

**FK90E017**

**FILLING LEVEL SENSORS • CAPACITIVE**

Filling level and level sensors operate according to different measuring principles. The selection of the sensor depends on the medium to be detected and the ambient conditions. The material flow in a vibratory bowl can be excellently queried with inductive filling level sensors whose pendulum is moved by the material in the pot. The detection of liquid or solid media is, for instance, possible with capacitive filling level sensor technology. These work according to the principle of the condensator, the medium changes the dielectricity between two electrodes. The resulting change is converted into a digital output signal. A further alternative for the detection of filling levels of conductive media is provided by conductive filling level relays. The resistance between reference and measuring electrode is determined. If a set threshold is exceeded, a relay output switches.



**MECHANICAL DATA**

Ambient temperature (MAX)	70 °C
Ambient temperature (MIN)	-10 °C
Degree of protection (IP)	IP67
Housing design	Cylinder, screw-thread
Housing material	Stainless steel 1.4305
Medium temperature (MAX)	100 °C
Pressure resistance	10 bar
Probe diameter	18 mm
Probe length	32.5 mm
Sensing element material	PEEK
Sensor diameter	40 mm
Sensor length	125 mm
Thread length	13.3 mm
Thread size, inches	1/2 inch
Type of process connection	G1/2 inch

**ELECTRICAL DATA**

Max. output current	0.25 A
No-load current	20 mA
Number of contacts as normally closed contact	1
Number of contacts as normally open contact	1
Number of pins	4
Physical measurement principle	Capacitive
Rated control supply voltage $U_s$ at DC (MAX)	35 V
Rated control supply voltage $U_s$ at DC (MIN)	12.5 V
Response sensitivity, adjustable	Yes
Reverse polarity protection	Yes
Setting procedure	Manual adjustment
Short-circuit-proof	Yes

**ELECTRICAL DATA**

Switching frequency	1 Hz
Type of electrical connection	Connector M12
Type of switching function	Anticoincidence
Type of switching output	PNP
Voltage drop	2 V
Voltage type for actuation	DC
With LED display	Yes

**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!

Never use these devices in applications where the safety of a person depends on their functionality.