



1) O-Ring with thrust ring



### Basic features

Approval/Conformity	CE UKCA WEEE
Base type deviation	Housing
Basic standard	IEC 60947-5-2

### Display/Operation

Function indicator	no
Power indicator	no

### Electrical connection

Cable diameter D	4.60 mm
Cable length L	5 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Connector, 5.00 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at Ue	0.5 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	10 mA
No-load current I <sub>o</sub> max., undamped	1 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Rated short circuit current	100 A
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	10 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	1000 Hz
Utilization category	DC -13
Voltage drop static max.	1.5 V

### Environmental conditions

Ambient temperature	-25...80 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP68

### Functional safety

MTTF (40 °C)	720 a
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## Interface

Switching output PNP normally open (NO)

## Material

Housing material 1.4104 stainless steel  
 Material jacket PUR  
 Material sensing surface EP  
 Support ring material PTFE

## Mechanical data

Dimension  $\varnothing 16 \times 73$  mm  
 Installation for flush mounting  
 Mounting length 38.00 mm  
 Mounting part M16x1  
 Pressure rating max. 350 bar  
 Pressure rating, note oil pressure rated  
 Sealing ring, size  $11 \times 1.8$  mm  
 Size M16x1  
 Tightening torque  $40 \text{ Nm} \pm 10 \%$

## Range/Distance

Assured operating distance  $S_a$  1.2 mm  
 Hysteresis H max. (% of  $S_r$ ) 15.0 %  
 Rated operating distance  $S_n$  1.5 mm  
 Real switching distance  $s_r$  1.5 mm  
 Repeat accuracy max. (% of  $S_r$ ) 5.0 %  
 Temperature drift max. (% of  $S_r$ ) 10 %  
 Tolerance  $S_r$   $\pm 10 \%$

## Remarks

Installation Instructions 614804

The sensor is functional again after the overload has been eliminated.

For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

## Connector Drawings



## Wiring Diagrams (Schematic)

