

## 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

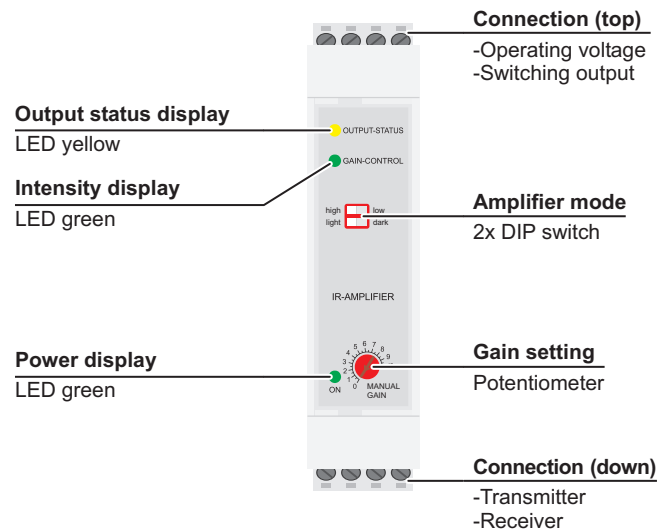


#### Warning!

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
<b>Accessories</b>	
Power supply unit 95...265 V AC	PSU-1000S/95-265VAC
Protective enclosure	PanBox 1x1

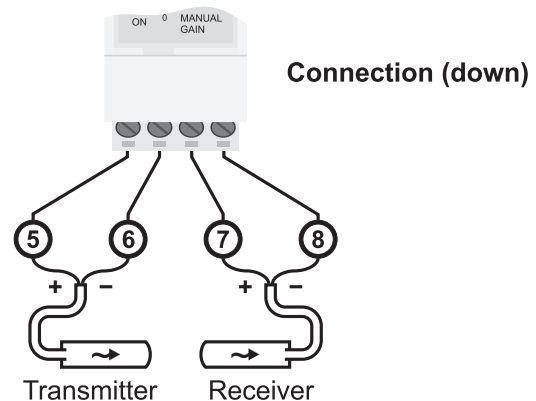
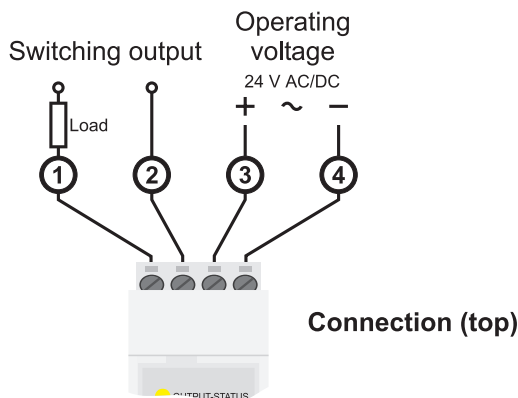
## ISM-1520 / ISM-1525

### 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 <sup>6</sup> h (T <sub>a</sub> = 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 <sup>2</sup>	

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)

