

## Ultrasonic emitter UBE15M-F54-H1-V1



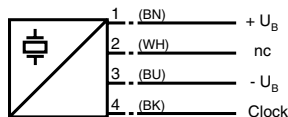
## Features

- Large sensing range
- Large possible lateral distance between emitter and receiver
- Separate evaluation

## Electrical connection

Standard symbol/Connection:

Emitter

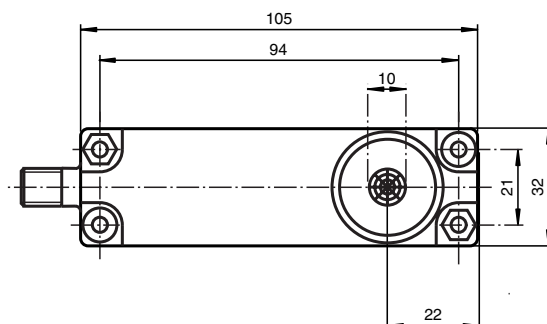


Core colours in accordance with EN 60947-5-2.

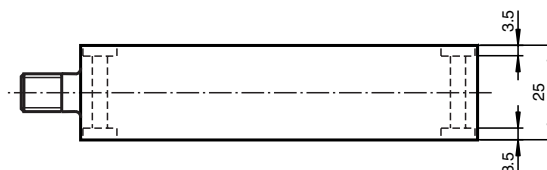
## Connector V1



## Dimensions



Bore hole and countersinking  
for screws/hexagon M4



## Technical data

### General specifications

Sensing range	0 ... 15000 mm , emitter - receiver synchronised
Transducer frequency	approx. 40 kHz
Angle of divergence	$\pm 45^\circ$ at -6 dB
Temperature drift of echo propagation delay	0,2 %/K

### Electrical specifications

Operating voltage	16 ... 30 V DC , ripple 10 % <sub>SS</sub> 8 V DC at less transmitting power
No-load supply current $I_0$	$\leq 10$ mA (typ. 6 mA at $U_B = 24$ V DC)

### Input

Input type	1 pulse input for transmitter pulse, activation through open collector npn < 1.5 V: emitter active, > 3.5 V: emitter inactive
Pulse length	100 $\mu$ s ... 10 ms
Pause length	$\geq 50 \times$ pulse length

### Standard conformity

Standards	Fulfills EMC requirements according to EN 60947-5-2
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### Ambient conditions

Ambient temperature	0 ... 50 °C (273 ... 323 K)
Storage temperature	-40 ... 85 °C (233 ... 358 K)

### Mechanical specifications

Protection degree	IP30
Connection	V1 connector (M12 x 1), 4-pin
Material	PBT
Housing	
Mass	110 g

**Function**

The emitter is part of a complete system consisting of emitter, receiver and controller

Receiver: UBE15M-F54-H2-V1

Controller: UH3-16E4A-K15-R3

In real mode, the transmitter and receiver will not be aligned to each other. This reduces the detection range that can be achieved.

The characteristic response curve to the side illustrates examples of the detection range of the system under the following operating conditions.

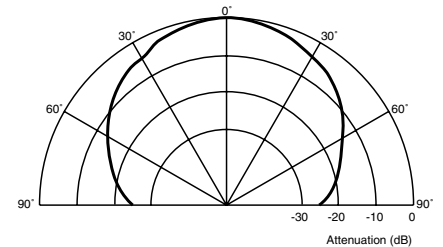
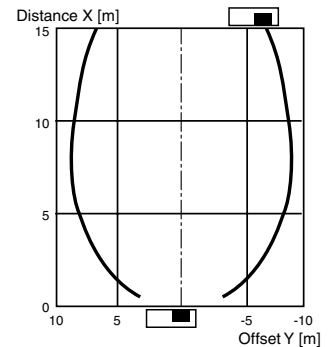
- The transmitter and receiver are arranged so they lie parallel opposite each other. The graph shows the detection range as a function of lateral offset.
- The receiver is arranged vertically downward, while the emitter is arranged in the direction of the receiver. The graph shows the detection range as a function of the angle of incidence.

This makes it possible to evaluate the detection range of the system as a function of the positioning of the transmitter and receiver for conditions that will occur in practical usage.



**Cable sockets with built-in indicator LEDs must not be used to connect this device!**

**UBE15M-F54-H1-V1**

**Characteristic curves/additional information**
**Direction characteristics**

**Characteristic response curve**


Permissible distance (offset) between the optical axis of the emitter and receiver.

**Characteristic response curve**
