K-2L
	3-pin, M12x1, Plugs		20 g	537684	SOEG-RSP-M12-PS-S-2L
				537686	SOEG-RSP-M12-NS-S-2L
2,000 mm	3-wire, Cable	2.5 m	121 g	537713	SOEG-RSP-M18-NS-K-2L
				537697	SOEG-RSP-M18-PS-K-2L
	3-pin, M12x1, Plugs		53 g	537715	SOEG-RSP-M18-NS-S-2L
				537699	SOEG-RSP-M18-PS-S-2L

SOEG_RTH diffuse sensor					
Operating distance	Electrical connection	Cable length	Product weight	Part no.	Type
10 ... 120 mm	3-wire, Cable	2.5 m	121 g	537705	SOEG-RTH-M18-NS-K-2L
				537687	SOEG-RTH-M18-PS-K-2L
	3-pin, M12x1, Plugs		53 g	537707	SOEG-RTH-M18-NS-S-2L
				537689	SOEG-RTH-M18-PS-S-2L

Peripherals

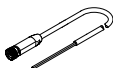
Peripherals overview



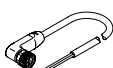
Accessories		→ Link
Type/order code	Description	
[1] SOEG-...	Round design, M12, M18..., with plug	soeg
[2] SOEG-...	Round design, M12, M18..., with cable	soeg
[3] Sensor bracket SIEZ-NB	–	8
[4] Sensor bracket SIEZ-UH	–	8
[5] Connecting cables NEBA	Straight socket	8
[6] Connecting cables NEBA	Angled socket	8

Accessories

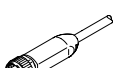
Connecting cable NEBA, socket M8x1, 3-pin, straight

	Connection technology left, field device side	Electrical connection 1, cable outlet	Connection technology right, controller side	Cable length	Part no.	Type
	Socket M8x1 A-coded, EN 61076-2-104	Straight	Open end	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
					8078227	NEBA-M8G4-U-2.5-N-LE4
				5 m	8078224	NEBA-M8G3-U-5-N-LE3
					8078228	NEBA-M8G4-U-5-N-LE4

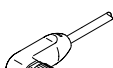
Connecting cable NEBU, socket M8x1, 3-pin, angled

	Connection technology left, field device side	Electrical connection 1, cable outlet	Connection technology right, controller side	Cable length	Part no.	Type
	Socket M8x1 A-coded, EN 61076-2-104	Angled	Open end	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
					8078233	NEBA-M8W4-U-2.5-N-LE4
				5 m	8078231	NEBA-M8W3-U-5-N-LE3
					8078234	NEBA-M8W4-U-5-N-LE4

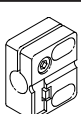
Connecting cable NEBA, socket M12x1, 5-pin, straight

	Connection technology left, field device side	Electrical connection 1, cable outlet	Connection technology right, controller side	Cable length	Part no.	Type
	Socket M12x1 A-coded, EN 61076-2-101	Straight	Open end	2.5 m	8078236	NEBA-M12G5-U-2.5-N-LE3
				5 m	8078240	NEBA-M12G5-U-5-N-LE4
					8078237	NEBA-M12G5-U-5-N-LE3

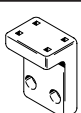
Connecting cable NEBA, socket M12x1, 5-pin, angled

	Connection technology left, field device side	Electrical connection 1, cable outlet	Connection technology right, controller side	Cable length	Part no.	Type
	Socket M12x1 A-coded, EN 61076-2-101	Angled	Open end	2.5 m	8078245	NEBA-M12W5-U-2.5-N-LE3
				5 m	8078249	NEBA-M12W5-U-5-N-LE4
					8078246	NEBA-M12W5-U-5-N-LE3

Sensor bracket SIEZ-NB

	Size	Type of mounting	Product weight	Part no.	Type
	M12	With through-hole	20 g	538347	SIEZ-NB-12
	M18		21 g	538349	SIEZ-NB-18

Sensor bracket SIEZ-UH

	Type of mounting	Product weight	Part no.	Type
	With through-hole	25 g	538354	SIEZ-UH