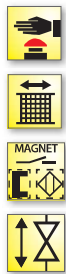


SNT 4M63K

Monitoring of emergency stop and safety gates



Applications

- Protection of people and machinery
- Monitoring of emergency stop applications
- Monitoring of safety gates
- Up to PL e/Category 4 (EN ISO 13849-1)
- Up to SIL_{CL} 3 (EN 62061)

Features

- Stop Category 0 according to EN 60204-1
- Manual or automatic start
- Cross monitoring
- 3 enabling current paths (NO contact, forcibly guided)
- Feedback loop for monitoring external contactors

Function

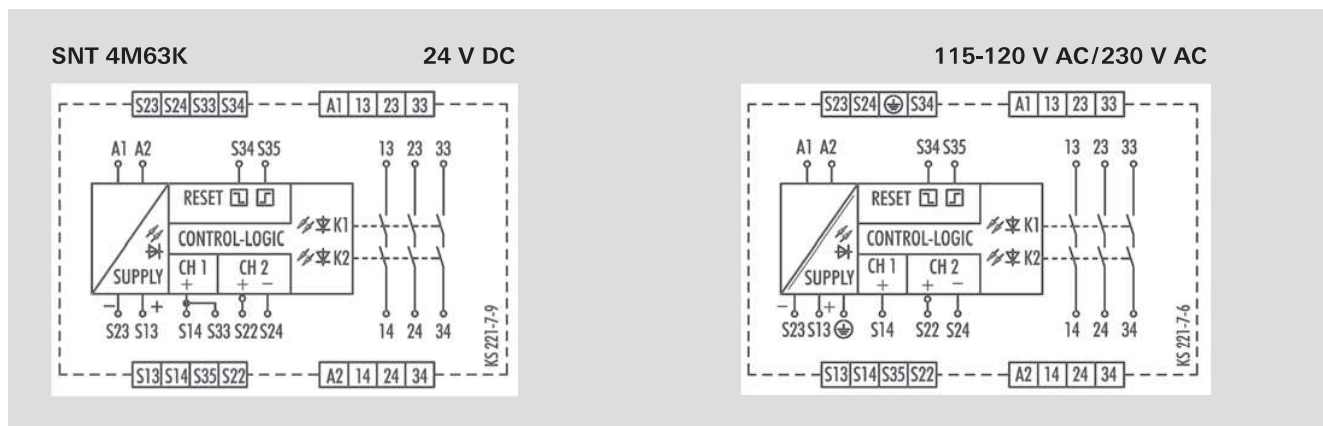
The device is a two-channel switching device with self-monitoring on each ON-OFF cycle. It complies with EN 60204-1 and is equipped with forcibly guided relays. It is intended for monitoring connected switching elements on separating safety devices and generating a safety-oriented signal (enable). Depending on the design, separating safety devices may include sliding safety gates, safety gates, housings, covers, sheetings, screens, etc.

Basic function

With supply voltage applied to terminals A1/A2 and the safety inputs closed, pressing the reset button closes the enabling current paths (manual start). When the safety inputs are opened the enabling paths will open.

- **Manual start** – When the safety inputs are closed, a button is used to close reset input S34 and open it again (triggering with falling edge) or to close reset input S35 (triggering with rising edge).
- **Automatic Start** – Reset input S35 is connected to S33/S14. The device starts with the rising edge of the signal on safety input S14.

Circuit diagram



Overview of devices | part numbers

Type	Rated voltage	Terminals	Part no.	P.U.
SNT 4M63K-A	24 V AC/DC	Screw terminals, pluggable	R1.188.1050.0	1
	115 – 120 V AC	Screw terminals, pluggable	R1.188.1060.0	1
	230 V AC	Screw terminals, pluggable	R1.188.1070.0	1
SNT 4M63K-C	24 V AC/DC	Push-in terminals, pluggable	R1.188.2390.0	1

Technical data

Function	Emergency stop relay, valve position and safety gate monitoring	
Function display	3 LEDs, green	
Power supply circuit		
Rated voltage U_N	A1, A2	24 V AC/DC, 115-120 V AC, 230 V AC
Rated consumption	24 V DC	2,0 W
	115-120 V AC, 230 V AC	2,6 W / 3.2 VA
Rated frequency	50 - 60 Hz	
Operating voltage range U_B	0.85 - 1.1 x U_N	
Electrical isolation supply circuit - control circuit	yes (at $U_N = 115-230$ V AC, 230 V AC)	
Control circuit		
Rated output voltage	S13/S23	22 V DC
Input current / peak current	S14/S33, S22/S24	40 mA / 100 mA
	S34, S35	5 mA / 50 mA
Response time t_{A1} / t_{A2}	40 ms / 600 ms	
Minimum ON time t_M	80 ms	
Recovery time t_W	100 ms	
Release time t_R	15 ms	
Synchronous time t_S	200 ms (CH1 → CH2)	
Max. resistivity, per channel ¹⁾	24 V AC/DC	$\leq (5 + (1.176 \times U_B / U_N - 1) \times 100) \Omega$
	115-120 V AC, 230 V AC	$\leq (5 + (1.176 \times U_B / U_N - 1) \times 100) \Omega$
Output circuit		
Enabling paths	13/14, 23/24, 33/34	normally open contact
Contact assignment	forcefully guided	
Contact type	Ag-alloy, gold-plated	
Rated switching voltage	enabling path	230 V AC
Max. thermal current I_{th}	enabling path	6 A
Max. total current I^2 of all current path	($T_u = 55$ °C)	9 A ²
Application category (NO)	AC-15	U_s 230 V, I_s 3 A
	DC-13	U_s 24 V, I_s 2.5 A
Short-circuit protection (NO), lead fuse / circuit breaker	6 A class gG / melting integral < 100 A ² s	
Mechanical life	10 ⁷ switching cycles	
General data		
Creepage distances and clearances between the circuits	EN 60664-1	
Protection degree according to EN 60529 (housing / terminals)	IP40 / IP20	
Ambient temperature / storage temperature	-25 °C - +55 °C / -25 °C - + 75 °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
	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	0.5 - 0.6 Nm	
Wire ranges push-in terminals	1 x 0.25 mm ² – 1-5 mm ²	
Weight	0-21 kg / 0-25 kg	
Standards	EN ISO 13849-1, EN 62061	
Approvals	DGUV, cULus, CCC	

¹⁾ If two-channel devices are installed as single channel, the value is halved.