



extract from our online catalogue:

***nero-15/CI***

current to: 2026-10-10



## **nero**

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

### **Highlights**

#### **Basics**

- › Variant with 90° angled head
- › UL Listed to Canadian and US safety standards
- › 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
- › 0.2 mm resolution
- › 10–30 V operating voltage

## ***nero ultrasonic proximity switches***

are available in a M18 plastic sleeve. The ultrasonic proximity switches detect contactless and reliable objects with four detection ranges from 20 mm to 1.3 m.

### ***Two output stages***

are available for 4 detection ranges:



1 switching output with pnp or npn switching technology



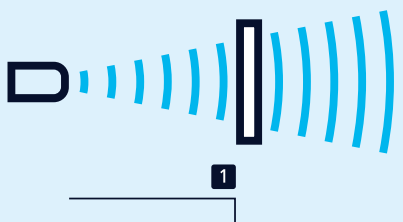
1 analogue output 4–20 mA or 0–10 V

### ***Sensors with switching output have three operating modes:***

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

### ***Teach-in of a single switching point***

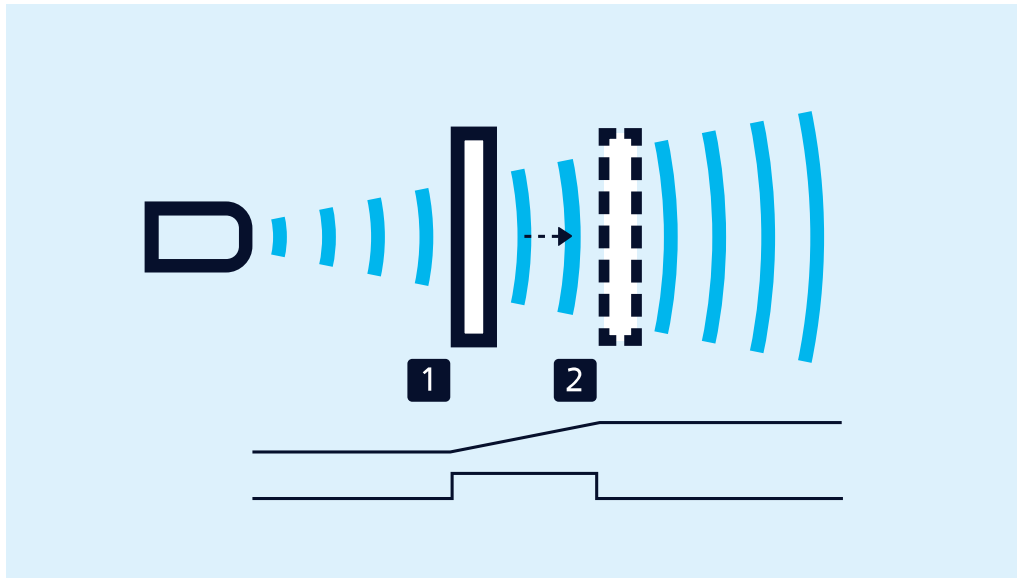
- Place object to be detected (1) at the desired distance
- Apply +U<sub>B</sub> to pin 2 for about 3 seconds
- Then apply +U<sub>B</sub> to pin 2 again for about 1 second



### Teach-in of a two-way reflective barrier

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 an analogue characteristic or a window with two switching points

### 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

### 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.

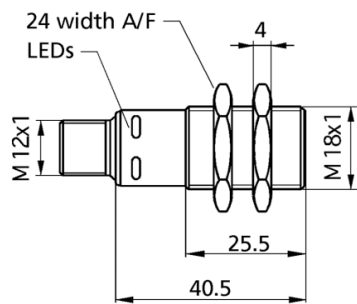
# ***You have special requirements?***

Nothing as simple as that.

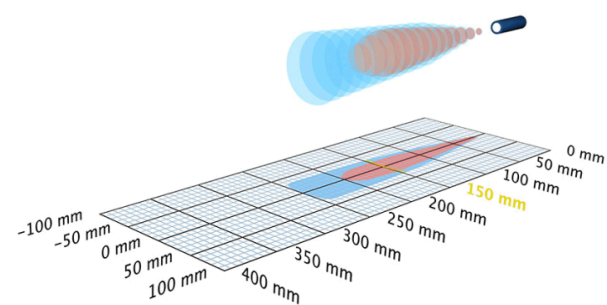
With us, you can easily find an individual solution. Let us talk about your application: +49 231 97 51 51-82.

# nero-15/CI

## scale drawing



## detection zone



 1 x analogue 4-20 mA

 250 mm

|                 |                                |
|-----------------|--------------------------------|
| design          | cylindrical M18                |
| operating mode  | analogue distance measurements |
| particularities | UL Listed                      |

### Ultrasonic-Specific

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| means of measurement | echo propagation time measurement                      |
| transducer frequency | 380 kHz                                                |
| blind zone           | 20 mm                                                  |
| operating range      | 150 mm                                                 |
| max. range           | 250 mm                                                 |
| resolution           | 0.056 mm to 0.297 mm, depending on the analogue window |
| reproducibility      | ± 0.15 %                                               |
| accuracy             | temperature drift 0.17 %/K                             |

### Electrical Data

|                             |                                             |
|-----------------------------|---------------------------------------------|
| operating voltage $U_B$     | 10 - 30 V d.c., reverse polarity protection |
| voltage ripple              | ± 10 %                                      |
| no-load current consumption | ≤ 40 mA                                     |
| type of connection          | 4-pin M12 initiator plug                    |

### outputs

|                             |                                                                  |
|-----------------------------|------------------------------------------------------------------|
| output 1                    | analogue output<br>current: 4-20 mA<br>switchable rising/falling |
| response delay              | 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 |
| 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                | nero-15/WK/CI                                      |
| further versions                | 90° angular head                                   |

**Technical Features/Characteristics**

|                          |                                                 |
|--------------------------|-------------------------------------------------|
| temperature compensation | no                                              |
| controls                 | control input                                   |
| scope for settings       | Teach-in                                        |
| synchronization          | no                                              |
| multiplex                | no                                              |
| indicators               | LED green: working, LED yellow: state of output |

**Accessories**

|                      |                                                                   |
|----------------------|-------------------------------------------------------------------|
| deployable accessory | BF-18<br>KST4A-2/M12<br>KST4A-5/M12<br>KST4G-2/M12<br>KST4G-5/M12 |
|----------------------|-------------------------------------------------------------------|

**pin assignment**

