



**ECOLAB®**



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



## Basic features

Approval/Conformity	cULus CE Ecolab FDA compliant EAC WEEE
Basic standard	IEC 60947-5-2
Trademark	Proxinox®

## Display/Operation

Function indicator	yes
Power indicator	no

## Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
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 Im	0 mA
No-load current Io max., damped	3 mA
No-load current Io max., undamped	10 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	33.0 kOhm + D
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	20 ms
Residual current Ir max.	10 µA
Ripple max. (% of Ue)	15 %
Switching frequency	700 Hz
Utilization category	DC -13
Voltage drop static max.	2.5 V

## Environmental conditions

Ambient temperature	-40...85 °C
Chemical resistance	15 % H2O2 solution 6 % H2O2 solution 3 % H2O2 solution
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 per DIN 40050	IP69K
Protection degree	IP68

Inductive Sensors  
**BES M18EI-POC80B-S04G-L01**  
Order Code: BES0438

**BALLUFF**

**Material**

Housing material	Stainless steel (1.4404)
Material sensing surface	PEEK

**Mechanical data**

Dimension	Ø 18 x 65 mm
Installation	for flush mounting
Size	M18x1
Tightening torque	45 Nm

**Output/Interface**

Switching output	PNP normally closed (NC)
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**Range/Distance**

Assured operating distance Sa	6.4 mm
Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	8 mm
Real switching distance sr	8 mm
Repeat accuracy max. (% of Sr)	5.0 %
Switching distance marking	■ ■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	±10 %

**Remarks**

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

**Connector Drawings**



**Wiring Diagrams**

