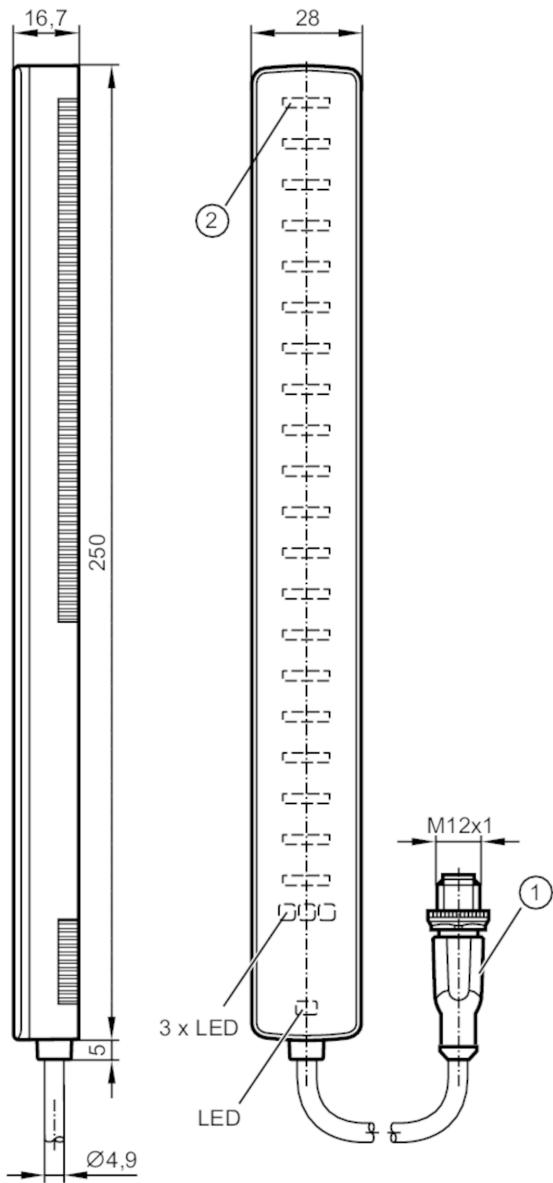


# KQ1001

## Continuous level sensor

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



- 1 connector  
2 LED bar graph



### Product characteristics

Electrical design	PNP/NPN; (parameterisable)
Communication interface	IO-Link
Dimensions [mm]	250 x 28 x 16.7

### 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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## Continuous 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	[Ω]	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
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1

# KQ1001



## Continuous level sensor

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

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)	<table border="1"> <thead> <tr> <th>function</th><th>bit length</th></tr> </thead> <tbody> <tr> <td>process value</td><td>16</td></tr> <tr> <td>exponent</td><td>8</td></tr> <tr> <td>device status</td><td>4</td></tr> <tr> <td>binary switching information</td><td>3</td></tr> </tbody> </table>		function	bit length	process value	16	exponent	8	device status	4	binary switching information	3
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 mode; 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										
Note	default For further information please see the IODD PDF file under "Downloads"											
<b>Operating conditions</b>												
Applications	DIN EN 60654-1 application class B2											
Ambient temperature [°C]	-20...80											
Storage temperature [°C]	-25...85											
Protection	IP 65											
<b>Tests / approvals</b>												
EMC	DIN EN 61000-6-4 30 - 230 MHz 230 - 1 GHz DIN EN 61000-4-2 DIN EN 61000-4-3 DIN EN 61000-4-4  DIN EN 61000-4-6	40 dBµV/m QP / 10 m distance 47 dBµV/m QP / 10 m distance ± 25 kV AD / ± 25 kV CD 80 MHz - / 1 GHz 10 V/m ± 2.5 kV / 5 kHz ± 2.5 kV / 100 kHz 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 Enclosure type power supply UL Approval no. File number UL	-25...60 °C Type 1 Limited Voltage/Current D006 E174191										
<b>Mechanical data</b>												
Weight [g]	377.5											
Dimensions [mm]	250 x 28 x 16.7											
Materials	PBT; PC;											

# KQ1001



## Continuous level sensor

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

### Displays / operating elements

Display	operation	1 x LED, green
	switching status	3 x LED, yellow
	function	20 x LED, green

### Accessories

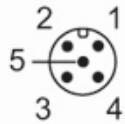
Items supplied	adhesive tape: 1 x 23 mm x 240 mm
Accessories (optional)	Mounting adapter: 2, E12675
	Mounting adapter: 2, E12676
	Fixing strap: 5, E10880
	adhesive tape: 10, E12677

### Remarks

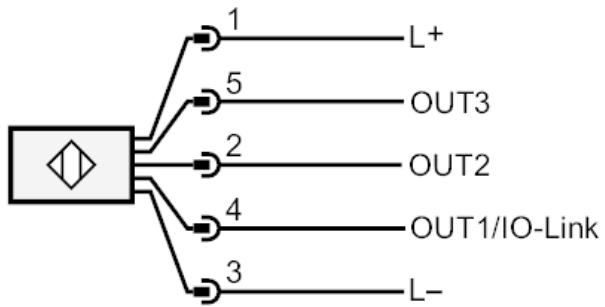
Remarks	when used on IO-Link class B masters switching outputs OUT2, OUT3 have to be switched off
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M12; coding: A



### Connection



### Electrical connection - plug

Cable: 0.1 m, PUR