

3RP, 3RT19 Timing Relays

General data

Function table 3RT19 16, 3RT19 26

Function	Function chart	3RT19 16 timing relays					3RT19 26 timing relays				
		3RT19 16-2C	3RT19 16-2D	3RP19 16-2E	3RT19 16-2F	3RT19 16-2G	3RT19 16-2L	3RT19 26-2C	3RT19 26-2D	3RT19 26-2E	3RT19 16-2F
1 CO contact											
OFF-delay with auxiliary voltage											
1 NO + 1 NC											
ON-delay (varistor integrated)											
With ON-delay											
OFF-delay without auxiliary voltage (varistor integrated)											
OFF-delay without auxiliary voltage											
2 NO											
Wye-delta function (varistor integrated) 1 NO delayed, 1 NO instantaneous, dead time 50 ms											
Wye-delta function 1 NO delayed, 1 NO instantaneous, dead time 50 ms											
1 NO contact (semiconductor)											
ON-delay Two-wire version (varistor integrated)											
OFF-delay with auxiliary voltage (varistor integrated)											

■ Function is possible

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3RP, 3RT19 Timing Relays

3RT19 16, 3RT19 26 timing relays for mounting onto contactors

Technical specifications

According to IEC 61812-1/DIN VDE 0435 Part 2021

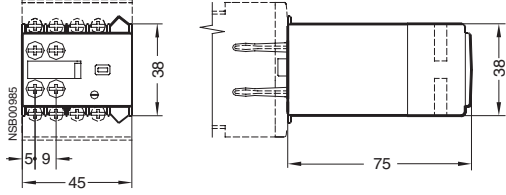
Contactor	Type		3RT19 .6-2C Solid-state time- delay blocks with semiconductor output	3RT19 .6-2D	3RT19 .6-2L Solid-state time-delay auxiliary switch blocks	3RT19 .6-2E	3RT19 .6-2F	3RT19 .6-2G
Rated insulation voltage U_i Degree of pollution 3 Overvoltage category III acc. to DIN VDE 0110		V AC	300					
Operating range of excitation			0.8 ... 1.1 x U_{S1} 0.95 ... 1.05 times rated frequency		0.85 ... 1.1 x U_{S1} 0.95 ... 1.05 times rated frequency			
Rated power Power consumption at 230 V AC, 50 Hz		W VA	1 1		2 4			
Rated operational currents I_e • AC-140, DC-13 • AC-15, 230 V, 50 Hz • DC-13, 24 V • DC-13, 110 V • DC-13, 230 V		A	0.3 for 3RT19 16 0.5 for 3RT19 26		-- -- 3 1 0.2 0.1			
DIAZED protection gL/gG operational class		A	--		4			
Switching frequency for load • With I_e 230 V AC • With 3RT10 16 contactor, 230 V AC		h^{-1} h^{-1}	2500 2500		5000			
Recovery time		ms	50		150			
Minimum ON period		ms	35		35 (OFF-delay with auxiliary voltage)		200 (with OFF-delay)	
Residual current	Max.	mA	5		--			
Voltage drop with conducting output	Max.	VA	3.5		--			
Short-time loading capacity	up to 10 ms	A	10		--			
Setting accuracy with reference to upper limit of scale	Max.	%	±15					
Repeat accuracy	Max.	%	±1					
Mechanical endurance		Oper- ating cycles	100 x 10 ⁶		10 x 10 ⁶			
Permissible ambient temperature								
	During operation	°C	-25 ... +60					
	During storage	°C	-40 ... +80					
Degree of protection acc. to EN 60947-1, Appendix C • Covers • terminals			IP40 IP20					
Connection type			Screw terminals					
• Terminal screw • Solid • Finely stranded with end sleeve • AWG cables, solid or stranded • Tightening torque		mm ² mm ² AWG Nm	M 3 (standard screwdriver, size 2 and Pozidriv 2) 1 x (0.5 ... 4) / 2 x (0.5 ... 2.5) 1 x (0.5 ... 2.5) / 2 x (0.5 ... 1.5) 2 x (20 ... 14) 0.8 ... 1.2					
Permissible mounting positions			Any					
Shock resistance Half-sine acc. to IEC 60068-2-27		g/ms	15/11					
Vibration resistance acc. to IEC 60068-2-6			10 ... 55 Hz: 0.35 mm					
Electromagnetic compatibility (EMC) Tests acc. to basic specification			EN 61000-6-2/EN 61000-6-4					
Overvoltage protection			Varistor integrated in timing relay		--			

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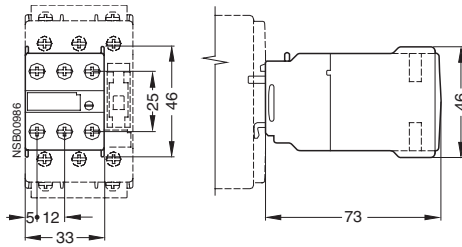
3RT19 16, 3RT19 26 timing relays
for mounting onto contactors

Dimensional drawings

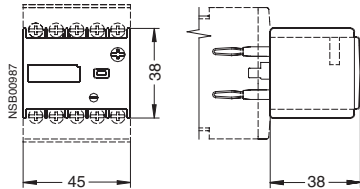
3RT19 16-2E, -2F, -2G, -2L
solid-state, time-delay auxiliary switch blocks
for size S00 contactors and contactor relays



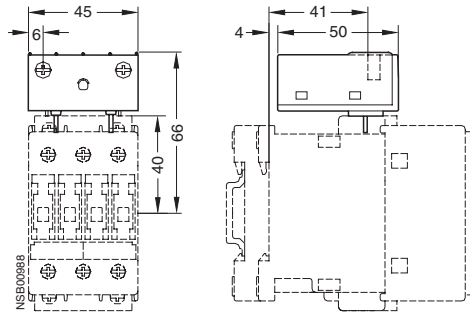
3RT19 26-2E, -2F, -2G
for size S0 to S3 contactors and contactor relays



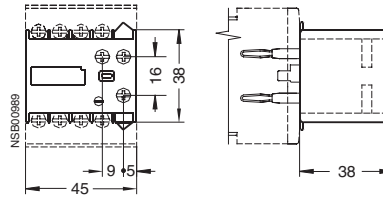
3RT19 16-2C solid-state time-delay blocks, ON-delay
for mounting onto the front of size S00 contactors



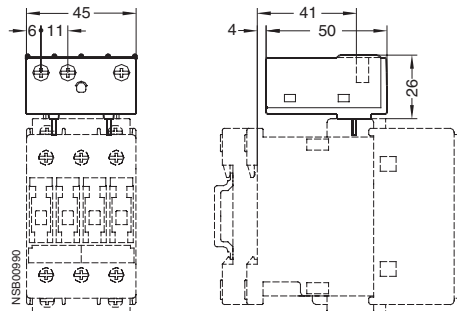
3RT19 26-2C
mountable on top or bottom of the contactors for size S0 to S3



3RT19 16-2D solid-state time-delay blocks, OFF-delay
for mounting onto the front of size S00 contactors



3RT19 26-2D
mountable on top or bottom of the contactors for size S0 to S3



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3RT19 16, 3RT19 26 timing relays for mounting onto contactors

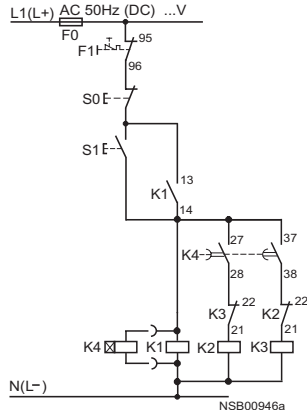
Schematics

3RT19 circuit diagrams

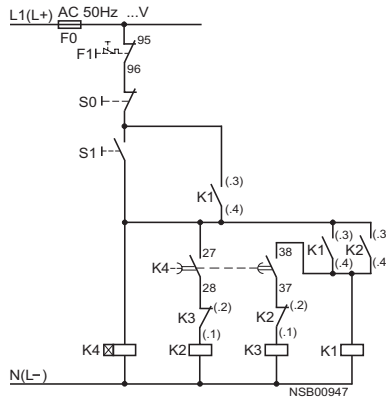
Control circuits (example circuits) with delayed 3RT19 .6-2G wye-delta auxiliary switch block

For momentary-contact operation

Size S00

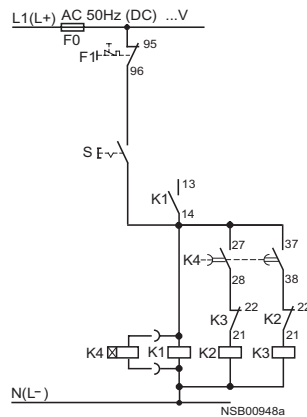


Sizes S0 to S3

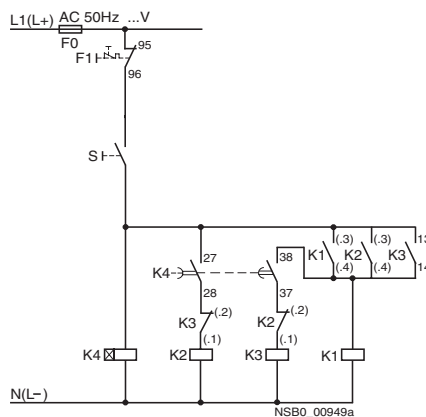


For maintained-contact operation

Size S00



Sizes S0 to S3



Legend:

- S0 "OFF" button
- S1 "ON" button
- S Maintained-contact switch

- K1 Line contactor
- K2 Star contactor
- K3 Delta contactor
- K4 Timer or timing relay

- F0 Fuse
- F1 Overload relay

Note:

The 27/28 contact element for the solid-state time-delay auxiliary switch block with wye-delta function is only closed on the wye stage; the contact element is open in the delta stage as well as in the de-energized state.

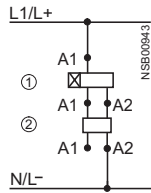
3RP, 3RT19 Timing Relays

3RT19 16, 3RT19 26 timing relays for mounting onto contactors

Solid-state timing relay blocks

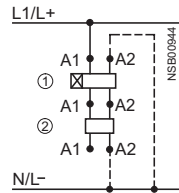
for size S00 to S3 3RT10 contactors and 3RH11 contactor relays

3RT19 16-2C



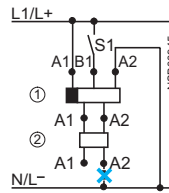
With ON-delay

3RT19 26-2C



With ON-delay

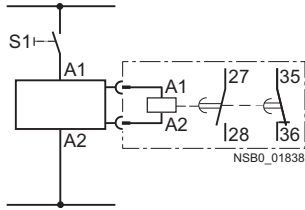
3RT19 16-2D/3RT19 26-2D



OFF-delay (with auxiliary voltage)

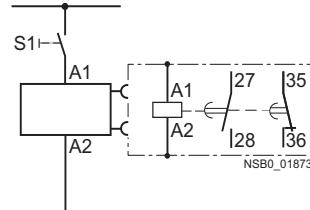
- ① Timing relay block
- ② Contactor
- can be connected
- ✘ **Do not connect!**

3RT19 16-2E



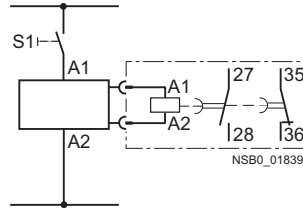
With ON-delay

3RT19 26-2E



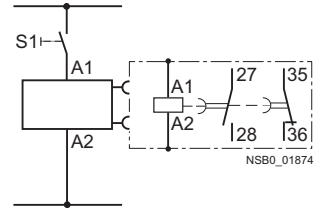
With ON-delay

3RT19 16-2F



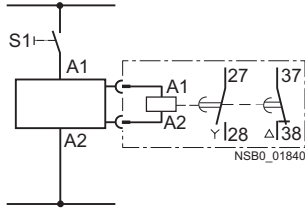
With OFF-delay (without auxiliary voltage)

3RT19 26-2F



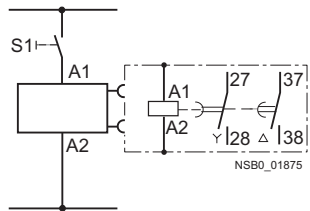
With OFF-delay (without auxiliary voltage)

3RT19 16-2G



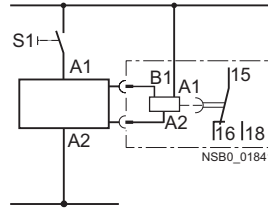
Wye-delta function

3RT19 26-2G



Wye-delta function

3RT19 16-2L



OFF-delay (with auxiliary voltage)

