

Ultrasonic receiver UBE15M-F54-H2-V1

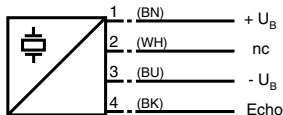


Features

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

Electrical connection

Standard symbol/Connection:
Receiver

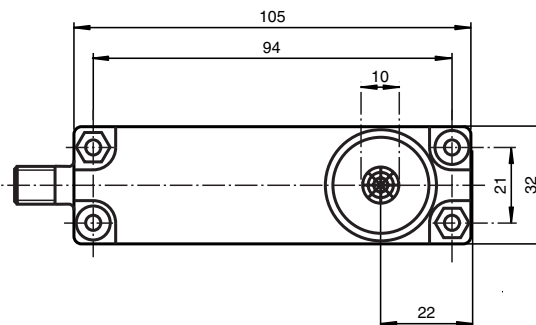


Core colours in accordance with EN 60947-5-2.

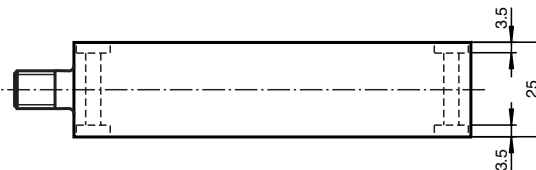
Connector V1



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	± 45 ° at -6 dB
Temperature drift of echo propagation delay	0,2 %/K

Electrical specifications

Operating voltage	10 ... 30 V DC , ripple 10 % _{SS}
No-load supply current I_0	≤ 15 mA (typ. 10 mA at $U_B = 24$ V DC)

Output

Output type	1 pulse output for echo propagation time, open collector NPN, short-circuit proof
0 level (active): $U_{OL} \leq 2$ V, $I_{OL} \leq 15$ mA	
1 level (inactive): $U_{OH} = U_B$ (pull-up R = 330 kOhm)	

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	
Housing	PBT
Mass	110 g

Function

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

Transmitter UBE15M-F54-H1-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.

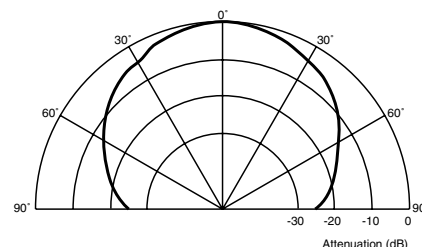
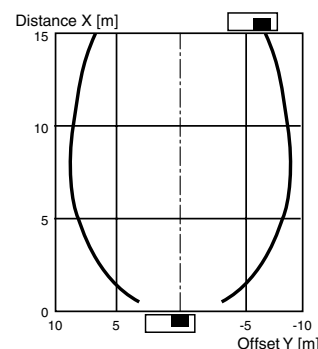
- The transmitter and receiver are arranged so they lie parallel opposite each other. The graph shows the detection range as a function of lateral offset.
- The receiver is arranged vertically downward, while the emitter is arranged in the direction of the receiver. The graph shows the detection range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

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Characteristic curves/additional information
Direction characteristics

Characteristic response curve


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

Characteristic response curve
