



ISD300-1212

ISD300

OPTICAL DATA TRANSMISSION

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
ISD300-1212	6024760

Other models and accessories → www.sick.com/ISD300

Detailed technical data

Technical specifications

Accessory group	Optical data transmission
Accessory family	ISD300
Housing material	Metal
Enclosure rating	IP65
Ambient operating temperature	-5 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing

Mechanics/electronics

Frequency	F2 ¹⁾
Protection class	I

¹⁾ A pair of devices with numbers ending in 1 and 2 are required to create a data transfer section.

Performance

Transmission range	≥ 0.2 m
Light source	LED, infrared (880 nm)
Typ. light spot size (distance)	1.75 m (at 100 m)
Aperture angle	Ca. ± 0.5°

Interfaces

PROFIBUS DP	✓
Data transmission rate	1.5 Mbit/s
Serial	✓, RS-485
Data transmission rate	1.5 Mbit/s
Digital input	0 V ... 2 V: sender deactivated
Digital output	
Number	1 ¹⁾ 2)

¹⁾ 0 V ... 2 V: interference-free operation.

²⁾ V_S -2 V: reduced system reserve.

Signal delay	≤ 1.5 µs, + 1 Tbit
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1) 0 V ... 2 V: interference-free operation.

2) $V_S - 2$ V: reduced system reserve.

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-2 / EN 61000-6-4
Ambient temperature, operation	-5 °C ... +50 °C
Ambient temperature, storage	-30 °C ... +70 °C
Max. rel. humidity (not condensing)	90 %, Non-condensing

General notes

Note	2 devices are required to construct a data transmission path: ISD300-xxx1 (frequency 1) and ISD300-xxx2 (frequency 2). The two devices must be ordered separately.
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Features

Housing material	Metal
Enclosure rating	IP65
Ambient operating temperature	-5 °C +50 °C
Storage temperature	-30 °C +70 °C
Permissible relative humidity	90 % Non-condensing

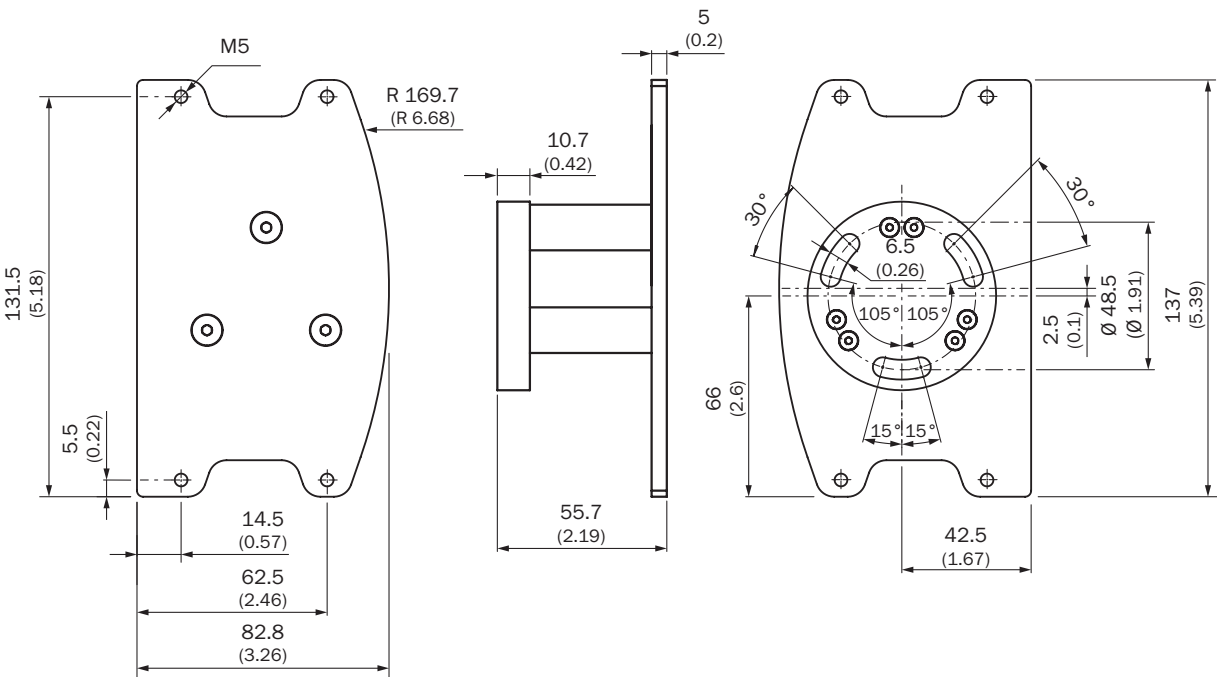
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓

Classifications

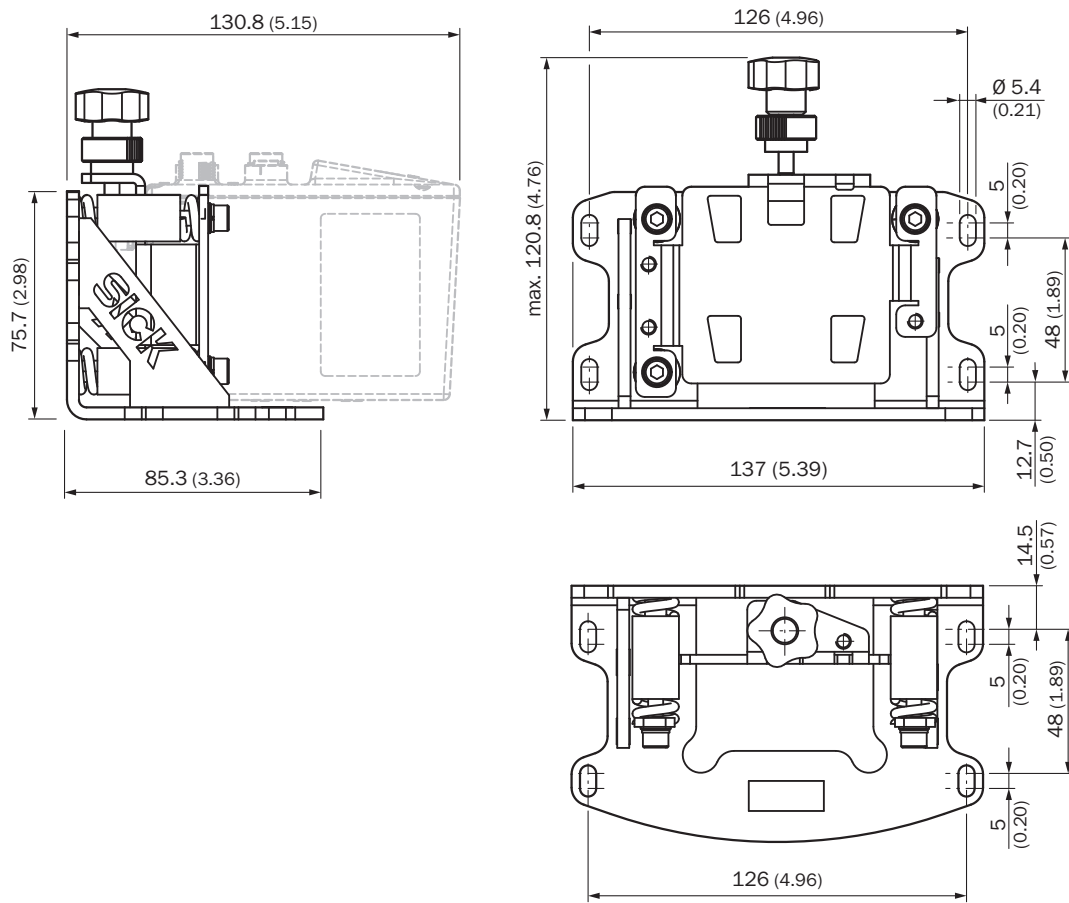
ECLASS 5.0	19039001
ECLASS 5.1.4	19039001
ECLASS 6.0	19179090
ECLASS 6.2	19179090
ECLASS 7.0	19179090
ECLASS 8.0	19179090
ECLASS 8.1	19179090
ECLASS 9.0	19179090
ETIM 5.0	EC000515
ETIM 6.0	EC000515
UNSPSC 16.0901	43201404

Dimensional drawing



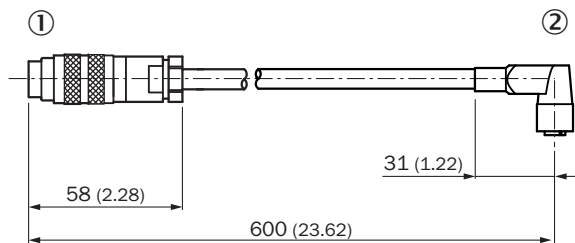
Dimensions in mm (inch)

Dimensional drawing



Dimensions in mm (inch)

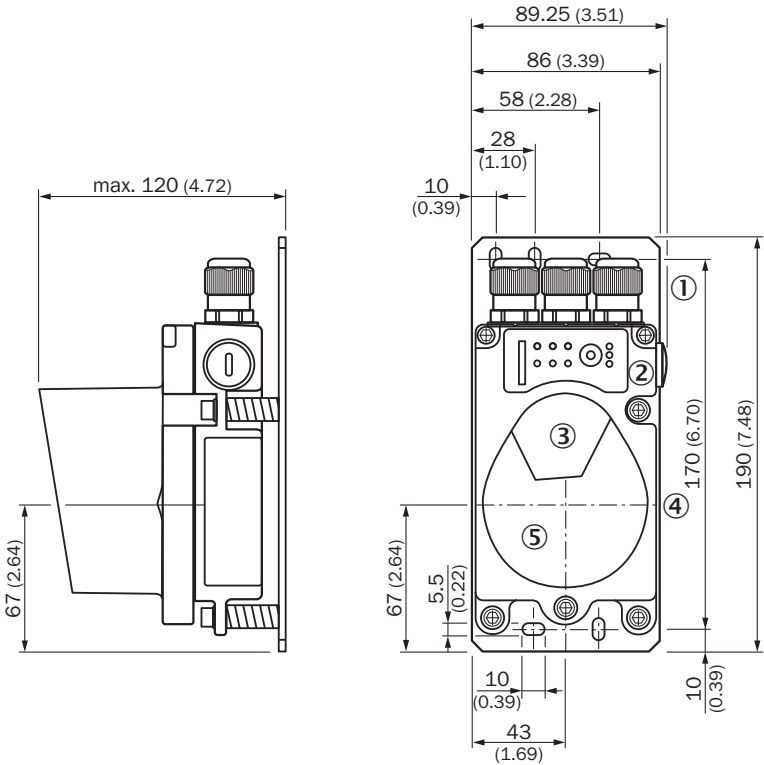
Dimensional drawing



Dimensions in mm (inch)

- ① Connector M16, 8-pin
- ② male connector M12, 8-pin

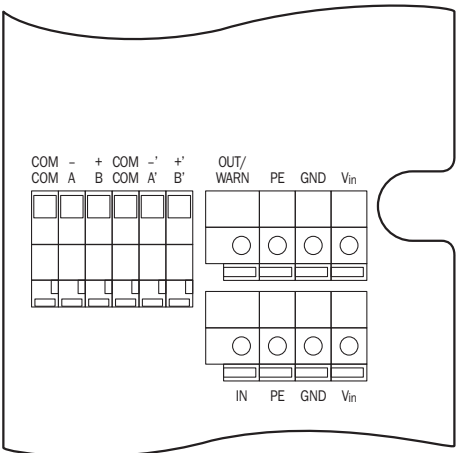
Dimensional drawing ISD300 RS-485/PROFIBUS, ISD300 RS-422/Interbus, ISD300 DH+/RIO, ISD300 DeviceNet/CANopen



Dimensions in mm (inch)

- ① M16 gland
- ② Control panel
- ③ Sender lens
- ④ Center of optical axis
- ⑤ Receiver lens

Connection type ISD300 RS-485/PROFIBUS



Anschlussschema

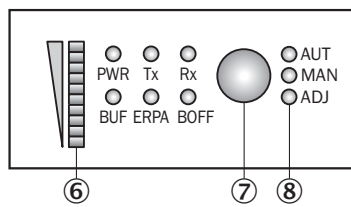
Terminals, general

V_{in}	L+
GND	M
PE	Shield
OUT/WARN	Q
IN	Switch. input

Terminals, PROFIBUS

A, -	A wire
B, +	B wire
COM	Pot. balance
A', -'	A wire
B', +'	B wire

Adjustments ISD300 RS-485/PROFIBUS, ISD300 RS-422/Interbus, ISD300 DH+/RIO, ISD300 DeviceNet/CANopen



- ⑥ Display for signal level
- ⑦ operating mode selector switch
- ⑧ LED operating indicator

Recommended accessories

Other models and accessories → www.sick.com/ISD300

	Brief description	Type	part no.
connectors and cables			
	• Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Signal type: CANopen, DeviceNet™ • Description: CANopen, shieldedDeviceNet™ • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm²	DOS-1205-GA	6027534
	• Connection type head A: Male connector, M12, 5-pin, straight, A-coded • Signal type: CANopen, DeviceNet™ • Description: CANopen, shieldedDeviceNet™ • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm²	STE-1205-GA	6027533
	• Connection type head A: Female connector, M12, 5-pin, straight, B-coded • Signal type: PROFIBUS DP • Description: PROFIBUS DP, shielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm²	DOS-1205-GQ	6021353
	• Connection type head A: Male connector, M12, 5-pin, straight, B-coded • Signal type: PROFIBUS DP • Description: PROFIBUS DP, shielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm²	STE-1205-GQ	6021354
	• Connection type head A: Male connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 5 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Note: Wire shield Al-Pt film, overall shield C-screen tin-plated • Application: Zones with oils and lubricants, Drag chain operation	STL-1205-G05MQ	6026005
	• Connection type head A: Flying leads • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Items supplied: By the meter • Cable: 2-wire, PUR • Description: PROFIBUS DP, shielded	LTG-2102-MW	6021355
	• Connection type head A: Flying leads • Connection type head B: Flying leads • Signal type: CANopen, DeviceNet™ • Items supplied: By the meter • Cable: 4-wire, twisted pair • Description: CANopen, shielded, DeviceNet™ • Note: Wire shield Al-Pt film, overall shield C-screen tin-plated	LTG-2804-MW	6028328

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