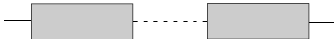

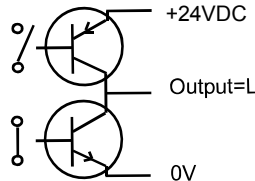
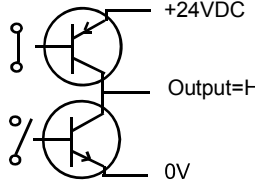
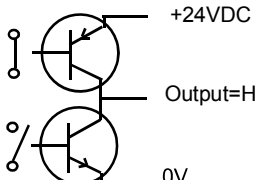
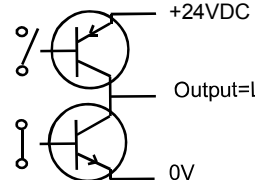
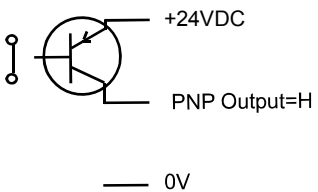
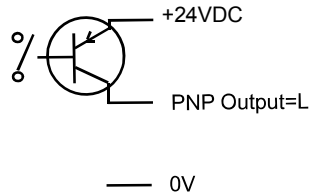


## Light barriers IRL-25-S/E S17 and IRL-50-S/E S17

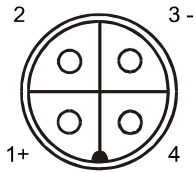


- With Push-Pull-Output, N- or P-switching
- Male Connector M18
- Optional for fibre optics connection, type IRL-...-SE-GF S17
- Optional with pollution indication output "VA"

Type	IRL-25N-S/E S17 IRL-25P-S/E S17	IRL-50N-S/E S17 IRL-50P-S/E S17
<b>Technical data</b>	S: Emitter / E: Receiver	
Designation	S: Emitter / E: Receiver	
Range	25m	50m
Supply voltage	24VDC +-15%	
Current consumption, Emitter	23mA	30mA
Current consumption, Receiver	34mA	34mA
Switching frequency	100Hz	
Output	Push-pull, 100mA, short circuit protected	
Working temperature range	-20°C < T <sub>amb</sub> < +50°C	
Storage temperature range	-20°C ... +70°C	
Housing	M30, brass, nickel plated	
Enclosure rating	IP65, EN 60529	
Accessories	4 nuts M30 or optional 2 clamps	
Electrical connection	Male connector M18, Binder series 714	
Display-LED Emitter	Red LED inside the connector: Ready LED	
Display-LED Receiver:	Red LED inside the connector: Status indication	
Options	- Switching frequency: Up to 1kHz, on demand - IRL-...-S/E- <b>GF</b> S17: Device for fibre optics connection - IRL-25/50-S- <b>DI</b> S17: With emitter disable input "DI" - IRL-25/50-E- <b>VA</b> S17: With pollution indication output "VA"	
Function and LED indication	 Light beam free LED ON	 Light beam interrupted LED OFF
Type: IRL-... <b>N</b> -E Output N-switching		
Type: IRL-... <b>P</b> -E Output P-switching		
Type: IRL-...-E- <b>VA</b> Pollution indication output "VA", optional		
For high temperature areas up to +400°C, type IRL-...-SE-GF S17 with special HT-fibre optics. (Sensor must be mounted outside the high temperature area)		

IRL-25-50-S17\_e8/2019-01-16/HB

Wiring diagram, male connector M18 at the sensor:



**IRL...-E S17**

1 +24VDC  
2 Output  
3 0V  
4 PE

**IRL...-E-VA S17**

1 +24VDC  
2 Output  
3 0V  
4 VA-Output

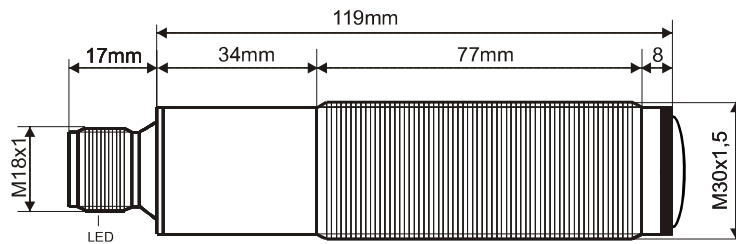
**IRL...-S S17**

1 +24VDC  
2 NC  
3 0V  
4 PE

**IRL...-S-DI S17**

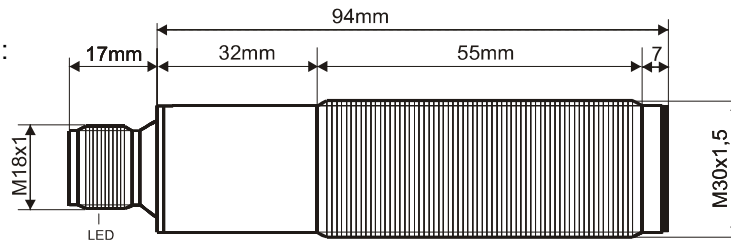
1 +24VDC  
2 DI-Input  
3 0V  
4 PE

Dimensions  
IRL-25/50N/P-S/E S17:



Same dimensions for emitter and receiver

Dimensions  
IRL-25/50N/P-S/E-GF S17:



Same dimensions for emitter and receiver

**Operating Manual / EC - Declaration of Conformity:**

**Mounting prescriptions**

For the type IRL...-E-VA S17: The local equipotential bonding have to be done by earthing the housing. The maximum ratings must be observed. 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 the protection earth large-surfaced. Connection cables must not be installed parallel to high voltage cables. For high temperature applications the special high temperature fibre optics must be used. The sensors must be mounted outside the high temperature area.

**Function IRL-25/50P-E S17**

If the light beam between emitter and receiver is free, the output switches to +24VDC and the LED lights on. If the light beam is interrupted the output switches to 0V and the LED is turned off.

**Function IRL-25/50N-E S17**

If the light beam between emitter and receiver is free, the output switches to 0V LED lights on. If the light beam is interrupted the output switches to +24VDC and the LED is turned off.

**Function IRL-25/50P-S/E-GF S17**

If the light beam between the emitter fibre optic and the receiver fibre optic is free, the output switches to +24VDC and the LED lights on. If the light beam is interrupted the output switches to 0V and the LED is turned off.

**Function IRL-25/50N-S/E-GF S17**

If the light beam between the emitter fibre optic and the receiver fibre optic is free, the output switches to 0V LED lights on. If the light beam is interrupted the output switches to +24VDC and the LED is turned off.

**Optical power, devices IRL-25/50N/P-S/E-GF S17**

The range of the light barriers with fibre optics connection is depended of the type of the used fibre optics, the diameter and the length.

**Output**

The output is a push-pull type and the load can be connected to +24V or 0V.

**Optional pollution indication output VA**

The optional pollution indication output will be activated by polluted lenses or bad allignement. This function gives the possibility to a fast reaction at polluted lenses. The pollution indication output is switched off, when the receiver detects only a reduced optical signal. If the output is switched ON and the pollution indication output switched OFF the lenses are polluted. If both outputs are switched ON the lenses are not polluted. The pollution output is deigned only as PNP-type. The load must be connected to 0V.

**Maintenance**

No special maintenance is required. If the lenses becomes dirty, they should be cleaned with a non-aggressive solvents. Equipment must only be repaired by the manufacturer.

**Arrangement of light barriers, only types IRL-25/50-S(-GF)-DI S17 (optional)**

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 >= 20ms. The DI input is PNP compatible. The Emitter-Disable-Input DI can also be used for testing the associated receiver. By a short-time shut-off of the emitter, the switching off of the receiver output and with it the correct function of the receiver will be checked.

**Safety informations**

The light barriers series IRL must not be used for fail-safe applications. In worst case the output can change to any state! When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations.

The light barriers are conform to the following standards:

Machine directive: 2006/42/EC

EMC directive: 2004/108/EC

RoHS directive: 2011/65/EU.

**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 9001:2015, declares:

Hans Bracher, Matrix Elektronik AG

IRL-25-50-S17\_e8/2019-01-16/1B

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