General data

OFF-delay device for size S3 contactors

AC and DC operation

IEC 60947, EN 60947

For screw fixing and snap-on mounting onto TH 35 standard mounting rails. The OFF-delay devices have screw terminals.

The OFF-delay device prevents a contactor from dropping out unintentionally when there is a short-time voltage dip or voltage failure. It supplies a downstream, DC-operated contactor with the necessary energy during a voltage dip, ensuring that the contactor does not trip. The 3RT1916 OFF-delay devices are specifically designed for operation with the 3RT1 contactors and 3RH1 contactor relays.

The OFF-delay device operates without external voltage on a capacitive basis and in size S3 can be energized only with DC.

A contactor opens after a delay when the capacitors of the solenoid coil, built into the OFF-delay device, are switched in parallel. In the event of voltage failures, the capacitors are discharged via the solenoid coil and thereby delay the opening of the contactor.

If the command devices are upstream of the OFF-delay device in the circuit, the OFF-delay takes effect with every opening operation. If the opening operation is downstream of the OFF-delay device, an OFF-delay only applies in the event of failure of the mains voltage.

Operation

For size S3, only one version with 24 V DC operation is available.

A DC-operated contactor is connected to the output according to the input voltage that is applied.

The mean value of the OFF-delay is approximately 1.5 times the specified minimum time.

Surge suppressors

- Without LED (also for spring-type terminals)
  Sizes S3, S6 to S12

All 3RT1 contactors and 3RH1 contactor relays can be retrofitted with RC elements or varistors for damping opening surges in the coil. Diodes or diode assemblies (comprising noise suppression diodes and Zener diodes for short break times) can be used.

With the size S3 contactors, varistors, RC elements and diode assemblies can be plugged on directly at the coil terminals, either on the top or underneath.

The plug-in direction of the diodes and diode assemblies is determined by a coding device.

Coupling contactors are supplied either without overvoltage damping or with a varistor or diode connected as standard, according to the version.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (noise suppression diode 6 to 10 times; diode assembly 2 to 6 times, varistor +2 to 5 ms).

Coupling links for mounting on contactors of size S3

DC operation

IEC 60947 and EN 60947

The coupling link is suitable for use in any climate. It is finger-safe according to EN 50274. The terminal designations comply with EN 50005.

System-compatible operation with 24 V DC,
operating range 17 to 30 V.

Low power consumption in conformity with the technical specifications of the solid-state systems. An LED indicates the switching state.

Surge suppression

The 3RH1924-1GP11 coupling link has an integrated surge suppressor (varistor) for the contactor coil being switched.

Mounting

The 3RH1924-1GP11 coupling link is mounted directly on the contactor coil.

Sealable covers for sizes S3 to S12

When contactors and contactor relays are used in safety-related applications, it must be ensured that it is impossible to operate the contactors manually.

For SIRIUS contactors there are sealable covers available for this purpose as accessories; these prevent accidental manual operation. These are transparent molded-plastic caps with a bracket that enables the contactor to be sealed.

Auxiliary switches

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RH1921-1DA11
3RH1921-1JA11
3RH1921-1EA..
3RH1921-1KA..

3RH1921-2DA11
3RH1921-2JA11
3RH1921-2EA..
3RH1921-2KA..

For contactors	Auxiliary contacts			DT	Screw terminals		DT	Spring-type terminals	
	Version				Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC							
Laterally mountable auxiliary switch blocks according to EN 50012									
Sizes S3 to S12			Left / Right						
	First laterally mountable auxiliary switch block (right or left), 2-pole								
3RT1.4 (3RT1.7)	1	1	21 13 / 22 14 — 31 43 / 32 44	▶	**3RH1921-1DA11**		▶	**3RH1921-2DA11**	
Sizes S3 to S12			Left / Right						
	Second laterally mountable auxiliary switch block (right or left), 2-pole								
3RT1.4 ... 3RT1.7	1	1	61 53 / 62 54 — 71 83 / 72 84	▶	**3RH1921-1JA11**		▶	**3RH1921-2JA11**	
Laterally mountable auxiliary switch blocks according to EN 50005									
Sizes S3 to S12			Left / Right						
	First laterally mountable auxiliary switch block (right or left), 2-pole								
3RT1.4 ... 3RT1.7	2	--	53 63 / 54 64 — 73 83 / 74 84	▶	**3RH1921-1EA20**		▶	**3RH1921-2EA20**	
	1	1	51 63 / 52 64 — 71 83 / 72 84	▶	**3RH1921-1EA11**			--	
	--	2	51 61 / 52 62 — 71 81 / 72 82	▶	**3RH1921-1EA02**		▶	**3RH1921-2EA02**	
Sizes S3 to S12			Left / Right						
	Second laterally mountable auxiliary switch block (right or left), 2-pole								
3RT1.4 ... 3RT1.7	2	--	153 163 / 154 164 — 173 183 / 174 184	▶	**3RH1921-1KA20**		D	**3RH1921-2KA20**	
	1	1	151 163 / 152 164 — 171 183 / 172 184	▶	**3RH1921-1KA11**			--	
	--	2	151 161 / 152 162 — 171 181 / 172 182	▶	**3RH1921-1KA02**		D	**3RH1921-2KA02**	

* You can order this quantity or a multiple thereof.
Illustrations are approximate