

SNV 4274SL / SNV 4074ST – MONITORING OF EMERGENCY STOP, LIGHT BARRIERS AND SAFETY GATES, OFF-DELAYED/ON-DELAYED



APPLICATIONS

- Monitoring of limit values in the process industry
- Monitoring of emergency stop applications
- Monitoring of safety gates
- Monitoring of interlocks
- Monitoring of light barriers
- Up to PL e/ Category 4 (EN ISO 13849-1)
- Up to SIL_{CL} 3 (EN 62061)

FEATURES

- Continuously adjustable, analog time setting
- Time ranges 3s, 30s or 300s
- Retriggering of the time delay possible
- Single-channel or two-channel control
- Manual or automatic start
- SafeStart
- Cross monitoring

OFF-DELAY WITH RETRIGGERING FUNCTION (SNV 4274SL)

After the supply voltage is applied to terminals A1/A2 and the safety inputs are closed, the contacts are switched on immediately, either automatically or by pressing the reset button (manual start). When the safety inputs are opened/de-energized, the contacts are switched off immediately or with a release delay.

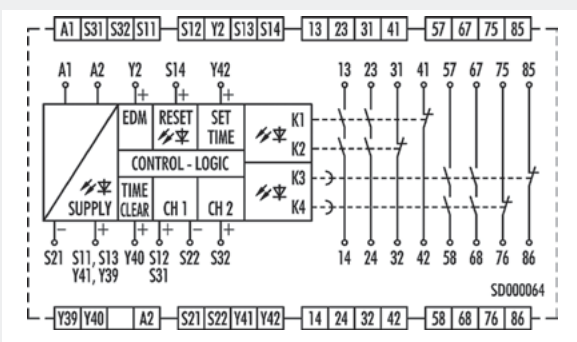
The set release delay only expires if the safety inputs are opened longer than the release delay set on the device. If the safety inputs are closed again before the release delay has expired (retriggering), the delayed contacts will remain closed, too.

ON-DELAY FUNCTION (SNV 4074ST)

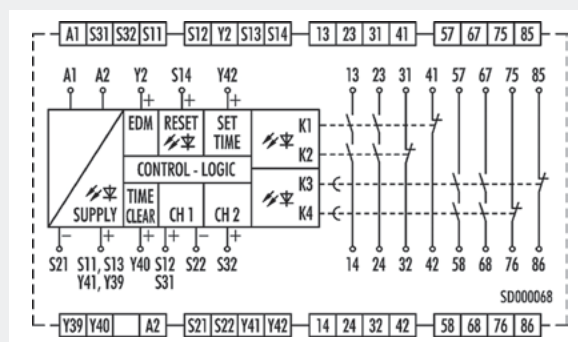
After the supply voltage is applied to terminals A1/A2 and the safety inputs are closed, the contacts are switched on immediately or with a response delay, either automatically or by pressing the reset button (manual start). When the safety inputs are opened/de-energized the contacts are switched off immediately.

CIRCUIT DIAGRAMS

SNV 4274SL



SNV 4074ST





OVERVIEW OF DEVICES | PART NUMBERS

Type	Time range	Rated voltage		Terminals	Part no. 24V DC	Part no. 115 – 230V AC	P.U.
SNV 4274SL-A	3s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2470.0	R1.188.2650.0	1
SNV 4274SL-A	30s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2500.0	R1.188.2680.0	1
SNV 4274SL-A	300s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2530.0	R1.188.2710.0	1
SNV 4274SL-C	3s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2480.0	R1.188.2660.0	1
SNV 4274SL-C	30s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2510.0	R1.188.2690.0	1
SNV 4274SL-C	300s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2540.0	R1.188.2720.0	1
SNV 4074ST-A	3s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2560.0	R1.188.2740.0	1
SNV 4074ST-A	30s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2590.0	R1.188.2770.0	1
SNV 4074ST-A	300s	24V DC	115 – 230V AC	Screw terminals, pluggable	R1.188.2620.0	R1.188.2800.0	1
SNV 4074ST-C	3s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2570.0	R1.188.2750.0	1
SNV 4074ST-C	30s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2600.0	R1.188.2780.0	1
SNV 4074ST-C	300s	24V DC	115 – 230V AC	Push-in terminals, pluggable	R1.188.2630.0	R1.188.2810.0	1

TECHNICAL DATA			
Function	Emergency stop relay		
Function display	5 LEDs, green/red		
Function mode / adjustment	Time / stepless		
Adjustment range	0.15 - 3 s / 1.5 - 30 s / 15 - 300 s		
Power supply circuit			
Rated voltage U_N	A1, A2	24 V DC / 115-230 V AC	
Rated consumption	24 V DC 115-230 V AC	2.8 W 3.2 W / 6.3 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)		
Control circuit			
Rated output voltage	S11, S13, S33, Y39 / S21	22 V DC	
Input current / peak current	S12, S31/S22, S32	3 mA / 4,5 mA	
	S14, S34, Y2, Y40	4 mA / 4,5 mA	
Response time t_{A1} / t_{A2}	200 ms		
Minimum ON time t_M	100 ms		
Recovery time t_W	50 ms		
Release time t_R	20 ms		
Release time t_{R1} , delayed contacts (tolerance)	0,15 - 3 s (± 16 % of the setting value)		
	1,5 - 30 s (± 16 % of the setting value)		
	15 - 300 s (± 16 % of the setting value)		
Permissible test pulse time t_{TP}	< 1 ms		
Max. resistivity, per channel ¹⁾	24 V DC 115-230 V AC	< 50 Ω < 50 Ω	
Output circuit			
Enabling paths	13/14, 23/24	normally open contact	
	57/58, 57/68	normally open contact, time delayed	
Signaling paths	31/32, 41/42 75/76, 85/86	normally closed contact	normally closed contact, time delayed
Contact assignment	forcefully guided		
Contact type	Ag-alloy, gold-plated		
Rated switching voltage	enabling- / signaling path	230 V AC	
Max. thermal current I_{th}	enabling- / signaling path	6 A / 2 A	
Max. total current I^2 of all current path ($T_u = 55$ °C)	40 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 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	0,33 kg / 0,35 kg		
Standards	EN ISO 13849-1, EN 62061, EN 50156-1		
Approvals	TÜV, GL, cULus, CCC		

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