



IND. CONT. EQ.  
 81U2  
 Class 2 Type 1

## Display/Operation

Function indicator	yes
Power indicator	no

## Electrical connection

Connection	M8x1-Male, 3-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

## Electrical data

Load capacitance max. at U <sub>e</sub>	0.5 µF
Min. operating current I <sub>m</sub>	0 mA
No-load current I <sub>o</sub> max., damped	3 mA
No-load current I <sub>o</sub> max., undamped	14 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.	20 ms
Residual current I <sub>r</sub> max.	10 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	2500 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

## Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

## Functional safety

MTTF (40 °C)	585 a
--------------	-------

## General data

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2

## Material

Housing material	Brass
Material sensing surface	LCP
Surface protection	Nickel-free coated

## Mechanical data

Dimension	Ø 12 x 44 mm
Installation	for flush mounting
Size	M12x1
Tightening torque	10 Nm

## Output/Interface

Switching output	NPN normally closed (NC)
------------------	--------------------------

Range/Distance

Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	4 mm

Real switching distance sr	4 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

Remarks

Flush: See installation instructions for inductive sensors with extended range 825357.  
The sensor is functional again after the overload has been eliminated.  
For further information about the 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

