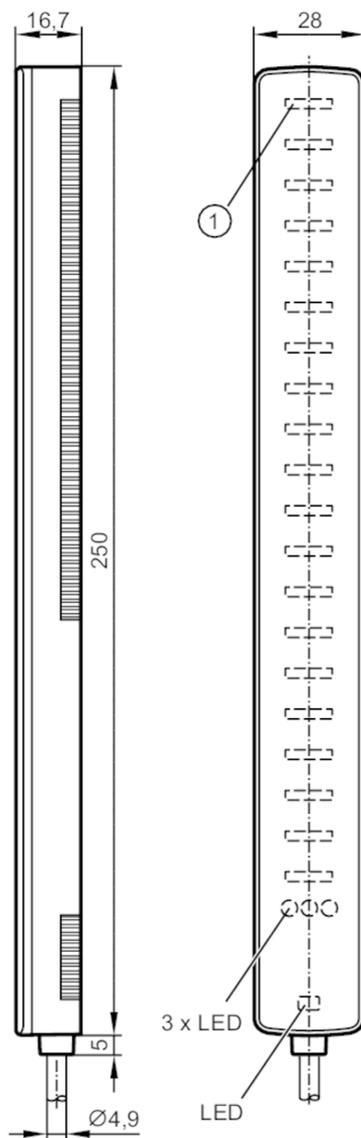


KQ1000

Continuous level sensor

KQ-5xxxNFPKG/IO



1 LED bar graph



Product characteristics	
Electrical design	PNP/NPN; (configurable)
Communication interface	IO-Link
Housing	rectangular
Dimensions [mm]	255 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	very adhesive media

KQ1000



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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; (configurable)	
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	yes (non-latching)	
Overload protection	yes	
Monitoring range		
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	
Reaction times		
Response time [ms]	1300	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 3.1 Common - I&D	Measuring Sensor Identification and Diagnosis
SIO mode	yes	

KQ1000



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Required master port class	A	
Process data analog	1	
Process data binary	3	
Min. process cycle time [ms]	7.2	
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 mode; switch-on cycle counter; operating hours counter; switching cycles counter; min./max. process value; internal temperature; min./max. internal temperature; diagnostic data level	
Supported DeviceIDs	Type of operation	DeviceID
	default	924
Note	For further information please see the IODD PDF file at "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 μ V/m QP / 10 m distance
	230 - 1 GHz	47 dB μ 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 number	D005
	File number UL	E174191

Mechanical data

Weight [g]	432	
Housing	rectangular	
Dimensions [mm]	255 x 28 x 16.7	
Material	PBT; PC;	

Displays / operating elements

Display	Power	1 x LED, green
	Switching status	3 x LED, yellow
	Function	20 x LED, green

KQ1000



Continuous level sensor

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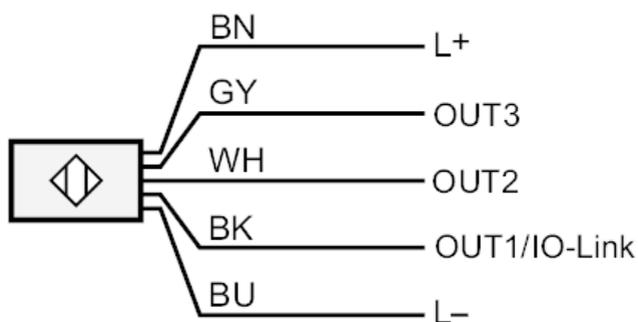
Accessories	
Items supplied	adhesive tape: 1 x (1,2 x 23 x 240 mm)
Accessories (optional)	Mounting adapter: 2, E12675
	Mounting adapter: 2, E12676
	Fixing strap: 5, E10880
	adhesive tape: 10, E12677

Remarks	
Remarks	When used on IO-Link class B masters, switching outputs OUT2, OUT3 must be turned off
Pack quantity	1 pcs.

Electrical connection

Cable: 2 m, PUR; 5 x 0.34 mm²

Connection



	Core colors
BN	brown
GY	grey Switching output 3
WH	white Switching output 2
BK	black Switching output 1 / IO-Link
BU	blue