

## diff. reflection with background suppression

dimensions	<b>M12x1</b>
sensing range	20 ... 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 sensors 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 sensors operate with infrared laser light of laser protection class 1.

The electrical connection is made via a 4-pin M12-connector. To avoid EMC-interferences a shielded cable socket (e.g. VK205325) has to be used.

article-no.  
operating range  
connection

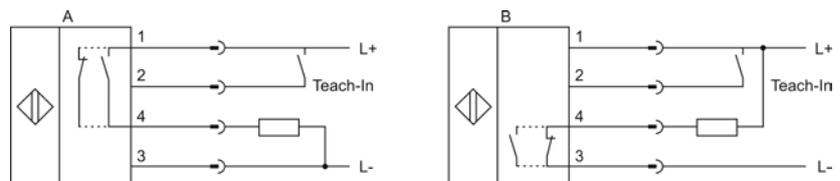
**PT120320**  
**20 ... 150mm**  
**M12-connector, 4-pin**



**TECHNICAL DATA**

sensing range	20... 150mm
output signal	push-pull, light on- / dark-on mode, no / nc
operating voltage	10 ... 30V DC
output current (max. load)	100mA
transmitting element	laser diode, infrared light
laser protection class	1
switching frequency	25Hz
display	LED yellow
adjustment	teach - in
short-circuit protection	+
reverse polarity protection	+
dimensions	M12x1
length (thread / total)	45mm / 72mm
material (housing)	VA 1.4305
material (front screen)	lux acryl 2H
protection class (EN 60529)	IP65
temperature (operating)	-10 ... +60°C
connection	M12-connector, 4-pin
connection accessories	e.g. <b>VK205325</b> (cable socket M12 shielded) <b>AV000114</b> (teach-in-adaptor)
mounting accessories (universal holder)	<b>AY000115</b>

**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

**Warning:**

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