

Through-beam ultrasonic barrier UBE1500-F64-SE0-V3



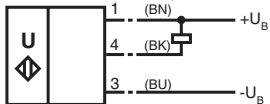
Features

- Reliable detection of transparent materials
- High switching frequency
- Small angle of divergence
- Small, compact design
- Plastic housing
- Emitter and receiver included in the delivery package

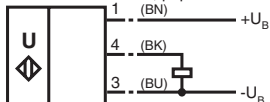
Electrical connection

Standard symbol/Connection:

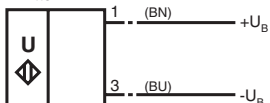
Receiver: version E0, npn



Receiver: version E2, pnp



Emitter:

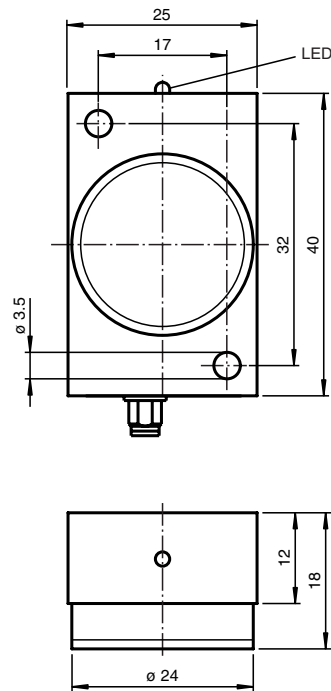


Core colours in accordance with EN 60947-5-2.

Connector V3



Dimensions



Technical data

General specifications

| | |
|----------------------|---|
| Sensing range | 0 ... 1500 mm , distance emitter-receiver 20 mm ... 1500 mm |
| Transducer frequency | 200 kHz |
| Reference target | receiver |

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 12 mA emitter |

Output

| | |
|--|----------------------------|
| Output type | 1 switch output E0, npn NO |
| Rated operational current I _e | 50 mA |
| Voltage drop U _d | ≤ 0,5 V |
| Switching frequency f | 120 Hz |
| Switch-on delay t _{on} | < 5 ms |

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 | IP54 |
| Connection | V3 connector (M8 x 1), 3 pin |
| Material | |
| Housing | PA 6.6 |
| Mass | 80 g per device |

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.

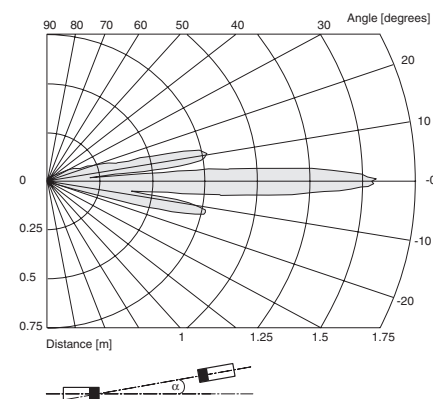
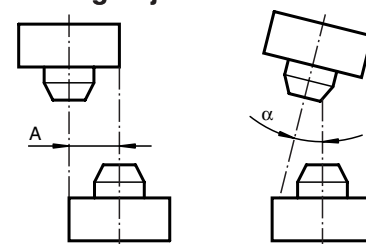
Caution

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

Accessories**Mating connectors**

V3-GM-5M-PUR
V3-WM-2M-PUR

For further information refer to chapter „Accessories“.

UBE1500-F64-SE0-V3**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