



AFO Proximity Sensors (0 ... +200 °C)

Inductive AFO Proximity Sensors are tough, insensitive and resistant to temperatures of up to +200 °C.

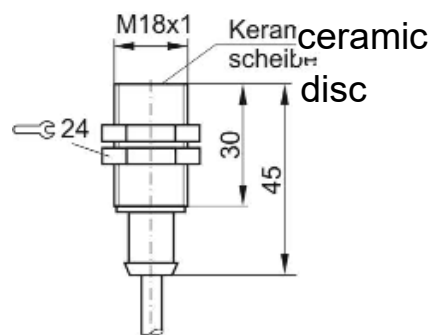
Further advantages are the small size and the non-contact operation free from any wear and tear. They allow high reliability when used with high temperatures and the setting of the switching distance when connected to an evaluation device.

Proximity Sensors are resistant to oil and water and are working non-reactive however small the parts to be detected are. Next to ferrous materials, AFO Proximity Sensors detect also a lot of other metals. They can be mounted flush in metals, and short response times guarantee that they are working reliably however fast the movements are.

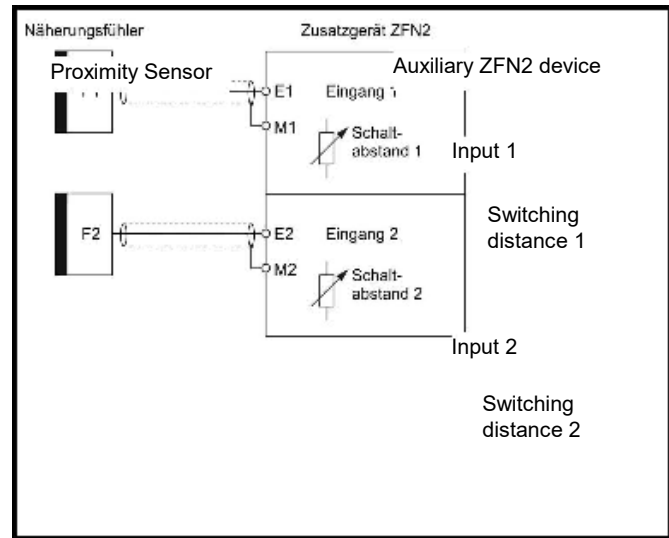
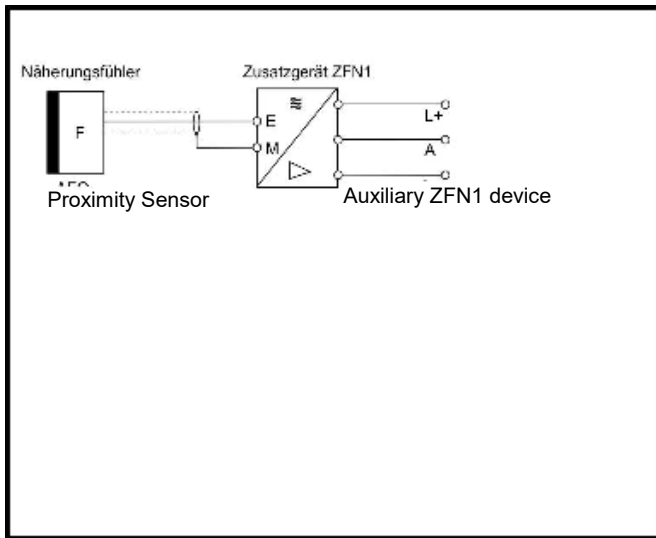
Design; length	M18 x 1; 30 mm
Material of the sensing face	ceramic
Material of the housing	steel
Maximum switching distance	4 mm
Mounting instructions	flush mounting
Operating alternating voltage	≤ 10 V
Operating frequency (at 23°C)	100 Hz
Ambiant temperature range	0 ... +200 °C
Connection	single-core, shielded Teflon lead
Specific lead capacity	C ≤ 100 pF/m
Maximum lead length Sensor evaluation device	≤ 20 m
Length of sensor lead	1.2 m
Protection rating	IP 65
Weight	55 g
Output	passive, for connecting an AFO Sensor to a ZFN1/a10ca-1.3 or two AFO Sensors to a ZFN2/a10ca-1.3 evaluation device.

AFO-77

Ref. no. 12.04-99



Connection



The indicated switching distance refers to iron. When using AFO Proximity Sensors for non-ferrous metals, a reduction factor has to be taken into account.

To set the indicated switching distance in the evaluation device with the potentiometer for switching distance setting, you have to put a piece of insulation paper (e.g. hard paper) as thick as the switching distance on the sensor and cover it with a metal lug. By turning the potentiometer the sensor will adopt the state "just damped".

The indicated switching distance is to be considered as maximum value, and should not be exceeded.

For ensuring in the event of an error safe operation with regard to the output signal, the auxiliary ZFN is equipped with a broken-wire security.

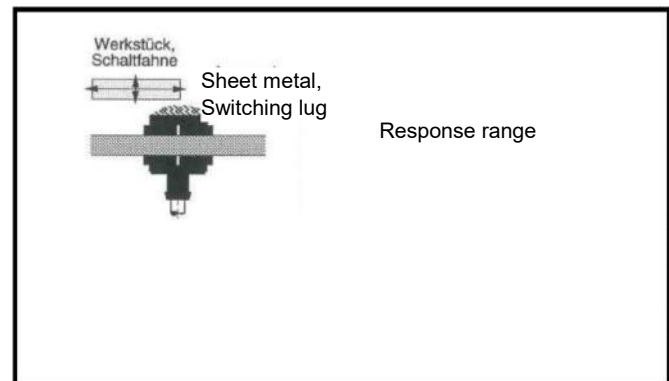
The connecting lead between sensor and evaluation device should be shielded and of low-capacitance.

Proximity sensors can be used for transmitting signals in counters, breakage control of rotating and fixed tooling and machinery elements as well as signal sensors in cramped spaces or when temperatures are extremely high.

Safety regulations:

The above-mentioned product is a component within the terms of the EU Directives. It is intended for mounting in a machine or system and cannot be operated independently. As part of the electrical equipment of a machine or system, it must be included by the manufacturer of the machine or system in the process of conformity declaration. Commissioning and maintenance must be performed only by qualified specialists or instructed staff.

Example for installation





Purpose

When used with an AFO Proximity Sensor, these ZFN devices are working like three-pole inductive proximity switches for DC for a temperature range between 0 and +200 °C.

Application

As Proximity Switch when the Sensor is used in cramped spaces or harsh environments.

Function

The connected AFO forms the inductive part of the oscillator circuit located on the input side of the ZFN. The switching elements connected to the oscillator correspond to a standard sensor with DC 3-pole, the output of which is the make-contact (NO) when the sensor is damped. A potentiometer allows to set the switching distance which depends on the AFO being used.

Indicator

1 or 2 red LED: output active.

Versions

There are two different versions: the ZFN1 housing consists of a single unit and the ZFN2 housing consists of two units. The L+ and L- connections of the double-unit version are galvanically connected with each other. This makes it very easy to connect the devices in series.

Technical Data

Input

- operating frequency
- damping duration

Output

- operating voltage
- load current
- no-load current
- residual voltage

Housing

- material
- mounting
- protection rating
- clamps

Weight

- single-unit device
- double-unit device

Ambient temperature range

for AFO Proximity Sensor

depends on AFO type

depends on AFO type

transistor, plus-switching

10 ... 30 VDC

≤ 400 mA, short circuit proof

≤ 30 mA

≤ 2.5 VDC

polyamide, green

snap-in

IP 20

screw connectors,
max 2.5 mm²

approx. 70 g

approx. 100 g

0 ... +80 °C

Order Data

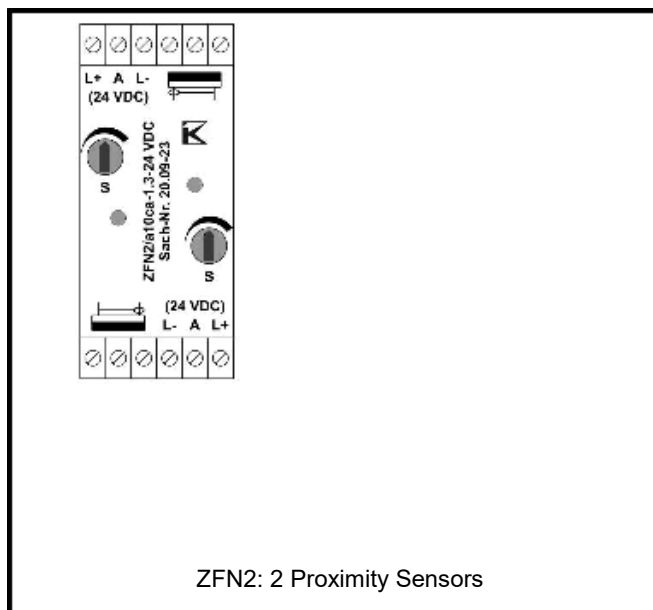
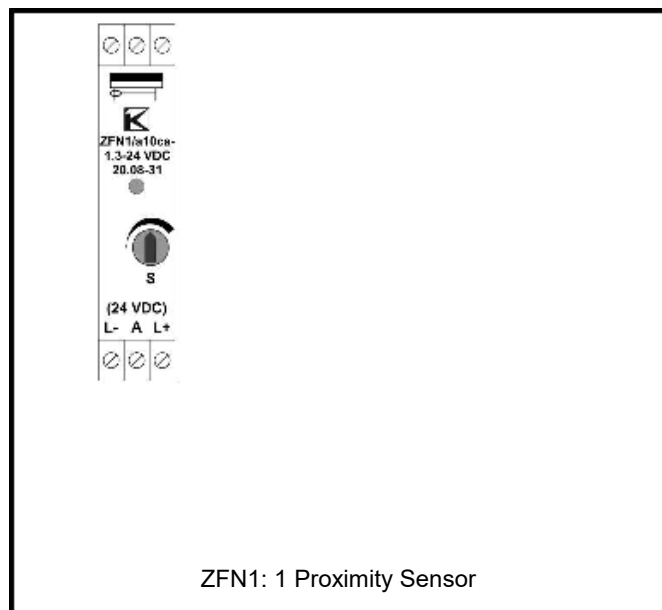
ZFN1/a10ca-1.3-24 VDC

Ref.no. 20.08-31

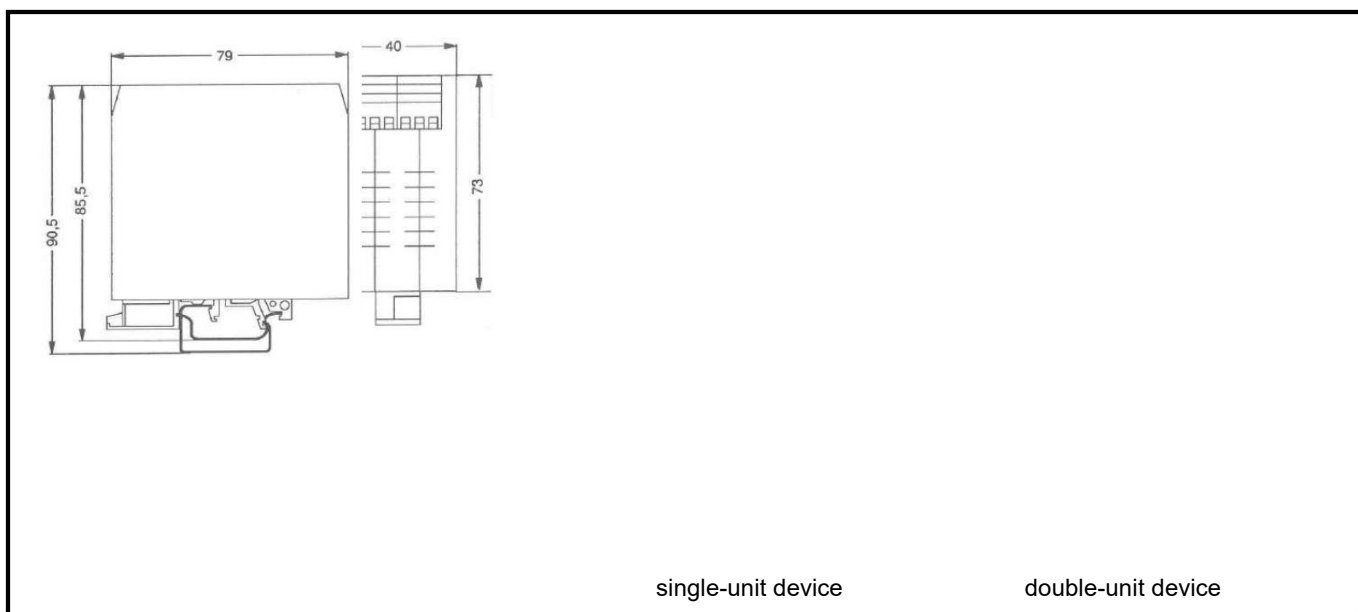
ZFN2/a10ca-1.3-24 VDC

Ref.no. 20.09-23

Connection



Dimensions of the housing



We are certified according to DIN EN ISO 9001
Subject to technical changes!