



Model Number

NJ40+U1+E2

Features

- **Comfort series**
- **40 mm non-flush**

Accessories

V1-M20-80

Receptacles, M12/M20; plastic version

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

MHW 01

Modular mounting bracket

Technical Data

General specifications

Switching element function	PNP	NO
Rated operating distance	s_n	40 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 32.4 mm
Actual operating distance	s_r	36 ... 44 mm typ. 40 mm
Reduction factor r_{AI}		0.5
Reduction factor r_{CU}		0.45
Reduction factor r_{304}		0.8

Nominal ratings

Operating voltage	U_B	10 ... 60 V
Switching frequency	f	0 ... 100 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 µA

No-load supply current I_0 ≤ 10 mA

Time delay before availability t_v ≤ 100 ms

Operating voltage indicator LED, green

Switching state indicator LED, yellow

Functional safety related parameters

MTTF_d 580 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

Core cross-section up to 2.5 mm²

Housing material PBT

Sensing face PBT

Degree of protection IP68

Compliance with standards and directives

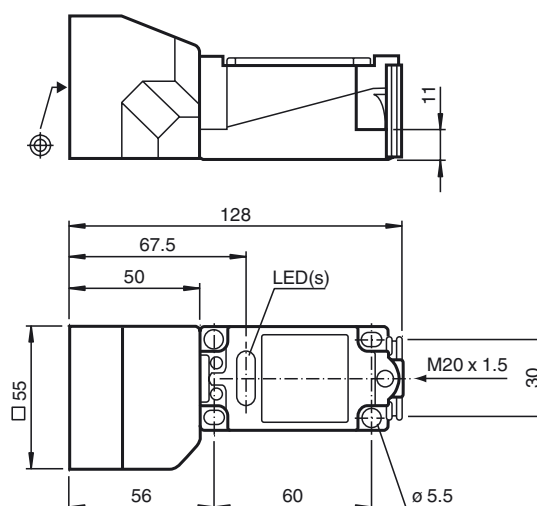
Standard conformity

Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007
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Approvals and certificates

EAC conformity	TR CU 020/2011
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

Dimensions





Electrical Connection

