



## Display/Operation

Function indicator	yes
Power indicator	no

## Electrical connection

Connection	M12x1-Male, 4-pole, 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
No-load current I <sub>o</sub> max., undamped	3 mA
No-load current I <sub>o</sub> max., damped	6 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Output resistance R <sub>a</sub>	33.0 kOhm + D
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
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.	21 ms
Residual current I <sub>r</sub> max.	10 µA
Residual ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	500 Hz
Utilization category	DC-13
Voltage drop static max.	3 V

## Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms

Internet	www.balluff.com
Balluff Germany	+49 (0) 7158 173-0, 173-370
Balluff USA	1-800-543-8390
Balluff China	+86 (0) 21-50 644131

EN 60068-2-6, Vibration

55 Hz, amplitude 1 mm, 3x30 min

IP rating

IP68

## Functional safety

MTTF (40 °C)

640 a

## General data

Approval/Conformity

CE  
 cULus  
 EAC

Basic standard

IEC 60947-5-2

Trademark

Global

## Material

Housing material

Brass

Material sensing surface

LCP

Surface protection

Nickel-free coated

## Mechanical data

Dimension

Ø 12 x 45 mm

Installation

non-flush

Size

M12x1

Tightening torque

10 Nm

## Output/Interface

Switching output

PNP Normally open (NO)

## Range/Distance

Assured operating distance S<sub>a</sub>

6.4 mm

Effective operating distance S<sub>r</sub>

8 mm

For definitions of terms, see main catalog  
 Subject to change without notice [247507]

eCl@ss 9.1: 27-27-01-01  
 ETIM 6.0: EC002714  
 BES01PY\_0.2\_2017-05-03

Inductive Sensors  
BES M12MD-PSC80F-S04G  
Ordercode: BES01PY

Hysteresis H max. (% of Sr)	15.0 %
Rated operating distance Sn	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.

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 view



## Wiring Diagram

