



Model Number

NBN7-12GK50-E3-M

Features

- 7 mm non-flush
- Extended temperature range
-40 ... +85 °C
- Increased noise immunity 100 V/m
- E1-Type approval
- With increased sealing, protection
class
IP68 / IP69K
- Highly shock and vibration resistant

Accessories

EXG-12

Quick mounting bracket with dead stop

Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	PNP
Rated operating distance	s_n 7 mm
Installation	non-flush
Output polarity	DC
Assured operating distance	s_a 0 ... 5.67 mm
Reduction factor r_{Al}	0.5
Reduction factor r_{Cu}	0.4
Reduction factor r_{304}	0.7
Reduction factor r_{Brass}	0.5
Output type	3-wire

Nominal ratings

Operating voltage	U_B 5 ... 60 V
Switching frequency	f 0 ... 1500 Hz
Hysteresis	H typ. 5 %
Reverse polarity protection	reverse polarity protected
Short-circuit protection	pulsing
Inductive overvoltage protection	yes
Surge suppression	yes
Voltage drop	U_d \leq 2 V
Rated insulation voltage	U_{BIS} 60 V
Operating current	I_L 0 ... 200 mA
Off-state current	I_r 0 ... 0.5 mA typ. 0.1 μ A at 25 °C
No-load supply current	I_0 \leq 7 mA
Time delay before availability	t_v \leq 200 ms
Switching state indicator	LED, yellow

Functional safety related parameters

MTTF _d	1006 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-40 ... 85 °C (-40 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type	cable PUR, 2 m
Core cross-section	3 x 0.75 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68 / IP69K
Mass	110 g

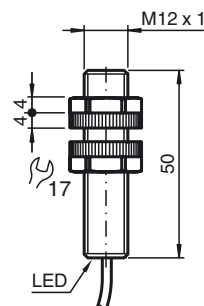
Compliance with standards and directives

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

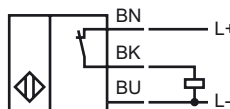
Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)
E1 Type approval	10R-04

Dimensions



Electrical Connection



Installation Hint

Interference immunity in accordance with
 DIN ISO 11452-2: 100 V/m
 Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2: Pulse

	1	2a	2b	3a	3b	4	5
Severity level	III	III	III	III	III	III	III
Failure criterion	C	A	C	A	A	A	B

EN 61000-4-2:	CD: 8 kV / AD: 15 kV
Severity level	IV IV
EN 61000-4-3:	30 V/m (80...2500 MHz)
Severity level	IV
EN 61000-4-4:	2 kV
Severity level	III
EN 61000-4-6:	10 V (0.01...80 MHz)
Severity level	III
EN 55011:	Class A

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