

RR-2A Reflex-Lightbarrier with analog output



- Robust and interference-proof reflex-lightbarrier
- With analog voltage output

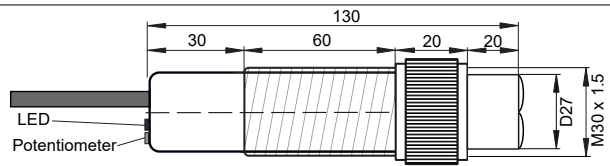
Technical Data	RR-2A	
Output Signal Range	0.1 VDC - 10.5 VDC (Ripple: 40mV)	
Light Source	Visible LED, red, 630nm	
Optical aperture angle	approx. 10°	
Response time	8ms	
Output type	PNP, output impedance approx. 25Ω, RL: 2kΩ bis 1MΩ	
Nominal output value	5V, with a distance of 3m, with a reflector D=83mm (adjustable)	
Supply voltage, Ue	24VDC ±15%	
Absolute maximum supply voltage, Um	30VDC	
Current consumption	50mA	
Power consumption	max. 1.38W	
Housing	M30, brass Ms 58, nickel plated	
Enclosure rating	IP 54	
Ambient working temperature range, T _{amb}	0°C up to +60°C	
EMC, shock and vibration resistance	Vibration: 30g at 20Hz to 2kHz. Shock: 50g in each direction (X, Y, Z).	
Connection cable	TPU insulation, AWM 20236, 3+PE x 0.5mm ² , halogen free, shielded, leads numbering marked, oil resistant cable for trailing, length: 3mm	
Accessories	Included <ul style="list-style-type: none"> • 2x nuts M30. (Optional 1x clamp) 	Optional <ul style="list-style-type: none"> • Reflector D=83mm, other reflectors on request • Connection cable with plug Lumberg M12, RKTS 5-298/xx (straight), RKWTH 5-298/xx (angled)

Options

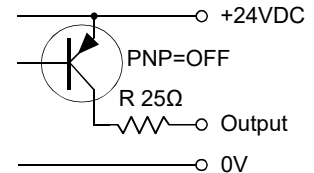
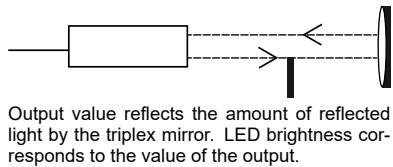
RR-2A-I4: With current output 4mA up to 20mA
 RR-2A S144: Output-Voltagerange: +0.03V up to +10.5V
 RR-2A S099: M12 Plug: Lumberg RSF 5, 5 pins

Wiring and Dimensions

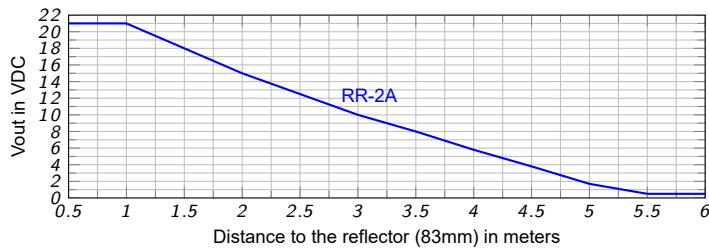
1	24VDC ±15%
2	0V
3	Output
yellow-green	PE



Function and wiring



Output signal
 (Detected on triplex mirror D=83mm) Potentiometer at maximum position



RR-2A_e1/2021-10-13/MP

Operating Manual / EU-declaration of conformity

General installation prescriptions

Since the aperture angle of the sensor is relatively small, the sensor and the associated triplex mirror must be mounted in a vibration-free and stable manner. 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 protection earth, large-surfaced. Do not exceed the maximum ratings. Connection cables must not be installed parallel to high voltage cables.

Function

The sensor can only be used with a reflector (triplex mirror), since only 2-fold refracted light beams are detected. If light reflected by the reflector is detected, the output shows an analog output signal corresponding to the amount of incident light, 0VDC to 10VDC or 0mA to 20mA (with optional current output). The brightness of the LED also corresponds to the amount of received light. The working distance or sensitivity of the sensor can be adjusted with the potentiometer.

Startup

- Mount the sensor and reflector.
- Adjust the potentiometer so that the analog output reaches approximately the middle of the output range. (5VDC / 10mA)

General safety

The sensor must not be used for Accident-Prevention! In worst case the output can change to any state! When installing and operating the product, it is necessary to take into consideration all relevant international and other national regulations.

Safety information about light sources

WARNING! Do not look into the light source, a direct look into the light source can lead to eye damage.

Maintenance

No special maintenance is required.

Protect the product and any optical ports (if applicable) from pollution. Clean with **non-aggressive** solvents only. Strong solvents may damage certain fibre optics. The equipment must only be repaired or serviced by the manufacturer.

General notes and 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.

EU-Declaration of Conformity

The product meets the requirements of the following standards and directives:

EN 60529, IEC 61000-4-2 to IEC 61000-4-6, Machine directive 2006/42/EC, EMC directive 2014/30/EU, RoHS directive 2011/65/EU

Pablo Ledergerber, Matrix Elektronik AG, is authorized to generation of documentation.

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:

Ehrendingen, 13.10.2021



Pablo Ledergerber, Matrix Elektronik AG