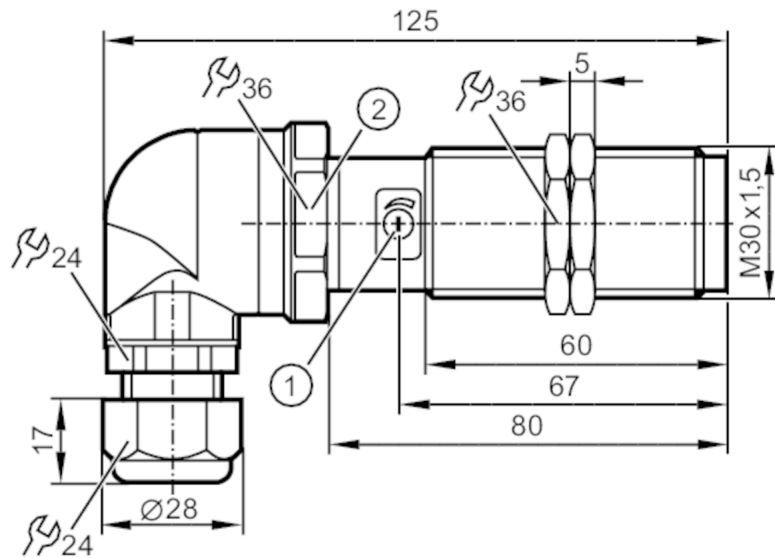


KI531A



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 = 150

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

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Short-circuit protection	yes	
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: Process Data Variable; Device Identification	
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	
Operating conditions		
Ambient temperature	[°C]	-20...60
Protection	IP 65; IP 67	
Tests / approvals		
ATEX marking	 II 3D Ex tc IIIC T90°C Dc X	
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
Housing	Threaded type	
Mounting	non-flush mountable	
Dimensions	[mm]	M30 x 1.5 / L = 150
Thread designation	M30 x 1.5	
Material	housing: PA; potentiometer: LCP; PBT	

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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

