

## KN180420

### CAPACITIVE SENSORS • NORM SWITCHING DISTANCE

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.



#### MECHANICAL FEATURES

Active area material of sensor	PTFE
Ambient temperature	-25 °C ... 70 °C
Degree of protection (IP)	IP67
Housing coating	Nickel-plated
Housing design	Cylinder, screw-thread
Housing material	Brass
Mechanical mounting condition for sensor	Non-flush
Pressure-proof	-
Sensor length	84 mm
Thread length	44 mm
Thread pitch	1 mm
Thread size, metric	18

#### ELECTRICAL FEATURES

Cascadable	-
Correction factor (glass)	0.6
Correction factor (oil)	0.5
Correction factor (PVC)	0.5
Correction factor (wood)	0.6
Hysteresis	15 %
Max. output current	250 mA
No-load current	15 mA
Number of pins	4
Number of switching outputs	2
Rated control supply voltage $U_s$ at DC	10 V ... 35 V
Reverse polarity protection	+
Setting procedure	Manual adjustment
Short-circuit protection	+
Suitable for safety functions	-
Supply voltage	10 V ... 35 V
Switching distance	8 mm
Switching distance	0.5 mm ... 15 mm
Switching frequency	50 Hz

## ELECTRICAL FEATURES

Type of electrical connection	Connector M12
Type of switching function	Exclusive-OR
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	+
With monitoring function of downstream devices	-

## OTHER FEATURES

Level detection	+
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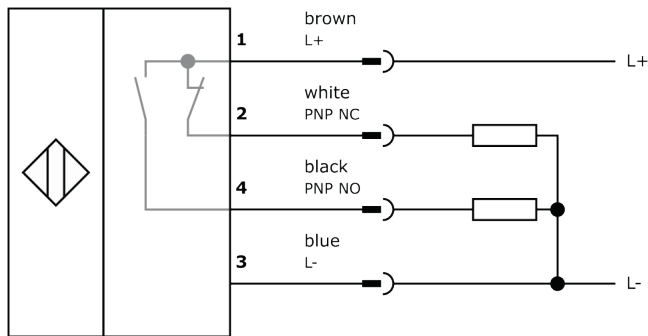
## Other

Packaging dimensions	77.0mm x 25.0mm x 123.0mm
Shipping weight	0.08kg
Tariff code	85365019

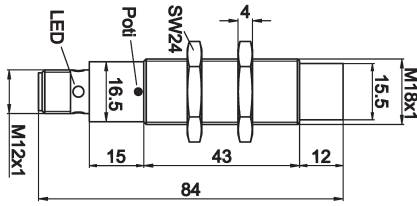
## Classification

ipf product group	243
eClass 8.0	27270102
eClass 9.0	27270102
eClass 9.1	27270102
ETIM-5.0	EC002715
ETIM-6.0	EC002715
ETIM-7.0	EC002715

## Connection



## Dimensional drawing



### Installation



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

### Disposal



### Software

Please download the software or driver required for operating your new device on our homepage: [www.ipf.de](http://www.ipf.de)

### 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.

LED lighting systems can generate intensive UV radiation, which can damage your eyes in case of improper use. The manufacturer cannot be held responsible for damages that result from improper use or connection.