RS25
Register Sensors

For best performance even in hazardous areas!

SICK
Sensor Intelligence.

For best performance even in hazardous areas!

Product description

The RS25 can be used in various print mark processes and the fiber-optic ATEX certified version is ideal in explosive gas environments. The sensor has extremely low jitter in combination with fast communication via EthernetPowerlink, resulting in a very high repeatability. The multicolored LED is adapted to each mark to get the best possible contrast.

At a glance

- PLC embedded register control
- Multi LED (RGB)
- Fast communication via Ethernet Powerlink
- Very high repeatability (≤ 40 μm)
- Detects up to 20 marks of different colors
- Reading window for improved reliability

Your benefits

- High precision to enhance print quality
- Sensor for explosive gas areas – ATEX certified
- Flexible solution via the PLC embedded register control unit
- Cost-saving potential with less material waste and less production conversion time

ETHERNET POWERLINK

Additional information

→ **www.mysick.com/en/RS25**

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.

Detailed technical data – optical sensor head

Features

Dimensions (L x W x H)	40 mm x 30 mm x 15 mm
Sensing distance	10 mm
Sensing distance tolerance	+/- 1 mm
Light source	LED red, green, blue
Light spot size	1,1 mm x 2,0 mm
Shape of head	Quadratic
Front window	Glass
Length of fiber optical cable	3,200 mm
Diameter of fiber optical cable	8 mm
Bending radius (static)	40 mm
Bending radius (dynamic)	80 mm
Enclosure rating	IP 65
Weight	450 g (fiber optical cable included)
ATEX	Ex II 2G Ex op is IIB T4 Gb
Housing material	Aluminium alloy, sandblasted
Ambient temperature	Operation: –10 °C … +55 °C Storage: –20 °C … +70 °C

Detailed technical data – evaluation unit

Features

Dimensions (L x W x H)	200 mm x 100 mm x 47 mm
Sensing distance	10 mm
Sensing distance tolerance	+/- 1 mm
Light source	LED red, green, blue
Maximum No. of marks in register	20
Start code	Configurable

Interfaces

Data interface	Ethernet POWERLINK

Mechanics/electronics

Supply voltage V_s [1]	24 V DC ± 20 %
Power consumption [2]	< 250 mA
Precision	< 40 µm
Connection type	2 x M12, 4-pin, Ethernet
Protection class [4]	III
Circuit protection	V_s connections reverse-polarity protected Interference suppression Outputs overcurrent and short-circuit protected
Enclosure rating	IP 65
Weight	1000 g
ATEX	Ex II (2)G [Ex op is Gb] IIB
Housing material	Aluminium

[1] Limit values: operation in short-circuit protected network max. 8 A.

[2] Without load.

[4] Reference voltage DC 50 V.

Ambient data

Ambient temperature	Operation: –10 °C ... +55 °C
	Storage: –20 °C ... +70 °C
Shock load	According to IEC 60068

Ordering information

ATEX approval	Type	Part no.
–	RS25-WF334000	1062005

Dimensional drawings

dimensions in mm (inch)

Evaluation unit
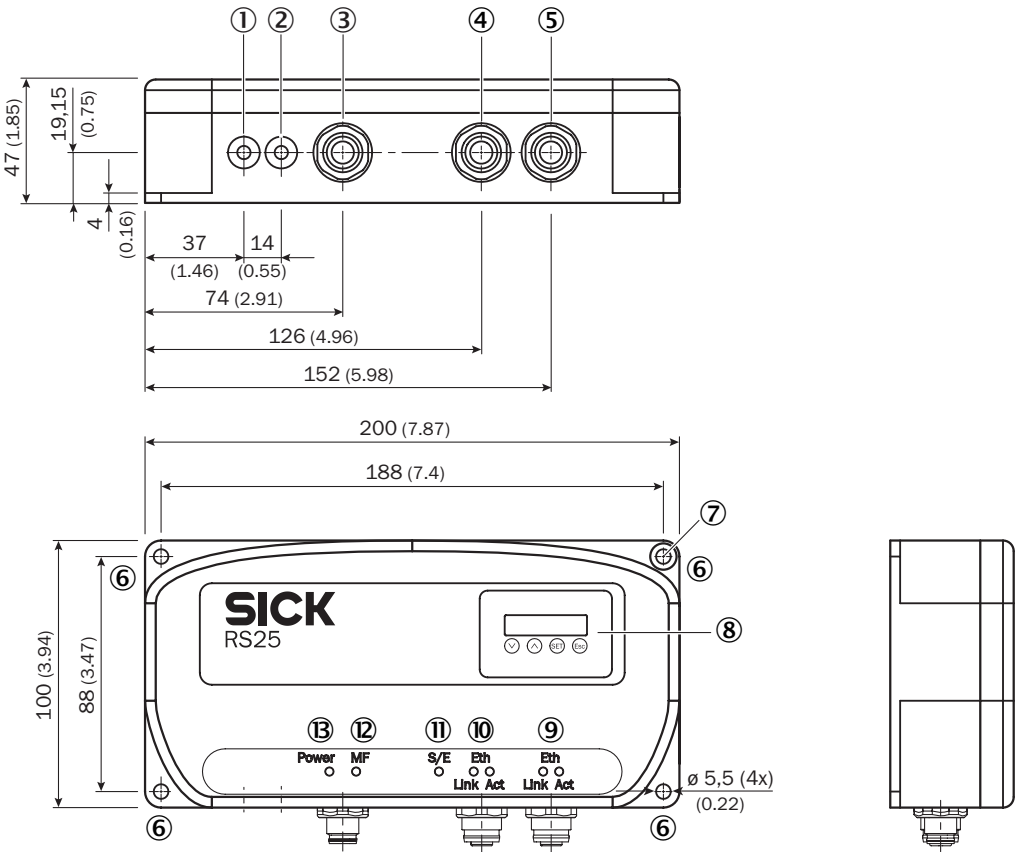
① Connection optical sensor head receiver
② Connection optical sensor head sender
③ Connection supply voltage
④ Connection Ethernet Powerlink
⑤ Connection Ethernet Powerlink
⑥ Fixing hole
⑦ Surface anodized free
⑧ Display and operating unit
⑨ LED function indicator (green) "Eth, Link and Act"
⑩ LED function indicator (green) "Eth, Link and Act"
⑪ LED function indicator (green/red) "S/E"
⑫ LED function indicator (yellow) "MF"
⑬ LED function indicator (green) "Power"

Optical sensor head

① Optical axis, sender
② Optical axis receiver
③ Fiber-optic cable, sender
④ Fiber-optic cable, receiver
⑤ Fixing hole
⑥ Sensing distance (SD) in mm (inch)

Connection type and diagram

Supply voltage
M12, 5-pin

brn	1	L+
wht	2	nc ①
blu	3	M
blk	4	nc ①
gra	5	nc ①
	FE (shield)

M12 (A-coded)

① Not connected

Ethernet Powerlink
M12, 4-pin

gra	1	Rx+
wht	2	Tx+
red	3	Rx−
blu	4	Tx−

M12 (D-coded)

Functional principle

Individual thresholds in memory		
Mark No.	Threshold value	LED Color
#1	x	
#2	y	
#3	z	
...	...	
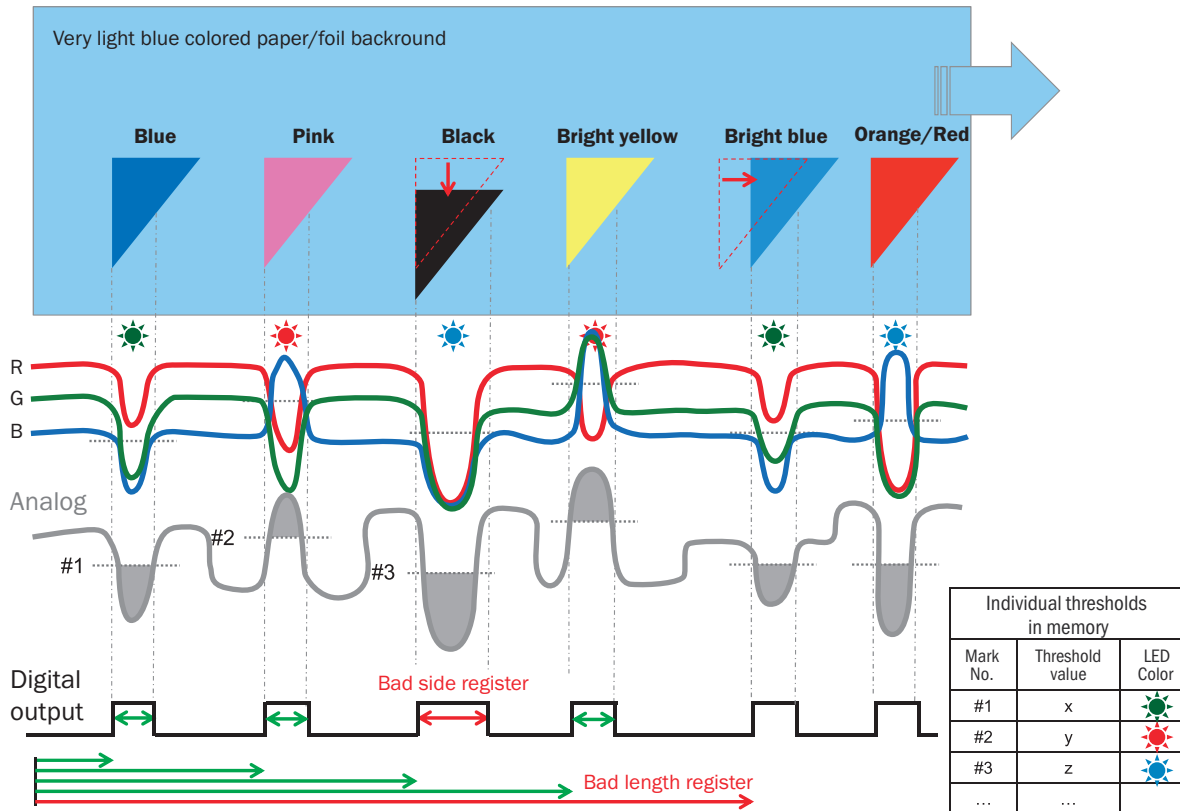
Flow diagram

6. Perform a restart. This is done by switching the supply voltage off and then on again after 5 seconds.

The register sensor is ready to communicate with the control (PLC).

Recommended accessories

Plug connectors and cables

Connecting cable (female connector-open)

M12, 5-pin, PUR halogen-free

- Cable material: PUR halogenfrei

Figure	Connection type head A	Connection type head B	Connecting cable	Model name	Part no.
	Female connector, M12, 5-pin, straight	Cable	5 m, 5-pole	DOL-1205-G05MAC	6036384
			10 m, 5-pole	DOL-1205-G10MAC	6036385
			20 m, 5-pole	DOL-1205-G20MAC	6036386

Connection cable (male connector-male connector)

M12, 4-pin, PUR

- Cable material: PUR

Figure	Connection type head A	Connection type head B	Connecting cable	Model name	Part no.
	Connector, M12, 4-pin, straight, D-coded	Connector, RJ45, 8-pin, straight	2 m, 4-pole, AWG26	SSL-2J04-G02ME	6034414
			5 m, 4-pole, AWG26	SSL-2J04-G05ME	6035389
			10 m, 4-pole, AWG26	SSL-2J04-G10ME	6030928
			20 m, 4-pole, AWG26	SSL-2J04-G20ME	6036158
			25 m, 4-pole, AWG26	SSL-2J04-G25ME	6033555

M12, 4-polig, PUR halogenfrei
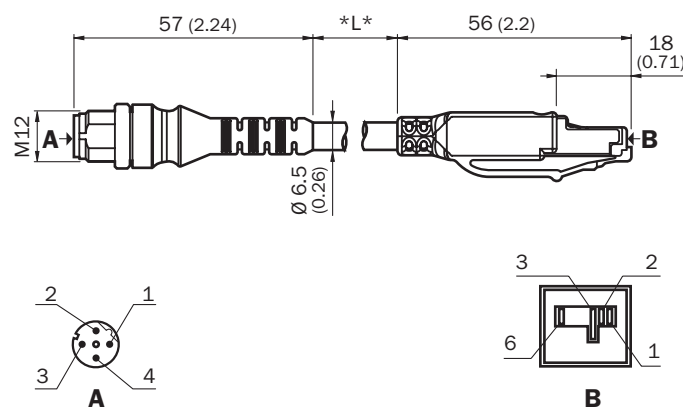
- Cable material: PUR halogen-free

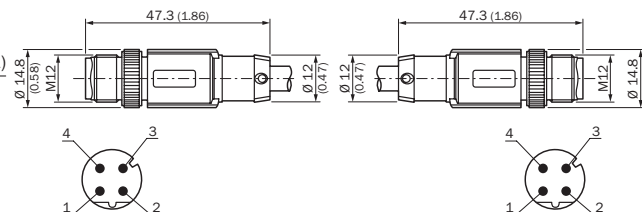| Figure	Connection type head A	Connection type head B	Connecting cable	Model name	Part no.
	Connector, M12, 4-pin, straight, D-coded	Connector, M12, 4-pin, straight	2 m, 4-pole, CAT5, CAT5e	SSL-1204-G02ME90	6045222
			5 m, 4-pole, CAT5, CAT5e	SSL-1204-G05ME90	6045277
			10 m, 4-pole, CAT5, CAT5e	SSL-1204-G10ME90	6045279

DOL-1205-GxxMAC
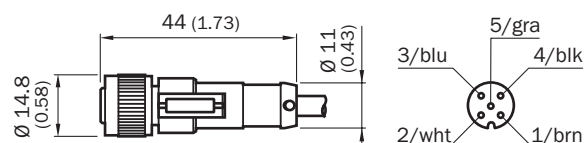
SSL-2J04-GxxME

SSL-1204-GxxME90

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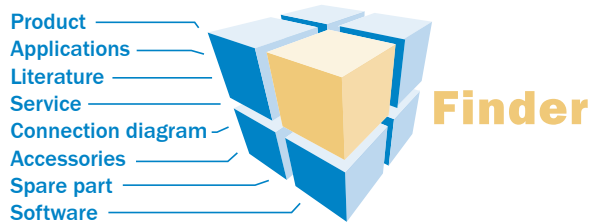
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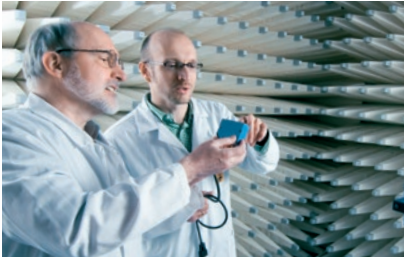Checks and recommendations for increased availability

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Training & Education
Employee qualification for increased competitiveness

SICK at a glance

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Unique product range

- Non-contact detecting, counting, classifying, positioning and measuring of any type of object or media
- Accident and operator protection with sensors, safety software and services
- Automatic identification with bar code and RFID readers
- Laser measurement technology for detecting the volume, position and contour of people and objects
- Complete system solutions for analysis and flow measurement of gases and liquids

Comprehensive services

- SICK LifeTime Services – for safety and productivity
- Application centers in Europe, Asia and North America for the development of system solutions under real-world conditions
- E-Business Partner Portal www.mysick.com – price and availability of products, requests for quotation and online orders

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