







Model Number

UBE800-F77-SE2-V31

Through-beam ultrasonic barrier

Features

- Miniature design
- **Highly visible LEDs for Power ON** and switching state
- **High switching frequency**
- **Program input**
- **Protection degree IP67**

Technical data

General	l specifications	
Sensir	ng range	

Standard target plate see table approx. 300 kHz Transducer frequency

Nominal ratings

Time delay before availability tv ≤ 150 ms Limit data

Permissible cable length

Indicators/operating means LED green Power on (emitter) LED yellow switching state (receiver)

Electrical specifications

Rated operating voltage U_e 24 V DC

20 ... 30 V DC , ripple 10 $\%_{SS}$; 12 ... 20 V DC reduced Operating voltage U_B

max. 300 m

0 ... 800 mm emitter/receiver spacing

sensitivity by 80 % \leq 20 mA

No-load supply current Io Input

1 program input (receiver) Input type Level low level: 0 ... 0.7 V; high level: > 14 V

Input impedance 16 kΩ ≥3s

Pulse length

Output 1 switch output PNP, NO Output type

Rated operating current Ie 200 mA , short-circuit/overload protected

Voltage drop U_d ≤ 2 V Switch-on delay ton ≤ 5 ms Switching frequency 100 Hz ≤ 0.01 mA

Off-state current I_r Ambient conditions

Ambient temperature -25 ... 70 °C (-13 ... 158 °F) -40 ... 85 °C (-40 ... 185 °F) Storage temperature Shock resistance

30~g , 11~ms period Vibration resistance $10 \dots 55 \text{ Hz}$, Amplitude $\pm 1 \text{ mm}$

Mechanical specifications

Connection type M8 x 1 connector, 4-pin

Protection degree IP67

Material Housing Polycarbonate

Transducer epoxy resin/hollow glass sphere mixture; polyurethane foam

Installation position any position Mass Per 10 g max. 0.2 Nm

Tightening torque, fastening screws Compliance with standards and

directives

Standard conformity Standards FN 60947-5-2:2007

IFC 60947-5-2:2007

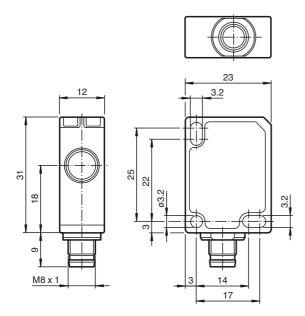
Approvals and certificates

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

CCC approval CCC approval / marking not required for products rated

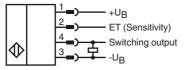


Dimensions

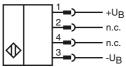


Electrical Connection

Receiver:



Emitter:



Pinout

2



PEPPERL+FUCHS

Wire colors in accordance with EN 60947-5-2

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

Accessories

OMH-ML7-01

Mounting bracket

V31-GM-2M-PVC

Female cordset, M8, 4-pin, PVC cable

V31-WM-2M-PVC

Female cordset, M8, 4-pin, PVC cable

Description of Sensor Function

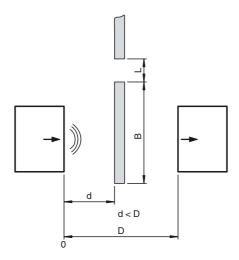
An ultrasonic thru-beam sensor always consists of an ultrasonic emitter and receiver. The working principle of the ultrasonic thru-beam sensor is based on the interruption of the transmission from the emitter to the receiver by the object to be detected (obstacle).

The emitter produces an ultrasonic signal which is evaluated by the receiver. If the signal is damped or broken by the object being detected, the receiver switches state.

No electrical connections are required between the emitter and receiver.

Sensitivity adjustment

The sensitivity is adjusted using the input ET. This can be open or connected using +U_B or -U_B.



ET	Sensitivity	D	B ⁽¹⁾	L ⁽¹⁾
Open	High	≤ 800 mm	≥ 50 mm	≥ 15 mm
-U _B	Medium	<u><</u> 600 mm	≥ 40 mm	≥ 10 mm
+U _B	Low	≤ 400 mm	≥ 30 mm	≥ 5 mm

(1) The specified values for B and L are reference values and refer to the maximum distance D and to objects with a rectangular shape. The shape of the objects can have an effect on the values for B and L.

Safety Note



The use of this device in applications, where the safety of persons depends from the devices function, is not allowed!