



Model Number

NJ20+U1+E2-Y287109

Features

- Comfort series
- 20 mm flush

Technical Data

General specifications

Switching element function		PNP	NO
Rated operating distance	s_n	20 mm	
Installation		flush	
Output polarity		DC	
Assured operating distance	s_a	0 ... 16.2 mm	
Actual operating distance	s_r	18 ... 22 mm typ. 20 mm	
Reduction factor r_{AI}		0.35	
Reduction factor r_{Cu}		0.35	
Reduction factor r_{304}		0.8	

Nominal ratings

Operating voltage	U_B	10 ... 30 V	
Switching frequency	f	0 ... 150 Hz	
Hysteresis	H	1 ... 10 typ. 5 %	
Reverse polarity protection		reverse polarity protected	
Short-circuit protection		pulsing	
Voltage drop	U_d	≤ 2.8 V	
Voltage drop at I_L			
Voltage drop $I_L = 1$ mA, switching element on U_d		0.5 ... 2.3 V typ. 0.9 V	
Voltage drop $I_L = 10$ mA, switching element on U_d		0.8 ... 2.2 V typ. 1.4 V	
Voltage drop $I_L = 20$ mA, switching element on U_d		0.9 ... 2.3 V typ. 1.5 V	
Voltage drop $I_L = 50$ mA, switching element on U_d		0.9 ... 2.5 V typ. 1.6 V	
Voltage drop $I_L = 100$ mA, switching element on U_d		1 ... 2.6 V typ. 1.8 V	
Voltage drop $I_L = 200$ mA, switching element on U_d		1.2 ... 2.8 V typ. 2 V	
Operating current	I_L	0 ... 200 mA	
Off-state current	I_r	0 ... 0.5 mA typ. 0.01 mA	
Off-state current $T_U = 40$ °C, switching element off		≤ 100 μ A	
No-load supply current	I_0	≤ 10 mA	
Time delay before availability	t_v	≤ 50 ms	
Operating voltage indicator		LED, green	
Switching state indicator		LED, yellow	

Functional safety related parameters

MTTF _d	819 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	screw terminals
Information for connection	A maximum of two conductors with the same core cross-section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross-section	up to 2.5 mm ²
Minimum core cross-section	without wire end ferrule 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section	without wire end ferrule 2.5 mm ² , with connector sleeves 1.5 mm ²
Cable gland	
Note	Sealing ring: Hole diameter 7 / 10.5 / 13 / 16 mm The dimension of the connection cable must correspond to the hole selected on the sealing ring.
Housing material	PBT with Viton seals and PVDF screwed connection
Sensing face	PBT
Degree of protection	IP68

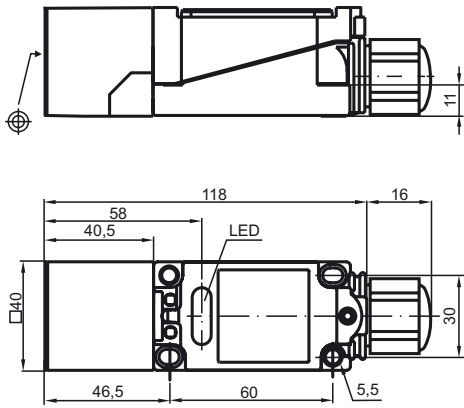
Compliance with standards and directives

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

Approvals and certificates

UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

Dimensions



Electrical Connection

