

Data sheet

Commercial Art.No.: R1.188.0500.1

device for monitoring of safety-related circuits SNO4003K-A AC/DC 24V (B)

Base unit, single channel control, automatic-/manual reset with reset switch monitoring, 3 enabling current paths, 1 signalling out put, AC/DC 24 V 50-60Hz, screw-terminals pluggable



certificates / approvals



Technical data

general

function display	2 LED, green
creepage distances and clearances between the circuits	EN 60664-1
protection degree according to DIN EN 60529 (housing)	IP40
protection degree according to DIN EN 60529 (terminals)	IP20
ambient temperature min.	-25 °C
ambient temperature max.	55 °C
wire ranges screw terminals, fine-stranded / solid	1 x 0.2 mm ² - 2.5 mm ² / 2 x 0.2 mm ² - 1.0 mm ²
wire ranges screw terminals, fine-stranded with ferrules	1 x 0.25 mm ² - 2.5 mm ² / 2 x 0.25 mm ² - 1.0 mm ²
permissible torque min.	0.5 Nm
permissible torque max.	0.6 Nm
tightening moment	0.6 Nm
weight	0.2 kg
standards	EN ISO 13849-1EN 62061; EN 62061
suitable for safety functions	yes
with muting function	no
feedback circuit	yes
start contact	yes
stop category acc. to IEC 60204	0
rail mounting possible	yes

connection data

detachable clamps	yes
type of electric connection	screw connection

safety parameters

category (ISO 13849-1)

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PL (ISO 13849-1)	level e
SIL _{CL} (IEC 62061)	3
PFD _d (Low demand mode)	3.6 E-6
PFH _d (High demand mode)	8.6 E-10 1/h
HFT	1
SSF	99.5 %
DC	99 %
MTTF _d	73 a
λS	1570 FIT
λD	1570 FIT
λDU	16 FIT
λDD	1554 FIT
T _M	20 a
proof test intervall (High demand mode)	20 a
proof test intervall (Low demand mode)	1 a

application

model	basic device
suitable for monitoring of magnetic switches	no
suitable for monitoring of proximity switches	yes
suitable for monitoring of emergency-stop circuits	yes
suitable for monitoring of optoelectronic protection equipment	no
suitable for monitoring of position switches	yes

output circuit

enabling paths	normally open contact
signaling paths	opener
contact material	Ag alloy, gold-plated
rated switching voltage, enabling paths AC	230 V
rated switching voltage, enabling paths DC	24 V
rated switching voltage, signaling paths AC	230 V
rated switching voltage, signaling paths DC	24 V
max. thermal current I _{th} , enabling paths	8 A
max. thermal current I _{th} , signaling paths	5 A
max. total current I ² of all current path	9 A ²
application category AC-15 (NO)	U _e 230V, I _e 5A
application category DC-13 (NO)	U _e 24V, I _e 5A
short-circuit protection (NO), max. fuse insert	6 A class gG fuse, fuse integral < 100 A ² s
mechanical life	10 ⁷ switching cycles
outputs, signalling function, undelayed, with contact	1
outputs, safe, undelayed, with contact	3

control circuit

nominal output voltage DC	24 V
input current (safety circuit / reset circuit)	90 mA
max. peak current (safety circuit / reset circuit)	1500 mA
response time tA1	60 ms
response time tA2	60 ms
min. switch-on time	60 ms
recovery time tW	> 200 ms

release time tR	< 80 ms
max. resistivity, per channel	$\leq (5 + (1.333 \times UB / UN - 1) \times 200) \Omega$
type of switch function of the inputs	normally open contact
evaluation inputs	1-channel

supply circuit

nominal voltage UN	AC/DC 24 V
rated consumption AC	3.2 VA
rated consumption DC	1.3 W
rated frequency min.	50 Hz
rated frequency max.	60 Hz
operating voltage min.	20.4 V
operating voltage max.	26.4 V
electrical isolation supply circuit - control circuit	no
min. rated control supply voltage at AC 50 Hz	20.4 V
max. rated AC voltage for controls, 50 Hz	26.4 V
min. rated DC voltage for controls	20.4 V
max. rated DC voltage for controls	26.4 V
min. rated control supply voltage at DC	20.4 V
rated control supply voltage at AC 60HZ	20.4 V
rated control supply voltage at AC 50HZ	26.4 V

dimensions

depth	114 mm
width	22.5 mm
height	96.5 mm

classification

ECLASS 11	
ECLASS 8.1	27371819
ETIM 9.0	EC001449
ETIM 8.0	EC001449
ETIM 7.0	EC001449
ETIM 6.0	EC001449
ETIM 5.0	EC001449
ETIM 4.0	EC001449
ETIM 3.0	EC001449

product compliance

ROHS conformity status	compliant/exempted
ROHS exceptions	III-6(c); III-7(c)I
REACH-SVHC conformity status	Duty-To-Declare
REACH-SVHC substances	Lead
REACH-SVHC CAS numbers	7439-92-1