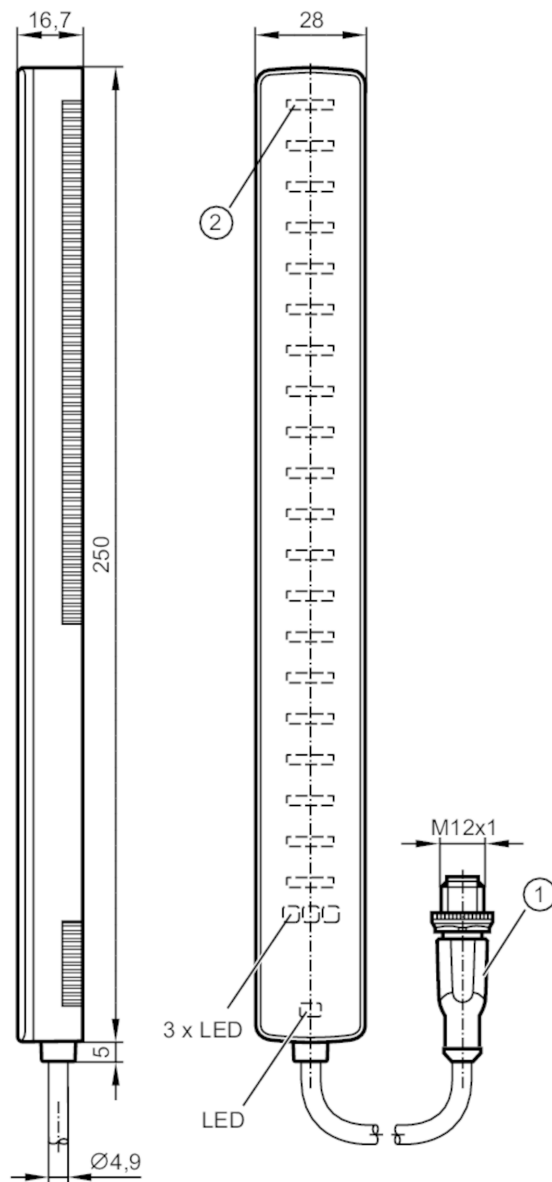


# KQ1001



## Electronic level sensor

KQ-5xxxNFPKG/IO/0,1M/US



- 1 connector
- 2 LED bar graph



### Product characteristics

Number of inputs and outputs

Number of digital outputs: 3

### Application

Application

Continuous level measurement behind non-metallic and non-conductive surfaces

Media

dry bulk material; aqueous solutions; oils

Cannot be used for

highly adhesive media

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## Electronic level sensor

KQ-5xxxNFPKG/IO/0,1M/US

Electrical data	
Operating voltage [V]	10...30 DC; (IO-Link: 18...30 DC)
Current consumption [mA]	< 50
Protection class	III
Reverse polarity protection	yes
Max. power-on delay time [ms]	1300
Measuring principle	capacitive
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 3
Outputs	
Electrical design	PNP/NPN; (parameterisable)
Number of digital outputs	3
Permanent current rating of switching output DC [mA]	200
Max. resistance switching output [ $\Omega$ ]	8
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes
Detection zone	
Measuring range [mm]	< 200
Measuring/setting range	
Detection range [mm]	228
Set point SP [%]	5...95
Reset point rP [%]	4...94
In steps of [%]	1
Accuracy / deviations	
Repeatability [% of the final value]	2
Offset deviation [% of the final value]	4
Resolution [% of the final value]	1
Linearity deviation [% of the final value]	1
Response times	
Response time [ms]	1300
Software / programming	
Parameter setting options	Damping; hysteresis / window; fault indication; diagnostic function; sensitivity; internal temperature; limitation of measuring range; Adjustable switching delay; zero-point calibration; direction of installation; LEDs can be deactivated

# KQ1001



## Electronic level sensor

KQ-5xxxNFPKG/IO/0,1M/US

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Digital Measuring Sensor Profile, Common Profile	
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	3	
Min. process cycle time [ms]	9.6	
IO-Link process data (cyclical)	function	bit length
	process value	16
	exponent	8
	device status	4
	binary switching information	3
IO-Link functions (acyclical)	direction of installation; limitation of sensor elements; sensitivity; minimum recognition threshold; Performance in case of a fault; error delay; Damping; LED_Modus; switch-on cycle counter; operating hours counter; switching cycles counter; min./max. process value; internal temperature; min./max. internal temperature; diagnostic data for level	
Supported DeviceIDs	Type of operation	DeviceID
	Default	924
Note	For further information please see the IODD PDF file under "Downloads"	
Operating conditions		
Applications	DIN EN 60654-1 application class B2	
Ambient temperature [°C]	-20...80	
Storage temperature [°C]	-25...85	
Protection	IP 65	
Tests / approvals		
EMC	DIN EN 61000-6-4 30 - 230 MHz	40 dB $\mu$ V/m QP / 10 m distance
	230 - 1 GHz	47 dB $\mu$ V/m QP / 10 m distance
	DIN EN 61000-4-2	$\pm$ 25 kV AD / $\pm$ 25 kV CD
	DIN EN 61000-4-3	80 MHz - / 1 GHz 10 V/m
	DIN EN 61000-4-4	$\pm$ 2.5 kV / 5 kHz
		$\pm$ 2.5 kV / 100 kHz
DIN EN 61000-4-6	10 V	
Shock resistance	EN 60068-2-27	15 g 11 ms
Vibration resistance	EN 60068-2-6	5 g (10...2000 Hz)
MTTF [years]	290.43	
UL approval	Ta	-25...60 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL Approval no.	D006
	File number UL	E174191

# KQ1001



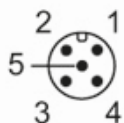
## Electronic level sensor

KQ-5xxxNFPKG/IO/0,1M/US

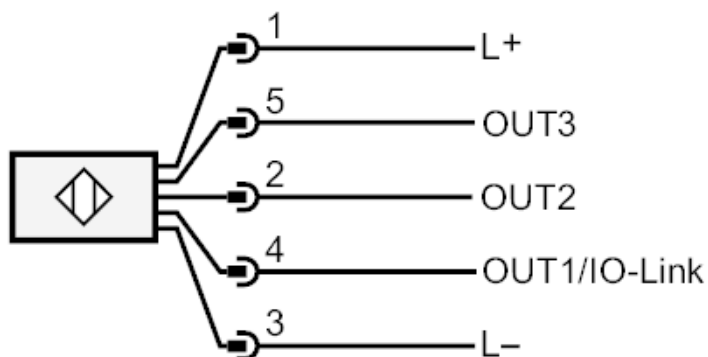
Mechanical data		
Weight	[g]	377.5
Dimensions	[mm]	250 x 28 x 16.7
Materials		PBT; PC;
Displays / operating elements		
Display	operation	1 x LED, green
	switching status	3 x LED, yellow
	function	20 x LED, green
Accessories		
Items supplied		adhesive tape: 1 x 23 mm x 240 mm
Accessories (optional)		Mounting adapter: 2, E12675
		Mounting adapter: 2, E12676
		Fixing strap: 5, E10880
		adhesive tape: 10, E12677
Remarks		
Remarks		when used on IO-Link class B masters switching outputs OUT2, OUT3 have to be switched off
Pack quantity		1 pcs.

### Electrical connection

Connector: 1 x M12



### Connection



### Electrical connection - plug

Cable: 0.1 m, PUR