

## KN180120

### Capacitive sensors • Norm switching distance

Sensor capacitive, M18x1 84long, non-flush, Sn: 0.5-15, 10-35V DC, PNP NO, M12 plug connector 3-pin, IP67, nickel-plated brass, LED, manual setting

including Nut, Screwdriver



Capacitive proximity switches are contact-free sensors. They detect metallic and non-metallic objects, regardless of whether they move or not. The achievable sensing range of the devices depends on the object material, its dimensions and the response sensitivity, which is set via a potentiometer. The vibration-resistant sensors can be approached laterally or frontally. Capacitive proximity switches are used for presence detection (e.g. sealing detection), positioning (e.g. PET bottles), counting (e.g. plastic caps), level detection (e.g. lubricant) or distance measurements (e.g. thickness measurement) of solid and liquid materials.

#### Electrical features

Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	400 mA
Setting procedure	Potentiometer
Relative hysteresis	15 %
Correction factor (glass)	0.6
Correction factor (wood)	0.6
Correction factor (PVC)	0.5
Correction factor (oil)	0.5
Short-circuit protection	Yes
No-load current	15 mA
Number of pins	3
Switching distance	0,5 - 15 mm
Switching frequency	50 Hz
Voltage drop	2 V
Reverse polarity protection	Yes
Operating voltage (DC)	10 - 35 V
Output functions	Switching point

**Mechanical features**

Design	Cylinder, screw-thread
Thread length	45 mm
Thread pitch	1 mm
Length	84 mm
Mechanical mounting condition for sensor	non-flush
Surface	nickel-plated
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PTFE)
Housing material	Brass
Thread dimension	M18
Ambient temperature	-25 - 70 °C

**Other features**

Reference medium / object	Material with permittivity $\epsilon_r=81$
ardTE00_Anwendungen	Niveauabfrage

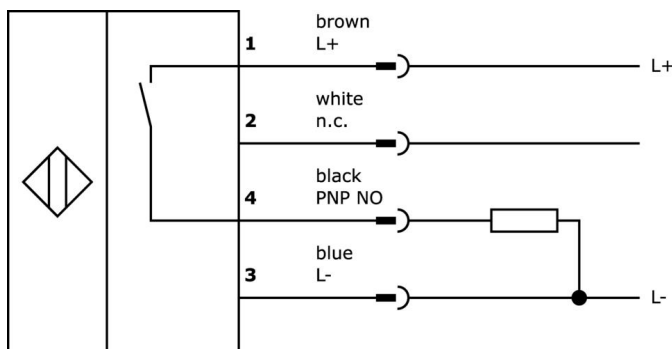
**Classification**

ETIM 8	EC002715 Capacitive proximity switch
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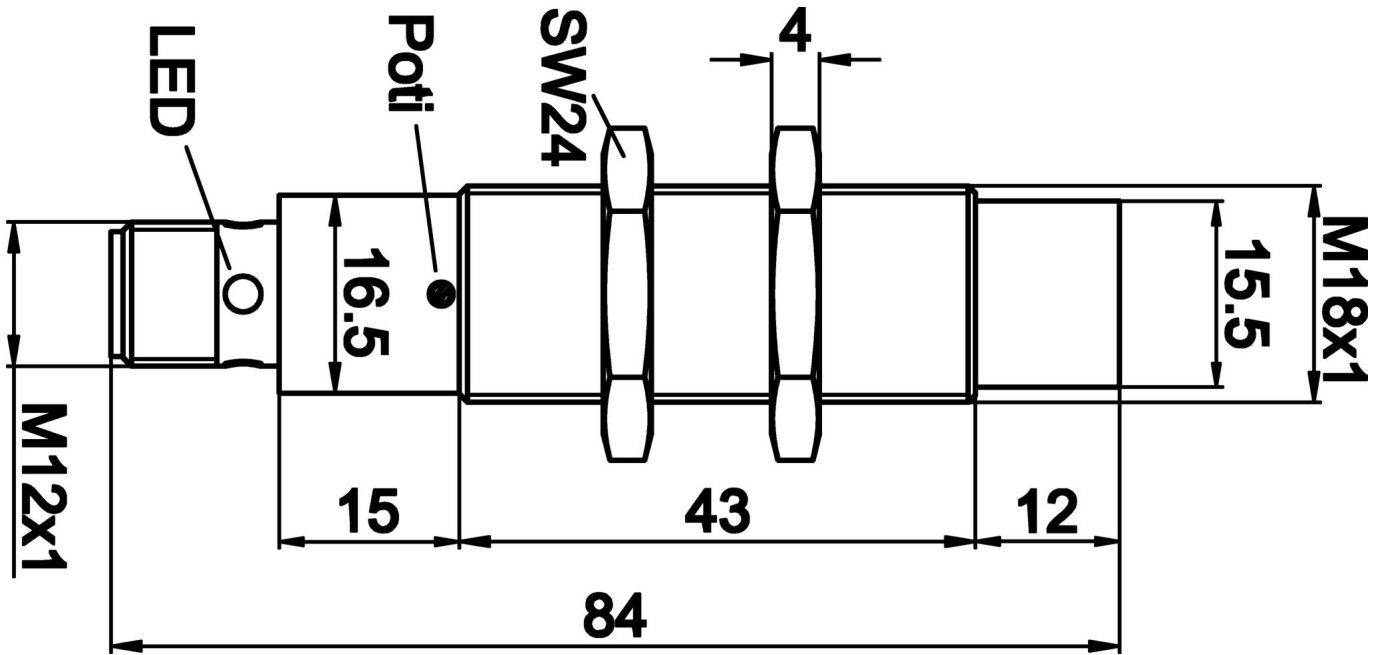
**More**

IPF Product Group	240 capacitive sensors
packaging dimensions	120 x 100 x 20 mm
gross weight	70 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**



**Dimensional drawing**



**Extract accessories program**

**VK030F21**



Connection cable, 0.3m, M12 socket 4-pin angular, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK030F25**



Connection cable, 0.3m, M12 socket 4-pin straight, M12 connector 4-pin straight, 4x0.34mm<sup>2</sup>, PUR (polyurethane), 240V, IP67, suitable for trailing chain and torsion resistant, oils and cooling lubricants, welding area, silicone-free

**VK200221**



Connection cable, 2m, M12 Female (socket) 3pin Angular, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silic...

**VK200225**



Connection cable, 2m, M12 Female (socket) 3pin Straight, Free conductor end, 3x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø4.3mm, -30-90°C, IP67, With LED display, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Sili...

**AY000117**



accessories sensor, Fixture kit, Metal, ball joint

**AY000162**



Accessories, magnetic, Ø43mm, neodymium-iron-boron, inside thread M5, rubber

**AY000070**



Tool, Flat-tip screwdriver, 1.6x0.4mm, Grip design 1-component

**AY000154**



Tool, Screwdriver set, Internal hexagon 0.7mm, Internal hexagon 0.9mm, Internal hexagon 1.3mm, Internal hexagon 1.5mm, Internal hexagon 2mm, Slot 1.5mm, Slot 2mm, Slot 2.5mm, Chromium steel

**AY000159**



accessories sensor, Mounting pipe, Ø12mm 200long, Aluminum Anodised

You can find further accessories on our homepage



**Installation**

Mounting / installation may only be carried out by a qualified electrician!



**Disposal**

WEEE number according to § 6 para. 3 ElektroG: 40951076

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**Safety warnings**

- / Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.
- / Never use these devices in applications where the safety of a person depends on their functionality.