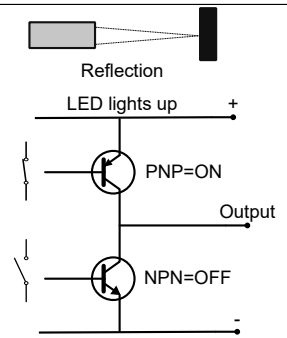
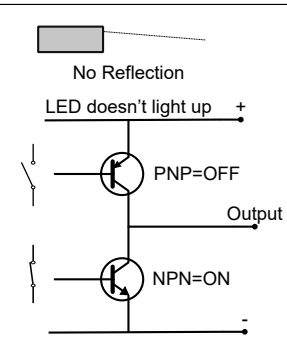
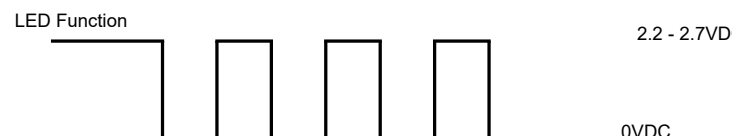
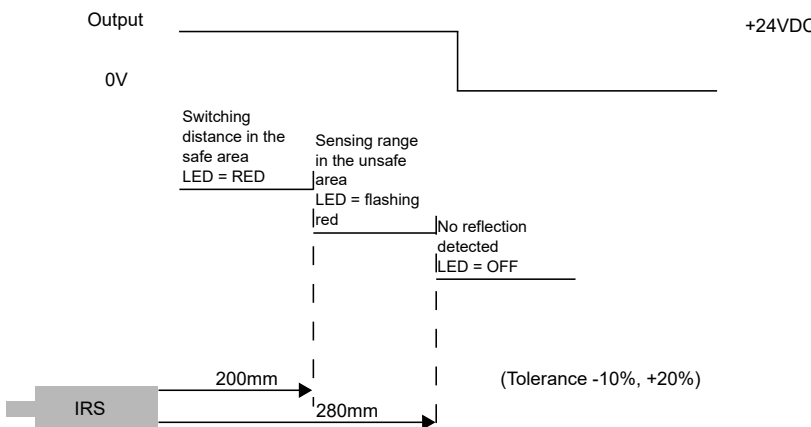


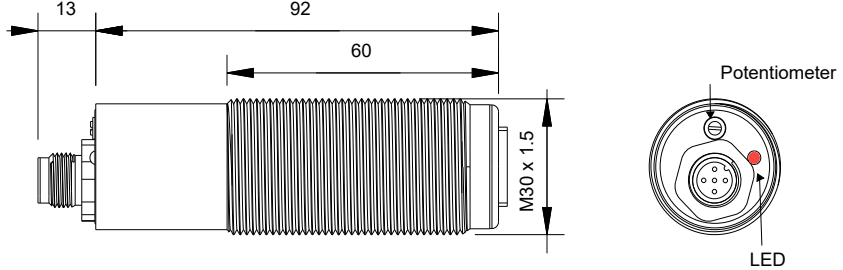
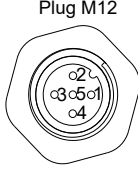

## Operating manual: IRS-U-2P-BS-S099 Photoelectric proximity switch



- Also for using with fibre optics
- Robust sensor for industrial applications

Technical Data	Type <b>IRS-U-2P-BS-S099</b>	
Optical Range	200mm, with potentiometer adjustable	
Output Signal Range	0.05VDC - 10.5VDC (Ripple: < 20mV)	
Temperature stability	When the temperature rises by 1°C, the switching distance decreases by 0.2%	
Output type	push-pull, max. 100mA, short circuit protected	
Switching hysteresis Axial	10% of the switching distance	
Switching hysteresis Radial	2% of the switching distance	
Supply voltage, Ue	24VDC +/- 10%	
Current consumption	50mA	
Maximum power consumption	1.4W	
Switching frequency	100Hz	
Housing	M30, brass, nickel plated	
Enclosure rating	IP 54	
Ambient working temperature range, T <sub>amb</sub>	-20°C up to +50°C	
Socket	Socket, male, M12, 5P, Lumberg RSF 5	
Accessories	<b>Included</b>	<b>Optional</b>
	• 2x nuts M30	
Function and LED indication	 <p style="text-align: center;">Reflection LED lights up + PNP=ON NPN=OFF Output</p>	 <p style="text-align: center;">No Reflection LED doesn't light up + PNP=OFF NPN=ON Output</p>
Blinking behavior	 <p style="text-align: center;">LED Function 2.2 - 2.7VDC 0VDC</p>	
Output and monitoring area	 <p style="text-align: center;">Output +24VDC 0V</p> <p style="text-align: center;">Switching distance in the safe area LED = RED Sensing range in the unsafe area LED = flashing red No reflection detected LED = OFF</p> <p style="text-align: center;">(Tolerance -10%, +20%)</p>	

IRS-U-2P-BS-S099\_e2/2024-11-18/MP

<p>Dimensions</p>													
<p>Wiring and Connection</p>	<table border="1" data-bbox="667 409 938 548"> <thead> <tr> <th colspan="2">Pin out</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+24VDC</td> </tr> <tr> <td>2</td> <td>LED Extern</td> </tr> <tr> <td>3</td> <td>0VDC</td> </tr> <tr> <td>4</td> <td>Ausgang</td> </tr> <tr> <td>5</td> <td>Erdung</td> </tr> </tbody> </table> 	Pin out		1	+24VDC	2	LED Extern	3	0VDC	4	Ausgang	5	Erdung
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2	LED Extern												
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<p style="text-align: center;"><b>Operating Manual / EC-/EU-declaration of conformity</b></p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="140 667 790 1187" style="width: 48%;"> <p><b>General mounting prescriptions</b> 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 the protection earth, large-surfaced. Connection cables must not be installed parallel to high voltage cables.</p> <p><b>Function</b> If an object enters the pulsed IR light beam within the set scanning range, some of the light is reflected on the receiver, which results in the output being switched. If only a little reflected light is received, the output switches on and the LED flashes red. If strong reflected light is received, the LED is permanently red; safe operating condition. The sensor has an equivalent output. The load (relay or other burden) can be connected against plus or minus. The switching distance can be adjusted to the optimal working distance with the potentiometer.</p> <p><b>Maintenance</b> The sensor is maintenance-free. If it becomes dirty, the light passage must be cleaned carefully. No aggressive cleaning agents may be used. Repairs may only be carried out by the manufacturer.</p> <p><b>General notes, disposal</b> 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.</p> </div> <div data-bbox="805 667 1460 1086" style="width: 48%;"> <p><b>General Safety Information</b> The sensor 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 national regulations.</p> <p>The sensors are conform to the following standards: IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014, IEC 61000-4-6:2013, Machine directive 2006/42/EC, EMC directive 2014/30/EU, RoHS directive 2011/65/EU</p> <p><b>EU-Declaration of Conformity</b> The conformity of the devices with all used standards and directives and the EC-type examination certificate and the observation of the Quality Management System ISO 9001:2015 declares:</p> <p style="text-align: right;">Ehrendingen, 18.11.2024</p>  <p style="text-align: right;">Pablo Ledergerber, Matrix Elektronik AG</p> </div> </div>													

IRS-U-2P-BS-S099\_e2/2024-11-18/MP

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