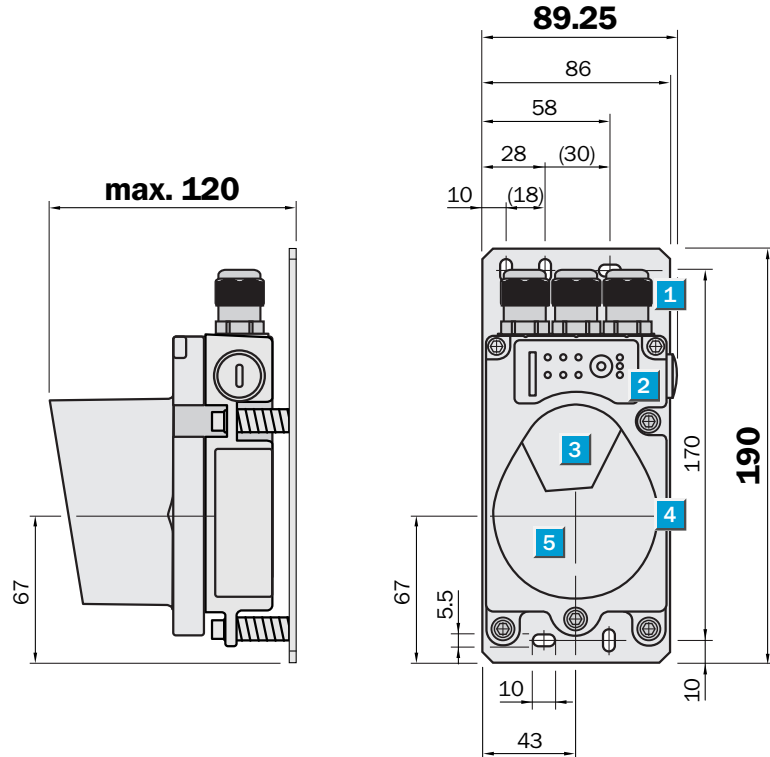


	<b>Scanning range</b>
	0.2 ... 120/0.2 ... 200/ 0.2 ... 300 m
<b>Data transmission systems</b>	

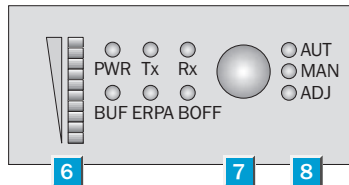
- Profibus interface
- Control panel front access
- Easy one-man-handling
- Up to 1.5 Mbit/s transfer rate
- Integrated 3-point bracket

**Dimensional drawing**



**Adjustment possible**

All types



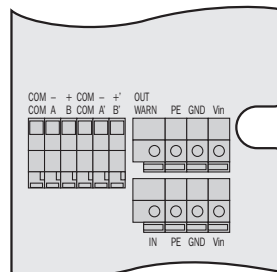
- 1 M16
- 2 Control panel
- 3 Sender lens
- 4 Center of optical axis
- 5 Receiver lens
- 6 Display for signal level
- 7 Function button
- 8 LED operating indicator



**Accessories**

- Cables and connectors
- Mounting systems
- Special accessories

**Connection type and data interface**



**Terminals, general**

V <sub>in</sub>	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

Technical data		ISD									
		300	300	300	300	300					
		-1211	-1221	-1111	-1121	-1311					
		-1212	-1222	-1112	-1122	-1312					
<b>Scanning range</b>	0.2 ... 120 m										
	0.2 ... 200 m										
	0.2 ... 300 m										
Light source	Infrared light ( $\lambda = 880 \text{ nm}$ )										
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis										
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/										
	3.5 m at 200 m										
<b>Data transfer rate</b>	1.5 Mbit/s Profibus RS 485										
Signal delay	1.5 $\mu\text{s}$ + 1 Tbit										
LED status indicator	Supply voltage, function mode										
	data transfer, signal level										
Data interface	Profibus/RS 485										
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off"										
	18 ... 30 V DC: "sender/receiver on"										
<b>Switching outputs</b>	0 ... 2 V DC: normal operative										
	$V_{in}-2 \text{ V DC}$ : reduced function reserve										
<b>Electrical connections</b>	Terminals										
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC										
Current consumption	200 mA at 24 V DC (without heating)										
	800 mA at 24 V DC (with heating)										
<b>Enclosure rating</b>	IP 65										
<b>Protection class</b>	1										
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)										
<b>Ambient temperature</b>	Operation 5 ... +50 °C										
	(without heating)										
	-30 ... +50 °C										
	(with heating)										
	Storage -30 ... +70 °C										
Max. relative humidity	90 %, uncondensed										
<b>Weight per unit</b>	1200 g										
<b>Housing material</b>	Aluminium die-cast, front screen: glass										

**Notes:**

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

**Order information**

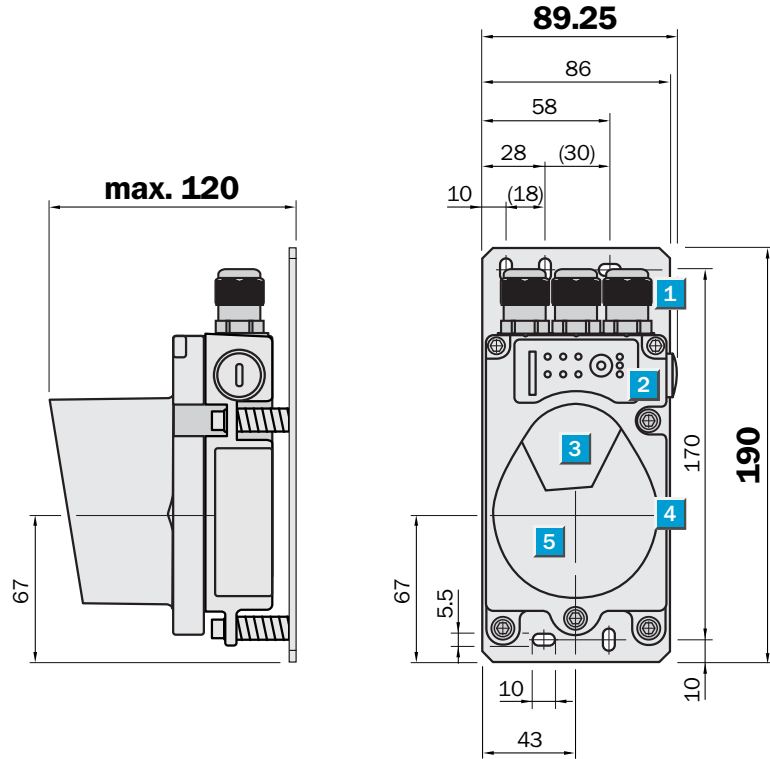
Type	Part no.
ISD 300-1211	6 024 759
ISD 300-1212	6 024 760
ISD 300-1221	6 024 838
ISD 300-1222	6 024 839
ISD 300-1111	6 024 761
ISD 300-1112	6 024 837
ISD 300-1121	6 024 840
ISD 300-1122	6 024 841
ISD 300-1311	6 028 213
ISD 300-1312	6 028 214

**Scanning range**  
 0.2 ... 120 m/  
 0.2 ... 200 m

**Data transmission systems**

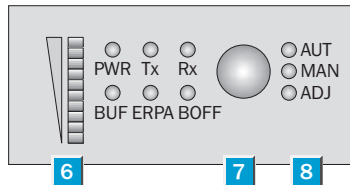
- Interbus interface
- Control panel front access
- Easy one-man-handling
- Up to 500 kbit/s transfer rate
- Integrated 3-point bracket

**Dimensional drawing**



**Adjustment possible**

All types



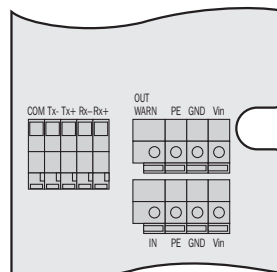
- 1 M16
- 2 Control panel
- 3 Sender lens
- 4 Center of optical axis
- 5 Receiver lens
- 6 Display for signal level
- 7 Function button
- 8 LED operating indicator



**Accessories**

- Cables and connectors
- Mounting systems
- Special accessories

**Connection type and data interface**



**Terminals, general**

V <sub>in</sub>
GND
PE
OUT/WARN
IN

L+
M
Shield
Q
Switch. input

**Terminals, Interbus**

DO1/DO2, Rx+	Receiver wire
DO1/DO2, Rx-	Receiver wire
DI1/DO2, Tx+	Send wire
DI1/DO2, Tx-	Send wire
COM	Pot. balance

Technical data		ISD	300	300	300	300						
			-2211	-2221	-2111	-2121						
			-2212	-2222	-2112	-2122						
<b>Scanning range</b>	0.2 ... 120 m											
	0.2 ... 200 m											
Light source	Infrared light ( $\lambda = 880$ nm)											
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis											
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/											
	3.5 m at 200 m											
<b>Data transfer rate</b>	500 kbit/s Interbus RS 422											
Signal delay	1.5 $\mu$ s											
LED status indicator	Supply voltage, function mode, data transfer, signal level											
Data interface	Interbus/RS 422											
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off"											
	18 ... 30 V DC: "sender/receiver on"											
<b>Switching outputs</b>	DC 0 ... 2 V: normal operative											
	DC $V_{in}-2$ V: reduced function reserve											
<b>Electrical connections</b>	Terminals											
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC											
Current consumption	200 mA at 24 V DC (without heating)											
	800 mA at 24 V DC (with heating)											
<b>Enclosure rating</b>	IP 65											
<b>Protection class</b>	1											
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)											
<b>Ambient temperature</b>	Operation 5 ... +50 °C											
	(without heating)											
	-30 ... +50 °C											
	(with heating)											
	Storage -30 ... +70 °C											
Max. relative humidity	Max. 90 %, uncondensed											
<b>Weight per unit</b>	1200 g											
<b>Housing material</b>	Aluminium die-cast, front screen: glass											

**Notes:**

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

**Order information**

Type	Part no.
ISD 300-2211	6 024 842
ISD 300-2212	6 024 843
ISD 300-2221	6 024 846
ISD 300-2222	6 024 847
ISD 300-2111	6 024 844
ISD 300-2112	6 024 845
ISD 300-2121	6 024 848
ISD 300-2122	6 024 849

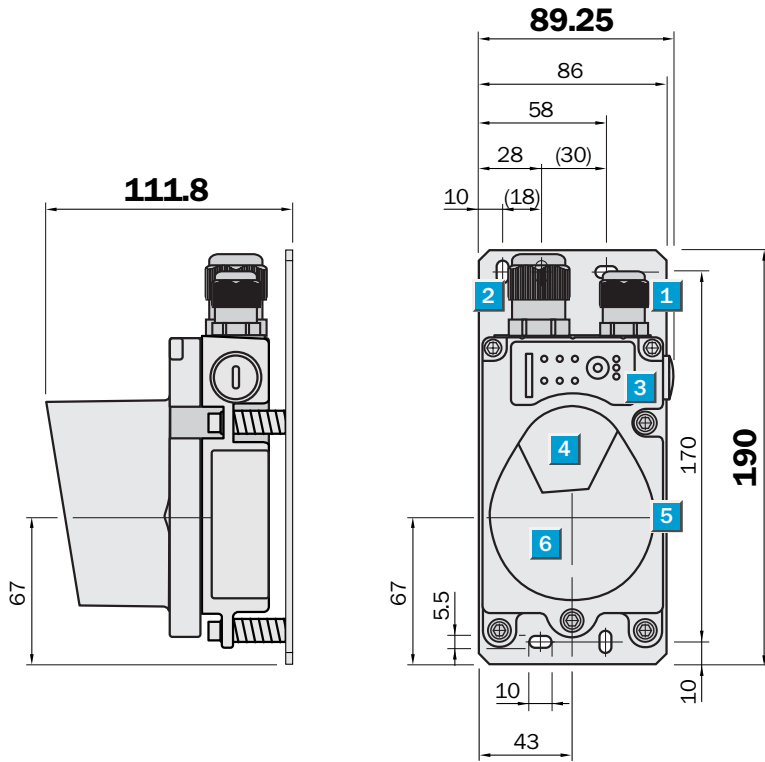
**Scanning range**  
**0.2 ... 200 m**

Data transmission systems

- Interbus interface
- Control panel front access
- Easy one-man-handling
- Up to 2 Mbit/s transfer rate
- Integrated 3-point bracket

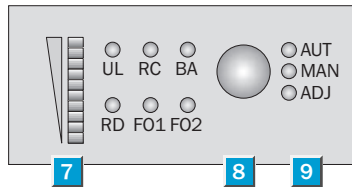


**Dimensional drawing**



**Adjustment possible**

All types



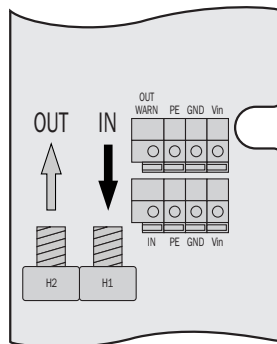
- 1 M20
- 2 M16
- 3 Control panel
- 4 Sender lens
- 5 Center of optical axis
- 6 Receiver lens
- 7 Display for signal level
- 8 Function button
- 9 LED operating indicator



**Accessories**

- Cables and connectors
- Mounting systems
- Special accessories

**Connection type and data interface**



**Terminals, general**

V <sub>in</sub>	L+
GND	M
PE	Shield
OUT/WARN	Q
IN	Switch. input

**Fibre optic socket, Interbus**

H1	Receiver
H2	Sender

Technical data		ISD									
		300	300								
		-3211	-3221								
		-3212	-3222								
<b>Scanning range</b>	0.2 ... 200 m										
Light source	Infrared light ( $\lambda = 880 \text{ nm}$ )										
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis										
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/ 3.5 m at 200 m										
<b>Data transfer rate</b>	2 Mbit/s Interbus LWL										
Signal delay	2.5 $\mu\text{s}$										
LED status indicator	Supply voltage, function mode, data transfer, signal level										
Data interface	Interbus/LWL										
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off" 18 ... 30 V DC: "sender/receiver on"										
<b>Switching outputs</b>	0 ... 2 V DC: normal operative $V_{in}$ -2 V DC: reduced function reserve										
<b>Electrical connections</b>	Terminals										
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC										
Current consumption	200 mA at 24 V DC (without heating) 800 mA at 24 V DC (with heating)										
<b>Enclosure rating</b>	IP 65										
<b>Protection class</b>	1										
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)										
<b>Ambient temperature</b>	Operation 5 ... +50 °C (without heating) -30 ... +50 °C (with heating)										
	Storage -30 ... +70 °C										
Max. relative humidity	Max. 90 %, uncondensed										
<b>Weight per unit</b>	1200 g										
<b>Housing material</b>	Aluminium die-cast, front screen: glass										

**Notes:**

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

**Order information**

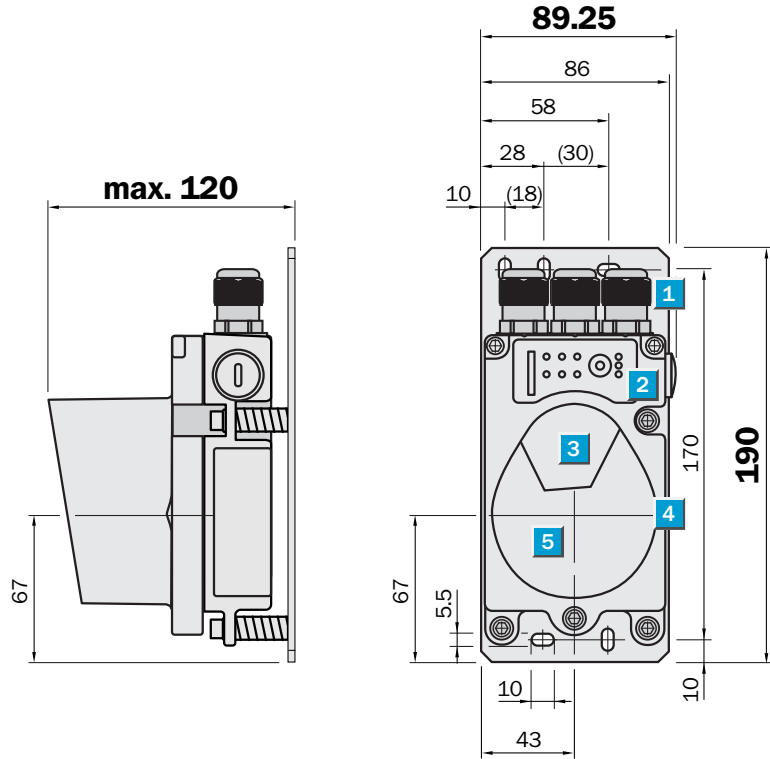
Type	Part no.
ISD 300-3211	6 024 850
ISD 300-3212	6 024 851
ISD 300-3221	6 024 852
ISD 300-3222	6 024 853

**Scanning range**  
**0.2 ... 200 m**

Data transmission systems

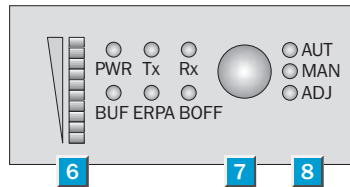
- DH+/RIO interface
- Control panel front access
- Easy one-man-handling
- Up to 230.4 kbit/s transfer rate
- Integrated 3-point bracket

**Dimensional drawing**



**Adjustment possible**

All types



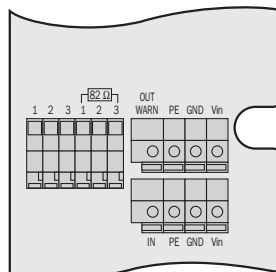
- 1 M16
- 2 Control panel
- 3 Sender lens
- 4 Center of optical axis
- 5 Receiver lens
- 6 Display for signal level
- 7 Function button
- 8 LED operating indicator



**Accessories**

- Cables and connectors
- Mounting systems
- Special accessories

**Connection type and data interface**



Terminals, general		Terminals, DH+/DH-	
V <sub>in</sub>	L+	1	Clear/blue
GND	M	2	Shield
PE	Shield	3	Blue/clear
OUT/WARN	Q		
IN	Switch. input		

Technical data		ISD	300	300								
			-4211	-4221								
			-4212	-4222								
<b>Scanning range</b>	0.2 ... 200 m											
Light source	Infrared light ( $\lambda = 880$ nm)											
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis											
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/ 3.5 m at 200 m											
<b>Data transfer rate</b>	230.4 kbit/s DH+/RIO											
Signal delay	1.5 $\mu$ s + 1.5 Tbit											
LED status indicator	Supply voltage, function mode, data transfer, signal level											
Data interface	DH+/RIO											
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off" 18 ... 30 V DC: "sender/receiver on"											
<b>Switching outputs</b>	0 ... 2 V DC: normal operative $V_{in}$ -2 V DC: reduced function reserve											
<b>Electrical connections</b>	Terminals											
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC											
Current consumption	200 mA at 24 V DC (without heating) 800 mA at 24 V DC (with heating)											
<b>Enclosure rating</b>	IP 65											
<b>Protection class</b>	1											
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)											
<b>Ambient temperature</b>	Operation 5 ... +50 °C (without heating) -30 ... +50 °C (with heating)											
	Storage -30 ... +70 °C											
Max. relative humidity	Max. 90 %, uncondensed											
<b>Weight per unit</b>	1200 g											
<b>Housing material</b>	Aluminium die-cast, front screen: glass											

**Notes:**

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

**Order information**

Type	Part no.
ISD 300-4211	6 024 854
ISD 300-4212	6 024 855
ISD 300-4221	6 024 856
ISD 300-4222	6 024 857



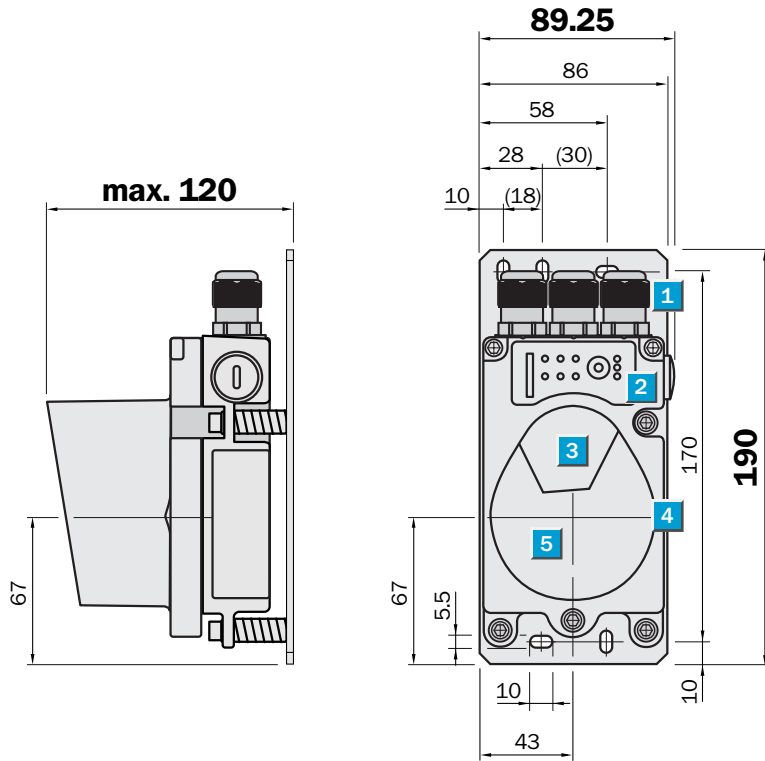
**Scanning range**  
**0.2 ... 200 m**

Data transmission systems

- CANopen/DeviceNet interface
- Control panel front access
- Easy one-man-handling
- Up to 1 MBit/s transfer rate
- Integrated 3-point bracket

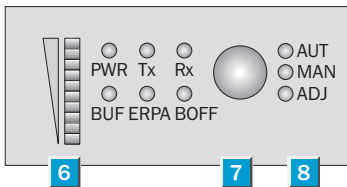


**Dimensional drawing**



**Adjustment possible**

All types

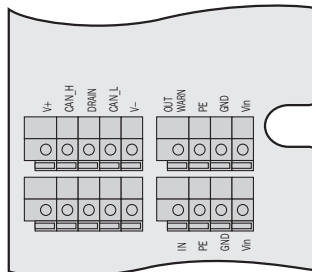


- 1** M16
- 2** Control panel
- 3** Sender lens
- 4** Center of optical axis
- 5** Receiver lens
- 6** Display for signal level
- 7** Function button
- 8** LED operating indicator

**Connection type and data interface**

**Accessories**

Cables and connectors
Mounting systems
Special accessories



Terminals, general	
V <sub>in</sub>	L+
GND	M
PE	Shield
OUT/WARN	Q
IN	Switch. input

Terminals, CANopen/DeviceNet	
V-	Neg. supply (CAN reference ground)
CAN_L	Bus signal (LOW)
DRAIN	Shield
CAN_H	Bus signal (HIGH)
V+	Pos. supply

Technical data		ISD 300-	5211	5212							
<b>Scanning range</b>	0.2 ... 200 m										
Light source	Infrared light ( $\lambda = 880 \text{ nm}$ )										
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis										
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/ 3.5 m at 200 m										
<b>Data transfer rate</b>	Max. 500 kBit/s DeviceNet Max. 1 MBit/s CANopen										
LED status indicator	Supply voltage, function mode, data transfer, signal level										
Data interface	CANopen/DeviceNet										
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off" 18 ... 30 V DC: "sender/receiver on"										
<b>Switching outputs</b>	0 ... 2 V DC: normal operative $V_{in} - 2 \text{ V DC}$ : reduced function reserve										
<b>Electrical connections</b>	Terminals										
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC										
Current consumption	200 mA at 24 V DC										
<b>Enclosure rating</b>	IP 65										
<b>Protection class</b>	1										
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)										
<b>Ambient temperature</b>	Operation $-5 \dots +50 \text{ }^\circ\text{C}$ Storage $-30 \dots +70 \text{ }^\circ\text{C}$										
Max. relative humidity	Max. 90 %, uncondensed										
<b>Weight per unit</b>	1200 g										
<b>Housing material</b>	Aluminium die-cast, front screen: glass										

**Notes:**

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

**Order information**

Type	Part no.
ISD 300-5211	6 027 231
ISD 300-5212	6 027 232

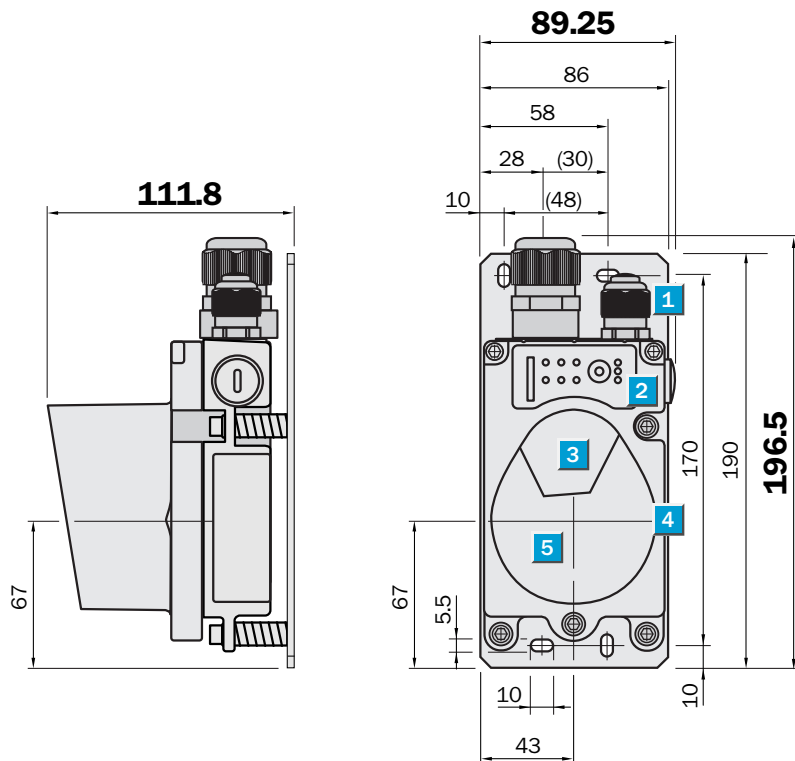
**Scanning range**  
0.2 ... 200 m

Data transmission systems

- Ethernet interface
- Control panel front access
- Easy one-man-handling
- Up to 2 MBit/s transfer rate
- Protocol-independent
- RJ 45 plug connection
- Integrated 3-point bracket

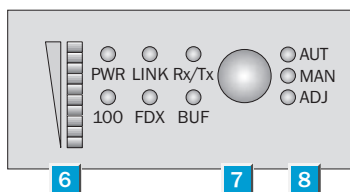


## Dimensional drawing



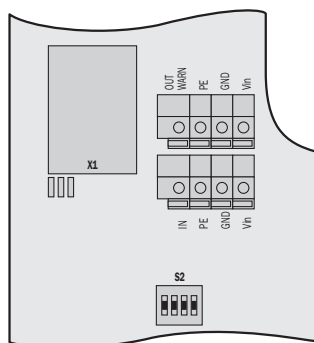
## Adjustment possible

All types



- 1** M16
- 2** Control panel
- 3** Sender lens
- 4** Center of optical axis
- 5** Receiver lens
- 6** Display for signal level
- 7** Function button
- 8** LED operating indicator

## Connection type and data interface



### Terminals, general

V <sub>in</sub>	L+
GND	M
PE	Shield
OUT/WARN	Q
IN	Switch. input

## Accessories

- Cables and connectors
- Mounting systems
- Special accessories

Socket	Function	
<b>X1</b>	Socket for 10Base-T or 100Base-TX	
Switch	Position	Function
<b>S2.1</b>	<b>ON</b>	<b>Autonegotiation active (default)</b>
	OFF	Autonegotiation deactivated
<b>S2.2</b>	ON	100 MBit
	<b>OFF</b>	<b>10 MBit (default)</b>
<b>S2.3</b>	ON	Full duplex
	<b>OFF</b>	<b>Half duplex (default)</b>
<b>S2.4</b>	ON	Reserved
	<b>OFF</b>	<b>Reserved (default)</b>

Technical data		ISD 300-	6211	6212								
<b>Scanning range</b>	0.2 ... 200 m											
Light source	Infrared light ( $\lambda = 880$ nm)											
Transmit/receive angle	$\pm 0.5^\circ$ for optical axis											
Light spot diameter	0.9 m at 50 m/1.75 m at 100 m/ 3.5 m at 200 m											
<b>Data transfer rate</b>	Max. 2 MBit/s											
LED status indicator	Supply voltage, function mode, data transfer, signal level											
Data interface	Ethernet											
<b>Switching inputs</b>	0 ... 2 V DC: "sender/receiver off" 18 ... 30 V DC: "sender/receiver on"											
<b>Switching outputs</b>	0 ... 2 V DC: normal operative $V_{in}$ -2 V DC: reduced function reserve											
<b>Electrical connections</b>	Terminals											
<b>Supply voltage <math>V_S</math></b>	18 ... 30 V DC											
Current consumption	200 mA at 24 V DC											
<b>Enclosure rating</b>	IP 65											
<b>Protection class</b>	1											
<b>EMC vibration test</b>	EN 61326 (1998) + A1 (1999)											
<b>Ambient temperature</b>	Operation $-5 \dots +50$ °C Storage $-30 \dots +70$ °C											
Max. relative humidity	Max. 90 %, uncondensed											
<b>Weight per unit</b>	1200 g											
<b>Housing material</b>	Aluminium die-cast, front screen: glass											

**Notes:**

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

**Order information**

Type	Part no.
ISD 300-6211	6 028 692
ISD 300-6212	6 028 693