

diff. reflection with background suppression

dimensions **M8x1**

sensing range 5 ... 150mm



- ✓ background suppression
- ✓ time-of-flight measuring method
- ✓ infrared laser, laser protection class 1
- ✓ adjustment via teach-In
- ✓ push-pull switching output
- ✓ window function programmable
- ✓ short-circuit and reverse polarity protected
- ✓ LED-display
- ✓ M12-connector, 4-pin

diffuse reflection laser sensor with background suppression



description

With this new device ipf electronic presents for the first time an extremely compact optical diffuse reflection sensor with background suppression that is able to detect objects completely independent of their color.

The background suppression works according to the so-called "time-of-flight" principle (TOF), a transit time method used for distance measurement. With this method, the distance of an object is determined by measuring the time-of-flight of a light pulse that is emitted by a sensor transmitter, reflected by the detected object and then finally captured by the sensor receiver.

The range, or rather the switching distance, of this compact diffuse reflection sensor is therefore fully independent of the reflective properties of the object surface that is to be detected.

The electrical connection is made via a 4-pin M12-cable connector with 300mm length. The output stage and the LED are integrated in the cable connector.

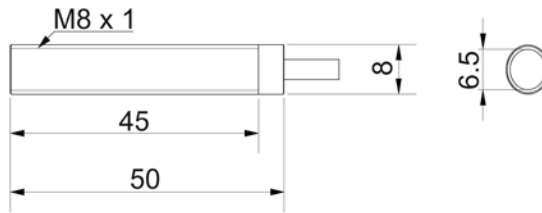
To avoid EMC-interferences, a shielded cable socket (e.g. VK205325) has to be used. The shield has to be connected to earth or machine ground over a large area. During normal operation, the teach-input has to be connected to 0V.

article-no.
operating range
connection

PT080320

5 ... 150mm

M12-cable connector, 4-pin



TECHNICAL DATA

sensing range
output signal

5 ... 150mm

push-pull, light-on / darl-on mode, no / nc

operating voltage
output current (max. load)
transmitting element
laser protection class
switching frequency

10 ... 30V DC

100mA

laser diode, infrared light

1

25Hz

display
settings
short-circuit protection
reverse polarity protection

LED yellow

teach-in

+

+

dimensions
length (thread / total)
material (housing)
material (front screen)
protection class (EN 60529)
temperature (operating)

M8x1

45mm / 50mm

VA 1.4305

lux acryl 2H

IP65

-10 ... +60°C

connection
connection accessories

M12-cable connector, 4-pin

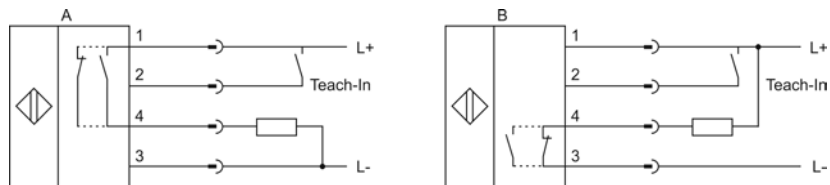
e.g. **VK205325** (cable socket M12 shielded)

AV000114 (teach-in adapter)

mounting accessories (universal holder)

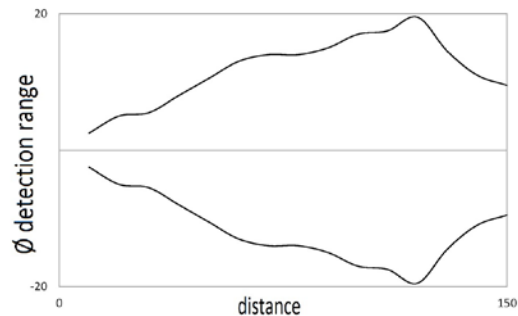
AY000115

connection



colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)
functions: 1 = L+, 2 = teach-in, 3 = L-, 4 = push-pull

beam path:



Warning:
Never use these articles in applications where the safety of a person depends on their functionality.