



### 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	$U_d$	$\leq 2.8$ 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		$\leq 100$ $\mu$ A	
No-load supply current	$I_0$	$\leq 10$ mA	
Time delay before availability	$t_v$	$\leq 100$ ms	
Operating voltage indicator		LED, green	
Switching state indicator		LED, yellow	

### Functional safety related parameters

MTTF <sub>d</sub>	580 a
Mission Time (T <sub>M</sub> )	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 <sup>2</sup>
Minimum core cross-section	without wire end ferrule 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section	without wire end ferrule 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68

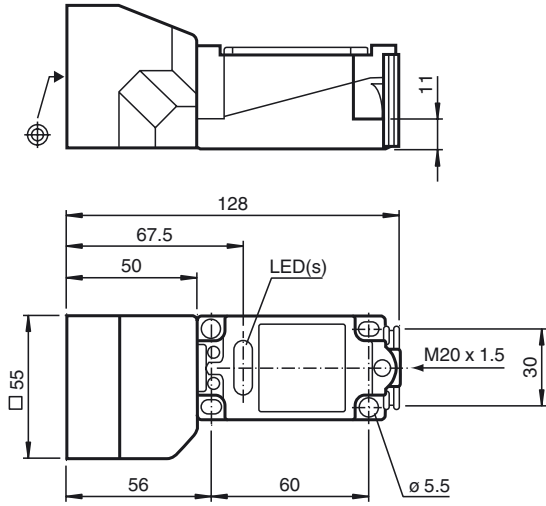
### Compliance with standards and directives

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

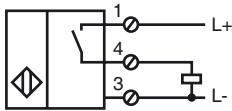
### Approvals and certificates

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





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