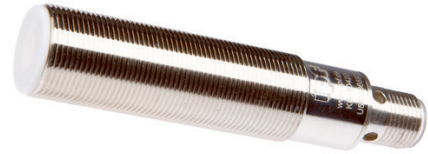# IPF ELECTRONIC

KB180420

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 DATA

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	Flush
Pressure-proof	No
Sensor length	84 mm
Thread length	55 mm
Thread pitch	1 mm
Thread size, metric	18

ELECTRICAL DATA

Cascadable	No
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 Us at DC	10 V ... 35 V
Reverse polarity protection	Yes
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Suitable for safety functions	No
Supply voltage	10 V ... 35 V
Switching distance	5 mm

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DATA SHEET **KB180420** • Subject to alteration! Version: 03.05.2019
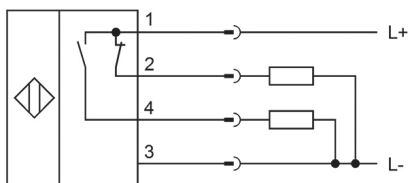
ELECTRICAL DATA

Switching distance	0.5 mm ... 10 mm
Switching frequency	300 Hz
Type of electrical connection	Connector M12
Type of switching function	Anticoincidence
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	Yes
With monitoring function of downstream devices	No

OTHER DATA

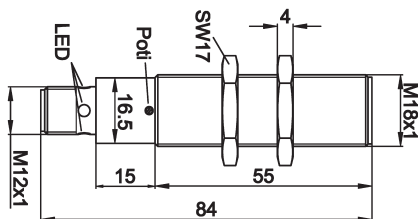|	
Level detection	Yes

CONNECTION

Colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)
Functions: 1 = L+, 2 = pnp/nc, 3 = L-, 4 = PNP NO

DIMENSIONAL DRAWING

INSTALLATION

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

DISPOSAL

SAFETY WARNINGS

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

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