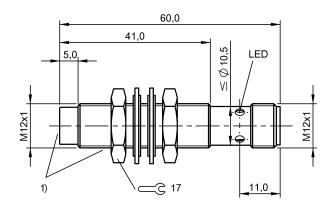
BES M12EF1-NSC10F-S04G-S

Order Code: BES02WC





1) Pressure resistant area







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

Min. operating current Im0 mANo-load current Io max., damped16 mANo-load current Io max., undamped9 mAOperating voltage Ub1030 VDCOutput resistance Ra47.0 kOhmRated insulation voltage Ui75 V DCRated operating current Ie200 mARated operating voltage Ue DC24 VRated short circuit current100 AReady delay tv max.10 msResidual current Ir max.100 μARipple max. (% of Ue)20 %Switching frequency350 HzUtilization categoryDC -13Voltage drop static max.2 V	Load capacitance max. at Ue	1 μF
No-load current lo max., undamped Operating voltage Ub 1030 VDC Output resistance Ra 47.0 kOhm Rated insulation voltage Ui 75 V DC Rated operating current le 200 mA Rated operating voltage Ue DC Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) Switching frequency Utilization category 9 mA 47.0 kOhm 75 V DC 200 mA 100 mA 100 µA 100	Min. operating current Im	0 mA
Operating voltage Ub 1030 VDC Output resistance Ra 47.0 kOhm Rated insulation voltage Ui 75 V DC Rated operating current le 200 mA Rated operating voltage Ue DC 24 V Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency 350 Hz Utilization category DC -13	No-load current lo max., damped	16 mA
Output resistance Ra 47.0 kOhm Rated insulation voltage Ui 75 V DC Rated operating current le 200 mA Rated operating voltage Ue DC 24 V Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency 350 Hz Utilization category DC -13	No-load current Io max., undamped	9 mA
Rated insulation voltage Ui Rated operating current le Rated operating voltage Ue DC Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency 350 Hz Utilization category 75 V DC 100 mA 100 mA 100 mS 100 pA 1	Operating voltage Ub	1030 VDC
Rated operating current le 200 mA Rated operating voltage Ue DC 24 V Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency 350 Hz Utilization category DC -13	Output resistance Ra	47.0 kOhm
Rated operating voltage Ue DC Rated short circuit current 100 A Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency Utilization category 24 V 100 A 100 A 20 M 20 PA 20 N	Rated insulation voltage Ui	75 V DC
Rated short circuit current Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency Utilization category 100 A 20 ms 20 % Switching frequency DC -13	Rated operating current le	200 mA
Ready delay tv max. 10 ms Residual current Ir max. 100 µA Ripple max. (% of Ue) 20 % Switching frequency 350 Hz Utilization category DC -13	Rated operating voltage Ue DC	24 V
Residual current Ir max.100 μARipple max. (% of Ue)20 %Switching frequency350 HzUtilization categoryDC -13	Rated short circuit current	100 A
Ripple max. (% of Ue) Switching frequency Utilization category 20 % 350 Hz DC -13	Ready delay tv max.	10 ms
Switching frequency 350 Hz Utilization category DC -13	Residual current Ir max.	100 μΑ
Utilization category DC -13	Ripple max. (% of Ue)	20 %
	Switching frequency	350 Hz
Voltage drop static max. $2 \lor$	Utilization category	DC -13
	Voltage drop static max.	2 V

Environmental conditions

MTTF (40 °C)	335 a
Functional safety	
IP rating	IP67
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms
Contamination scale	3
Ambient temperature	-2570 °C

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±10 %

Interface

Switching output NPN normally open (NO)

Material

Housing materialStainless steelMaterial sensing surfaceStainless steel

Mechanical data

DimensionØ 12 x 60 mmInstallationnon-flushMounting length36.00 mmPressure rating max.80 bar

Pressure rating, note Pressure-resistant

Range/Distance

Assured operating distance Sa Hysteresis H max. (% of Sr) Rated operating distance Sn Real switching distance sr Repeat accuracy max. (% of Sr) Switching distance marking Temperature drift max. (% of Sr) Tolerance Sr 8.1 mm 15.0 % 10 mm 10 mm 5.0 %

Remarks

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

Installation permitted only in clamp without positive stop.

When installing in metal see Installation Instructions 939231.

LED flashes between 100% and approx. 70% of Sr

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)

