

ISM-1520 / ISM-1525

Features

- Light barrier with modulated infrared light
- High degree of immunity to ambient light, disturbing impulse and influence from other light barriers
- Range up to 70 m
- Operating voltage 24 V AC/DC
- Light or dark switching selectable
- Floating distance switching output (ISM-1520... with relay and ISM-1525... with semiconductor relay)
- Transmitter and receiver connections are short circuit proof
- Connections are pluggable
- Mounting for DIN rail EN 60715

Short Description

Light barrier amplifiers are used for the detection of objects in machines or production systems.

They form, in conjunction with one infrared transmitter and receiver a powerful light barrier and they are useable in areas with a long range or an extreme degree of pollution in which traditional light barriers reach their limits.

The modulation of the infrared light will additionally give the system a high degree of immunity to ambient light, disturbing impulse and influence from other light barriers.

The amplifiers of the ISM-1500 series are low cost devices which make simple light barrier applications possible. The user must adjust the transmit power to the special terms of his application by using a potentiometer. A green LED shows the optimal set point of the transmit power and also shows when the power exceeds this set point during operation. A floating distance switching output reports the light beam status, free or interrupted, to an evaluation unit, (e.g. a PLC).

Infrared transmitters and receivers in different, compact and robust designs are described in the sensor heads datasheet.



Safety Instructions

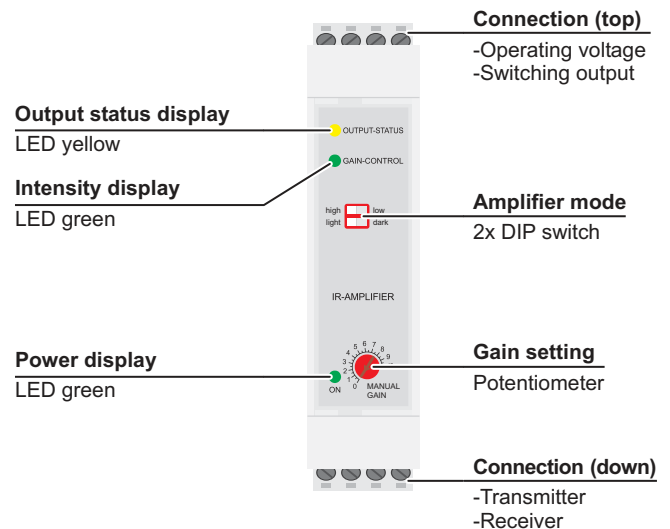


Warning!

The infrared light barriers ISM-... are not safety systems and should not be used as such systems.

The devices are not to be used for applications, where personal safety is dependent on their function.

Device Overview



Ordering Table

Type	Order code
ISM-1520 with relay	ISM-1520/24V
ISM-1525 with semiconductor relay	ISM-1525/24V
Accessories	
Power supply unit 95...265 V AC	PSU-1000S/95-265VAC
Protective enclosure	PanBox 1x1

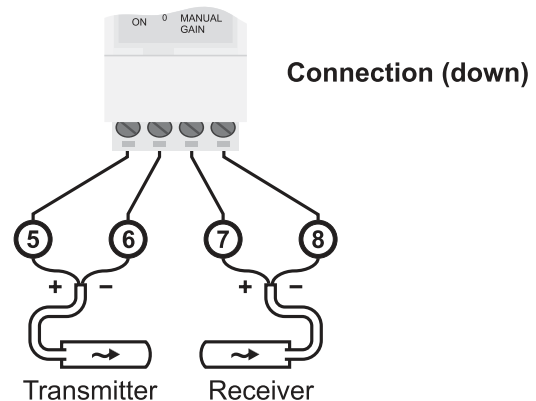
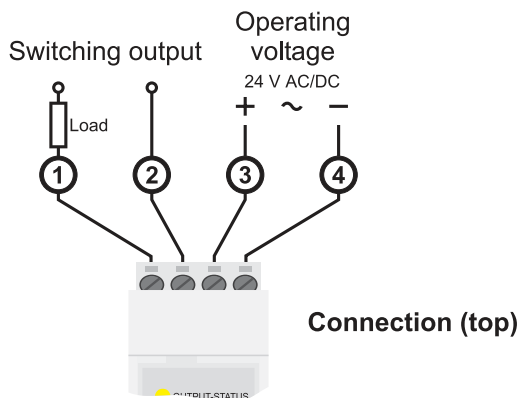
ISM-1520 / ISM-1525

Technical Data (at 20 °C / 68 °F, 24 V DC)

Operating voltage	24 V AC / ±10%	24 V DC / ±20%
Power consumption (max.)	2,4 VA	2,4 W
Power loss (max.) (EN 61439)	not available	not available
Operating basis	modulated infrared light	
Transmit frequency	4,0 kHz	
Transmit power	manual adjustable	
Basic transmit level	low / high	
Switching behavior	light / dark	
Switching delay	—	
MTBF (IEC 61709)	3,5 · 10 ⁶ h (T _a = 40 °C / 104 °F)	
Operation temperature	-25 °C ... 50 °C (-13 °F ... 122 °F)	
Storage temperature	-40 °C ... 80 °C (-40 °F ... 176 °F)	
Housing material	Polyamide, light grey	
Protection class (EN 60529)	IP20	
Flammability class (UL 94)	V0	
Mounting	top hat rail EN 60715	
Connection	plug with screw terminals 0,2 - 2,5 mm ²	

Switching output ISM-1520	NO floating distance	
Switching data (max.)	5 A / 250 V AC (24 V DC)	
Reaction time	36 ms	
Switching output ISM-1525	NO (semiconductor relay) floating distance, short circuit proof	
Switching data (max.)	100 mA / 60 V AC (DC)	
Reaction time	36 ms	
Alarm output	—	
Test input	—	
COM interface	—	
max. Range (through beam)	Receiver IRL-...	Receiver IR-..., IRH-...
Transmitter IT-..., ITL-...	20 m (66 ft)	25 m (82 ft)
Transmitter IT-...HP, ITH-...	30 m (98 ft)	35 m (115 ft)
Transmitter ITA-...	50 m (164 ft)	70 m (230 ft)

Connection Diagram



Dimensions (in mm)

