



# ISD300-1112

ISD300

OPTICAL DATA TRANSMISSION

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
ISD300-1112	6024837

Data transmission requires two devices. The second device must be ordered separately.

Other models and accessories → [www.sick.com/ISD300](http://www.sick.com/ISD300)

### Detailed technical data

#### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	DC 18 V ... 30 V
<b>Connection type</b>	Terminals
<b>Current consumption</b>	≤ 0.2 A
<b>Frequency</b>	F2 <sup>1)</sup>
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	I

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

#### Performance

<b>Transmission range</b>	0.2 m ... 120 m
<b>Light source</b>	LED, infrared (880 nm)
<b>Typ. light spot size (distance)</b>	1.75 m (at 100 m)
<b>Aperture angle</b>	Ca. ± 0.5°

#### Interfaces

<b>PROFIBUS DP</b>	✓
Data transmission rate	1.5 Mbit/s
<b>Serial</b>	✓, RS-485
Remark	On request
Data transmission rate	1.5 Mbit/s
<b>Digital input</b>	0 V ... 2 V: sender deactivated
<b>Digital output</b>	
Number	1 <sup>1) 2)</sup>
<b>Signal delay</b>	≤ 1.5 μs, + 1 Tbit

<sup>1)</sup> 0 V ... 2 V: interference-free operation.

<sup>2)</sup>  $V_s - 2$  V: reduced system reserve.

## Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2 <sup>1)</sup> EN 61000-6-4
<b>Ambient temperature, operation</b>	-5 °C ... +50 °C
<b>Ambient temperature, storage</b>	-30 °C ... +70 °C
<b>Max. rel. humidity (not condensing)</b>	90 %, Non-condensing

<sup>1)</sup> This is a Class A device. This device can cause radio interference in living quarters.

## General notes

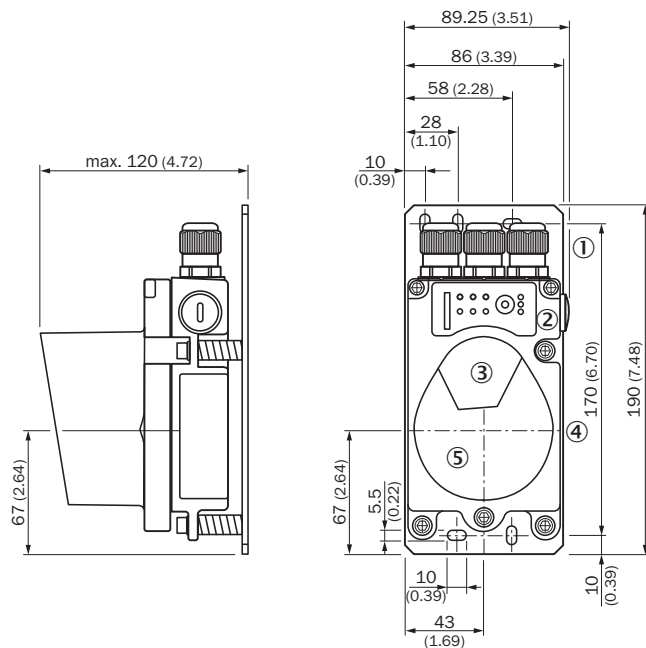
<b>Note</b>	2 devices are required to construct a data transmission path: ISD300-xxx1 (frequency 1) and ISD300-xxx2 (frequency 2). The two devices must be ordered separately.
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## Classifications

<b>ECLASS 5.0</b>	19039001
<b>ECLASS 5.1.4</b>	19039001
<b>ECLASS 6.0</b>	19179090
<b>ECLASS 6.2</b>	19179090
<b>ECLASS 7.0</b>	19179090
<b>ECLASS 8.0</b>	19179090
<b>ECLASS 8.1</b>	19179090
<b>ECLASS 9.0</b>	19179090
<b>ECLASS 10.0</b>	19179090
<b>ECLASS 11.0</b>	19170500
<b>ECLASS 12.0</b>	19170500
<b>ETIM 5.0</b>	EC000515
<b>ETIM 6.0</b>	EC000515
<b>ETIM 7.0</b>	EC000515
<b>ETIM 8.0</b>	EC000515
<b>UNSPSC 16.0901</b>	43201404

## Dimensional drawing (Dimensions in mm (inch))

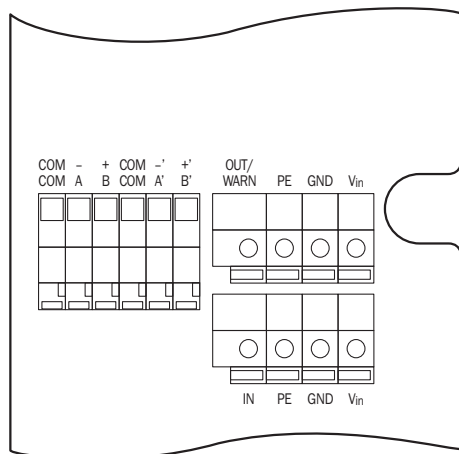
ISD300 RS-485/PROFIBUS, ISD300 RS-422/Interbus, ISD300 DH+/RIO, ISD300 DeviceNet/CANopen



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

## Connection type

ISD300 RS-485/PROFIBUS

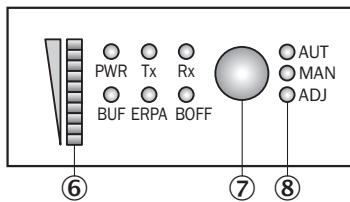


## Connection diagram

Terminals, general		Terminals, PROFIBUS	
V <sub>in</sub>	L+	A, -	A wire
GND	M	B, +	B wire
PE	Shield	COM	Pot. balance
OUT/WARN	Q	A', -'	A wire
IN	Switch. input	B', +'	B wire

## Adjustment possible

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](http://www.sick.com/ISD300)

	Brief description	Type	Part no.
Plug connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Flying leads</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> PROFIBUS DP</li> <li>• <b>Cable:</b> 2-wire, PUR</li> <li>• <b>Description:</b> PROFIBUS DP, shielded</li> <li>• <b>Items supplied:</b> By the meter</li> </ul>	LTG-2102-MW	6021355
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Flying leads</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> CANopen, DeviceNet™</li> <li>• <b>Cable:</b> 4-wire, twisted pair</li> <li>• <b>Description:</b> CANopen, DeviceNet™, shielded</li> <li>• <b>Note:</b> Wire shield Al-Pt film, overall shield C-screen tin-plated</li> <li>• <b>Items supplied:</b> By the meter</li> </ul>	LTG-2804-MW	6028328
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 5-pin, straight, B-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> PROFIBUS DP</li> <li>• <b>Cable:</b> 5 m, 2-wire, PUR, halogen-free</li> <li>• <b>Description:</b> PROFIBUS DP, twisted pair, shielded</li> <li>• <b>Note:</b> Wire shield Al-Pt film, overall shield C-screen tin-plated</li> <li>• <b>Application:</b> Zones with oils and lubricants, Drag chain operation</li> </ul>	STL-1205-G05MQ	6026005

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight</li> <li>• <b>Signal type:</b> CANopen, DeviceNet™</li> <li>• <b>Description:</b> CANopen, DeviceNet™, shielded, Head A: female connector, M12, 5-pin, straight, shielded, for cable diameter 4.5 mm ... 7 mm Head B: -</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	DOS-1205-GA	6027534
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight, B-coded</li> <li>• <b>Signal type:</b> PROFIBUS DP</li> <li>• <b>Description:</b> PROFIBUS DP, shielded, Head A: M12 female connector, 5-pin, straight, B-coded, PROFIBUS DP, shielded, for cable diameter 4 mm ... 9 mm Head B: -</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	DOS-1205-GQ	6021353
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li>• <b>Signal type:</b> CANopen, DeviceNet™</li> <li>• <b>Description:</b> CANopen, DeviceNet™, shielded, Head A: male connector, M12, 5-pin, straight, A coded, shielded, for cable diameter 4 mm ... 8 mm Head B: -</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1205-GA	6027533
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 5-pin, straight, B-coded</li> <li>• <b>Signal type:</b> PROFIBUS DP</li> <li>• <b>Description:</b> PROFIBUS DP, shielded, Head A: male connector, M12, 5-pin, straight, B coded, shielded, for cable diameter 4 mm ... 9 mm Head B: -</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1205-GQ	6021354

## 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](http://www.sick.com)