



Extract from our online catalogue:

## ews-100/M18/CD Set

Current to: 2023-11-13



Ultrasonic through-beam sensor in different housings

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## HIGHLIGHTS

- › Transmitter and receiver › in miniature cubic or M18 housing
- › Installation-compatible with many light barriers › a true alternative for critical applications
- › Up to 500 Hz switching frequency › for fast sampling

## BASICS

- › 1 switching output in pnp variant
- › Teach-in using a button
- › Working distance between the transmitter and the receiver selectable from 10 to 2,500 mm
- › 20-30 V operating voltage

# Overview

## Ultrasonic through-beam barrier ews

for contact-free detection of objects specially in the most diverse applications e.g. with bottles or plastic foils. The through-beam sensor ews is available as a cuboid miniature housing and a cylindrical M18 housing. The ews family covers a working range of 10 mm to 2,500 mm.

## A through-beam barrier

consists of two constructively-identical units which are operated as a transmitter and a receiver. The two units recognize whether they are intended to work as a transmitter or a receiver via the control input. If pin 2 +UB is activated, this unit functions as a transmitter.



*The functional principle ultrasonic through-beam barrier*

## The functional principle

one through-beam sensor ews, set as transmitter, sends cyclic sound impulses, received by another one, set as receiver. If an object interrupts the pulses between the transmitter and the receiver, the switching output of the receiver is set.

## Teach-in

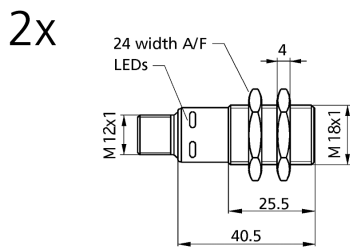
The button on the top of the cubic through-beam barrier ews-15/CD allows for a convenient configuration of the response time and the output function (NOC/NCC) of the receiver. The response time and an off-delay of 6.9 ms can be set. At the through-beam barrier in the M18 housing, response time and output function can be set at Pin 2.

## Two LEDs

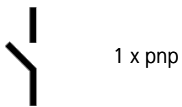
show the operating state and the state of the switching output of the receiver.

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## scale drawing



## detection zone



working range	100 - 2,500 mm
design	cylindrical M18
operating mode	one-way barrier
particularities	receiver for ultrasonic through-beam barrier transmitter for ultrasonic through-beam barrier

## ultrasonic-specific

means of measurement	Transmitter-receiver pulse mode
transducer frequency	200 kHz

## electrical data

operating voltage $U_B$	10 - 30 V d.c., reverse polarity protection
voltage ripple	$\pm 10 \%$
no-load current consumption	as emitter $\leq 50$ mA, as receiver $\leq 25$ mA
type of connection	4-pin M12 initiator plug

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## outputs

output 1	switching output pnp: $I_{\max} = 200 \text{ mA}$ ( $U_B = 2V$ ) NOC/NCC adjustable, short-circuit-proof
switching frequency	200 Hz, with activated filter 50 Hz
response time	5 ms, with activated filter 15 ms
delay prior to availability	< 300 ms

## inputs

input 1	control input Teach-in input
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## housing

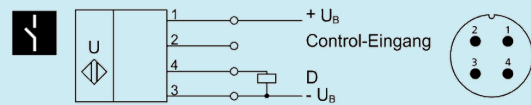
material	ABS
max. tightening torque of nuts	1 Nm
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	2 x 15 g
further versions	single transmitter/receiver

## technical features/characteristics

controls	control input
scope for settings	Teach-in
indicators	LED green (transmitter and receiver: working), LED yellow (only receiver: switch status)
particularities	receiver for ultrasonic through-beam barrier transmitter for ultrasonic through-beam barrier

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## pin assignment



order no.

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