

EDM5-P/122

Distance sensor

EDM5-P/122

with terminal compartment

CE



- ◆ Analogue output 4 mA ... 20 mA
- ◆ Operating distance adjustable
- ◆ Pre-fault indication and output
- ◆ Not sensitive to ambient light
- ◆ No reflector required

General specifications

Light source	LED
Approvals	CE
Measurement range	30 ... 5000 mm
Reference target	Grey card 18 % (grey) ... 90 % (white) reflection, 200 mm x 200 mm
Light type	IR-light 880 nm
Diameter of the light spot	100 mm at a distance of 5000 mm
Filter	IR-filter
Ambient light limit	≤ 13000 Lux sun light ≤ 10000 Lux halogen light
Temperature influence	≤ 7 mm/K

Indicators/operating means

Operating display	LED green
Function display	LED yellow: switching state LED red: stability control (2 Hz flashing)
Operating elements	Adjuster for switch point - 2 x switch point (rough/fine)

Electrical specifications

Operating voltage	15 ... 30 V DC
Ripple	10 %
No-load supply current I_0	≤ 150 mA at $U_B = 10$ ≤ 65 mA at $U_B = 30$ V

Output

Output of the pre-fault indication	1 switch output pnp, max. 10 mA , short-circuit/overload protected
Switching type	light ON
Signal output	1 pnp, antivalent, short-circuit proof, protected against reverse polarity
Switching current	max. 100 mA
Measurement output	1 analogue output 4 ... 20 mA, short-circuit/overload protected
Deviation of the characteristic curve	± 5 % by 90 % reflection (white) ± 10 % by 18 % reflection (grey)
Repeat accuracy	Analogue output: ≤ 5 % of the measurement range
Voltage drop U_d	≤ 2,5 V
Switching frequency f	switch output E2: ≤ 10 Hz
Trip value f_{max}	Analogue output: 20 Hz

Standard conformity

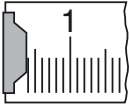
Standards	EN 60947-5-2
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Ambient conditions

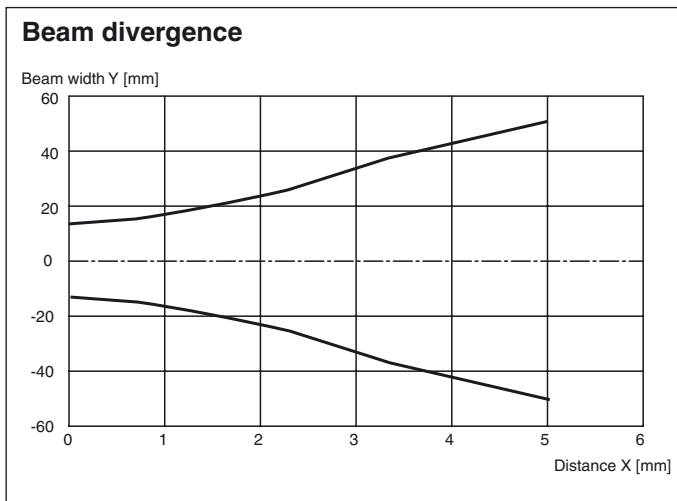
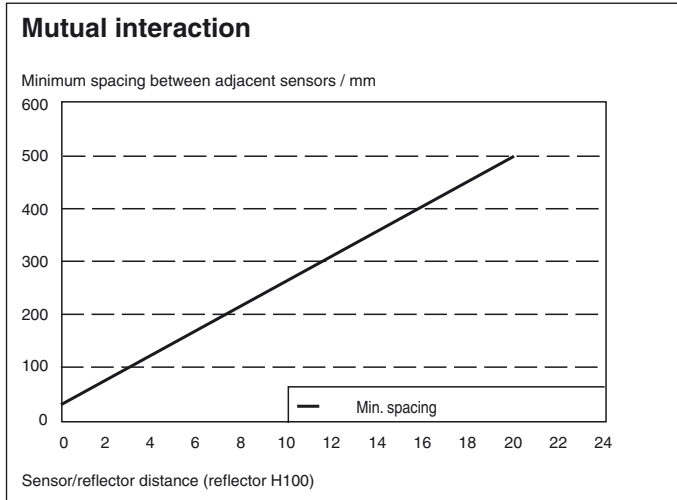
Ambient temperature	0 ... 50 °C (273 ... 323 K)
Storage temperature	-25 ... 70 °C (248 ... 343 K)

Mechanical specifications

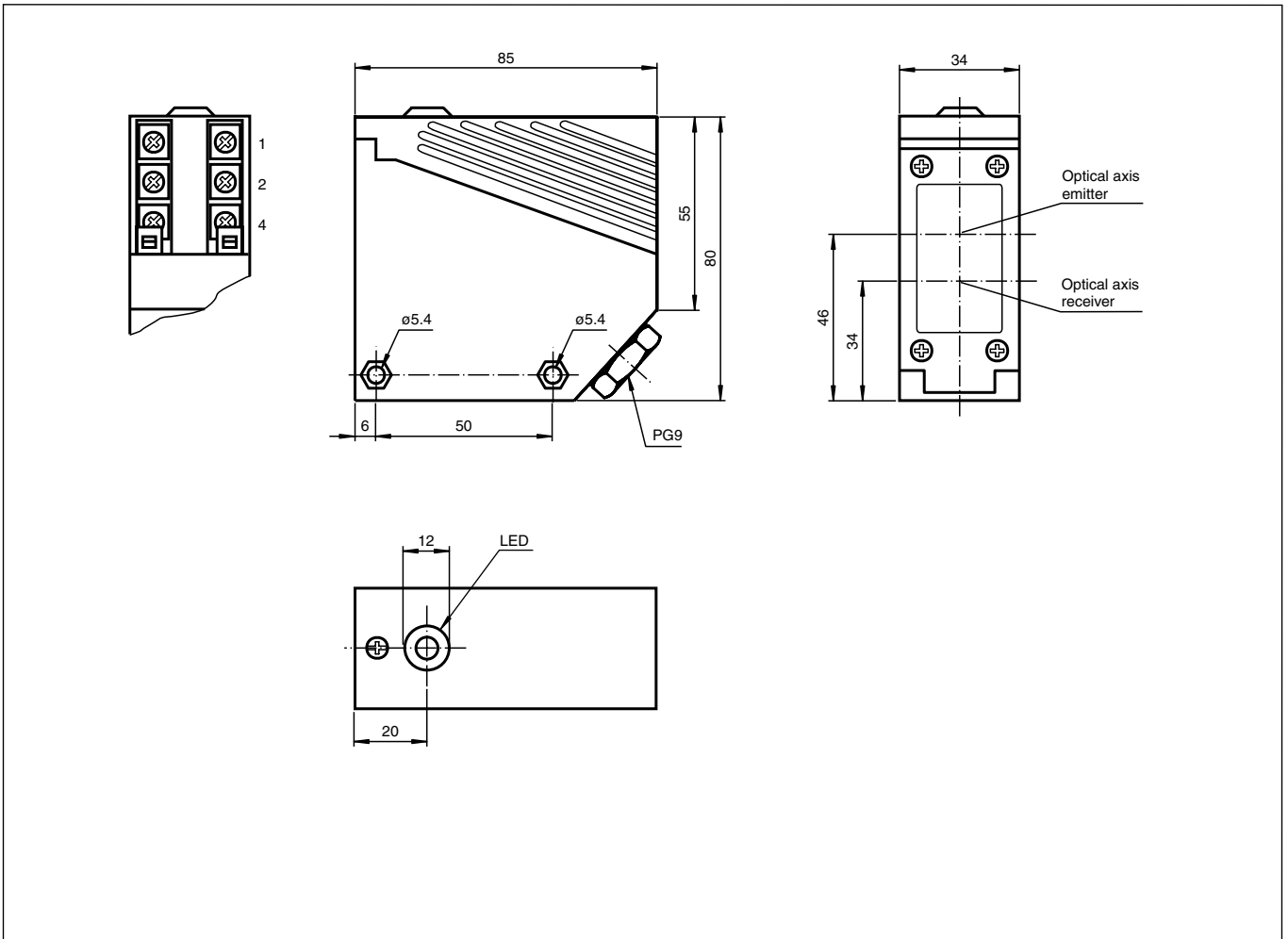
Protection degree	IP64 according to EN 60529
Connection	terminal compartment PG9, ≤ 2.5 mm ²
Material	
Housing	PMMA
Optical face	PMMA
Mass	200 g



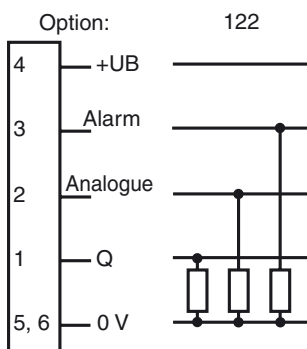
Curves/Diagrams



Dimensions



Electrical connection



○ = light on, ● = dark on

Additional information

Intended use:

The distance sensor works according to the principle of phase correlation. The device contains a transmitter and receiver in a housing. The light from the sender is beamed back to the transmitter by a reflector or object. The distance is determined based on the resulting phase shift.

Mounting instructions:

The sensors can be fastened directly in place with pass-through drill holes or a support bracket (the latter is not included with delivery).

The surface underneath must be flat to prevent the housing from moving when it is tightened into position. We recommend securing the nut and screw in place with spring washers to prevent the sensor from going out of adjustment.

Adjustment:

Mount a suitable reflector on the target object (applies only to devices that are working with a reflector). After making a rough adjustment of the sensor to the reflector, adjust the sensor by rotating it horizontally and vertically until it is optimally adjusted to the reflector so that the yellow LED is continuously lit. If the alignment is not precise, the red LED will flash.

Check:

If the reception signal deteriorates (accumulated dirt or no longer properly adjusted) and there is insufficient functional reserve, the red LED flashes (2Hz).

Cleaning:

We recommend cleaning the light exit at regular intervals and checking the screw connections and plug-in connections as well.

