



### Model Number

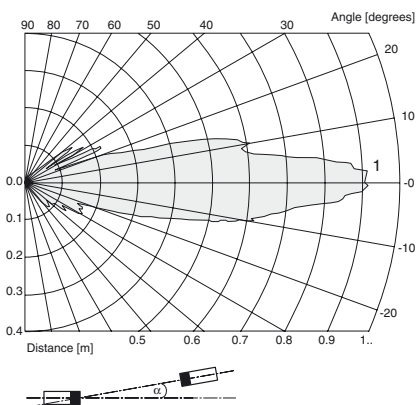
UBE500-18GK-SE2-V1

### Features

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

### Diagrams

#### Characteristic response curves



Release date: 2011-08-12 08:58 Date of issue: 2011-08-12 11:11:09\_eng.xml

### 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 $U_B$	18 ... 30 V DC , ripple 10 % <sub>SS</sub>
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 $U_d$	$\leq 1.5$ V
Switching frequency $f$	100 Hz

#### Ambient conditions

Ambient temperature	0 ... 60 °C (32 ... 140 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

#### Mechanical specifications

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

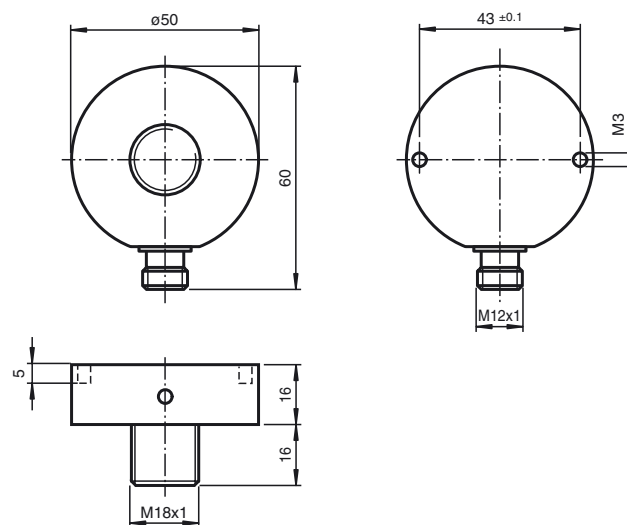
#### Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

#### Approvals and certificates

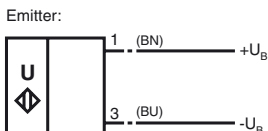
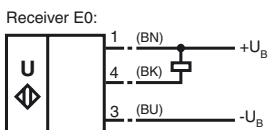
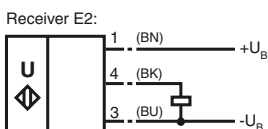
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose

### Dimensions



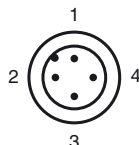
**Electrical Connection**

Standard symbol / Connection:



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

**Pinout**



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

**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**

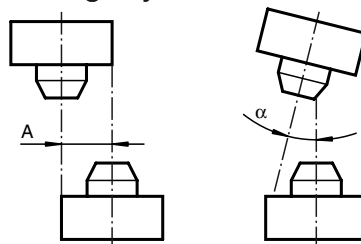
For the detection of thin foils (< 0.1 mm), install the through-beam ultrasonic barrier at an angle of  $\geq 10^\circ$  from perpendicular to the foil.

**Caution**

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

**Additional Information**

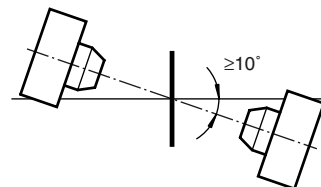
**Mounting/Adjustment**



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

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

**Thin foil detection**



**Accessories**

**V1-G-2M-PVC**

Cable socket, M12, 4-pin, PVC cable

**V1-W-2M-PVC**

Cable socket, M12, 4-pin, PVC cable