

Light Barrier Amplifier

ISM-1220S

- Light barrier with modulated infrared light
- Range up to 20 m
- Manual / automatic operation selectable
- Permanent sensor monitoring
- Test function
- Relay output (1 change over)
- Relay switches delayed or pulsed
- 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 20 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 automatic power adjustment, with which the transmit power adjusts to the special environments of the application.

To increase the overall accuracy of the device, permanent sensor monitoring was include, which detects errors at the sensor heads and signals this to the user by the

error output. A red LED illuminates to show the error combined with a yellow LED (error transmitter) or a green LED (error receiver).

A relay output give the light beam status, free or interrupted, to the following evaluation unit, e.g. a PLC. A yellow LED shows this. The output signal can switched delayed (ON delay or OFF delay) or pulsed (ON pulse or OFF pulse).

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

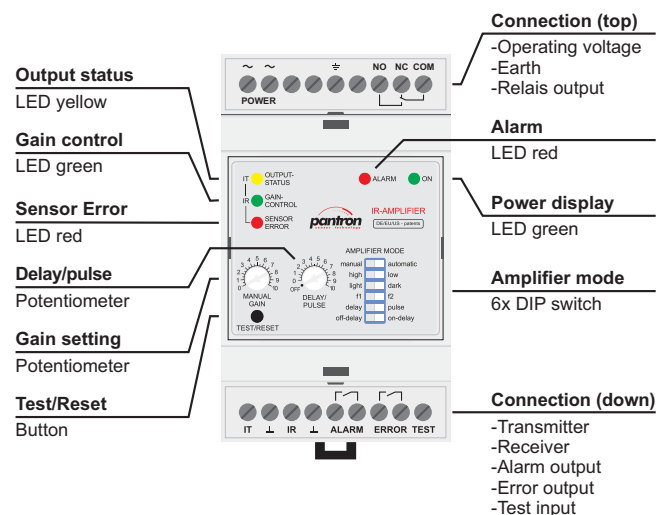
Operation voltage	Order code
230 V AC	ISM-1220S/230VAC
115 V AC	ISM-1220S/115VAC
24 V AC	ISM-1220S/24VAC
Accessories	
Protective enclosure	PanBox 1x1

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

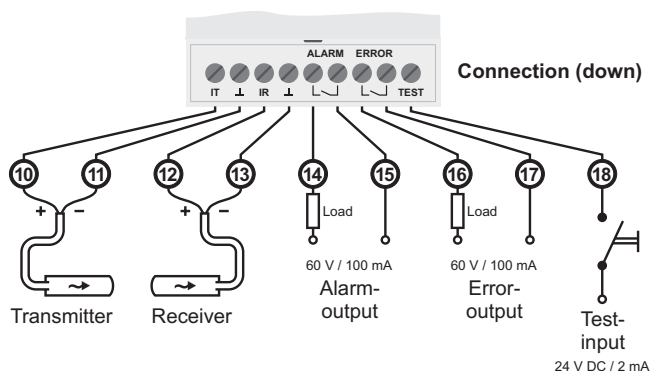
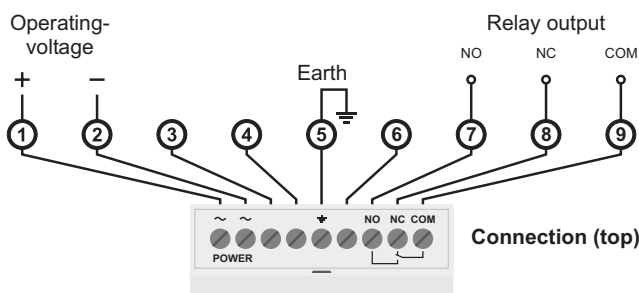
ISM-1220S

Technical Data

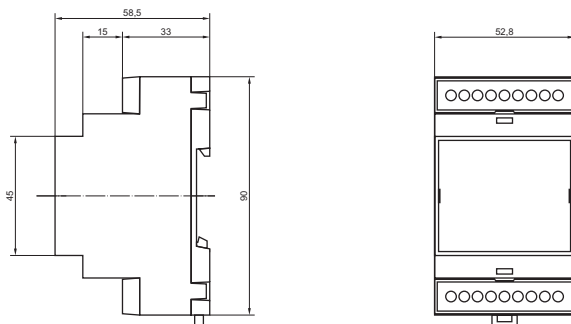
Operating voltage	see ordering table
Operating basis	modulated infrared light
Transmit frequency [kHz]	3,7 / 4,3
Transmit power	manual / automatic
System power	low / high
Multiplex speed	---
Operation mode	light / dark
Switching delay	0 ... 10 s
max. range (through beam)	
Sensors ITL... + IRL...	8 m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

Relay output	1 change over
max. operation value	5 A / 230 V AC (24 V DC)
Switching frequency	20 Hz (Low) / 11 Hz (High)
Alarm output	NO (semiconductor relay)
floating distance, short circuit proof	
max. operation value	60 V AC (DC) / 100 mA
Error output	NO (semiconductor relay)
floating distance, short circuit proof	
max. operation value	60 V AC (DC) / 100 mA
Analog output	---
Test input	max. 30 V DC
response voltage	< 5 V DC
COM interface	---
Mounting	top hat rail DIN 50 022
Electrical connection	0,14 - 2,5 mm ² screw terminal

Connection Diagram



Dimensions



dimensions in millimeter