

PS180024 / PE180424

Through-beam sensor

Installation

Install the transmitter and receiver so that both devices are in one level and the object to be detected interrupts the light beam. It can be fixed, for example, in a plastic or metal plate with a through hole $\varnothing > 18\text{mm}$ using the nuts (SW 24) supplied. The maximum tightening torque is 22Nm. Alternatively, our quick clips **AY000051** are available.

Setting

With the installed potentiometer on the receiver, the sensitivity and thus the range (distance between transmitter and receiver) can be changed. Always set the potentiometer to the right stop.

When the light beam is interrupted, the switching output is activated, and the yellow switching status LED is on. If you notice that the receiver does not switch safely (e.g. with a very small object), reduce the sensitivity by turning the potentiometer to the left until a safe switching behaviour (see "LED display") is achieved.

Note: Always turn the potentiometer slowly. If the device is pushed too hard against the end stops, it can be irreparably damaged.

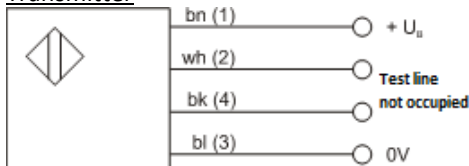
The transmitter has a test line. If the white line (PIN 2) is connected to the brown line (PIN 1 / +UB), the transmitter diode will be switched off. At the same time, the switching output of the receiver must activate, and the yellow LED must be on. If this is not the case, either the receiver is defective, or it is influenced by very strong extraneous light. During normal operation, the test line can remain open or be connected to the blue line (PIN 3/ GND/ 0V).

LED display:

There is a yellow and a green LED on the receiver. The yellow LED signals that the switching output is active. The green LED indicates that there is a safe switching performance. It should be on in both the non-switched and switched conditions.

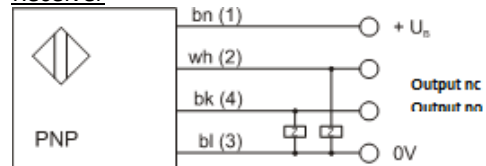
Electrical connection

Transmitter



bn=brown wh=white bk=black bl=blue
clamp designation of the cable socket in brackets

Receiver



bn=brown wh=white bk=black bl=blue
clamp description of the cable socket in brackets

Technical data

	PS180024	PE180424
Sensor type	Transmitter	Receiver
Range	0 ... 60m	
Operating voltage U_B	10 ... 30V DC	
Switching output	----	pnp, antivalent (no/nc)
Current consumption without load	$\leq 30\text{mA}$	$\leq 35\text{mA}$
Max. Switching current	----	100mA
Max. Switching frequency	----	1.5kHz
Sensitivity setting	----	Potentiometer 270°
Display	LED green: U_B available	LED yellow: Output switched LED green: Switching status stable
Transmitting element	Laser red light, 650nm, Laser protection class 1	----
Design / Housing material	Threaded sleeve M18 x 1 / Brass chrome plated	
Lens material	PMMA	
Protection class	IP 67 (EN 60529)	
Ambient temperatur	-10 ... +50°C	
Storage temperatur	-25 ... +70°C	
Elektrical connection	M12-connection 4-pole	
Suitable cable box	2m: VK200321 / 5m: VK500321 / 10m: VKA00321	



The use of these devices in applications where the safety of persons depends on their function is not permitted!