

Through-beam ultrasonic barrier UBE500-18GK-SE2-V1

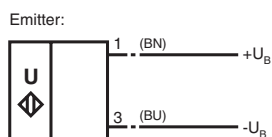
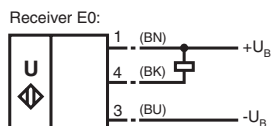
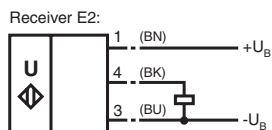


Features

- High switching frequency
- Small, compact design
- Plastic housing
- Suited for applications for detection and counting of transparent objects (e.g. bottles and plastic-wrapping)
- Emitter and receiver included in the delivery package

Electrical connection

Standard symbol / Connection:

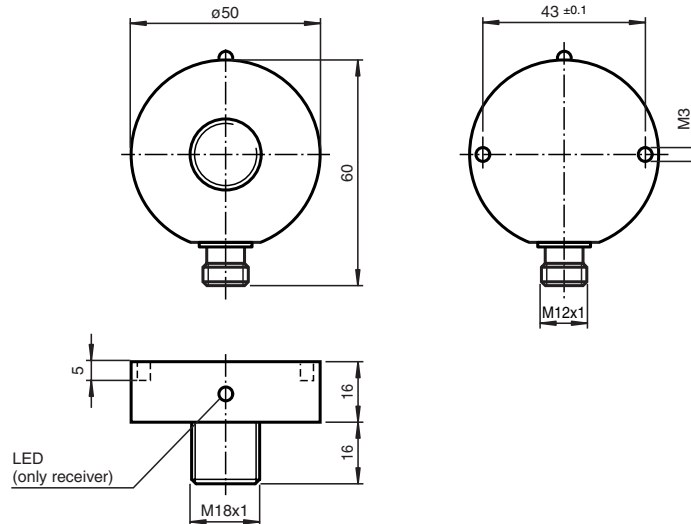


Core colours in accordance with EN 60947-5-2.

Connector V1



Dimensions



Technical data

General specifications

Sensing range 0 ... 500 mm , distance emitter-receiver 15 mm ... 500 mm
Transducer frequency 400 kHz

Indicators/operating means

LED yellow indication of the switching state (receiver)

Electrical specifications

Operating voltage 18 ... 30 V DC , ripple 10 %_{SS}
No-load supply current I_0 20 mA receiver
25 mA emitter

Output

Output type 1 switch output E2, pnp NO
Rated operational current I_e 200 mA
Voltage drop U_d ≤ 1,5 V
Switching frequency f 100 Hz

Standard conformity

Standards EN 60947-5-2

Ambient conditions

Ambient temperature 0 ... 60 °C (273 ... 333 K)
Storage temperature -40 ... 85 °C (233 ... 358 K)

Mechanical specifications

Protection degree IP65
Connection V1 connector (M12 x 1), 4-pin
Material Polyamide (PA)
Mass 50 g

Function

A through-beam ultrasonic barrier always consists of a single emitter and a single receiver. The function of a through-beam ultrasonic barrier is based in the interruption of the sound transmission to the receiver by the object to be detected. The emitter sends an ultrasonic signal that is evaluated by the receiver. If the signal is interrupted or muted by the object to be detected, the receiver switches. No electrical connections are required between the emitter and receiver. The function of through-beam ultrasonic barriers is not dependent on the position of their installation. We recommend, however, to install the emitter below in the case of vertical installations to prevent the accumulation of dust particles.

Installation tolerances

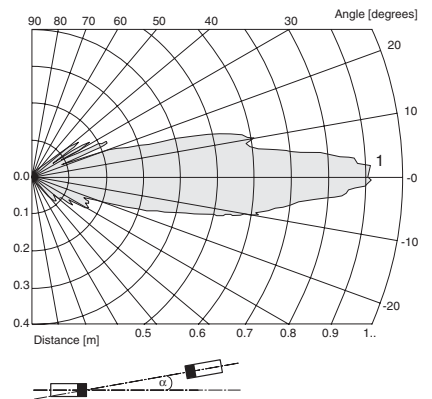
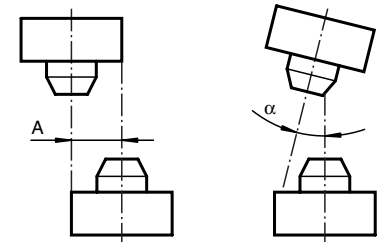
The installation tolerances of the central axes of the emitter and receiver may not exceed the values specified in the illustration.

Detection of thin foils

For the detection of thin foils (< 0.1 mm), install the through-beam ultrasonic barrier at an angle of $\geq 10^\circ$ from perpendicular to the foil.

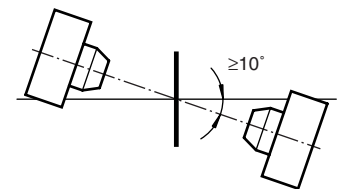
Caution

Mount or replace emitter and receiver only in pairs. Both devices are optimally matched to each other by the manufacturer.

UBE500-18GK-SE2-V1**Characteristic curves/additional information****Characteristic response curves****Mounting/Adjustment**

Parallel displacement
 $A \leq 8 \text{ mm}$

Angle displacement
 $\alpha \leq 5^\circ$

Thin foil detection**Accessories****Cable sockets *)**

V1-G-2M-PVC

V1-W-2M-PVC

*) For additional cable sockets see section „Accessories“.