Extract from our online catalogue:

nero-25/CU

Current to: 2023-11-13

Ultrasonic proximity switch nero in M18 plastic sleeve with 4 detection ranges

HIGHLIGHTS

› Variant with 90° angled head

› UL Listed to Canadian and US safety standards

BASICS

› 1 switching output, pnp or npn basis

› Analogue output 4–20 mA or 0–10 V

› 4 detection ranges with a measurement range of 20 mm to 1.3 m

› microsonic Teach-in on pin 2

› 0.2 mm resolution

› 10–30 V operating voltage

Description

nero ultrasonic proximity switches

are available in a M18 plastic sleeve. In addition to the axial beam direction variant, there is also a housing variant with a 90° angled head and radial beam direction.

The ultrasonic proximity switches detect contactless and reliable objects with four detection ranges from 20 mm to 1.3 m.

For the nero sensor family

there are 2 output stages and 4 detection ranges available:

1 switching output with pnp or npn switching technology

1 analogue output 4–20 mA or 0–10 V

Sensors with switching output have three operating modes:

› Single switching point
› Two-way reflective barrier
› Window mode

Teach-in of a single switching point

› Place object to be detected (1) at the desired distance
› Apply +U_B to pin 2 for about 3 seconds
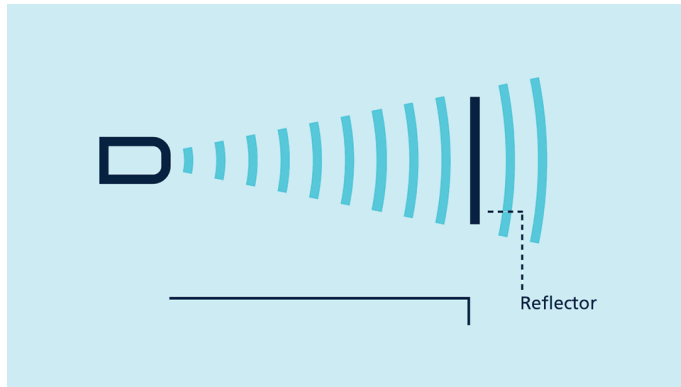› Then apply +U_B to pin 2 again for about 1 second
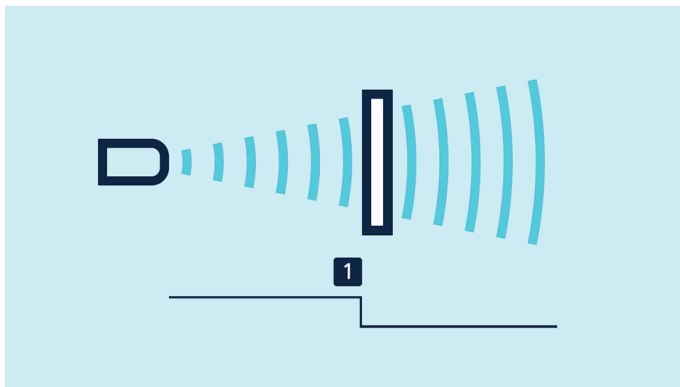
Teach-in of a switching point

Teach-in of a two-way reflective barrier

**microsonic**   nero ultrasonic sensors

with a fixed reflector

› Apply $+U_B$ to pin 2 for about 3 seconds
› Then apply $+U_B$ to pin 2 again for about 10 seconds

Teach-in of a two-way reflective barrier

For configuration of a window

› Place object at the near edge of the window (1)
› Apply $+U_B$ to pin 2 for about 3 seconds
› Then move the object to the far edge of the window (2)
› Then apply $+U_B$ to pin 2 again for about 1 second
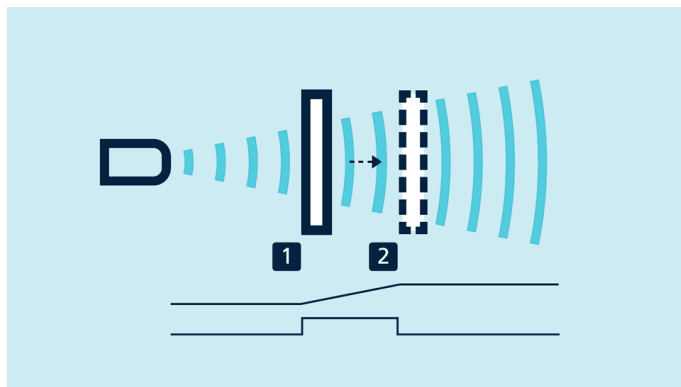
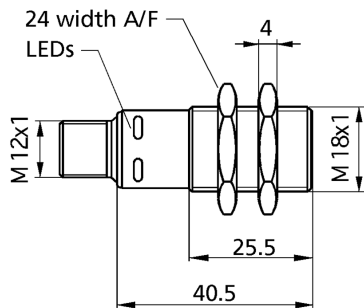*Teach-in of an analogue characteristic or a window with two switching points*

NCC/NOC

and rising/falling analogue characteristic curve can also be set via pin 2.
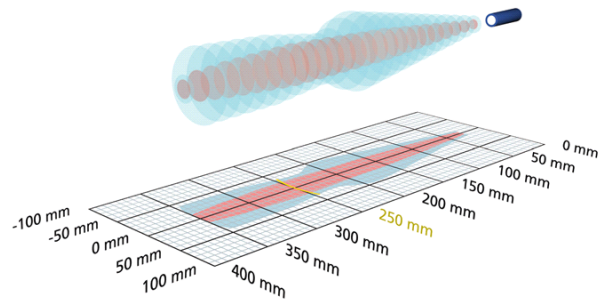
One green and one yellow LED

indicate the state of the output and support microsonic Teach-in.

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scale drawing

24 width A/F
LEDs
M 12x1
M 18x1
4
25.5
40.5

detection zone

0 mm
50 mm
100 mm
150 mm
200 mm
250 mm
300 mm
350 mm
400 mm
-100 mm
-50 mm
0 mm
50 mm
100 mm

1 x analogue 0-10 V

350 mm

measuring range	30 - 350 mm
design	cylindrical M18
operating mode	analogue distance measurements
particularities	UL Listed

ultrasonic-specific

means of measurement	echo propagation time measurement
transducer frequency	320 kHz
blind zone	30 mm
operating range	250 mm
maximum range	350 mm
resolution	0.056 mm to 0.413 mm, depending on the analogue window
reproducibility	± 0.15 %
accuracy	temperature drift 0.17 %/K

electrical data

operating voltage U_B	15 V bis 30 V DC, verpolfest
voltage ripple	± 10 %
no-load current consumption	≤ 40 mA
type of connection	4-pin M12 initiator plug

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outputs

output 1	analogue output voltage: 0-10 V, short-circuit-proof switchable rising/falling
response time	32 ms
delay prior to availability	< 300 ms

inputs

|	
input 1	Teach-in input

housing

material	PBT
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
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	15 g
further versions	90° angular head
further versions	nero-25/WK/CU

technical features/characteristics

temperature compensation	no
controls	control input
scope for settings	Teach-in
Synchronisation	no
multiplex	no
indicators	LED green: working, LED yellow: state of output
particularities	UL Listed

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1	+U$_B$	
2	U | I	
4	R$_L$ Teach-in	
3	-U$_B$	
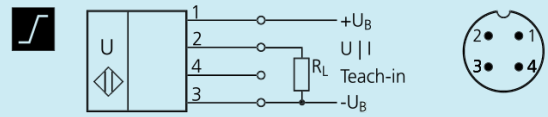
order no.   **nero-25/CU**

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