SNA 4063K/KM, SNA 4064K/KM

MONITORING OF EMERGENCY STOP, SAFETY GATES AND LIGHT BARRIERS

APPLICATIONS

- Monitoring of emergency stop applications
- Monitoring of safety gates
- Monitoring of light barriers
- 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
- Single-channel or two-channel control
- Manual reset with monitoring
- Cross monitoring
- 3 to 4 enabling current paths

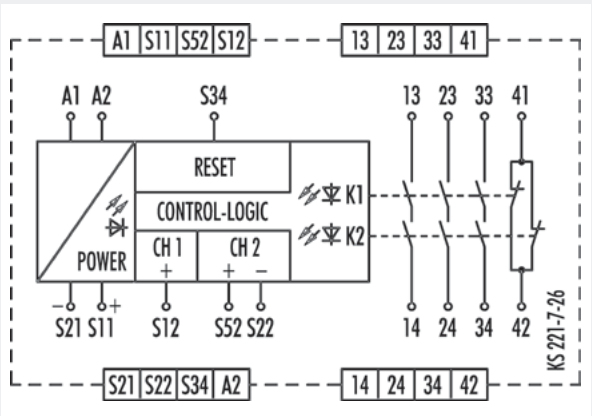
FUNCTION

After the supply voltage is applied to terminals A1/A2 and the safety inputs are closed, the enabling current paths (NO contacts) are closed and the signal current path (NC contact) is opened by pressing the reset button (manual start with monitoring). When the safety inputs are opened/de-energized, the enabling current paths (NO contacts) are opened immediately.

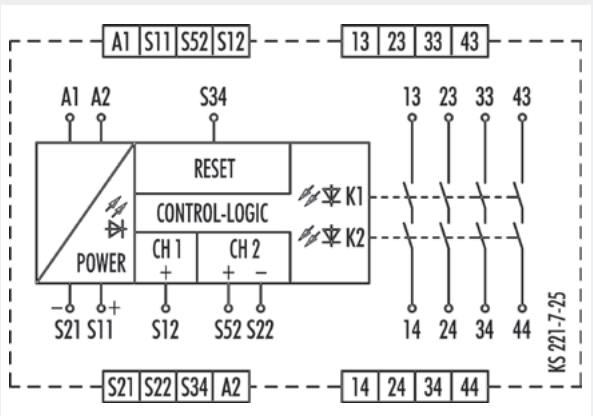
- **Manual start with monitoring** – Reset input S34 is connected to safety input S11 via a RESET button. To monitor external contact blocks (EDM), their NC contacts must be connected in series to the RESET button.
- **Monitoring of light curtains** – The **KM device types** are especially suitable for the monitoring of very fast tactile switching operations, for example in safety light curtain applications. Very short switch-off procedures of a few milliseconds are detected reliably and lead to the switching off of the internal relays.

CIRCUIT DIAGRAM

SNA 4063K/KM



SNA 4064K/KM



OVERVIEW OF DEVICES | PART NUMBERS

Type	Rated voltage	Terminals	Part no.	P.U.
SNA 4063K-A	24 V AC/DC	Screw terminals, pluggable	R1.188.1440.0	1
SNA 4063K-A	115-120 V AC	Screw terminals, pluggable	R1.188.1450.0	1
SNA 4063K-A	230 V AC	Screw terminals, pluggable	R1.188.1460.0	1
SNA 4063K-C	24 V AC/DC	Push-in terminals, pluggable	R1.188.1950.0	1
SNA 4063KM-A	24 V AC/DC	Screw terminals, pluggable	R1.188.3290.0	1
SNA 4063KM-C	24 V AC/DC	Push-in terminals, pluggable	R1.188.3420.0	1
SNA 4064K-A	24 V AC/DC	Screw terminals, pluggable	R1.188.1900.0	1
SNA 4064K-A	115-120 V AC	Screw terminals, pluggable	R1.188.1920.0	1
SNA 4064K-A	230 V AC	Screw terminals, pluggable	R1.188.1930.0	1
SNA 4064K-C	24 V AC/DC	Push-in terminals, pluggable	R1.188.1970.0	1
SNA 4064KM-A	24 V AC/DC	Screw terminals, pluggable	R1.188.3360.0	1
SNA 4064KM-C	24 V AC/DC	Push-in terminals, pluggable	R1.188.3430.0	1

TECHNICAL DATA			
Function			Emergency stop relay
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	24V DC / 24 V AC		1.6 W / 2.9 VA
	42-48V AC / 115-120V AC / 230 V AC		2.3 W / 2.6 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	S11/S21		24 V DC
Input current / peak current	S12, S52/S22 | S34		25 mA / 100 mA | 5 mA / 50 mA
Response time t_{A1} / t_{A2}			100 ms / ---
Minimum ON time t_M			100 ms
Recovery time t_W			750 ms
Release time t_R			10 ms
Synchronous time t_S			no
Permissable test pulse time t_{TP}			< 1 ms
Max. resistivity, per channel [1]		24V AC/DC	≤ (5 + (1,176 x U_B / U_N - 1) x 100) Ω
		42-48V AC/ 115-120 V AC, 230 V AC	≤ (5 + (1,176 x U_B / U_N - 1) x 100) Ω
Output circuit	SNA 4063K/KM	SNA 4064K/KM	
Enabling paths	13/14, 23/24, 33/34	13/14, 23/24, 33/34, 43/44	normally open contact
Signaling paths	41/42	---	normally closed contact
Contact assignment			forcebly guided
Contact type			Ag-alloy, gold-plated
Rated switching voltage	enabling / signaling path		230 V AC
Max. thermal current I_{th}	enabling / signaling path		8 A / 5 A
Max. total current I^2 of all current path	(Tu = 55 °C) / (Tu = 65 °C)		25 A^2 / 9 A^2
Application category (NO)		AC-15 | DC-13	U_e 230 V, I_e 3 A | U_e 24 V, I_e 3 A
Short-circuit protection (NO), lead fuse / circuit breaker			6 A class gG / melting integral < 100 A^2s
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 - +65 °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 bis 1-5 mm^2
Weight	24 V AC/DC device / AC device		0-21 kg / 0-25 kg
Standards			EN ISO 13849-1, EN 62061, EN 81-20/50, EN 50156-1, EN 61511
Approvals			TÜV, cULus, CCC, GL

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