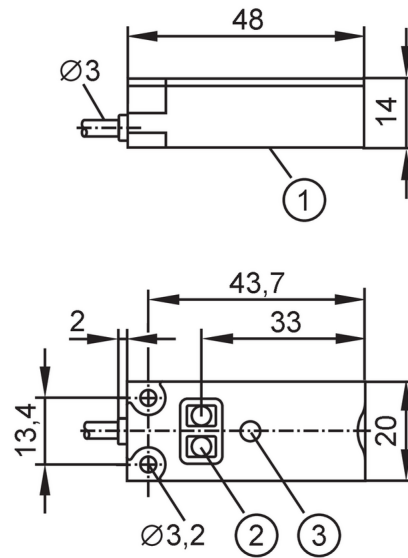


KQ6001



Capacitive sensor

KQ-3120NFAKG/2T



- 1 sensing face
- 2 Programming buttons
- 3 LED



Product characteristics

Electrical design	PNP/NPN; (Automatic load detection PNP/NPN)
Output function	normally open / closed; (selectable)
Sensing range [mm]	12
Communication interface	IO-Link
Housing	rectangular
Dimensions [mm]	20 x 14 x 48

Application

Installation	detection through non-metallic container wall or on bypass pipes
Media	dry bulk material; liquids

Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 17
Protection class	III
Reverse polarity protection	yes
Measuring principle	capacitive

Outputs

Electrical design	PNP/NPN; (Automatic load detection PNP/NPN)
Output function	normally open / closed; (selectable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	10
Short-circuit protection	yes

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Type of short-circuit protection		yes (non-latching)
Overload protection		yes
Monitoring range		
Sensing range	[mm]	12
Real sensing range Sr	[mm]	12 ± 10 %
Accuracy / deviations		
Hysteresis	[% of Sr]	1...15
Switch-point drift	[% of Sr]	-20...20
Interfaces		
Communication interface		IO-Link
Transmission type		COM1 (4,8 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9 CDV
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Multiple switching signal
	Function	Process data variable
	Function	Teach channel
SIO mode		yes
Min. process cycle time	[ms]	100.8
Supported DeviceIDs	Type of operation	DeviceID
	default	371
Operating conditions		
Ambient temperature	[°C]	-25...80
Protection		IP 65; IP 67; IP 69K
Tests / approvals		
EMC	EN 61000-4-2 ESD	8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	3 V
	EN 55011	class B
Shock resistance	EN 60068-2-27	30 g 6 shocks / 11 ms half-sine (x, y, z)
Vibration resistance	EN 60068-2-6	(10...55 Hz) / 1 mm amplitude, vibration duration 5 min., 30 min. per axis with resonance or 55 Hz
MTTF	[years]	623
UL approval	Ta	-25...80 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
Mechanical data		
Weight	[g]	46.6
Housing		rectangular
Mounting		non-flush mountable
Dimensions	[mm]	20 x 14 x 48
Material		housing: PBT reinforced glass-fiber; Pushbuttons: TPE-U; cover: PC reinforced glass-fiber

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Displays / operating elements		
Display	Switching status	1 x LED, yellow
Teach function		yes
Electronic lock		yes
Remarks		
Pack quantity		1 pcs.

Electrical connection

Cable: 2 m, PVC; 3 x 0.14 mm²

Connection



BK: OUT / IO-Link
Automatic load detection PNP/NPN
when using a resistive load < 20 kΩ
Core colors :
BK = black
BN = brown
BU = blue