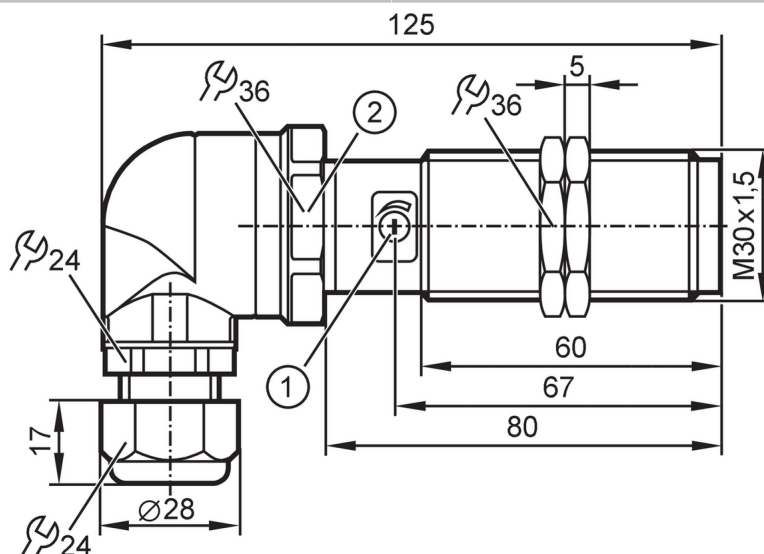


KI531A

Capacitive sensor

KIE4150NCPKG/IO/3D



- 1 potentiometer
2 Tightening torque 10 Nm



Product characteristics

Electrical design	PNP
Output function	complementary
Sensing range [mm]	3...26
Communication interface	IO-Link
Housing	Threaded type
Dimensions [mm]	M30 x 1.5 / L = 125

Electrical data

Operating voltage [V]	10...30 DC
Rated insulation voltage [V]	60
Current consumption [mA]	< 22
Protection class	III
Reverse polarity protection	yes
Max. power-on delay time [ms]	300
Measuring principle	capacitive

Outputs

Electrical design	PNP
Output function	complementary
Max. voltage drop switching output DC [V]	2.5
Max. leakage current [mA]	0.1
Permanent current rating of switching output DC [mA]	200
Short-time current rating of switching output [mA]	200
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]	3...26	
Sensing range adjustable	yes	
Real sensing range Sr [mm]	15 ± 10 %	
Accuracy / deviations		
Hysteresis [% of Sr]	1...15	
Switch-point drift [% of Sr]	-20...20	
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 0	Generic Profiled Sensor
	Function	Device identification
	Function	Multiple switching signal
	Function	Process data variable
	Function	Device diagnosis
SIO mode	yes	
Required master port class	A	
Min. process cycle time [ms]	20	
IO-Link functions (acyclical)	application specific tag; operating hours counter; PNP / NPN (parametrierbar); Switch point setting; Hysteresis	
Supported DeviceIDs	Type of operation	DeviceID
	default	1286
Operating conditions		
Ambient temperature [°C]	-20...60	
Protection	IP 65; IP 67	
Tests / approvals		
ATEX marking	Ex II 3D Ex tc IIIC T90°C Dc	
	Ex BVS 20 ATEX E 058 X; IECEx BVS 20.0061X	
EMC	EN 61000-4-2 ESD	kV / 8 kV AD
	EN 61000-4-3 HF radiated	3 V/m (80...2000 MHz)
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	3 V 0,15...80 MHz
	EN 55011	class B
	IEC 60255-5	1 kV line to line, Ri: 500 Ohm
Vibration resistance	EN 60068-2-6 Fc	10...55 Hz 1 mm amplitude, vibration duration 5 min., 30 min. per axis with resonance or 55 Hz
Shock resistance	EN 60068-2-27 Ea	30 g 6 shocks / 11 ms half-sine (x, y, z)
MTTF [years]	623	
Mechanical data		
Weight [g]	151.8	

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Housing	Threaded type
Mounting	non-flush mountable
Dimensions [mm]	M30 x 1.5 / L = 125
Thread designation	M30 x 1.5
Material	housing: PA; potentiometer: LCP; PBT

Displays / operating elements

Display	Switching status	1 x LED, yellow
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Accessories

Items supplied	lock nuts: 2
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Remarks

Pack quantity	1 pcs.
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Electrical connection

terminals: 0.34...1.5 mm²; Cable sheath: Ø 5...9 mm; Cable gland: M20 X 1.5

Connection

