

# Original operating manual:

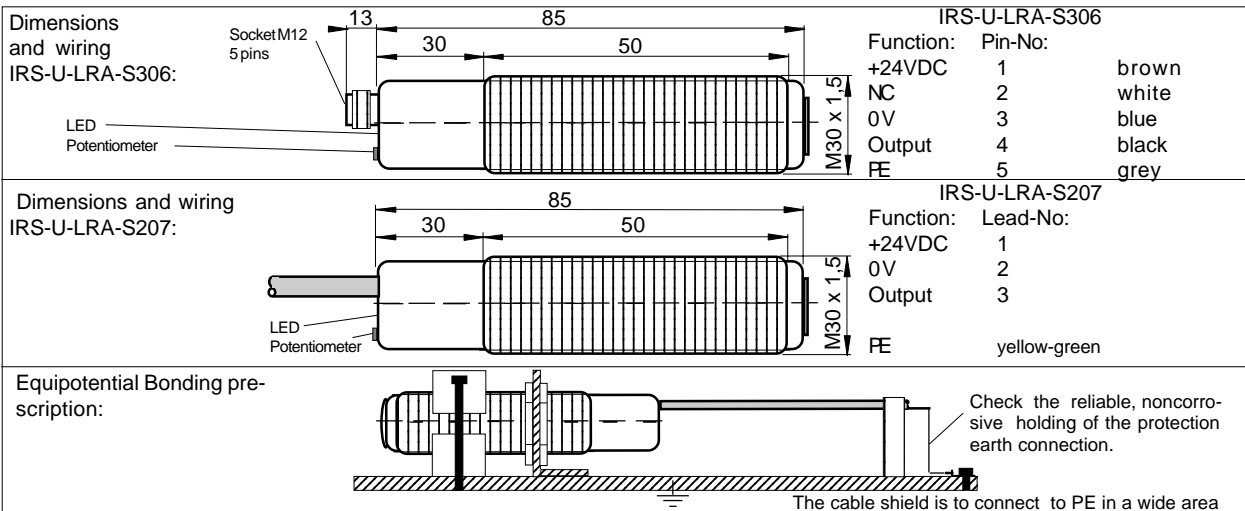
## Photoelectric sensors with analog output: IRS-U-LRA-S207

### Housing M30



- Only for using with fibre optics
- For measurement of reflection quality on reflection discs
- Analog voltage output 0V ... 10VDC

Technical data	Type	IRS-U-LRA-S207
		Voltage output 0 ... 10V
Type of Ex protection Gas, according to 2014/34/EU		NONE
Type of Ex protection Dust, according to 2014/34/EU		NONE
For use in Ex Zones		NONE
Output signal range		0.03VDC - 10.5VDC( Ripple:<20mV) or 0.06mA - 21mA or 4mA - 20mA
Voltage output, adjustable		10VDC with test fibre optic on test disc
Light source		visible red 623nm
Optical aperture angle		fibre optic: approx.63°
Maximum optical radiant power		<=35mW
Maximum radiant power		<=5mW/mm²
Response time		5ms (faster response time, on request)
Power up delay time		500ms
Supply voltage		24VDC +-10%, Um = maximum 30VDC
Intrinsic current consumption		35mA
Maximum power dissipation		0.93W
Output type		PNP, output impedance appr. 25Ω, RLoad: 2kΩ to 1MΩ
Disable-Input		Not availabl
Housing		M30, brass Ms 58, nickel plated, head part: Steel optional stainless steel 1.4404, on request
Enclosure rating, according to EN 60529		IP 65
Ambient working temperature range Tamb		-20°C up to +50°C
Storage temperature range		-20°C ... +70°C
Relative humidity		15% ... 80%
Vibration and shock resistance		Vibration: 30g over 20Hz to 2kHz. Shock: 100g for 3ms
Pollution degree, according to EN 60664-1:2007		4
Device designation, according to EN 60947-5-2		R3A30AP1
Connection cable		3+PE x 0,5mm²,TPU, shielded, leads numbering marked, oil resistant cable for trailing, L: 3m UL AWM 20236 80°C 30V E63216, CSA AWM 90°C 30V I/II A/B FT1 LL46064
Socket, IRS-U-LRS-S306		Male connector M12, Lumberg RSF 5, 5-leads
Accessories, all devices		- 2x nuts M30 (or 1 clamp on demand)
Accessories, not included		- Fibre optix type VA-1500-2-T-FG-EB3-R
Accessories, not included, only IRS-U-LRS-S306		- Single ended cordset, types RKT5 5-298/xx or RKWTH 5-298/xx, Lumberg
Options		- Cable length: Up to maximum 100m, on request - IRS-U-LRA-S306: Male connector M12: Lumberg RSF-5, 5 pins
Function and LED indication	<div>  <p>Proximity switch with fibre optic</p> <p>The brightness of the LED and the output level, is dependant on the quantity of the detected light.</p> </div> <div>  <p>Proximity switch with fibre optic</p> <p>No light detected. Output=OFF, LED=OFF</p> </div>	
Wiring and connection		



## Operating manual, EC-/EU-declaration of conformity:

### General mounting prescriptions

It is necessary to take into consideration all the valid international and national rules and regulations. Do not exceed the maximum ratings. The maximum input voltage  $U_m=30VDC$  must not be exceeded. The electrical connections must be exactly as shown in the connection diagram. The local equipotential bonding have to be done. The protective earth (PE) is solid connected with the housing. The cable have to be installed and protected against damages. The cable with termination fittings, or in cable tray systems and installed in a manner to avoid tensile stress at the termination fittings. Additional optical lenses are not allowed. The cable shield should be connected to the protection earth, large-surfaced. Connection cables must not be installed parallel to high voltage cables.

### Function

Corresponding to the quantity of detected light, the output of the sensor generates an analog output signal. With the fibre optics, the sensor is applicable for measurement the reflection quality of reflections discs or as relative distance detection device or similar applications. The output generates a voltage signal from 0.03V to 10.5VDC or a current loop, 0.06 or 4mA to 21mA. Please check the permissible load of the output. For best measurement results the sensor can be adjusted by the potentiometer.

### Fibre optics

The sensor can only be used with fibre optics, types VA-1500-2-T-FG-EB3-R.

### Nominal range

The sensor is preadjusted with the special fibra optic, type VA-1500-2-T-FG-EB3-R, on a test disc with 10VDC at the output.

The real output level is depended on the color,

the form, the dimension, and the surface finish of the object.

### Maintenance

Protect the sensors 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.

### General safety instructions

The sensor must not be used for faul-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.

The sensors are conform to the following standards:

EN 60529:2014, EN 60950-1:2006; EN 61000-4-2 to EN 61000-4-6, EN 61000-6-1/-2, EN 61000-6-4, Machine directive: 2006/42/EC, EMC directive: 2014/30/EU, 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-/EU-Declaration of conformity:

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

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