
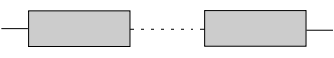
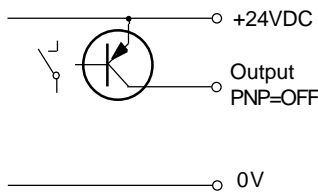
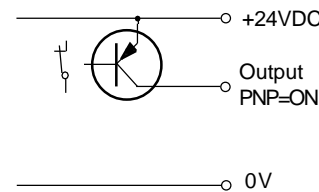
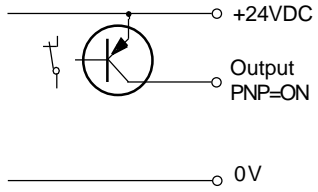
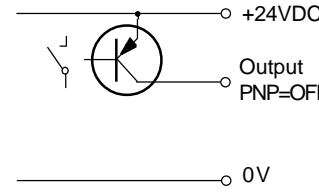
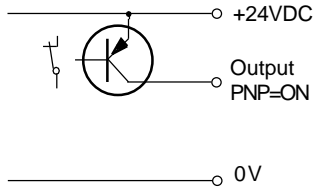
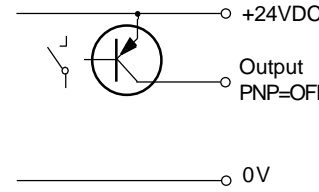
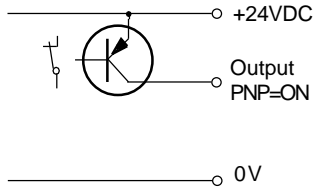
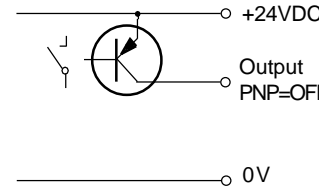


## Light Barrier IRL-25P-S/E S72

Extended operating temperature range -20°C to +100°C

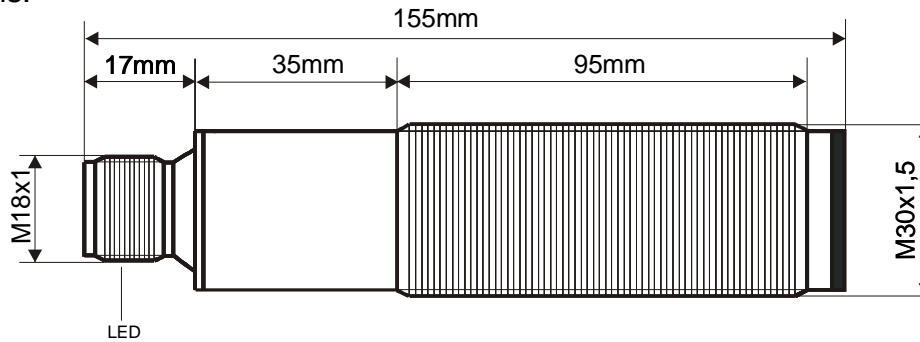


- Wide temperature range
- With connector
- For industrial applications

Type	IRL-25P-S/E S72	
<b>Technical Data</b>		
Additional designations	S: Emitter / E: Receiver	
Range	25m	
Light source	880nm, infrared	
Minimum detectable object size	20mm	
Optical aperture	appr.12°	
Response time	5ms	
Switching frequency	100Hz	
Supply voltage	24 VDC (20 to 26VDC)	
Current consumption	Emitter:13mA / Receiver:7mA	
Power dissipation	Emitter:0.34W / Receiver:0.2W	
Output	PNP, maximum 100mA, short circuit protected	
Input, only type IRL-25P-S-DI	Emitter disable input, PNP compatible, Ri 10kΩ	
Indication LED, Emitter	Power-on indication LED, inside the sensor socket	
Indication LED, Receiver	Status indication LED, inside the sensor socket	
Housing	M30, yellow brass, nickel plated	
Enclosure rating at EN 60529	IP 65	
Ambient operating temperature TA	-20°C < TA < +100°C	
Sensor socket	Binder, series 714, 4 terminals	
Accessories included	4 nuts M30 (optional 2 clamps)	
Options	- IRL-25N-S/E: With NPN output type - IRL-25P-S-DI: Emitter with disable input	
Function and LED indication	 Light beam interrupted LED=OFF	 Light beam not interrupted LED=ON
Function on standard connection:		
Pin No.      Receiver:      Emitter: 1              +24VDC              +24VDC 3              0V                      0V 2              Output                  DI-Input 4              FE                        FE Cable shield      -- (Bond the shield at PE or 0V)		
Function on reversed polarity of the supply voltage:		
Pin No.      Receiver:      Emitter: 1              0V                      +24VDC 3              +24VDC              0V 2              Output                  DI-Input 4              FE                        FE Cable shield      -- (Bond the shield at PE or 0V)		

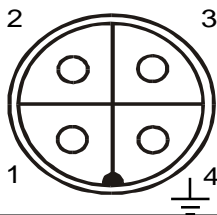
IRL-25-S72\_e4/2011-04-05/HB

## Dimensions:



Same dimensions for Emitter and Receiver

## Connection layout:



### Receiver:

Standard connection

- 1: +24VDC
- 2: Output
- 3: 0V
- 4: PE  $\perp$

Reversed connection:

- 0V
- Output
- +24VDC
- PE  $\perp$

### Emitter:

- +24VDC
- DI-Input (optional)
- 0V
- PE  $\perp$

## Operating Manual / EC-Declaration of Conformity:

### General mounting prescriptions:

Do not exceed the maximum ratings. The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to PE or 0V of the supply voltage. Connection cables must not be installed parallel to high voltage cables.

### Function

The sensor works basically as proximity switch on diffuse optical reflections. If the sensor detects reflected light, the output switches to ON or OFF, dependent of the polarity of the supply voltage and the LED shows red or yellow. If no reflected light will be recognized, the LED will be extinguished and the output switches to OFF or ON dependent of the polarity of the supply voltage. The load must be connected to 0V (PNP type).

### Arrangement of light barriers:

If several light barriers are installed close to another, each light barrier has an influence on each other. For an arrangement with multiple light barriers please choose the type IRL-25P-S-DI.

### Arrangement of light barriers, type IRL-25P-S-DI:

If several light barriers are installed close to another, it is necessary to use light barriers with emitters with disable input. By using the disable input DI, each emitter can be controlled in a short reaction time. If only one emitter is activated in the same time, a mutual influence is precluded.

DI= 0V or not connected = emitter enabled

DI= High (24VDC) = emitter disabled

The Disable Input DI must be activated for  $\geq 10$ ms.  
The DI input is PNP compatible.

### Maintenance

Protect the sensor and the optional fibre optics against pollution. If the fibre optics or the sensor lenses are contaminated, clean with alcohol. Do not use aggressive solvents. Optical fibres can be destroyed by strong solvents. Equipment must only be repaired or serviced by the manufacturer.

### Safety Informations

The light barriers types IRL-25P-S/E S72 must not be used for Accident-Prevention! In worst case of disturbance, the output can show any state. When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations.

Standards met::

EN 60825-1:2006, EN 60825-2:2004; EN 60529:2000;  
EN 60950-1:2006; EN 61000-4-2 to EN 61000-4-6,  
EN 61000-6-1/-2, EN 61000-6-4

- Machine directive: 2006/46/EC

- EMC: 2004/108/EC

- RoHS directive: 2002/95/EC

### General Notes, disposal

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

### EC-Declaration of Conformity

The conformity of the devices with the EC standards and directives and the observation of the Quality Safety System ISO 9001:2008, declares:

Hans Bracher, Matrix Elektronik AG

Tippkemper - Matrix GmbH

Meegener Str. 43 D-51491 Overath  
Tel.: +49 2206 9566-0 Fax -19  
info@tippkemper-matrix.com

Matrix Elektronik AG (Manufacturer)

Kirchweg 24 CH-5420 Ehrendingen  
Tel.: +41 56 20400-20 Fax -29  
info@matrix-elektronik.com