



Model Number

NJ20+U4+W-BHMS3-N.O.

Features

- 2-wire AC
- Surface mount
- Sensing range 20 mm

Technical Data

General specifications

Switching element function		AC	NO
Rated operating distance	s_n	20 mm	
Installation		non-flush	
Output polarity		AC	
Assured operating distance	s_a	0 ... 16.2 mm	
Reduction factor r_{Al}		0.35	
Reduction factor r_{Cu}		0.35	
Reduction factor r_{304}		0.8	

Nominal ratings

Operating voltage	U_B	20 ... 253 V ¹⁾
Switching frequency	f	0 ... 20 Hz
Hysteresis	H	1 ... 10 typ. 5 %
Voltage drop	U_d	≤ 5 V
Voltage drop at I_L		
Voltage drop $I_L = 10$ mA, switching element 6 ... 11 V typ. 9 V on U_d		
Voltage drop $I_L = 20$ mA, switching element 5 ... 9.5 V typ. 8 V on U_d		
Voltage drop $I_L = 50$ mA, switching element 4 ... 7.5 V typ. 6.8 V on U_d		
Voltage drop $I_L = 100$ mA, switching element on U_d		4 ... 7 V typ. 6.5 V
Voltage drop $I_L = 200$ mA, switching element on U_d		4 ... 7 V typ. 6.5 V
Voltage drop $I_L = 200$ mA, $T_U = 23^\circ\text{C}$, switching element on U_d		4 ... 7 V typ. 6 V
Voltage drop $I_L = 500$ mA, switching element on U_d		4 ... 7 V typ. 6 V
Momentary current (20 ms, 0.1 Hz)		0 ... 3000 mA
Operating current	I_L	8 ... 500 mA
Off-state current	I_r	0.5 ... 1.95 mA typ. 1.2 mA
Off-state current U_B 24 V, switching element off I_r		0.5 ... 1.7 mA typ. 1.2 μA
Time delay before availability	t_v	≤ 70 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	810 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

Mechanical specifications

Connection type	Quick disconnect type BHMS3
Housing material	PBT
Sensing face	PBT
Housing base	metal
Degree of protection	IP68
Note	¹⁾ In the temperature range below 0 °C, permissible operating voltage U_b 80...253 V

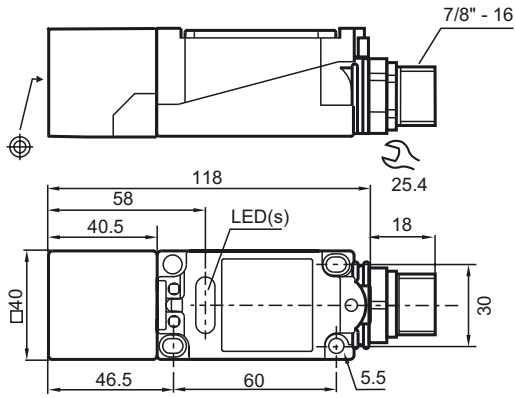
Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

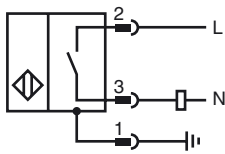
Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

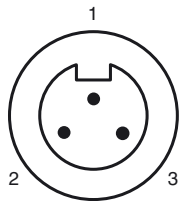
Dimensions



Electrical Connection



Pinout



Wire colors

1		GN	(green)
2		BK	(black)
3		WH	(white)

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