

Power Contactors for Switching Motors

Accessories for 3RT1 Contactors

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.

Power Contactors for Switching Motors Accessories for 3RT1 Contactors

Auxiliary switches

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



For contactors		Auxiliary contacts		DT	Screw terminals		DT	Spring-type terminals	
Ident. No.	Version			Article No.	Price per PU	Article No.	Price per PU		
Type	NO	NC	NO	NC					

Auxiliary switch blocks for snapping onto the front according to EN 50005

Size S3¹⁾

2-pole auxiliary switch blocks with cable entry on one side
• Cable entry from above

3RT1.4	11	1	1	--	--		▶	3RH1921-1LA11	--
	20	2	--	--	--		▶	3RH1921-1LA20	--
	02	--	2	--	--		▶	3RH1921-1LA02	--

• Cable entry from below

3RT1.4	11	1	1	--	--		▶	3RH1921-1MA11	--
	20	2	--	--	--		▶	3RH1921-1MA20	--
	02	--	2	--	--		▶	3RH1921-1MA02	--

Sizes S3 to S12²⁾

1-pole auxiliary switch blocks according to EN 50005 and EN 50012

3RT1.4 ... 3RT1.7	10	1	--	--	--		▶	3RH1921-1CA10	▶	3RH1921-2CA10
	01	--	1	--	--		▶	3RH1921-1CA01	▶	3RH1921-2CA01
	10	--	--	1	--		▶	3RH1921-1CD10	--	
	01	--	--	--	1		▶	3RH1921-1CD01	--	

¹⁾ Exception: 3RT16.

²⁾ Exception: 3RT12, 3RT16.



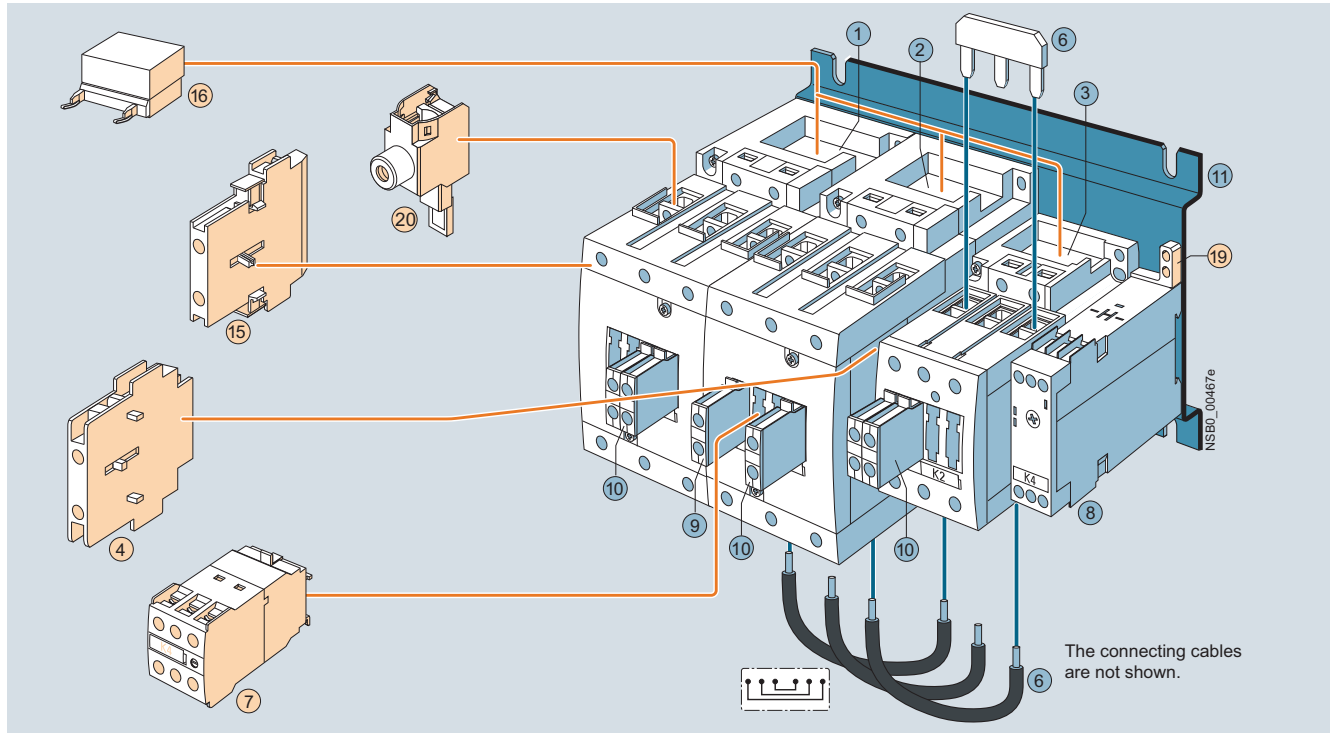
Contactor Assemblies

3RA23, 3RA13, 3RA24, 3RA14 Contactor Assemblies

SIRIUS 3RA14 contactor assemblies for wye-delta starting

Selection and ordering data

Fully wired and tested contactor assemblies · Size S3-S3-S2 · up to 75 kW



The connecting cables are not shown.

Mountable accessories (optional)

To be ordered separately	Article No.	Page
④ Mech. interlock, lateral, depth compensation required Q3: 0 mm; Q2: 27.5 mm ¹⁾	3RA1924-2B	3/172
⑦ Solid-state time-delay auxiliary switch block, front ²⁾	3RT1926-2G...	3/118
⑮ Auxiliary switch block, lateral	3RH1921-1EA...	3/116
⑯ Surge suppressor	3RT19.6-1...	3/119
⑲ Push-in lug for timing relay screw mounting	3RP1903	3/192
⑳ Single-phase infeed terminals	3RA1943-3L	

1) Use the 3RA1942-2B base plate for this design.
 2) Generally possible. If a solid-state time-delay auxiliary switch block is mounted onto the front of Q3, an auxiliary switch block can only be mounted onto the side.

Complete contactor assemblies

Individual parts	Article No.	Q1	Q3	Q2	Page
① ② ③ Contactor, 55 kW	3RT1044	3RT1044	3RT1035	3/97	
① ② ③ Contactor, 75 kW	3RT1045	3RT1045	3RT1036	3/98	
⑧ Timing relay, lateral	3RP1574-1N.30			3)	
⑨ Auxiliary switch block with 1 unassigned NO contact	3RH1921-1CA10			3/114	
⑩ Auxiliary switch block for local control					
2 units	3RH1921-1CA01				
3 units	3RH1921-1CA10			3/114	
⑪ Base plate	3RA1942-2E			3/192	
⑥ Assembly kit	3RA1943-2C			3/192	

The assembly kit contains the star jumper on the top and the wiring module on the bottom for connecting the main current paths.

3) See Chapter 10 "Monitoring and Control Devices" → "3RP, 7PV Timing Relays" → "3RP15 Timing Relays in Industrial Enclosure, 22.5 mm".



3RA144.-8XC21-1...

Rated data AC-3		Ratings of three-phase motors at 50 Hz and				Rated control supply voltage U_s ¹⁾	DT	Screw terminals	PU (UNIT, SET, M)	PS*	PG
Operational current I_e up to		230 V	400 V	500 V	690 V						
A	kW	kW	kW	kW	V		Article No.	Price per PU			
AC operation, 50/60 Hz											
115	37	55	81	93	24 AC	B	3RA1444-8XC21-1AC2		1	1 unit	41B
					110 AC	B	3RA1444-8XC21-1AG2		1	1 unit	41B
					230 AC	▶	3RA1444-8XC21-1AL2		1	1 unit	41B
150	47	75	103	110	24 AC	B	3RA1445-8XC21-1AC2		1	1 unit	41B
					110 AC	B	3RA1445-8XC21-1AG2		1	1 unit	41B
					230 AC	▶	3RA1445-8XC21-1AL2		1	1 unit	41B
DC operation											
115	37	55	81	93	24 DC	B	3RA1444-8XC21-1BB4		1	1 unit	41B
150	47	75	103	110	24 DC	B	3RA1445-8XC21-1BB4		1	1 unit	41B

1) Coil operating range at 50 Hz: 0.8 ... 1.1 x U_s ; at 60 Hz: 0.85 ... 1.1 x U_s .