

# Light Barrier Amplifier

## ISM-1100 / ISM-1100S

- Light barrier with modulated infrared light
- High degree of immunity to ambient light, disturbing impulse and influence from other light barriers
- Range up to 25 m
- Manual gain setting with potentiometer
- Switching output 60V / 100mA, floating distance
- Alarm output
- Test input for external test equipment
- Transmitter and receiver connections are short circuit proof
- Mounting for DIN rail EN 50 022



### Short Description

The light barrier amplifier ISM series were specially designed for areas with a high range or extreme dirt in which other light barriers reach their limits.

The system includes an amplifier, transmitter IT..., and receiver IR..., and has very high power. Distances up to 25 m are possible. 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 ampfier is equipped with an gain potentiometer, with which the transmit power adjusts to the special environments of the application. A green LED shows the optimal set point of the transmit power and also shows when the power exceeds this set

point during operation. An alarm output reports when the transmit power drops below the setting point.

A floating distance and short circuit proof switching output reports the light beam status, free or interrupted, to the following evaluation unit, e.g. a PLC. A yellow LED shows this.

Included as extra equipment is the integrated test input with which it is possible to examine the light barrier system's functionality. When the test input is activated, the transmitter will be switched off and the status of the switching output should change.

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

### Ordering Table

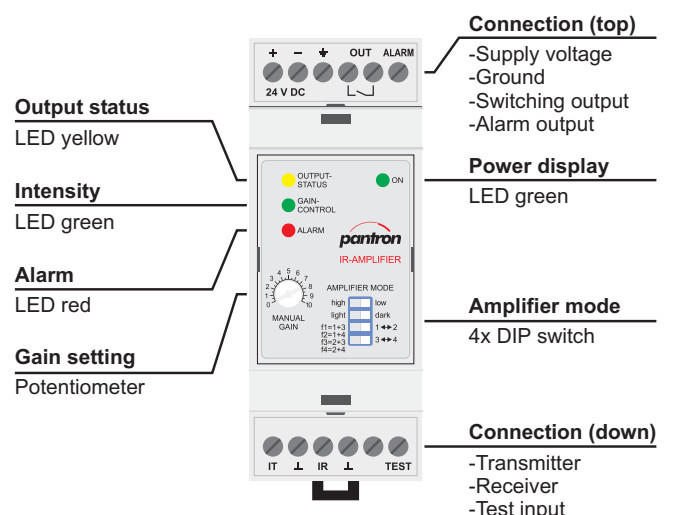
Typ	Order code
ISM-1100 with screw terminals	ISM-1100S/24VDC
ISM-1100 pluggable	ISM-1100/24VDC
<b>Accessories</b>	
Power supply unit 95...265 V AC	PSU-1000S/95-265VAC
Protective enclosure	PanBox 1x1

### Safety Instructions



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

### Device Overview



# Light Barrier Amplifier

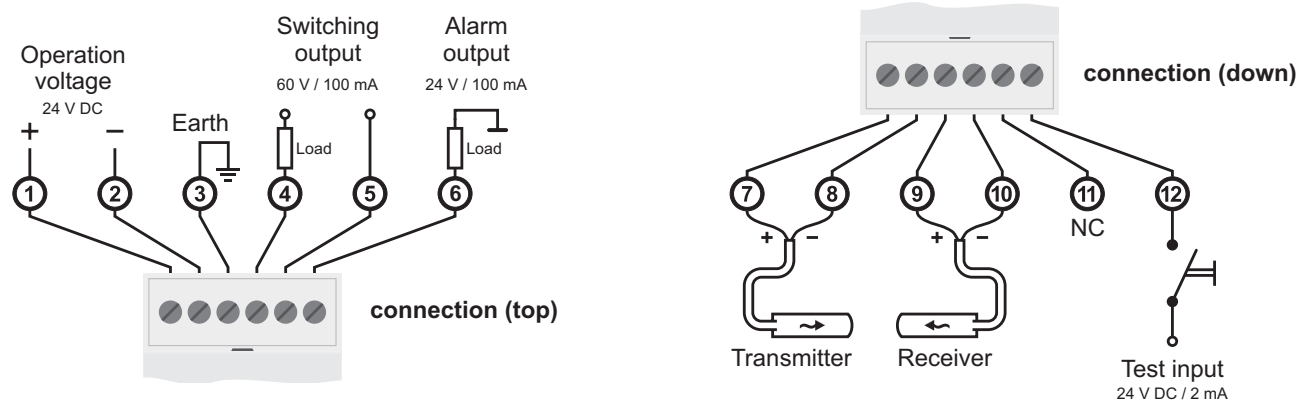
## ISM-1100 / ISM-1100S

### Technical Data

Operating voltage	24 V DC / $\pm 20\%$ / 2,4 W
Operating basis	modulated infrared light
Transmit frequency [kHz]	3,5 / 3,8 / 4,0 / 4,5
Transmit power	manual adjustable
System power	low / high
Multiplex speed	---
Operation mode	light / dark
Switching delay	---
max. range (through beam)	
Sensors ITL... + IRL...	7 m
Sensors ITH... + IRL...	10 m
Sensors ITL... + IR-P10...	15 m
Sensors ITH... + IR-P10...	25 m
Housing material	NORYL (self-extinguishing)
Protection class	IP 20
Operation temperature	-25 °C ... +50 °C
Storage temperature	-40 °C ... +80 °C

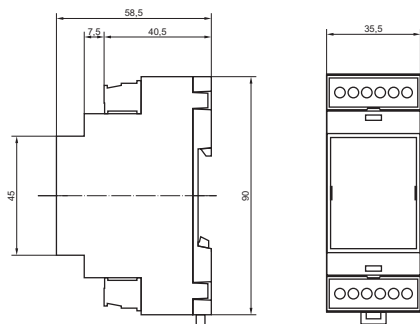
Switching output	NO (semiconductor relay) floating distance, short circuit proof
max. operation value	60 V AC (DC) / 100 mA
reaction time	24 ms
Alarm output	pnp, 24 V DC
current carrying capacity	100 mA
Error output	---
current carrying capacity	---
Analog output	---
Test input	max. 30 V DC / 2 mA
response voltage	low < 5 V DC; high > 15 V DC
COM interface	---
Mounting	top hat rail DIN 50 022
Electrical connection	0,14 - 2,5 mm <sup>2</sup>
ISM-1100...	pluggable
ISM-1100S...	screw terminal

### Connection Diagram

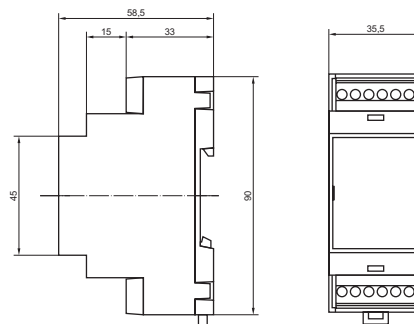


### Dimensions

ISM-1100



ISM-1100S



dimensions in millimeter