

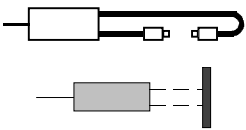
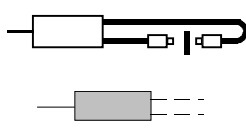
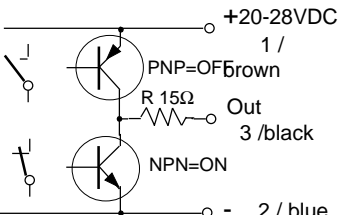
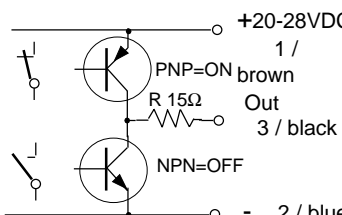
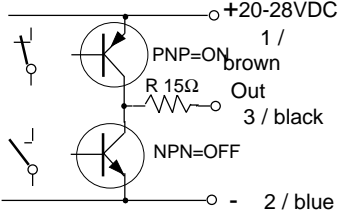
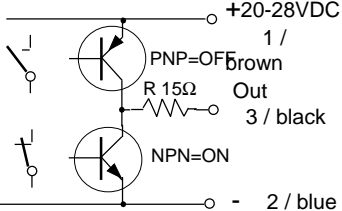


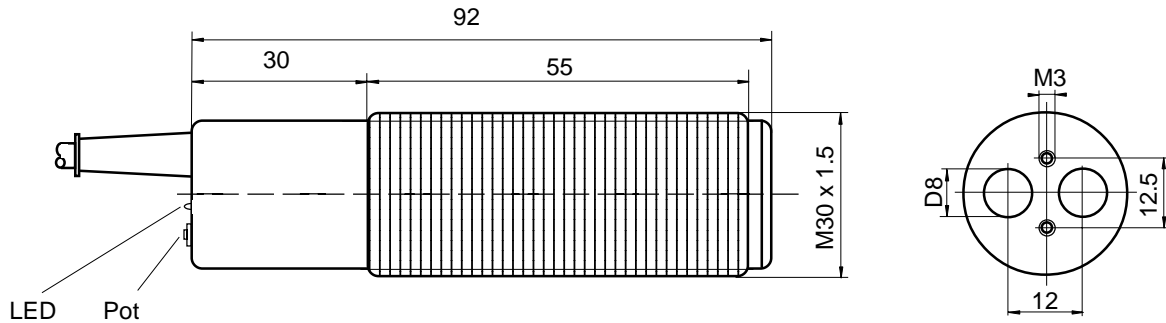
## Photoelectric Proximity Switch IRS-..-GF special applicable with fibre optics Housing M30



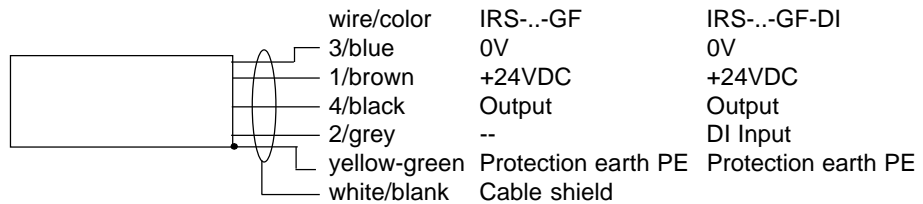
- robust sensor for industrial applications
- high reliability

Type	IRS-2N-GF IRS-2P-GF	IRS-4N-GF IRS-4P-GF	IRS-10N-GF IRS-10P-GF	IRS-30N-GF IRS-30P-GF
<b>Technical Data</b>				
Range (adjustable) (on white paper, 20cmx30cm)	200mm	400mm	1000mm	3000mm
Supply voltage	12-28 VDC			
Current consumption	30mA	40mA	50mA	60mA
Output current	100mA			
Power Dissipation	0.84W	1.12W	1.4W	1.68W
Switching frequency	100Hz			
Output protection	short circuit protected			
Operating temperature range	-20°C <TA < +50°C			
Housing	M30, yellow brass, nickel plated			
Enclosure protection	IP65, with connected fibre optics, at EN 60529			
Accessories, included	2 nuts M30, (or optional 1 clamp)			
Connection cable	3+PE x 0.5mm <sup>2</sup> + Shield, L=3m			
Fibres (see our different types in the fibres catalog)				
Options	<ul style="list-style-type: none"> <li>- Switch frequency up to 2kHz, on demand</li> <li>- IRS-..GF-DI (with emitter disable input)</li> </ul>			
Function and LED indication	 Light detected  LED lights up		 No light detected  LED switched off	
<b>IRS-..N-GF</b> Output low side switching (NPN) Connection layout: 1 / brown = + 3 / blue = - 4 / black = Output 2 / grey = Disable-input (only.-DI) yellow-green = PE white/blank = Cable shield				
<b>IRS-..P-GF</b> Output high side switching (PNP) Connection layout: 1 / brown = + 3 / blue = - 4 / black = Output 2 / grey = Disable-input (only.-DI) yellow-green = PE white/blank = Cable shield				

## Dimensions:



## Connection layout:



## 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 0V(-) of the supply voltage. Connection cables must not be installed parallel to high voltage cables.

### Fibre optics

For efficiently detection solutions look for our multiple program of fibre optics, also for high temperature areas.

### Function

The sensor works basically as proximity switch on diffuse optical reflections. If the sensor detects light, the LED shows red/yellow and the output switches on +24VDC (P types) or 0V (N types). If no light will be recognized, the output switches to 0V (P types) or +24VDC (N types). The push-pull output allows to connect the load to +24VDC or 0V.

### Sensors with disable input, types IRS...-GF-DI:

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

DI= 0V or not connected = emitter enabled  
 DI= High (24VDC) = emitter disabled

For a correct function the sensor must be enabled for at minimum  $\geq 7.5$ ms (DI=0V). If the DI input will be disabled, the outputs holds the previous output status from the last enabled time.

The DI input is PNP compatible.

### Range, Potentiometer

The nominal range is defined as proximity switch on white paper A4, 80g. The real range is depended on the color, the form, the dimension, and the surface finish of the object. The range can be adjusted by

the potentiometer.

### 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 sensors types IRS... must not be used for Accident-Prevention!** When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations.

Standards met:

- EN 50081-1/-2, EN 50082-1/-2; EN 60529
- Machine directive: 98/37/EG
- Low voltage directive: 73/23/EWG, 93/68/EWG
- EMC 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG

### General Notes

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.

### Declaration of conformity

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

Hans Bracher, Matrix Elektronik AG