

## diffuse reflection sensors

**PRODUCT:** diffuse reflection laser, analog

dimensions: 13.4 x 48.2 x 40

- robust metal housing
- high resolution
- slight linearity deviation
- short-circuit and reverse polarity protected
- connection via 4-pin M8-connector

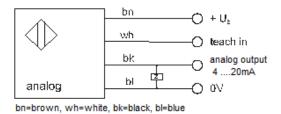


#### **Technical Data**

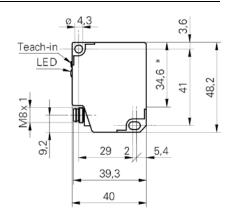
article no.	PT493070
operating voltage	12 28V DC
analog output	4 20mA
load resistance	< 300Ω
measuring range	50 350mm
current consumption (w/o load)	80mA
distance teach-limits	> 5mm
response time	< 0.9ms
transmitter	laser diode, red, 675nm, pulsed
laser protection class	2
resolution	0.01 0.4 mm
linearity deviation	±0.05 1.2mm
beam width	2mm
beam height	4 9mm
display (operating)	LED green
display (alarm / soiling)	LED red / LED red blinking
temperature (operating)	0 +50°C
material (housing)	aluminum
protection class (EN 60529)	IP 67
connection	M8-connector, 4-pin
accessories	universal bracket AY000096
compatible cable socket	2m: <b>VK200375</b> 5m: <b>VK500375</b> 10m: <b>VKA00375</b>

#### Connection

## **Dimensional drawing**













## laser sensors

### diffuse reflection sensor



#### **Operating instructions**

For the devices of this series it is possible to teach a section within the standard measuring range. Thus, the total hub of the analog output can be used over the desired measuring range. The sensor can be taught via the teach button next to the LED as well as via the teach-in wire (white).

### **Teach process**

Within 5 minutes after power on, the measuring range can be determined via the teach button. After the teach process the 5 minutes start again. Then, the teach button is locked. For running another teach-process with the teach button the operating voltage first has to be switched off. The teach-in wire is active all the time.

During the teach process the red LED serves as acknowledgement signal. While it is lighting up, the laser switches off.

#### Procedure:

- 1. Press the button. The red LED has to light up (if not, the 5 minutes expired).
- 2. Hold down the button for approx. 5 seconds until the red LED flashes.
- 3. Release the button.
- 4. Place the object to be measured at the position where the sensor produces 4mA.
- 5. Press the button briefly again, as acknowledgement signal the red LED lights up for approx. 3 sec, afterwards it flashes again.
- 6. Place the object to be measured at the position where the sensor produces 20mA.
- 7. Press the button briefly, as acknowledgement signal the red LED lights up for approx. 3 sec, then it lights off and flashes briefly. The sensor is now ready for operation and works with the new measuring range. By leaving this measurement range, the red LED lights up.

In case that one of the two taught limits was outside the standard measuring range or the distance between both limits was too small, the red LED flashes instead the 2. acknowledgement signal for approx. 5 sec. The new settings are not valid! Then the device is also ready for operation, but works with the previous measuring range. The teach process has to be repeated.

If you like to teach the measuring range via the teach-in wire, proceed in the same sequence. Instead of pressing the button, connect the white wire with the operating voltage. The teach-in wire is active all the time.

Note: After the teach process the teach-in wire should be connected to the 0V-potential to avoid interferences.

### How to reset to the standard measuring range

If you like to reset the sensor to the factory settings via the teach button, it is only possible within 5 minutes after power-on or after the teach-process. Proceed as follows:

- 1. Press the button and hold it down. The red LED lights up for approx. 5 sec, then it flashes.
- 2. Don't release the button. After another 10 sec. the LED starts flashing rapidly.
- 3. Release the button. The standard measuring range is now programmed again.

If you like to reset the device to the standard measuring range via the teach-in-wire, proceed in the same sequence. Instead of pressing the button connect the white wire with the operating voltage. The teach-in wire is active all the time.

Attention:

To avoid measurement errors due to temperature the device should be switched on approx. 10 ... 15 minutes before the first measuring!



LASER RADIATION
DO NOT STARE INTO BEAM
Wavelength: 620...680nm
Max. av. Output < 1mW
IEC 60825-1, Ed. 2, 2007
CLASS 2 LASER PRODUCT

Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser notice No. 50, dated June 24, 2007



ipf electronic gmbh Ka

Kalver Str. 25 - 27 58515 Lüdenscheid - Germany

Tel +49 (0) 2351/9365-0 Fax +49 (0) 2351/9365-19 www.ipf-electronic.com info@ipf-electronic.com Subject to alteration! Version: July 2014



# **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Photoelectric Sensors category:

Click to view products by IPF ELECTRONIC manufacturer:

Other Similar products are found below:

7442AD2X5FRX EX-19B-LP EX-19SB-PN 7443AR0X5FRX 7452AD4D4NNX 7694ADE04DS2X FE7C-FRC6S-M FX-305 PM-R24-R
Q45VR2FPQ 13104RQD07 E3JUXM4MN E3L2DC4 E3S3LE21 E3SCT11M1J03M E3SDS20E21 E3VDS70C43S E3XNM16 BR23P
HOA6563-001 OJ-3307-30N8 OS-311A-30 P32013 P34036 P43004 P60001 PB10CNT15PO S14132 935286-000 S52101 S56258 FDSN500 FE7B-FDRB6-M SU-79 T36342 T40300 T60001 PD60CNX20BP FX-302-HY FZS PM-T64W PZ2-51P CX-491-P-J CYNUTX10
UZB802 UZB803 UZFRG1 UZFRG4 UZFRT4 UZFTT8