Through-beam ultrasonic barrier UBE4000-30GM-SA2-V15



Features

- · Reliable detection of transparent materials
- · High switching frequency
- · Small angle of divergence
- Protective functions
- · Emitter and receiver included in the delivery package
- · Adjustable acoustic power
- · Adjustable switch-on delay

Electrical connection

(BN)

n.c.

(BU)

ЪN.O.

2 (WH)

4 (BK)

5

+UB

-U_R

N.C.

Standard symbol/Connection:

(version A2, pnp)

Receiver:

U

 Φ

Dimensions:











CE

Technical data

General specifications Sensing range Through-beam mode Transducer frequency Reference target Indicators/operating means LED green

LED yellow Electrical specifications

Operating voltage No-load supply current I0

Output

Output type Rated operational current I_e Voltage drop Ud Switching frequency f Switch-on delay ton Standard conformity Standards

Ambient conditions

Ambient temperature Storage temperature Mechanical specifications Protection degree Connection Material Housing Mass

0 ... 4000 mm . distance emitter-receiver 500 mm ... 4000 mm Single path ultrasonic switch 85 kHz receiver

alignment aid OFF: no ultrasonic signal flashing: uncertain area ON: positive reception switching state

18 ... 30 V DC , ripple 10 $\%_{SS}$ 35 mA emitter 25 mA receiver

2 switch outputs pnp, normally open/closed (complementary) 200 mA \leq 2,5 V \leq 15 Hz 100 ... 3000 ms

EN 60947-5-2 C-UL listed: 57M3, IND CONT. EQ., "Powered by Class 2 Power Source"

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

IP65 connector V15 (M12 x 1), 5 pin

brass, nickel-plated, plastic components PBT 160 g each sensor

Emitter



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

Connector V15



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Printed in Germany

Model number

Description of the sensor functions

Remote potentiometer

The distance range of the through-beam ultrasonic barrier can be adjusted with the potentiometer integrated in the emitter, or via a remote potentiometer connected to the emitter.

The remote potentiometer simplifies the adjustment of the distance range if the sensors are installed in an inaccessible location. A 10 k Ω /0.3 W potentiometer serves as the remote potentiometer. The connection is realised using the plug connector pins 2 and 4 of the emitter (see: Electrical Connection).

The following distance ranges can be set using the remote potentiometer:

Adjustment of the internal distance regulator	Distance range adjustable via remote potenti- ometer
Minimum switching point	0 m 2 m
Maximum switching point	2 m 4 m

When operating without a remote potentiometer, the plug connector pins 2 and 4 must be bridged.

Alignment

When adjusting the emitter and receiver, take care to align them as precisely as possible.

Angular tolerance: $\alpha < \pm 2^{\circ}$ maximum offset: s < ± 5 mm

A through-beam ultrasonic barrier consists of a single emitter and a single receiver.

Caution

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

Characteristic curves/additional information

UBE4000-30GM-SA2-V15

Characteristic response curves



Alignment



Accessories

Mounting aid BF30 BF5-30

Remote potentiometer FP100

Cable sockets *) V1-G-2M-PVC V1-W-2M-PVC

*) For additional cable sockets see section "Accessories".