



# ISD400-7222

ISD400

OPTICAL DATA TRANSMISSION

**SICK**  
Sensor Intelligence.



## Ordering information

Type	part no.
ISD400-7222	1065103

Other models and accessories → [www.sick.com/ISD400](http://www.sick.com/ISD400)

Illustration may differ



## Detailed technical data

### Features

<b>Product segment</b>	Optical data transmission
<b>Product</b>	ISD400
<b>Product version</b>	ISD400 Pro
<b>Housing material</b>	AlSi12
<b>Enclosure rating</b>	IP65
<b>Light source</b>	Laser, red, 660 nm
<b>Power consumption</b>	<sup>1)</sup>
<b>Ambient operating temperature</b>	-40 °C ... +55 °C, operation with heating
<b>Relative humidity</b>	90 %, Non-condensing
<b>Weight</b>	Approx. 800 g

<sup>1)</sup> Without load with 24 V.

### Mechanics/electronics

<b>Supply voltage V<sub>s</sub></b>	DC 18 V ... 30 V
<b>Power consumption</b>	≤ 30 W <sup>1)</sup>
<b>Transmission range</b>	0.2 m 150 m
<b>Connection type</b>	1 x Ethernet female connector M12, 4-pin, D-coded 1 x power supply male connector M12, 4-pin, A-coded
<b>Frequency</b>	F2
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	III

<sup>1)</sup> Without load with 24 V.

### Performance

<b>Transmission range</b>	0.2 m ... 150 m
<b>Light source</b>	Laser, red (660 nm)

<sup>1)</sup> Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

<sup>2)</sup> CAUTION: Never look directly at the laser beam using optical instruments. Optical instruments include magnifying glasses, microscopes, telescopes and binoculars.

<b>Laser class</b>	1M (IEC 60825-1:2014, EN 60825-1:2014) <sup>1)</sup> 2)
<b>Typ. light spot size (distance)</b>	1.75 m (at 100 m)
<b>Aperture angle</b>	Sender
<b>Heating</b>	✓

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## Interfaces

<b>Ethernet</b>	✓
Data transmission rate	100 Mbit/s
<b>Digital input</b>	V <sub>S</sub> : sender deactivated
<b>Digital output</b>	
Number	1 <sup>1)</sup>
Type	PNP
Function	Output active for LOW and HIGH level
	Warning messages as the laser ages, if the permissible limits of the interior device temperature are exceeded or undercut, if the optical path is interrupted, if no Ethernet cable is connected, if the receiving level is undercut, if the laser is not ready for operation, if the heating is switched on.

<sup>1)</sup> HIGH: U<sub>V</sub> - 3 V, LOW: < 2 V.

## Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2 <sup>1)</sup> EN 61000-6-4
<b>Ambient temperature, operation</b>	-40 °C ... +55 °C, operation with heating
<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>	Setting up a data transmission path requires a pair of devices, where one device has frequency F1 (ISD400-7xx1) and the other device has frequency F2 (ISD400-7xx2). A wide variety of Ethernet protocols can be used in protocol-free transmission (e.g., PROFINET, PROFI-safe, EtherNet/IP, EtherCAT, TCP/IP, etc.).
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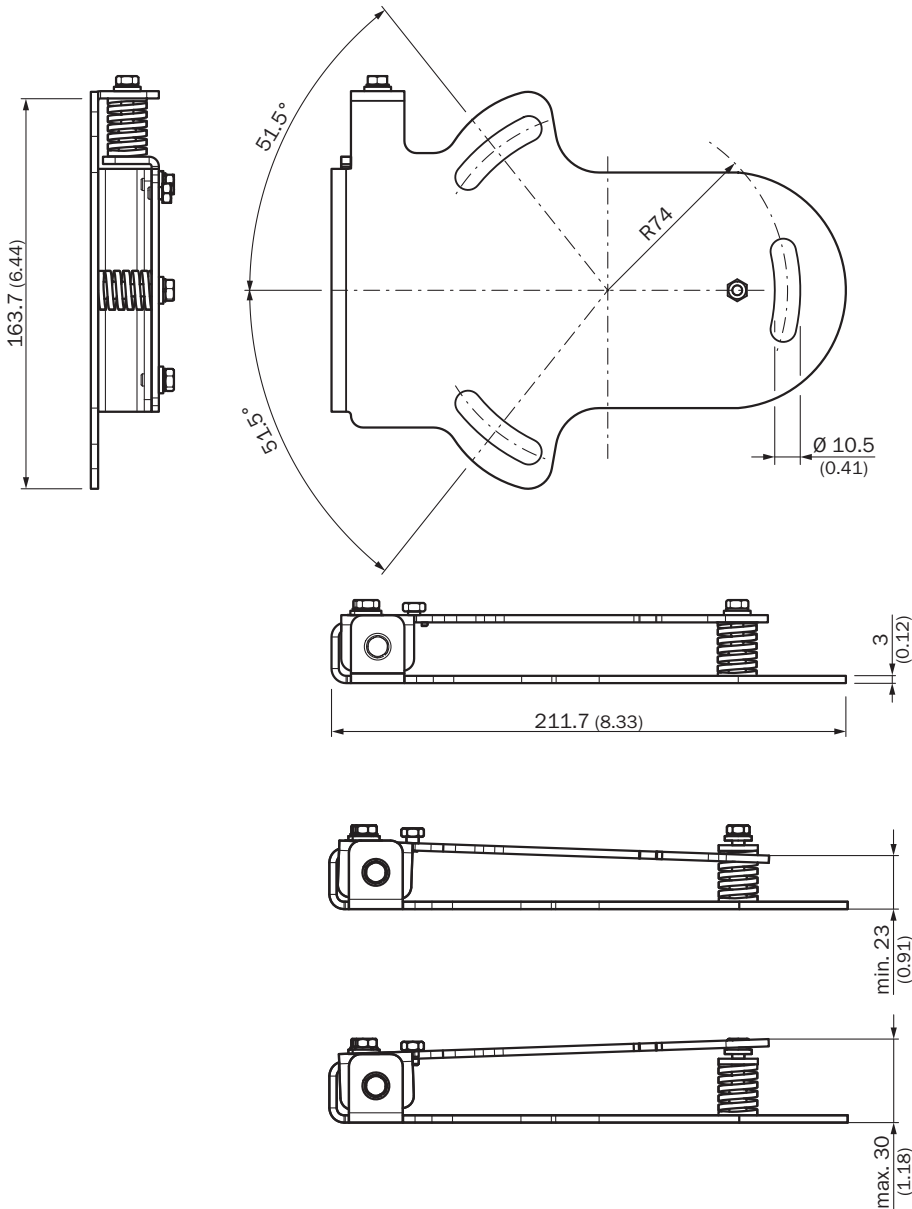
## Classifications

<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>ETIM 5.0</b>	EC000515
<b>ETIM 6.0</b>	EC000515
<b>UNSPSC 16.0901</b>	43201404

Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

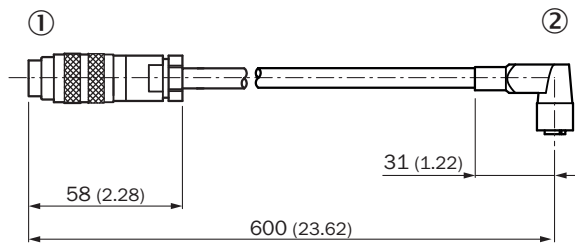
Dimensional drawing: BEF-DME/ISD



All dimensions in mm (inch)

Dimensions in mm (inch)

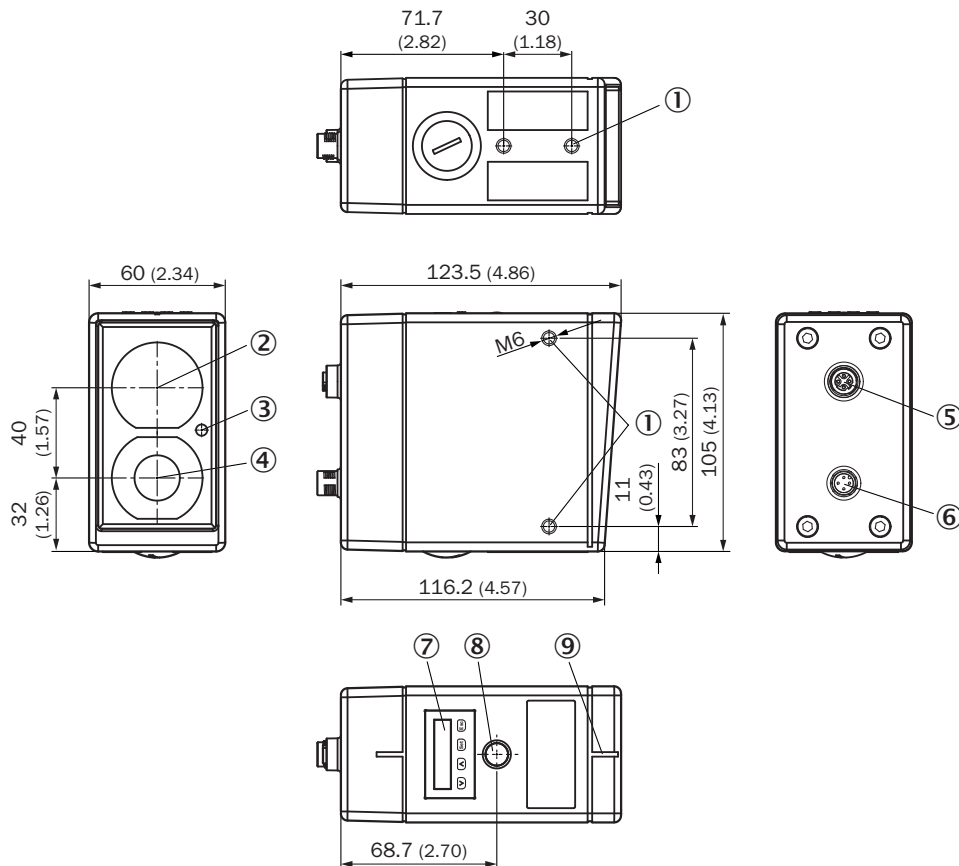
Dimensional drawing: DSC-1608-1208



Dimensions in mm (inch)

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

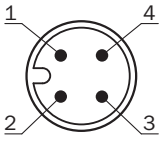
Dimensional drawing, sensor



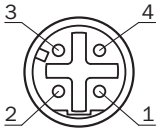
Dimensions in mm (inch)

- ① Threaded mounting hole M6
- ② Center of optical axis, sender
- ③ Receive indicator
- ④ Center of optical axis, receiver
- ⑤ Ethernet female connector M12, 4-pin, D-coded
- ⑥ Power supply male connector M12, 4-pin, A-coded
- ⑦ Display with pushbuttons
- ⑧ Optical adjustment aid
- ⑨ Alignment sight

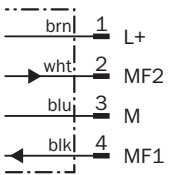
### Voltage supply connection type



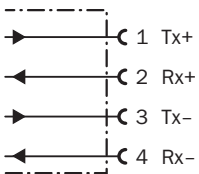
### Ethernet connection type



### Voltage supply connection diagram



### Ethernet connection diagram




### Adjustments



⑥ Liquid crystal display with function keys

## Recommended accessories

Other models and accessories → [www.sick.com/ISD400](http://www.sick.com/ISD400)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li><b>Description:</b> Alignment unit for DME4000/ISD400, aluminum, anodised</li></ul>	BEF-DME/ISD	2046052

## 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)