

PT430470

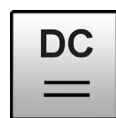
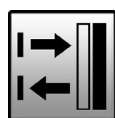
Laser sensors

Diffuse-reflection sensors with background suppression



- / Robust plastic housing
- / LED display for switching state and operating voltage
- / short circuit proof and reverse polarity protected
- / Connection via 4-pin M8-connector

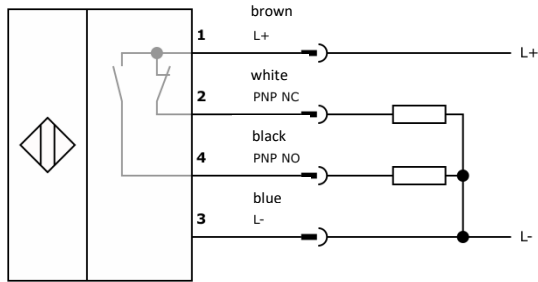
Background suppression by triangulation



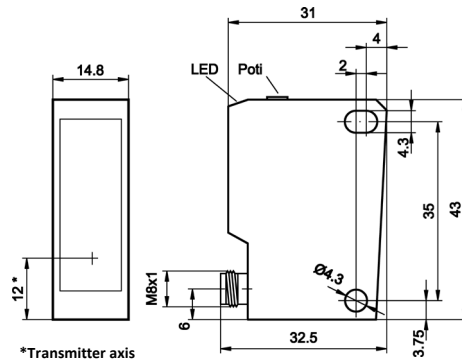
TECHNICAL DATA

Scanning range	20 ... 350mm
Setting	Mechanical, 9 rotations
Transmitting element	Laser diode, red, pulsed
Wavelength	670nm
Operating voltage	10 ... 30 V DC
Current consumption (without load)	50mA
Switching output	PNP, light/dark switching
Output current (max. load)	100mA
Voltage drop (max. load)	2.2V
Switching frequency	1,000Hz
Laser focus	115mm (see scanning range diagram)
Laser class	2
short-circuit proof	+
reverse polarity protected	+
Display (signal)	LED yellow
Display (operation)	LED green
Response time	< 0.5ms
Dimensions	14.8 x 43 x 32.5mm
Material (housing)	Plastic, ASA
Material (front panel)	Plastic, PMMA
Temperature (operation)	-10 ... +50 °C
Protection class (EN 60529)	IP 67
Connection	M8-connector, 4pin
Connection accessories	e.g. VK200375
Mounting accessories (angle)	AO000082
Mounting accessories (Uni holder)	AY000120

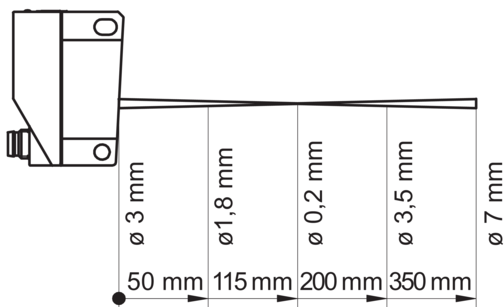
Connection



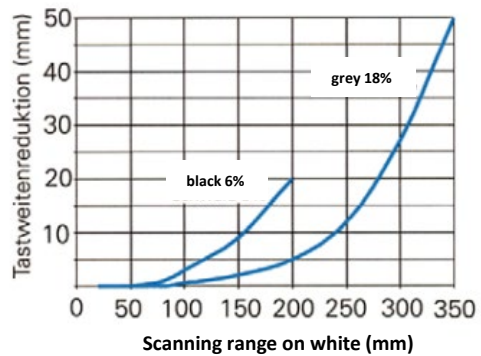
Dimensional drawing



Laser beam path



Scanning range diagram



Safety instructions for laser beam:

The warning labels attached to the device are used to identify the laser device. Alternatively, a warning sticker can be ordered under part number AP000026. In addition, the operating elements of the equipment must be placed as far away as possible from the beam and the employees must be instructed accordingly. Never point the laser beam at an eye! It is recommended not to let the beam run into the emptiness, but to stop it with a mat plate or object.

<p>CAUTION</p> <p>LASER RADIATION</p> <p>DO NOT STARE INTO BEAM</p> <p>LASERDIODE</p> <p>Wavelength: 630 - 660 nm Max. Output: < 1 mW</p> <p>Class 2 LASER Product</p>	<p>Attention laser beam</p> <p>do not look into the beam</p> <p>Laser diode</p> <p>Wavelength 630-380nm Max. output power < 1mW</p> <p>Laser class 2</p>
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Installation and environment

Coverings on the optics impair the function. Please install the device in such a way that, if possible, no dust can accumulate or liquids can get onto the optics. The unit should be accessible for cleaning. From time to time, the optics should be cleaned with a soft cloth moistened with soapy water.

Sensor setting:

1. First, align the PT43 diffuse-reflection sensor with the object to be detected and fasten it temporarily.

2. Setting the background area:

For this purpose, the object to be detected must not be in the beam path! If the background is in the detection range (S_n) of the sensor, the potentiometer is turned clockwise until the yellow signal LED lights up.

If the background is outside the detection range, the potentiometer must be turned clockwise until a "click" is heard. This corresponds to the end stop.

3. Setting the foreground area:

To do this, the object to be detected must be brought back into the beam path. The yellow signal LED must light up. If it does not light up, the object is too far away from the sensor and the distance must be changed accordingly!

Now turn the potentiometer counterclockwise until the signal LED goes out. Since this is a multi-start potentiometer, the revolutions must be counted if necessary.

4. Setting the switching point:

The potentiometer must be set exactly between the determined positions.

5. The diffuse-reflection sensor can now be finally mounted. Make sure that the maximum tightening torque of **1Nm** is not exceeded. Otherwise, distortions of the plastic housing may cause the circuit board to break and the sensor to be irreparably destroyed.

SAFETY INSTRUCTIONS

Before commissioning, please make sure that all safety instructions listed in the product documentation, if applicable, have been observed!

In case of direct impact on personal safety, the use of these products is prohibited.