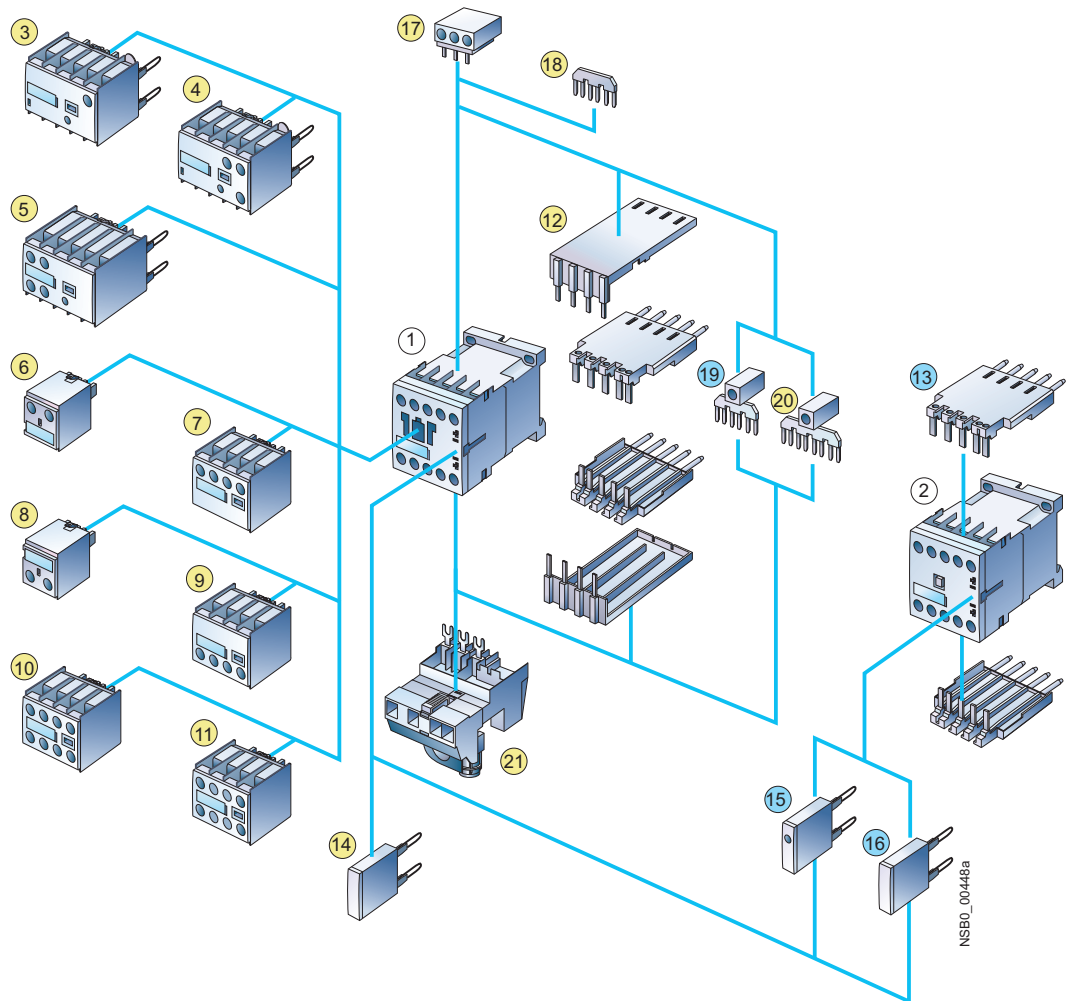


Overview

3RT1 contactors and coupling relays
Size S00 with mountable accessories

The SIRIUS generation of controls is a complete, modular system family, logically designed right down to the last detail, from the basic units to the accessories.



- ① Contactor (page 3/15)
- ② Coupling relay (page 3/79)

- ③ Solid-state time-delay block, ON-delay (page 3/106)
- ④ Solid-state time-delay block, OFF-delay (page 3/106)
- ⑤ Auxiliary switch block with solid-state time delay (page 3/105)
(ON or OFF-delay or wye-delta function)
- ⑥ 1-pole auxiliary switch block, cable entry from above (page 3/100)
- ⑦ 2-pole auxiliary switch block, cable entry from above (page 3/100)
- ⑧ 1-pole auxiliary switch block, cable entry from below (page 3/100)
- ⑨ 2-pole auxiliary switch block, cable entry from below (page 3/100)
- ⑩ 4-pole auxiliary switch block (page 3/100) (terminal designations according to EN 50012 or EN 50005)
- ⑪ 2-pole auxiliary switch block, standard version or solid-state compatible version (pages 3/100, 3/105)
(terminal designations according to EN 50005)
- ⑫ Solder pin adapter for contactors with 4-pole auxiliary switch block (page 3/111)
- ⑬ Solder pin adapter for contactors and coupling relays (page 3/110)

- ⑭ Additional load module for increasing the permissible residual current (page 3/109)
- ⑮ Surge suppressor with LED (page 3/108)
- ⑯ Surge suppressor without LED (page 3/108)
- ⑰ 3-phase feeder terminal (page 3/47)
- ⑱ Link for paralleling (star jumper), 3-pole, without connection terminal (page 3/47)
- ⑲ Link for paralleling, 3-pole, with terminal (page 3/111)
- ⑳ Link for paralleling, 4-pole, with terminal (page 3/111)
- ㉑ Connection module (adapter and plug) for contactors with screw-type connection (page 3/110)

- For contactors
- For contactors and coupling relays (interface)

For contactor assemblies see pages 3/32 to 3/39.
For assembly kit for reversing contactor assemblies (mech. interlocking, wiring modules) see page 3/38.
For mountable overload relays see "Protection Equipment --> Overload Relays".

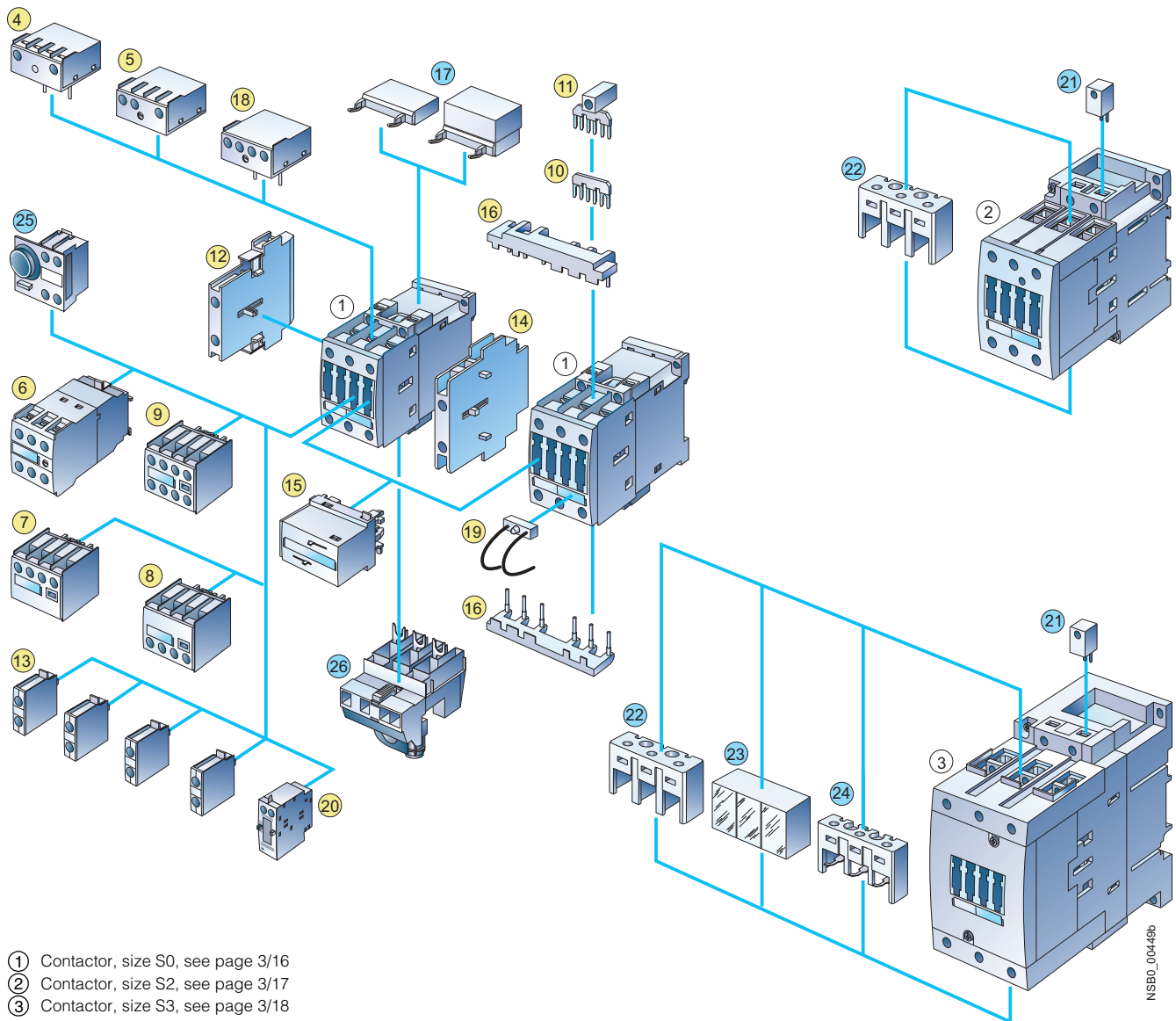
For fuseless load feeders, see "Load Feeders, Motor Starters and Soft Starters -> 3RA Fuseless Load Feeders".

3RT, 3TB, 3TF Contactors for Switching Motors

General data

3RT1 contactors

Sizes S0 to S3 with mountable accessories



NSB0_00449b

- ① Contactor, size S0, see page 3/16
- ② Contactor, size S2, see page 3/17
- ③ Contactor, size S3, see page 3/18

For sizes S0 to S3:

- ④ Solid-state time-delay block, ON-delay (page 3/106)
- ⑤ Solid-state time-delay block, OFF-delay (page 3/106)
- ⑥ Auxiliary switch block with solid-state time delay (page 3/105) (ON or OFF-delay or wye-delta function)
- ⑦ 2-pole auxiliary switch block, cable entry from above (page 3/101)
- ⑧ 2-pole auxiliary switch block, cable entry from below (page 3/101)
- ⑨ 4-pole auxiliary switch block (page 3/101) (terminal designations according to EN 50012 or EN 50005)
- ⑩ Link for paralleling (star jumper), 3-pole, without connection terminal (page 3/47)
- ⑪ Link for paralleling, 3-pole, with terminal (page 3/111)
- ⑫ 2-pole auxiliary switch block, laterally mountable left or right (page 3/103) (terminal designations according to EN 50012 or EN 50005)
- ⑬ Single-pole auxiliary switch block (up to 4 can be snapped on) (page 3/101)
- ⑭ Mechanical interlock, laterally mountable (page 3/37)
- ⑮ Mechanical interlock, mountable on the front (page 3/37)
- ⑯ Wiring modules on the top and bottom (reversing duty) (page 3/39)
- ⑰ Surge suppressor (page 3/107) (varistor, RC element, diode assembly), can be mounted on the top or bottom (different for S0 and S2/S3)

- ⑱ Coupling link for mounting directly onto contactor coil (page 3/110)
- ⑲ LED module for indicating contactor operation (page 3/110)

Only for size S0:

- ⑳ Pneumatic delay block (page 3/106)
- ㉑ Connection module (adapter and plug) for contactors with screw-type connection (page 3/110)

Only for sizes S0 and S2:

- ㉒ Mechanical latching (page 3/106)

Only for sizes S2 and S3:

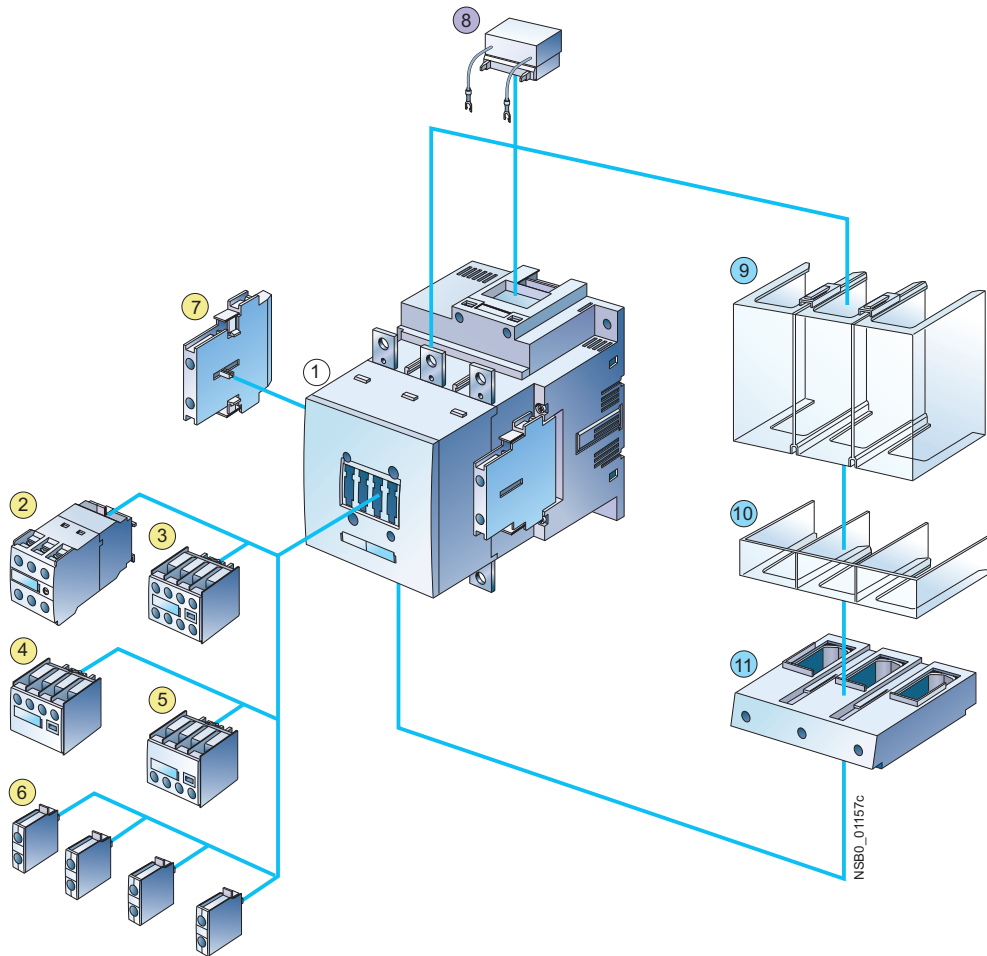
- ㉓ Coil repeat terminal for making contactor assemblies (page 3/37)
- ㉔ Terminal cover for box terminals (page 3/112)

Only for size S3:

- ㉕ Terminal cover for cable lugs and busbar connections (page 3/112)
- ㉖ Auxiliary conductor terminal, 3-pole (page 3/110)

- Accessories identical for sizes S0 to S3
- Accessories differ according to size

3RT1 contactors
Sizes S6 to S12 with accessories
(illustration for basic unit)



① 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12
 (page 3/23 and 3/51)

- ② Auxiliary switch block with solid-state time delay (page 3/105)
 (ON or OFF-delay or wye-delta function)
- ③ 4-pole auxiliary switch block (page 3/100)
 (terminal designations according to EN 50012 or EN 50005)
- ④ 2-pole auxiliary switch block, cable entry from above (page 3/101)
- ⑤ 2-pole auxiliary switch block, cable entry from below (page 3/101)
- ⑥ Single-pole auxiliary switch block (up to 4 can be snapped on)
 (page 3/101)
- ⑦ 2-pole auxiliary switch block, laterally mountable left or right (page 3/103)
 (terminal designations according to EN 50012 or EN 50005)
 (identical for S0 to S12)
- ⑧ Surge suppressor (RC element) (page 3/108), for plugging into top of
 withdrawable coil

- ⑨ Terminal cover for cable lug and busbar connection
 (page 3/112), different for sizes S6 and S10/S12
- ⑩ Terminal cover for box terminal, (page 3/112),
 different for sizes S6 and S10/S12
- ⑪ Box terminal block (page 3/112), different for sizes S6 and S10/S12

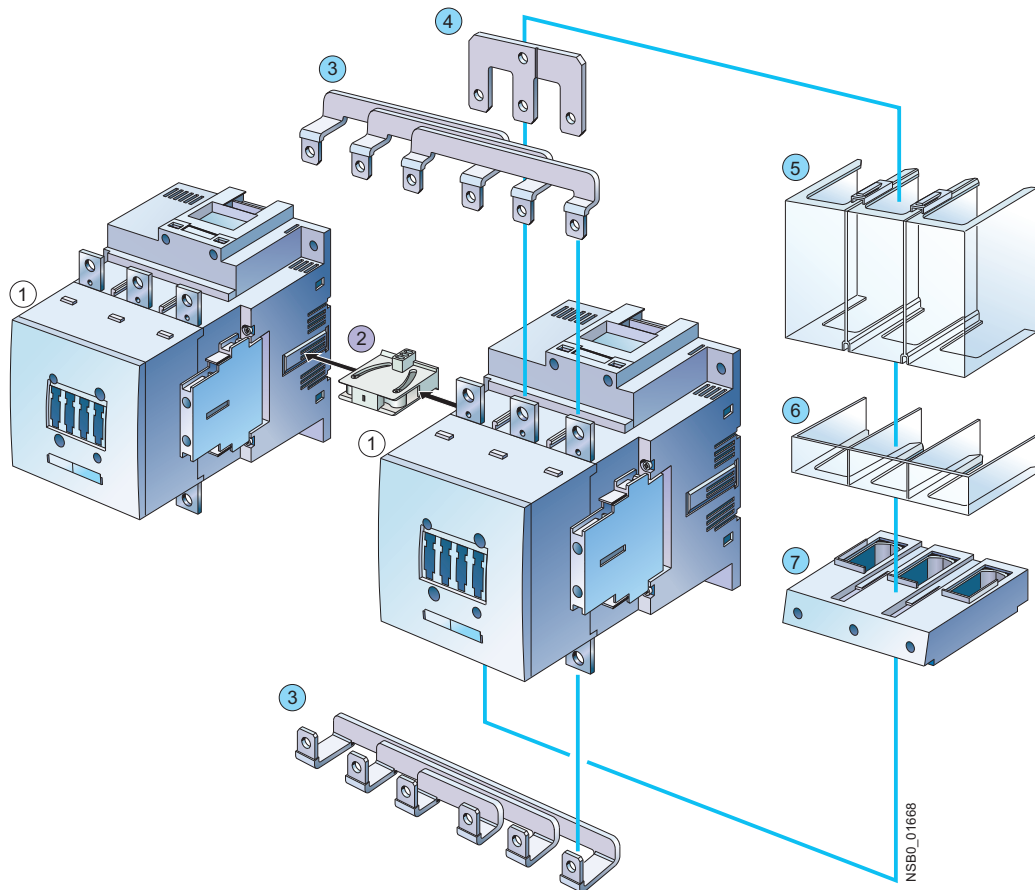
- Accessories identical for sizes S0 to S12
- Accessories identical for sizes S6 to S12
- Accessories differ according to size

For mountable overload relays see "Protection Equipment -->
 Overload Relays".

3RT, 3TB, 3TF Contactors for Switching Motors

General data

3RA1 contactor assemblies, 3RT1 contactors
Size S6 with accessories



① 3RT10 and 3RT14 air-break contactor, size S6 (page 3/23 and 3/51)

② 3RA19 54-2A mechanical interlock, laterally mountable (page 3/37)

③ 3RA19 53-2A wiring modules on the top and bottom (page 3/39)

④ 3RT19 56-4BA31 link for paralleling (star jumper), 3-pole, with through-hole (page 3/111)

⑤ Terminal cover for cable lug and busbar connection (page 3/112), different for sizes S6 and S10/S12

⑥ Terminal cover for box terminal, (page 3/112), different for sizes S6 and S10/S12

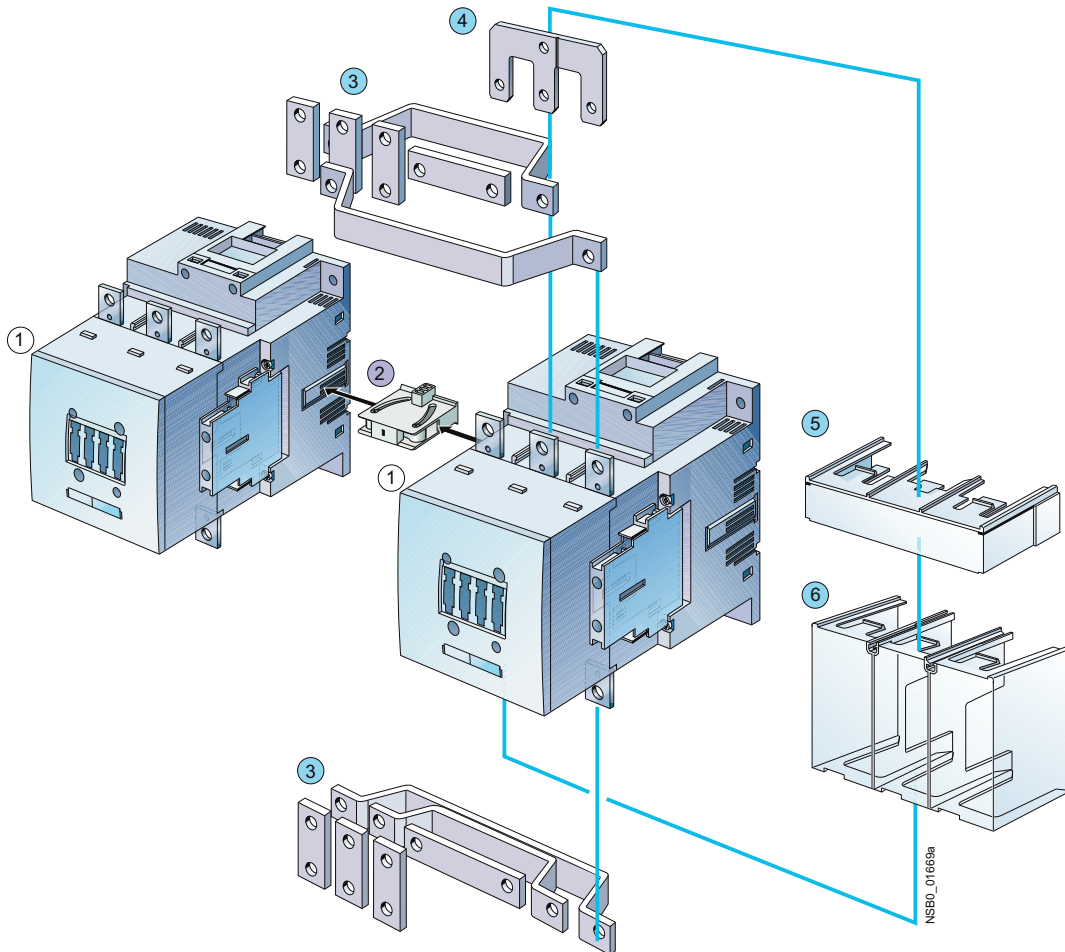
⑦ Box terminal block (page 3/112), different for sizes S6 and S10/S12

● Accessories identical for sizes S6 to S12

● Accessories differ according to size

For mountable overload relays see "Protection Equipment --> Overload Relays".

3RA1 contactor assemblies, 3RT1 contactors
Sizes S6, S10 and S12 with accessories



① 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12 (page 3/23 and 3/51) or 3RT12 vacuum contactor, sizes S10 and S12 (page 3/27)

② Mechanical interlock, laterally mountable (page 3/37)

③ 3RA19 wiring modules on the top and bottom (page 3/38)

④ 3RT19 56-4BA31 link for paralleling (star jumper), 3-pole, with through-hole (page 3/111)

⑤ Terminal cover for box terminal, (page 3/112), different for sizes S6 and S10/S12

⑥ Terminal cover for cable lug and busbar connection (page 3/112), different for sizes S6 and S10/S12

● Accessories identical for sizes S6 to S12

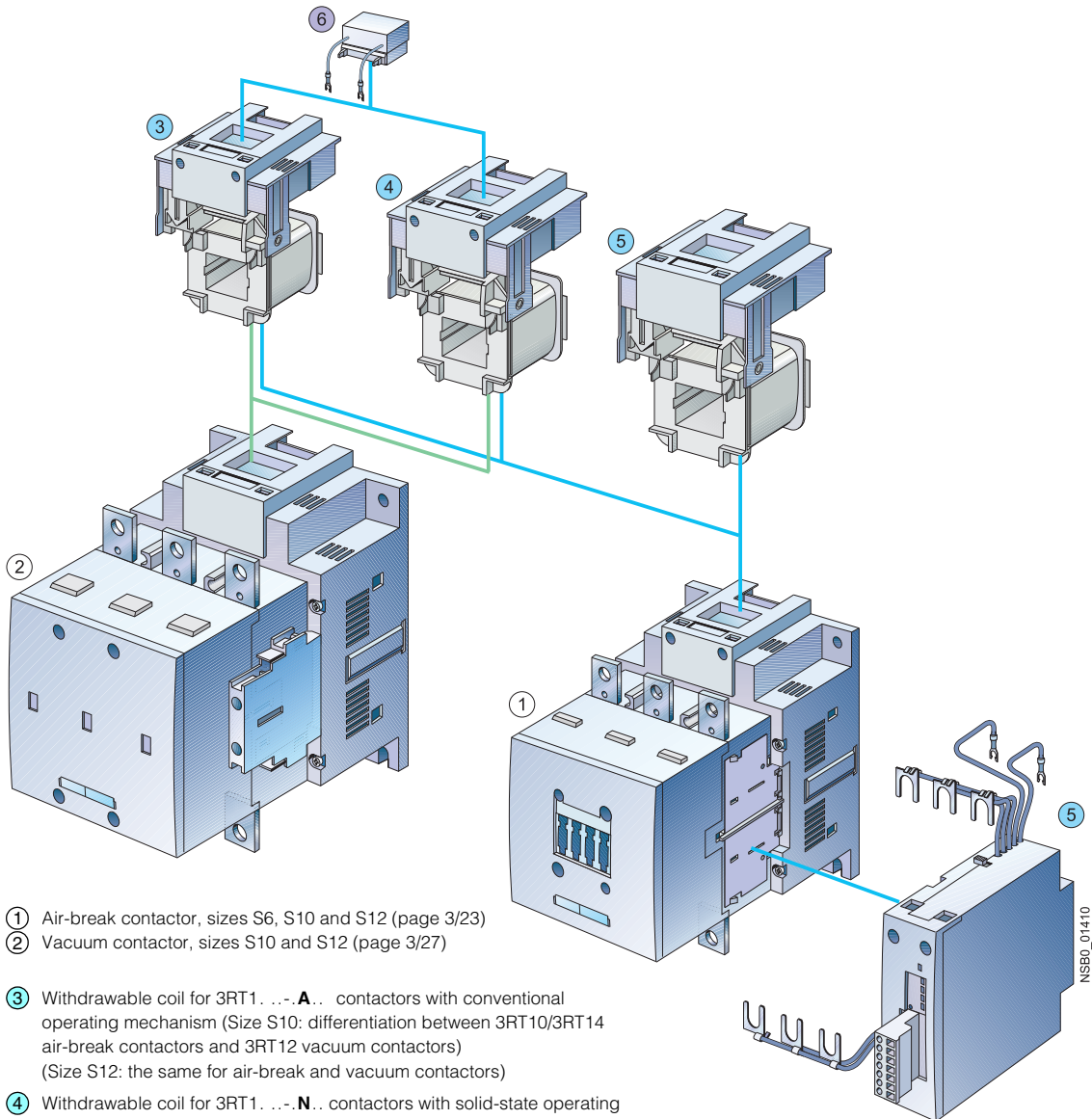
● Accessories differ according to size

For mountable overload relays see "Protection Equipment --> Overload Relays".

3RT, 3TB, 3TF Contactors for Switching Motors

General data

3RT1 contactors Sizes S6 to S12 with accessories



- ① Air-break contactor, sizes S6, S10 and S12 (page 3/23)
 ② Vacuum contactor, sizes S10 and S12 (page 3/27)
- ③ Withdrawable coil for 3RT1...-**A**.. contactors with conventional operating mechanism (Size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors) (Size S12: the same for air-break and vacuum contactors)
- ④ Withdrawable coil for 3RT1...-**N**.. contactors with solid-state operating mechanism (Size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors) (Size S12: the same for air-break and vacuum contactors)
- ⑤ Withdrawable coil and laterally mountable module (plug-on) for 3RT1...-**P**.. and 3RT1...-**Q**.. air-break contactors with solid-state operating mechanism and remaining lifetime indicator.
- ⑥ Surge suppressor (RC element) (page 3/107), plug-mountable on withdrawable coils
- 3RT1...-**A**..with conventional operating mechanism
 - 3RT1...-**N**.. with solid-state operating mechanism

- ① Identical for sizes S6 to S12
 ② Different according to size

For mountable overload relays see "Protection Equipment --> Overload Relays".

NSB0_01410

Overview

3RT10 contactors, 3-pole, sizes S00 to S3, up to 45 kW

AC and DC operation

IEC 60947, EN 60947 (VDE 0660)

The 3RT1 contactors are climate-proof. They are finger-safe according to EN 50274.

Size S00 contactors have an auxiliary contact integrated in the basic unit. The basic units of sizes S0 to S3 contain only the main current paths.

All basic units can be extended with auxiliary switch blocks. For size S0 and higher, complete units with 2 NO + 2 NC are available (connection designation according to EN 50012). The auxiliary switch block can be removed (for more information see [Technical Information LV 1 T](#)).

In addition, complete units with permanently mounted auxiliary switch block (2 NO + 2 NC according to EN 50012) are offered for sizes S00 and S0. These versions are built according to special Swiss regulations "SUVA" and are distinguished externally by a red labeling plate.

Connection methods

The 3RT1 contactors are available with screw terminals (box terminals and connecting bars) or with Cage Clamp terminals.

The size S3 contactors have removable box terminals for the main conductor connections. This permits connection of ring terminal lugs or busbars.

Contact reliability

If voltages ≤ 110 V and current ≤ 100 mA are to be switched, the auxiliary contacts of the 3RT1 contactor or 3RH11 contactor relay should be used as they guarantee a high level of contact reliability.

These auxiliary contacts are suitable for solid-state circuits with currents ≥ 1 mA at a voltage of 17 V.

Short-circuit protection of the contactors

For more information about short-circuit protection of contactors without overload relay, see [Technical specifications](#). For short-circuit protection of the contactors with overload relay, see ["Overload Relays"](#). To assemble fuseless motor feeders you must select combinations of motor starter protector and contactor as explained in ["Fuseless Load Feeders"](#).

Motor protection

3RU11 thermal overload relays or 3RB20 solid-state overload relays can be fitted to the 3RT1 contactors for protection against overload. The overload relays must be ordered separately.

Ratings of induction motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

Surge suppression

3RT1 contactors can be retrofitted with RC elements, varistors, diodes or diode assemblies (assembly of diode and Zener diode for short break times) for damping opening surges in the coil.

The surge suppressors are plugged onto the front of size S00 contactors. Space is provided for them next to a snap-on auxiliary switch block.

For size S0 to S3 contactors, varistors and RC elements can be snapped on either on the top or directly below the coil terminals. Diode assemblies are available in 2 different versions on account of their polarity. Depending on the application they can be connected either only at the bottom (assembly with motor starter protector) or only at the top (assembly with overload relay).

The plug-in direction of the diodes and diode assemblies is specified by coding.

Exceptions:

3RT19 26-1T.00 and

3RT19 36-1T.00, in this case the plug-in direction is marked with "+" and "-".

Coupling relays are supplied either without surge suppression or with a varistor or diode connected as standard, according to the version.

Note:

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

3RT10 contactors, 3-pole, sizes S6 to S12, > 45 to 250 kW

- 3RT10, contactors for switching motors,
- 3RT12, vacuum contactors for switching motors,
- 3RT14, contactors for AC-1 applications.

Operating mechanism types

Two types of solenoid operation are available:

- Conventional operating mechanism
- Solid-state operating mechanism (with 3 performance levels)

AC/DC operation

The contactors can be operated with AC (40 to 60 Hz) as well as with DC.

Withdrawable coils

For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Auxiliary contact complement

For details of the auxiliary switch fittings per S0-S12 contactor see [Technical Information LV1 T 2009, page 3/16](#).

- 3RT10 and 3RT14 contactors:
Auxiliary contacts mounted laterally and on front
- 3RT12 vacuum contactors:
Auxiliary contacts mounted laterally

Note:

Auxiliary contact complement according to SUVA.

Contactors with permanently mounted auxiliary switch block for safety applications according to SUVA

Contactors with conventional operating mechanism

3RT1. ...-A version:

The solenoid coil is switched directly on and off with the control supply voltage U_s by way of terminals A1/A2.

Multi-voltage range for the control supply voltage U_s :

Several closely adjacent control supply voltages, available around the world, are covered by just one coil, for example 110-115-120-127 V AC/DC or 220-230-240 V AC/DC.

In addition, allowance is also made for a coil operating range of 0.8 times the lower ($U_{s\ min}$) and 1.1 times the upper ($U_{s\ max}$) rated control supply voltage within which the contactor switches reliably and no thermal overloading occurs.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

Contactors with solid-state operating mechanism

The solenoid coil is supplied selectively with the power required for reliable switching and holding by upstream control electronics.

- **Wide voltage range for the control supply voltage U_s :**
Compared with the conventional operating mechanism, the solid-state operating mechanism covers an even broader range of control supply voltages used worldwide within one coil variant. For example, the coil for 200 to 277 V UC ($U_{s \min}$ to $U_{s \max}$) covers the voltages 200-208-220-230-240-254-277 V used worldwide.
- **Extended operating range 0.7 to 1.25 x U_s :**
The wide range for the rated control supply voltage and the additionally allowed coil operating range of $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$ results in an extended coil operating range of at least 0.7 to $1.25 \times U_s$, within which the contactors will operate reliably, for the most common control supply voltages of 24, 110 and 230 V.
- **Bridging temporary voltage dips:**
Control voltage failures dipping to 0 V (at A1/A2) are bridged for up to approx. 25 ms to avoid unintentional tripping.
- **Defined ON and OFF thresholds:**
For voltages of $\geq 0.8 \times U_{s \min}$ and higher the electronics will reliably switch the contactor ON, and as of $\leq 0.5 \times U_{s \min}$ it is reliably switched OFF. The hysteresis in the switching thresholds prevents the main contacts from chattering as well as increased wear or welding when operated in weak, unstable networks. This also prevents thermal overloading of the contactor coil if the voltage applied is too low (contactor does not close properly and is continuously operated with overexcitation).
- **Low control power consumption when closing and in the closed state.**

Electromagnetic compatibility (EMC)

The contactors with solid-state operating mechanism comply with the requirements for operation in industrial plants.

- Interference immunity
 - Burst (IEC 61000-4-4): 4 kV
 - Surge (IEC 61000-4-5): 4 kV
 - Electrostatic discharge, ESD (IEC 61000-4-2): 8/15 kV
 - Electromagnetic field (IEC 61000-4-3): 10 V/m
- Emitted interference
 - Limit value class A according to EN 55011

Note:

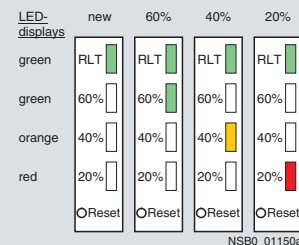
In connection with converters, the control cables should be installed separately from the load cables of the converter.

Remaining lifetime indicator (RLT)

Main contactor contacts are working parts which must be replaced in good time when the end of their service life has been reached. The degree of contact erosion and thus the electrical endurance (= number of operating cycles) depends on the loading, utilization category, operating mode, etc. Up to now, routine checks/visual inspections by the maintenance personnel were needed in order to gain an insight into the state of the main contacts. The indication of remaining lifetime function now takes over this task. It does not count the number of operating cycles – which does not provide information about contact erosion – but instead electronically identifies, evaluates and stores the actual progress of erosion of each one of the three main contacts, and outputs a warning when specified limits are reached. The stored data are not lost even if the control supply voltage for A1/A2 fails. After replacement of the main contacts, measurement the remaining lifetime must be reset using the "RESET" button (hold down RESET button for about 2 seconds using a pen or similar tool).

Advantages:

- Signaling through relay contact or AS-i when remaining lifetime is 20 %, i.e. contact material wear is 80 %
- Additional visual indication of various levels of erosion by means of LEDs on the laterally mounted solid-state module when remaining lifetime is 60 % (green), 40 % (orange) and 20 % (red)



- Early warning to replace contacts
- Optimum utilization of contact material
- Visual inspection of the condition of contacts no longer necessary
- Reduction of ongoing operating costs
- Optimum planning of maintenance measures
- Avoidance of unforeseen plant downtimes

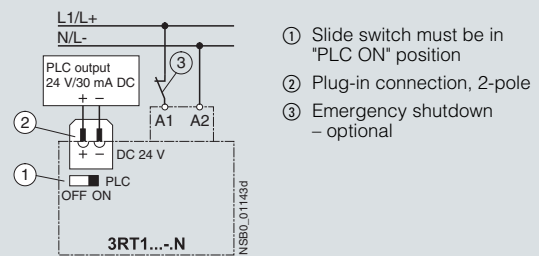
3RT1...-N version: for 24 V DC PLC output

2 control options:

- Control without a coupling link directly through a 24 V DC ≥ 30 mA PLC output (EN 61131-2). Connection by means of 2-pole plug-in connection. The screwless spring-type connection is part of the scope of supply. The control supply voltage which supplies the solenoid operating mechanism must be connected to A1/A2.

Note:

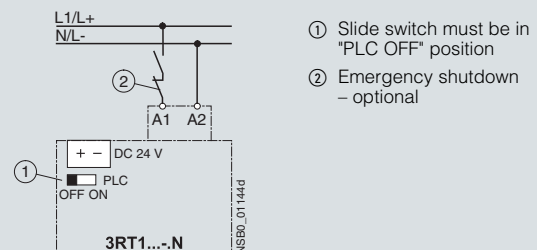
Before start-up, the slide switch for PLC operation must be moved to the "PLC ON" position (setting ex works: "PLC OFF").



- Conventional control by applying the control supply voltage at A1/A2 through a switching contact.

Note:

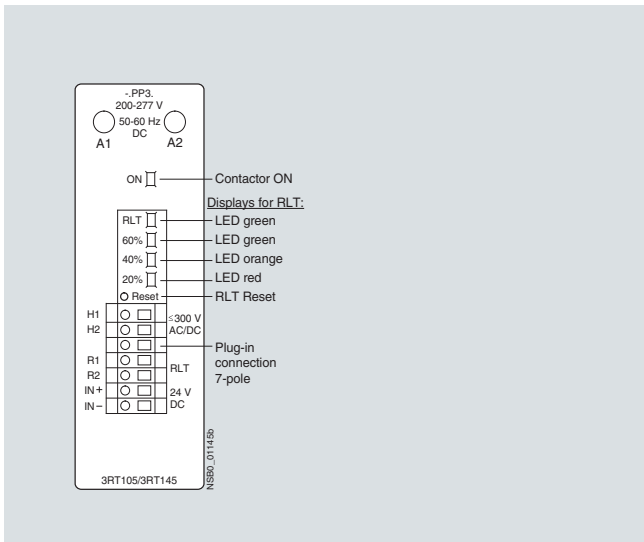
The slide switch must be in the "PLC OFF" position (= setting ex works).



3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

3RT1...-P version: For 24 V DC PLC output or PLC relay output, with remaining lifetime indicator (RLT).

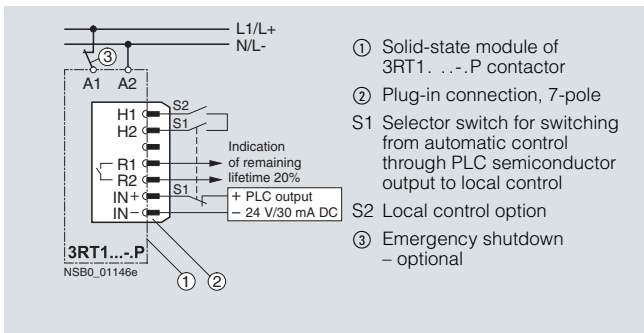


To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_s must be connected to terminals A1/A2 of the laterally mounted solid-state module. The control inputs of the contactor are connected to a 7-pole plug-in connection; the screwless spring-operated connector is part of the scope of supply.

- The "Remaining Lifetime RLT" status signal is available at terminals R1/R2 through a floating relay contact (hard gold-plated, enclosed) and can be input to SIMOCODE, PLC or other devices for processing, for example. Permissible current-carrying capacity of the R1/R2 relay output:
 - I_e /AC-15/24 to 230 V: 3 A
 - I_e /DC-13/24 V: 1 A
- LED indications
The following states are indicated by means of LEDs on the laterally mounted solid-state module:
 - Contactor ON (energized state): Green LED ("ON")
 - Indication of remaining lifetime

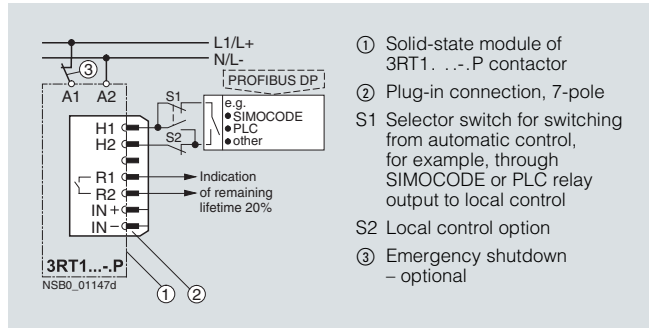
2 control options:

- Contactor control without a coupling link directly through a 24 V DC ≥ 30 mA PLC output (EN 61131-2) by way of terminals IN+/IN-.

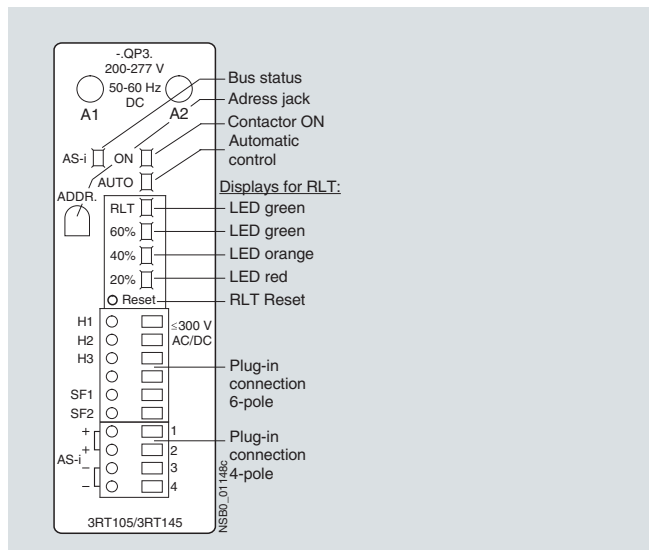


Possibility of switching from automatic control to local control by way of terminals H1/H2, i. e. automatic control through PLC or SIMOCODE/PROFIBUS DP can be deactivated e. g. at start-up or in the event of a fault and the contactor can be controlled manually.

- Contactor control through relay outputs, e. g. by
 - PLC
 - SIMOCODE
 by way of terminals H1/H2. Contact loading: U_s /approx. 5 mA. When operated through SIMOCODE, a communication link to PROFIBUS DP is also provided.



3RT1...-Q version: Communication-capable with integrated AS-Interface and indication of remaining lifetime (RLT)



To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_s must be connected to terminals A1/A2 of the laterally mounted solid-state module. The contactor itself is controlled by way of the integrated AS-Interface interface. The inputs and outputs are connected to a 10-pole plug-in connection; the screwless spring-type connections (6-pole for external connection and 4-pole for AS-Interface connection) are part of the scope of supply.

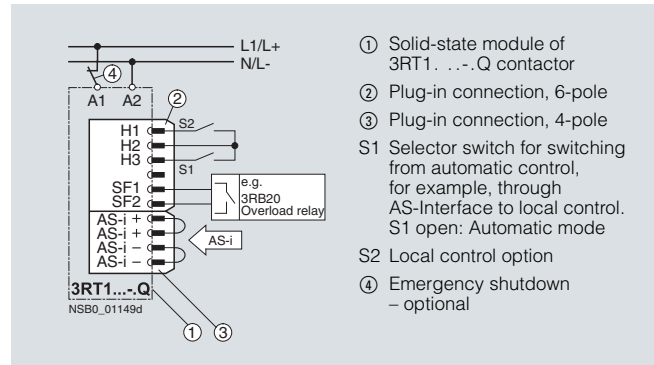
- LED indications
The following states are indicated by means of LEDs on the laterally mounted solid-state module:
 - Contactor ON (energized state): green LED ("ON")
 - Automatic/local control: green LED ("AUTO")
 - Bus status: green/red dual LED ("AS-i")
 - Remaining lifetime indicator (RLT)
- AS-Interface addressing socket "ADDR":
The contactor address can be assigned after installation.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

Control circuit:

- Contactor control through AS-Interface by way of terminals AS-i +/AS-i -. Each of these terminals is jumpered and connected twice to a 4-pole connector which is separate from the other control inputs.
 - Advantages:
 - The AS-Interface cable is not interrupted if the plug is pulled out
 - The contactor remains functional through the local control inputs and its own 6-pole connector
- Control signals through AS-i:
 - Contactor ON/OFF
- Status signals through AS-i:
 - Contactor ON/OFF
 - Automatic/Local control
 - Remaining lifetime indicator (RLT)
 - Signal through free input, e. g. overload relay tripped.



Possibility of switching from automatic control to local control by means of terminals H1/H2/H3, i.e. automatic control through AS-Interface can be deactivated e. g. during start-up or in the event of a fault and the contactor can be controlled manually.

I/O configuration (hex)	7
ID code (hex)	F
Power supply	V 26.5 ... 31.6 (acc. to AS-Interface specification)
AS-Interface power consumption	mA max. 20
Contact loading at SF1/2	mA 3 ... 6
Watchdog function (disconnects outputs in the event of AS-Interface fault)	Built-in

Indication

During operation, the LEDs on the contactor indicate the states shown on the right.

LEDs	States	Description of state
AS-Interface	ON ON Flash-ing Flash-ing	Station address 0
		No AS-Interface communication
		AS-Interface communication OK

Contactor diagnostics using the user program

Inputs

Input signals	Device status
DI0 "Ready"	0 Device not ready/manual operation 1 Device ready/automatic mode
DI1 "Running"	0 Contactor off 1 Contactor on
DI2 "Remaining lifetime"	0 Remaining lifetime RLT > 20 % 1 Remaining lifetime RLT ≤ 20 %
DI3 "Free input"	0 No input signal at SF1/2 1 Input signal at SF1/2

Outputs

Output signals	Device status
DO0 "Running"	0 Contactor off 1 Contactor on
DO1	0 -- 1 --
DO2	0 -- 1 --
DO3	0 -- 1 --

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

Selection and ordering data

AC operation

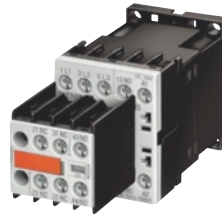
PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



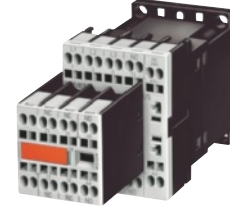
3RT10 1.-1A...



3RT10 1.-2A...



3RT10 1.-1AP04-3MA0



3RT10 1.-2AP04-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_s at 50/60 Hz	DT	Screw terminals		Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Ident. No.	Version			Order No.	Price per PU			Order No.	Price per PU	
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and 400 V	Operational current I_e up to 690 V	NO NC	V AC								
A	kW	A										kg

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S00¹⁾

Terminal designations according to EN 50012

7	3	18	10 E	1	--	24	▶	3RT10 15-1AB01	0.200	▶	3RT10 15-2AB01	0.200
						110	▶	3RT10 15-1AF01	0.200	▶	3RT10 15-2AF01	0.200
						230	▶	3RT10 15-1AP01	0.200	▶	3RT10 15-2AP01	0.200
			01	--	1	24	▶	3RT10 15-1AB02	0.200	▶	3RT10 15-2AB02	0.200
						110	▶	3RT10 15-1AF02	0.200	▶	3RT10 15-2AF02	0.200
						230	▶	3RT10 15-1AP02	0.200	▶	3RT10 15-2AP02	0.200
9	4	22	10 E	1	--	24	▶	3RT10 16-1AB01	0.200	▶	3RT10 16-2AB01	0.200
						110	▶	3RT10 16-1AF01	0.200	▶	3RT10 16-2AF01	0.200
						230	▶	3RT10 16-1AP01	0.200	▶	3RT10 16-2AP01	0.200
			01	--	1	24	▶	3RT10 16-1AB02	0.200	▶	3RT10 16-2AB02	0.200
						110	▶	3RT10 16-1AF02	0.200	▶	3RT10 16-2AF02	0.200
						230	▶	3RT10 16-1AP02	0.200	▶	3RT10 16-2AP02	0.200
12	5.5	22	10 E	1	--	24	▶	3RT10 17-1AB01	0.200	▶	3RT10 17-2AB01	0.200
						110	▶	3RT10 17-1AF01	0.200	▶	3RT10 17-2AF01	0.200
						230	▶	3RT10 17-1AP01	0.200	▶	3RT10 17-2AP01	0.200
			01	--	1	24	▶	3RT10 17-1AB02	0.200	▶	3RT10 17-2AB02	0.200
						110	▶	3RT10 17-1AF02	0.200	▶	3RT10 17-2AF02	0.200
						230	▶	3RT10 17-1AP02	0.200	▶	3RT10 17-2AP02	0.200

Size S00¹⁾

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

7	3	18	22 E	2	2	230	▶	3RT10 15-1AP04-3MA0	0.250	B	3RT10 15-2AP04-3MA0	0.250
9	4	22	22 E	2	2	230	▶	3RT10 16-1AP04-3MA0	0.250	B	3RT10 16-2AP04-3MA0	0.250
12	5.5	22	22 E	2	2	230	▶	3RT10 17-1AP04-3MA0	0.250	B	3RT10 17-2AP04-3MA0	0.250

For other voltages see page 3/26, for contactors with permanently mounted auxiliary switch block please inquire.

For accessories, see page 3/100.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

¹⁾ For size S00: coil operating range
 at 50 Hz: 0.8 ... 1,1 x U_s ,
 at 60 Hz: 0.85 ... 1,1 x U_s .

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC operation

PU (UNIT, SET, M)= 1
 PS* = 1 unit
 PG = 101



3RT10 2.-1A.00



3RT10 2.-3A.00



3RT10 2.-1A.04



3RT10 2.-1AL24-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_s at 50 Hz	DT	Screw terminals		Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Operational current I_e up to	Ident. No.			Version	Order No.			Price per PU	Order No.	
400 V	400 V	690 V										
A	kW	A		NO NC V AC			kg				kg	

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S0

9	4	40 ¹⁾	--	--	--	24 110 230	▶	3RT10 23-1AB00 3RT10 23-1AF00 3RT10 23-1AP00	0.350 B 0.350 B 0.350 ▶	3RT10 23-3AB00 3RT10 23-3AF00 3RT10 23-3AP00	0.350 0.350 0.350
12	5.5	40 ¹⁾	--	--	--	24 110 230	▶	3RT10 24-1AB00 3RT10 24-1AF00 3RT10 24-1AP00	0.350 B 0.350 B 0.350 ▶	3RT10 24-3AB00 3RT10 24-3AF00 3RT10 24-3AP00	0.350 0.350 0.350
17	7.5	40 ¹⁾	--	--	--	24 110 230	▶	3RT10 25-1AB00 3RT10 25-1AF00 3RT10 25-1AP00	0.350 B 0.350 B 0.350 ▶	3RT10 25-3AB00 3RT10 25-3AF00 3RT10 25-3AP00	0.350 0.350 0.350
25	11	40 ¹⁾	--	--	--	24 110 230	▶	3RT10 26-1AB00 3RT10 26-1AF00 3RT10 26-1AP00	0.350 B 0.350 B 0.350 ▶	3RT10 26-3AB00 3RT10 26-3AF00 3RT10 26-3AP00	0.350 0.350 0.350

Size S0

With mounted auxiliary switch block (removable)²⁾

Terminal designations according to EN 50012

9	4	40 ¹⁾	22 E	2	2	24 110 230	▶	3RT10 23-1AB04 3RT10 23-1AF04 3RT10 23-1AP04	0.400 0.400 0.400	--	--
12	5.5	40 ¹⁾	22 E	2	2	24 110 230	▶	3RT10 24-1AB04 3RT10 24-1AF04 3RT10 24-1AP04	0.400 0.400 0.400	--	--
17	7.5	40 ¹⁾	22 E	2	2	24 110 230	▶	3RT10 25-1AB04 3RT10 25-1AF04 3RT10 25-1AP04	0.400 0.400 0.400	--	--
25	11	40 ¹⁾	22 E	2	2	24 110 230	▶	3RT10 26-1AB04 3RT10 26-1AF04 3RT10 26-1AP04	0.400 0.400 0.400	--	--

Size S0

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

12	5.5	40 ¹⁾	22 E	2	2	230	B	3RT10 24-1AL24-3MA0	0.420	--	--
17	7.5	40 ¹⁾	22 E	2	2	230	A	3RT10 25-1AL24-3MA0	0.420	--	--
25	11	40 ¹⁾	22 E	2	2	230	A	3RT10 26-1AL24-3MA0	0.420	--	--

For other voltages see page 3/26, for contactors with permanently mounted auxiliary switch block please inquire.

For accessories, see page 3/101.

For spare parts, see page 3/114.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

¹⁾ Minimum conductor cross-section 10 mm².

²⁾ Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



3RT10 3.-1A.00



3RT10 3.-3A.00



3RT10 3.-1A.04

Rated data		Auxiliary contacts		Rated control supply voltage U_s at 50 Hz	DT	Screw terminals		Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Ident. No.	Version			Order No.	Price per PU			Order No.	Price per PU	
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and 400 V	Operational current I_e up to 690 V										
A	kW	A	NO NC V AC					kg				kg

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S2

32	15	50	--	--	--	24 110 230	▶	3RT10 34-1AB00	0.850 B		3RT10 34-3AB00	0.850
							▶	3RT10 34-1AF00	0.850 B		3RT10 34-3AF00	0.850
							▶	3RT10 34-1AP00	0.850 ▶		3RT10 34-3AP00	0.850
40	18.5	60	--	--	--	24 110 230	▶	3RT10 35-1AB00	0.850 B		3RT10 35-3AB00	0.850
							▶	3RT10 35-1AF00	0.850 B		3RT10 35-3AF00	0.850
							▶	3RT10 35-1AP00	0.850 ▶		3RT10 35-3AP00	0.850
50	22	60	--	--	--	24 110 230	▶	3RT10 36-1AB00	0.850 B		3RT10 36-3AB00	0.850
							▶	3RT10 36-1AF00	0.850 B		3RT10 36-3AF00	0.850
							▶	3RT10 36-1AP00	0.850 ▶		3RT10 36-3AP00	0.850

Size S2

With mounted auxiliary switch block (removable)¹⁾

Terminal designations according to EN 50012

32	15	50	22 E	2	2	24 110 230	▶	3RT10 34-1AB04	0.950	--		
							▶	3RT10 34-1AF04	0.950	--		
							▶	3RT10 34-1AP04	0.950	--		
40	18.5	60	22 E	2	2	24 110 230	▶	3RT10 35-1AB04	0.950	--		
							▶	3RT10 35-1AF04	0.950	--		
							▶	3RT10 35-1AP04	0.950	--		
50	22	60	22 E	2	2	24 110 230	▶	3RT10 36-1AB04	0.950	--		
							▶	3RT10 36-1AF04	0.950	--		
							▶	3RT10 36-1AP04	0.950	--		

Size S2

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

32	15	50	22 E	2	2	230	B	3RT10 34-1AP04-3MA0	0.908	--		
40	18.5	50	22 E	2	2	230	▶	3RT10 35-1AP04-3MA0	0.950	--		
50	22	50	22 E	2	2	230	B	3RT10 36-1AP04-3MA0	0.935	--		

For other voltages see page 3/26, for contactors with mounted auxiliary switch block please inquire.

For accessories, see page 3/101.

For spare parts, see page 3/114.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

¹⁾ Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



3RT10 4.-1A.00



3RT10 4.-3A.00

Rated data		Auxiliary contacts		Rated control supply voltage U_s at 50 Hz	DT	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals	Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Ident. No.	Version			⊕			⊕	
Operational current I_e up to	Rating of induction motors at 50 Hz and					Order No.	Price per PU		Order No.	Price per PU
400 V	400 V	690 V								
A	kW	A	NO NC V AC				kg			kg

For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail

Size S3

65	30	100	--	--	--	24 110 230	▶	3RT10 44-1AB00	1.800 B	3RT10 44-3AB00	1.800
							▶	3RT10 44-1AF00	1.800 B	3RT10 44-3AF00	1.800
							▶	3RT10 44-1AP00	1.800 ▶	3RT10 44-3AP00	1.800
80	37	120	--	--	--	24 110 230	▶	3RT10 45-1AB00	1.800 B	3RT10 45-3AB00	1.800
							▶	3RT10 45-1AF00	1.800 B	3RT10 45-3AF00	1.800
							▶	3RT10 45-1AP00	1.800 ▶	3RT10 45-3AP00	1.800
95	45	120	--	--	--	24 110 230	▶	3RT10 46-1AB00	1.800 B	3RT10 46-3AB00	1.800
							▶	3RT10 46-1AF00	1.800 B	3RT10 46-3AF00	1.800
							▶	3RT10 46-1AP00	1.800 ▶	3RT10 46-3AP00	1.800

Size S3

With mounted auxiliary switch block (removable)¹⁾

Terminal designations according to EN 50012

65	30	100	22 E	2	2	24 110 230	▶	3RT10 44-1AB04	1.950	--	
							▶	3RT10 44-1AF04	1.950	--	
							▶	3RT10 44-1AP04	1.950	--	
80	37	120	22 E	2	2	24 110 230	B	3RT10 45-1AB04	1.950	--	
							▶	3RT10 45-1AF04	1.950	--	
							▶	3RT10 45-1AP04	1.950	--	
95	45	120	22 E	2	2	24 110 230	B	3RT10 46-1AB04	1.950	--	
							▶	3RT10 46-1AF04	1.950	--	
							▶	3RT10 46-1AP04	1.950	--	

Size S3

With permanently mounted auxiliary switch block

for safety applications according to SUVA

Terminal designations according to EN 50012

65	30	50	22 E	2	2	230	▶	3RT10 44-1AP04-3MA0	1.950	--	
80	37	50	22 E	2	2	230	B	3RT10 45-1AP04-3MA0	1.933	--	
95	45	50	22 E	2	2	230	▶	3RT10 46-1AP04-3MA0	1.950	--	

For other voltages see page 3/26, for contactors with mounted auxiliary switch block please inquire.

For accessories, see page 3/101.

For spare parts, see page 3/115.

¹⁾ Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

DC operation - DC solenoid system

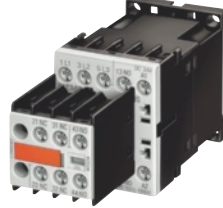
PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



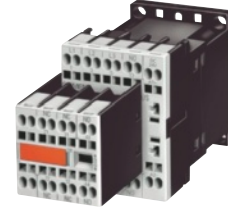
3RT10 1.-1B...



3RT10 1.-2B...



3RT10 1.-1BB44-3MA0



3RT10 1.-2BB44-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_s	DT	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals	Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Ident. No.	Version			Order No.	Price per PU		Order No.	Price per PU
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and 690 V						kg			kg
A	kW	A		NO NC V DC						

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S00

Terminal designations according to EN 50012

7	3	18	10 E	1	--	24	▶	3RT10 15-1BB41	0.260	▶	3RT10 15-2BB41	0.260
						220	A	3RT10 15-1BM41	0.260	B	3RT10 15-2BM41	0.260
			01	--	1	24	▶	3RT10 15-1BB42	0.260	▶	3RT10 15-2BB42	0.260
						220	B	3RT10 15-1BM42	0.260	B	3RT10 15-2BM42	0.260
9	4	22	10 E	1	--	24	▶	3RT10 16-1BB41	0.260	▶	3RT10 16-2BB41	0.260
						220	B	3RT10 16-1BM41	0.260	B	3RT10 16-2BM41	0.260
			01	--	1	24	▶	3RT10 16-1BB42	0.260	▶	3RT10 16-2BB42	0.260
						220	B	3RT10 16-1BM42	0.260	B	3RT10 16-2BM42	0.260
12	5.5	22	10 E	1	--	24	▶	3RT10 17-1BB41	0.260	▶	3RT10 17-2BB41	0.260
						220	B	3RT10 17-1BM41	0.260	B	3RT10 17-2BM41	0.260
			01	--	1	24	▶	3RT10 17-1BB42	0.260	▶	3RT10 17-2BB42	0.260
						220	B	3RT10 17-1BM42	0.260	B	3RT10 17-2BM42	0.260

Size S00

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

7	3	18	22 E	2	2	24	▶	3RT10 15-1BB44-3MA0	0.300	B	3RT10 15-2BB44-3MA0	0.300
9	4	22	22 E	2	2	24	▶	3RT10 16-1BB44-3MA0	0.300	A	3RT10 16-2BB44-3MA0	0.300
12	5.5	22	22 E	2	2	24	▶	3RT10 17-1BB44-3MA0	0.300	B	3RT10 17-2BB44-3MA0	0.300

For other voltages see page 3/26, for contactors with permanently mounted auxiliary switch block please inquire.

For accessories, see page 3/100.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

DC operation - DC solenoid system

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



3RT10 2.-1B.40



3RT10 2.-3B.40



3RT10 2.-3B.44



3RT10 2.-1BB44-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_s	DT	Screw terminals		Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and 400 V			Ident. No.	Version			Order No.	Price per PU	
A	kW	A						kg				kg

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S0

9	4	40 ¹⁾	--	--	--	24	▶	3RT10 23-1BB40	0.580	▶	3RT10 23-3BB40	0.580
						220		3RT10 23-1BM40	0.580	B	3RT10 23-3BM40	0.580
12	5.5	40 ¹⁾	--	--	--	24	▶	3RT10 24-1BB40	0.580	▶	3RT10 24-3BB40	0.580
						220		3RT10 24-1BM40	0.580	B	3RT10 24-3BM40	0.580
17	7.5	40 ¹⁾	--	--	--	24	▶	3RT10 25-1BB40	0.580	▶	3RT10 25-3BB40	0.580
						220		3RT10 25-1BM40	0.580	B	3RT10 25-3BM40	0.580
25	11	40 ¹⁾	--	--	--	24	▶	3RT10 26-1BB40	0.580	▶	3RT10 26-3BB40	0.580
						220		3RT10 26-1BM40	0.580	B	3RT10 26-3BM40	0.580

Size S0

With mounted auxiliary switch block (removable)²⁾

Terminal designations according to DIN 50012

9	4	40 ¹⁾	22 E	2	2	24	▶	3RT10 23-1BB44	0.650	--		
						220		3RT10 23-1BM44	0.650	--		
12	5.5	40 ¹⁾	22 E	2	2	24	▶	3RT10 24-1BB44	0.650	--		
						220		3RT10 24-1BM44	0.650	--		
17	7.5	40 ¹⁾	22 E	2	2	24	▶	3RT10 25-1BB44	0.650	--		
						220		3RT10 25-1BM44	0.650	--		
25	11	40 ¹⁾	22 E	2	2	24	▶	3RT10 26-1BB44	0.650	--		
						220		3RT10 26-1BM44	0.650	--		

Size S0

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to DIN 50012

12	5.5	40 ¹⁾	22 E	2	2	24	A	3RT10 24-1BB44-3MA0	0.650	--		
17	7.5	40 ¹⁾	22 E	2	2	24	A	3RT10 25-1BB44-3MA0	0.650	--		
25	11	40 ¹⁾	22 E	2	2	24	A	3RT10 26-1BB44-3MA0	0.650	--		

For other voltages see page 3/26, for contactors with mounted auxiliary switch block please inquire.

For accessories, see page 3/101.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

¹⁾ Minimum conductor cross-section 10 mm².

²⁾ Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

DC operation - DC solenoid system

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



3RT10 3.-1B.40



3RT10 4.-1B.40



3RT10 3.-3B.40



3RT10 4.-3B.40



3RT10 4.-1B.44

Rated data		Auxiliary contacts		Rated control supply voltage U_s	DT	Screw terminals		Weight per PU approx.	DT	Cage Clamp terminals		Weight per PU approx.
AC-2 and AC-3, T_{li} : up to 60 °C	AC-1, T_{li} : 40 °C	Operational current I_e up to	Rating of induction motors at 50 Hz and			Ident. No.	Version			Order No.	Price per PU	
400 V	400 V	690 V										
A	kW	A						kg				kg

For screw and snap-on mounting onto 35 mm standard mounting rail

Size S2

32	15	50	--	--	--	24	▶	3RT10 34-1BB40	1.450	▶	3RT10 34-3BB40	1.450
						220	A	3RT10 34-1BM40	1.450	B	3RT10 34-3BM40	1.450
40	18.5	60	--	--	--	24	▶	3RT10 35-1BB40	1.450	▶	3RT10 35-3BB40	1.450
						220	B	3RT10 35-1BM40	1.450	B	3RT10 35-3BM40	1.450
50	22	60	--	--	--	24	▶	3RT10 36-1BB40	1.450	▶	3RT10 36-3BB40	1.450
						220	B	3RT10 36-1BM40	1.450	B	3RT10 36-3BM40	1.450

Size S2

With mounted auxiliary switch block (removable)¹⁾

Terminal designations according to EN 50012

32	15	50	22 E	2	2	24	▶	3RT10 34-1BB44	1.550	--	--	--
						220	A	3RT10 34-1BM44	1.550	--	--	--
40	18.5	60	22 E	2	2	24	▶	3RT10 35-1BB44	1.550	--	--	--
						220	B	3RT10 35-1BM44	1.550	--	--	--
50	22	60	22 E	2	2	24	▶	3RT10 36-1BB44	1.550	--	--	--
						220	B	3RT10 36-1BM44	1.550	--	--	--

Size S2

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

32	15	50	22 E	2	2	24	▶	3RT10 34-1BB44-3MA0	1.550	--	--	--
40	18.5	50	22 E	2	2	24	▶	3RT10 35-1BB44-3MA0	1.550	--	--	--
50	22	50	22 E	2	2	24	▶	3RT10 36-1BB44-3MA0	1.550	--	--	--

For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail

Size S3

65	30	100	--	--	--	24	▶	3RT10 44-1BB40	2.800	▶	3RT10 44-3BB40	2.800
						220	B	3RT10 44-1BM40	2.800	B	3RT10 44-3BM40	2.800
80	37	120	--	--	--	24	▶	3RT10 45-1BB40	2.800	▶	3RT10 45-3BB40	2.800
						220	B	3RT10 45-1BM40	2.800	B	3RT10 45-3BM40	2.800
95	45	120	--	--	--	24	▶	3RT10 46-1BB40	2.800	▶	3RT10 46-3BB40	2.800
						220	B	3RT10 46-1BM40	2.800	B	3RT10 46-3BM40	2.800

* You can order this quantity or a multiple thereof.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 101



3RT10 3.-1B.40



3RT10 4.-1B.40



3RT10 3.-3B.40



3RT10 4.-3B.40



3RT10 4.-1B.44

Rated data		Auxiliary contacts		Rated control supply voltage U_c	DT	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals	Weight per PU approx.
AC-2 and AC-3, T_U : up to 60 °C	AC-1, T_U : 40 °C	Operational current I_e up to	Operational current I_e up to			Order No.	Price per PU		Order No.	Price per PU
400 V	400 V	400 V	690 V							
A	kW	A		NO NC V DC			kg			kg

For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail (continued)

Size S3

With mounted auxiliary switch block (removable)¹⁾

Terminal designations according to EN 50012

65	30	100	22 E	2	2	24					
						220	▶	3RT10 44-1BB44	2.900	--	
							B	3RT10 44-1BM44	2.900	--	
80	37	120	22 E	2	2	24	▶	3RT10 45-1BB44	2.900	--	
						220	B	3RT10 45-1BM44	2.900	--	
95	45	120	22 E	2	2	24	▶	3RT10 46-1BB44	2.900	--	
						220	B	3RT10 46-1BM44	2.900	--	

Size S3

With permanently mounted auxiliary switch block for safety applications according to SUVA

Terminal designations according to EN 50012

65	30	50	22 E	2	2	24					
							▶	3RT10 44-1BB44-3MA0	2.900	--	
80	37	50	22 E	2	2	24	▶	3RT10 45-1BB44-3MA0	2.900	--	
95	45	50	22 E	2	2	24	▶	3RT10 46-1BB44-3MA0	2.900	--	

For other voltages see page 3/26, for contactors with mounted auxiliary switch block please inquire.

For accessories, see page 3/101.

For spare parts, see page 3/115.

For multi-unit packing and reusable packaging, see "Appendix --> Ordering notes".

¹⁾ Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC/DC operation (40 Hz to 60 Hz, DC)

Auxiliary and control conductors: screw terminals

Withdrawable coils

Integrated coil circuit (Varistor)

Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals¹⁾



3RT1. 5.



3RT1. 6.



3RT1. 7.

Size	Rated data					Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	AC-2 and AC-3, T_U : Up to 60 °C					AC-1, T_U : 40 °C									
	Operational current I_e up to 500 V	Ratings of induction motors at 50 Hz and				Operational current I_e up to									
	A	230 V	400 V	500 V	690 V	690 V									
		kW	kW	kW	kW	A									
							NO NC	V AC/DC							

Conventional operating mechanisms

										Screw terminals						
S6	115	37	55	75	110	160	2	2	110 ... 127 220 ... 240	▶	3RT10 54-1AF36 3RT10 54-1AP36		1	1 unit	101	3.600
	150	45	75	90	132	185	2	2	110 ... 127 220 ... 240	▶	3RT10 55-6AF36 3RT10 55-6AP36		1	1 unit	101	3.500
	185	55	90	110	160	215	2	2	110 ... 127 220 ... 240	▶	3RT10 56-6AF36 3RT10 56-6AP36		1	1 unit	101	3.500
S10	225	55	110	160	200	275	2	2	110 ... 127 220 ... 240	▶	3RT10 64-6AF36 3RT10 64-6AP36		1	1 unit	101	6.500
	265	75	132	160	250	330	2	2	110 ... 127 220 ... 240	▶	3RT10 65-6AF36 3RT10 65-6AP36		1	1 unit	101	6.500
	300	90	160	200	250	330	2	2	110 ... 127 220 ... 240	▶	3RT10 66-6AF36 3RT10 66-6AP36		1	1 unit	101	6.500
S12	400	132	200	250	400	430	2	2	110 ... 127 220 ... 240	▶	3RT10 75-6AF36 3RT10 75-6AP36		1	1 unit	101	10.500
	500	160	250	355	400	610	2	2	110 ... 127 220 ... 240	▶	3RT10 76-6AF36 3RT10 76-6AP36		1	1 unit	101	10.500

Conventional operating mechanisms

										Cage Clamp terminals						
S6	115	37	55	75	110	160	2	2	110 ... 127 220 ... 240	B	3RT10 54-3AF36 3RT10 54-3AP36		1	1 unit	101	3.600
	150	45	75	90	132	185	2	2	110 ... 127 220 ... 240	B	3RT10 55-2AF36 3RT10 55-2AP36		1	1 unit	101	3.600
	185	55	90	110	160	215	2	2	110 ... 127 220 ... 240	B	3RT10 56-2AF36 3RT10 56-2AP36		1	1 unit	101	3.600
S10	225	55	110	160	200	275	2	2	110 ... 127 220 ... 240	B	3RT10 64-2AF36 3RT10 64-2AP36		1	1 unit	101	6.600
	265	75	132	160	250	330	2	2	110 ... 127 220 ... 240	B	3RT10 65-2AF36 3RT10 65-2AP36		1	1 unit	101	6.600
	300	90	160	200	250	330	2	2	110 ... 127 220 ... 240	B	3RT10 66-2AF36 3RT10 66-2AP36		1	1 unit	101	6.600
S12	400	132	200	250	400	430	2	2	110 ... 127 220 ... 240	B	3RT10 75-2AF36 3RT10 75-2AP36		1	1 unit	101	10.500
	500	160	250	355	400	610	2	2	110 ... 127 220 ... 240	B	3RT10 76-2AF36 3RT10 76-2AP36		1	1 unit	101	10.500

For other voltages, see page 3/26.

For accessories, see page 3/101.

For spare parts, see page 3/116.

¹⁾ Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals. Without additional price. In the 8th position of the Order No. the "1" must be replaced with "6" for screw terminals, e. g. 3RT10 54-6A.36; for Cage Clamp terminals the "3" must be replaced by "2", e. g. 3RT10 54-2A.36.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC/DC operation (40 Hz to 60 Hz, DC)

Auxiliary and control conductors: screw terminals

Withdrawable coils

Integrated coil circuit (Varistor)

Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals¹⁾



3RT1. 5.



3RT1. 6.



3RT1. 7.

Size	Rated data					AC-1, T _i : 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U _s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	AC-2 and AC-3, T _i : Up to 60 °C		Ratings of induction motors at 50 Hz and			Operational current I _e up to 690 V	Version		V AC/DC							kg
	Operational current I _e up to 500 V	230 V	400 V	500 V	690 V		I	L ₁								
	A	kW	kW	kW	kW	A	NO	NC								
Solid-state operating mechanisms · for 24 V DC PLC output																
											Screw terminals					
S6	115	37	55	75	110	160	2	2	96 ... 127 200 ... 277	A	3RT10 54-1NF36 3RT10 54-1NP36		1	1 unit	101	3.500
	150	45	75	90	132	185	2	2	96 ... 127 200 ... 277	A	3RT10 55-6NF36 3RT10 55-6NP36		1	1 unit	101	3.500
	185	55	90	110	160	215	2	2	96 ... 127 200 ... 277	A	3RT10 56-6NF36 3RT10 56-6NP36		1	1 unit	101	3.500
S10	225	55	110	160	200	275	2	2	96 ... 127 200 ... 277	A	3RT10 64-6NF36 3RT10 64-6NP36		1	1 unit	101	6.700
	265	75	132	160	250	330	2	2	96 ... 127 200 ... 277	A	3RT10 65-6NF36 3RT10 65-6NP36		1	1 unit	101	6.700
	300	90	160	200	250	330	2	2	96 ... 127 200 ... 277	B	3RT10 66-6NF36 3RT10 66-6NP36		1	1 unit	101	6.700
S12	400	132	200	250	400	430	2	2	96 ... 127 200 ... 277	A	3RT10 75-6NF36 3RT10 75-6NP36		1	1 unit	101	10.500
	500	160	250	355	400	610	2	2	96 ... 127 200 ... 277	A	3RT10 76-6NF36 3RT10 76-6NP36		1	1 unit	101	10.500
Solid-state operating mechanisms · for 24 V DC PLC output																
											Cage Clamp terminals					
S6	115	37	55	75	110	160	2	2	96 ... 127 200 ... 277	B	3RT10 54-3NF36 3RT10 54-3NP36		1	1 unit	101	3.500
	150	45	75	90	132	185	2	2	96 ... 127 200 ... 277	B	3RT10 55-2NF36 3RT10 55-2NP36		1	1 unit	101	3.500
	185	55	90	110	160	215	2	2	96 ... 127 200 ... 277	B	3RT10 56-2NF36 3RT10 56-2NP36		1	1 unit	101	3.500
S10	225	55	110	160	200	275	2	2	96 ... 127 200 ... 277	B	3RT10 64-2NF36 3RT10 64-2NP36		1	1 unit	101	6.700
	265	75	132	160	250	330	2	2	96 ... 127 200 ... 277	B	3RT10 65-2NF36 3RT10 65-2NP36		1	1 unit	101	6.700
	300	90	160	200	250	330	2	2	96 ... 127 200 ... 277	B	3RT10 66-2NF36 3RT10 66-2NP36		1	1 unit	101	6.700
S12	400	132	200	250	400	430	2	2	96 ... 127 200 ... 277	B	3RT10 75-2NF36 3RT10 75-2NP36		1	1 unit	101	10.500
	500	160	250	355	400	610	2	2	96 ... 127 200 ... 277	B	3RT10 76-2NF36 3RT10 76-2NP36		1	1 unit	101	10.500

For other voltages, see page 3/26.

For accessories, see page 3/101.

For spare parts, see page 3/114.

¹⁾ Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals. Without additional price. In the 8th position of the Order No. the "1" must be replaced with "6" for screw terminals, e. g. 3RT10 54-6A.36; for Cage Clamp terminals the "3" must be replaced by "2", e. g. 3RT10 54-2A.36.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

AC/DC operation (40 Hz to 60 Hz, DC)

Auxiliary and control conductors: screw terminals

Withdrawable coils

Integrated coil circuit (Varistor)

Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals¹⁾

Remaining lifetime indicator (RLT)



3RT10 56-6P..



3RT10 56-6Q..

Size	Rated data						Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals	⊕	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	AC-2 and AC-3, T_U : Up to 60 °C		Ratings of induction motors at 50 Hz and				AC-1, T_U : 40 °C									
	Operational current I_e up to	230 V	400 V	500 V	690 V	690 V	Version			Order No.	Price per PU					
A	kW	kW	kW	kW	A	NO	NC	V AC/DC							kg	
Solid-state operating mechanisms · for 24 V DC PLC output/ PLC relay output, with remaining lifetime indicator (RLT)																
S6	115	37	55	75	110	160	1	1	96 ... 127 200 ... 277	B	3RT10 54-1PF35 3RT10 54-1PP35		1	1 unit	101	4,000
	150	45	75	90	132	185	1	1	96 ... 127 200 ... 277	B	3RT10 55-6PF35 3RT10 55-6PP35		1	1 unit	101	4,000
	185	55	90	110	160	215	1	1	96 ... 127 200 ... 277	B	3RT10 56-6PF35 3RT10 56-6PP35		1	1 unit	101	4,000
S10	225	55	110	160	200	275	1	1	96 ... 127 200 ... 277	B	3RT10 64-6PF35 3RT10 64-6PP35		1	1 unit	101	7,000
	265	75	132	160	250	330	1	1	96 ... 127 200 ... 277	B	3RT10 65-6PF35 3RT10 65-6PP35		1	1 unit	101	7,000
	300	90	160	200	250	330	1	1	96 ... 127 200 ... 277	B	3RT10 66-6PF35 3RT10 66-6PP35		1	1 unit	101	7,000
S12	400	132	200	250	400	430	1	1	96 ... 127 200 ... 277	B	3RT10 75-6PF35 3RT10 75-6PP35		1	1 unit	101	10,500
	500	160	250	355	400	610	1	1	96 ... 127 200 ... 277	B	3RT10 76-6PF35 3RT10 76-6PP35		1	1 unit	101	10,500
Solid-state operating mechanisms · with AS-Interface and remaining lifetime indicator (RLT)																
S6	115	37	55	75	110	160	1	1	96 ... 127 200 ... 277	B	3RT10 54-1QF35 3RT10 54-1QP35		1	1 unit	101	4,000
	150	45	75	90	132	185	1	1	96 ... 127 200 ... 277	B	3RT10 55-6QF35 3RT10 55-6QP35		1	1 unit	101	4,000
	185	55	90	110	160	215	1	1	96 ... 127 200 ... 277	B	3RT10 56-6QF35 3RT10 56-6QP35		1	1 unit	101	4,000
S10	225	55	110	160	200	275	1	1	96 ... 127 200 ... 277	B	3RT10 64-6QF35 3RT10 64-6QP35		1	1 unit	101	7,000
	265	75	132	160	250	330	1	1	96 ... 127 00 ... 277	B	3RT10 65-6QF35 3RT10 65-6QP35		1	1 unit	101	7,000
	300	90	160	200	250	330	1	1	96 ... 127 200 ... 277	B	3RT10 66-6QF35 3RT10 66-6QP35		1	1 unit	101	7,000
S12	400	132	200	250	400	430	1	1	96 ... 127 200 ... 277	B	3RT10 75-6QF35 3RT10 75-6QP35		1	1 unit	101	10,500
	500	160	250	355	400	610	1	1	96 ... 127 200 ... 277	B	3RT10 76-6QF35 3RT10 76-6QP35		1	1 unit	101	10,500

For other voltages, see page 3/26.

For accessories, see page 3/101.

For spare parts, see page 3/116.

¹⁾ Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals.

Without additional price. In the 8th position of the Order No. the "1" must be replaced with "6", e. g. 3RT10 54-6. .35.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT10 contactors, 3-pole, 3 ... 250 kW

Rated control supply voltages (the 10th and 11th position of the order number must be changed)

Contactor type	3RT10 1	3RT10 2, 3RT10 3, 3RT10 4	3RT14 4	3RT13 1, 3RT15 1	3RT13 2 ... 3RT13 4, 3RT15 2 and 3RT15 3	3RT16
Rated control supply voltage U_s						

Sizes S00 ... S3

AC operation¹⁾

Solenoid coils for 50 Hz (exception: Size S00: 50 and 60 Hz²⁾)

24 V AC	B0	B0	B0	B0	B0	B0
42 V AC	D0	D0	D0	D0	--	--
48 V AC	H0	H0	H0	H0	--	--
110 V AC	F0	F0	F0	F0	F0	F0
230 V AC	P0	P0	P0	P0	P0	P0
400 V AC	V0	V0	V0	V0	V0	V0

Solenoid coils for 50 and 60 Hz²⁾

24 V AC	B0	C2	C2	B0	C2	C2
42 V AC	D0	D2	D2	D0	D2	--
48 V AC	H0	H2	H2	H0	H2	--
110 V AC	F0	G2	G2	F0	G2	G2
220 V AC	N2	N2	N2	N2	N2	N2
230 V AC	P0	L2	L2	P0	L2	L2

Solenoid coils (for USA and Canada³⁾)

50 Hz	60 Hz						
110 V AC	120 V AC	K6	K6	K6	K6	K6	K6
220 V AC	240 V AC	P6	P6	P6	P6	P6	P6

Solenoid coils (for Japan)

50/60 Hz ⁴⁾	60 Hz ⁵⁾						
100 V AC	110 V AC	G6	G6	G6	G6	G6	G6
200 V AC	220 V AC	N6	N6	N6	N6	N6	N6
400 V AC	440 V AC	R6	R6	R6	R6	R6	R6

DC operation¹⁾

12 V DC	A4	--	--	A4	--	--
24 V DC	B4	B4	B4	B4	B4	--
42 V DC	D4	D4	D4	D4	D4	--
48 V DC	W4	W4	W4	W4	--	--
60 V DC	E4	E4	E4	--	--	--
110 V DC	F4	F4	F4	F4	F4	--
125 V DC	G4	G4	G4	G4	G4	--
220 V DC	M4	M4	M4	M4	M4	--
230 V DC	P4	P4	P4	P4	--	--

Sizes S6 ... S12

AC/DC operation (AC 40 ... 60 Hz, DC)

Conventional operating mechanism

U_s min ... U_s max ⁶⁾	Contactor type	3RT1. 5.-.A 3RT1. 6.-.A 3RT1. 7.-.A	U_s min ... U_s max ⁶⁾	Contactor type	3RT1. 5.-.A 3RT1. 6.-.A 3RT1. 7.-.A
23 ... 26 V AC		B3	240 ... 277 V		U3
42 ... 48 V AC/DC		D3	380 ... 420 V		V3
110 ... 127 V		F3	440 ... 480 V		R3
200 ... 220 V		M3	500 ... 550 V		S3
220 ... 240 V		P3	575 ... 600 V		T3

Solid-state operating mechanism

U_s min ... U_s max ⁶⁾	Contactor type	3RT1. 5.-.N 3RT1. 6.-.N 3RT1. 7.-.N	3RT1. 5.-.P/Q 3RT1. 6.-.P/Q 3RT1. 7.-.P/Q
21 ... 27.3 V AC		B3	--
96 ... 127 V		F3	F3
200 ... 277 V		P3	P3

Examples

AC operating mechanism	3RT10 23-1AP00 3RT10 23-1AG20	Contactor with screw terminals; with solenoid coil for 50 Hz for rated control supply voltage 230 V AC. Contactor with screw terminals; with solenoid coil for 50/60 Hz for rated control supply voltage 110 V AC.
DC operating mechanism	3RT10 34-3BB40 3RT10 34-3BG40	Contactor with Cage Clamp terminals; for rated control supply voltage 24 V DC. Contactor with Cage Clamp terminals; for rated control supply voltage 125 V DC.

¹⁾ For deviating coil voltages and coil operating ranges of sizes S00 and S0, the 24 V DC SITOP Power supply unit with wide range input (93 to 264 V AC; 30 to 264 V DC) can be used for coil excitation (see "Power Supplies" -> "SITOP power Power Supplies").

²⁾ Coil operating range
at 50 Hz: 0.8 to 1.1 x U_s
at 60 Hz: 0.85 to 1.1 x U_s .

³⁾ Coil operating range
Size S00: at 50 Hz: 0.85 to 1.1 x U_s
at 60 Hz: 0.8 to 1.1 x U_s
Sizes S0 to S3: at 50 Hz and 60 Hz: 0.8 to 1.1 x U_s .

⁴⁾ Coil operating range
Size S00: at 50/60 Hz: 0.85 to 1.1 x U_s
Sizes S0 to S3: at 50 Hz: 0.8 to 1.1 x U_s
at 60 Hz: 0.85 to 1.1 x U_s .

⁵⁾ Coil operating range
at 60 Hz: 0.8 to 1.1 x U_s .

⁶⁾ Operating range:
0.8 x U_s min to 1.1 x U_s max.

3RT, 3TB, 3TF Contactors for Switching Motors

3RT12 vacuum contactors, 3-pole, 110 ... 250 kW

Overview

- 3RT12 vacuum contactors for switching motors

Operating mechanism types

Two types of solenoid operation are available:

- Conventional operating mechanism, version 3RT12...-A
- Solid-state operating mechanism, version 3RT12...-N

UC operation

The contactors can be operated with AC (40 to 60 Hz) as well as with DC.

Withdrawable coils

For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Auxiliary contact complement

The contactors can be fitted with up to 8 lateral auxiliary contacts (identical auxiliary switch blocks from S0 to S12). Of these, no more than 4 are permitted to be NC contacts.

Selection and ordering data

AC/DC operation (40 Hz to 60 Hz, DC)

Auxiliary and control conductors: screw terminals

Withdrawable coils

Integrated coil circuit (Varistor)

Main conductors: busbar connections



3RT12 7.

3RT12 7.

Size	Rated data						Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	AC-2 and AC-3, T_U : up to 60 °C						AC-1, T_U : 40 °C				⊕				
	Operational current I_e up to 1000 V	Ratings of induction motors at 50 Hz and				Operational current I_e up to 1000 V					Order No.	Price per PU			
	A	kW	kW	kW	kW	A	NO	NC	V AC/DC					kg	
Conventional operating mechanisms															
S10	225	55	110	160	200	330	2	2	110 ... 127 220 ... 240	A	3RT12 64-6AF36 3RT12 64-6AP36	1	1 unit	101	7.300
	265	75	132	160	250	330	2	2	110 ... 127 220 ... 240	A	3RT12 65-6AF36 3RT12 65-6AP36	1	1 unit	101	7.300
	300	90	160	200	250	330	2	2	110 ... 127 220 ... 240	A	3RT12 66-6AF36 3RT12 66-6AP36	1	1 unit	101	7.300
S12	400	132	200	250	400	610	2	2	110 ... 127 220 ... 240	A	3RT12 75-6AF36 3RT12 75-6AP36	1	1 unit	101	10.500
	500	160	250	355	500	610	2	2	110 ... 127 220 ... 240	A	3RT12 76-6AF36 3RT12 76-6AP36	1	1 unit	101	10.500
Solid-state operating mechanisms · for 24 V DC PLC output															
S10	225	55	110	160	200	330	2	2	96 ... 127 200 ... 277	B	3RT12 64-6NF36 3RT12 64-6NP36	1	1 unit	101	7.300
	265	75	132	160	250	330	2	2	96 ... 127 200 ... 277	B	3RT12 65-6NF36 3RT12 65-6NP36	1	1 unit	101	7.300
	300	90	160	200	250	330	2	2	96 ... 127 200 ... 277	B	3RT12 66-6NF36 3RT12 66-6NP36	1	1 unit	101	7.300
S12	400	132	200	250	400	610	2	2	96 ... 127 200 ... 277	B	3RT12 75-6NF36 3RT12 75-6NP36	1	1 unit	101	10.500
	500	160	250	355	500	610	2	2	96 ... 127 200 ... 277	B	3RT12 76-6NF36 3RT12 76-6NP36	1	1 unit	101	10.500

For other voltages see page 3/26.

For more 3TF68/69 vacuum contactors (335 kW and 450 kW), see page 3/28.

For accessories, see page 3/103.

3RT, 3TB, 3TF Contactors for Switching Motors

3TF6 vacuum contactors, 3-pole, 335 ... 450 kW

Selection and ordering data

Auxiliary and control conductors: screw terminals
Main conductors: busbar connections, size 14

IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)

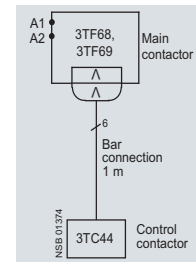
The 3TF68/69 contactors are climate-proof.

They are finger-safe according to EN 50274.

Terminal covers (see [Accessories and Spare Parts on page 3/117](#)) may have to be fitted onto the connecting bars, depending on the configuration with other devices.



3TF68



3TF6. 33-.Q.7

Rated data		Ratings of induction motors at 50 Hz and up to 690 V					AC-1	Auxiliary contacts		Rated control supply voltage U_s	DT	Screw terminals	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.	
Operational current I_e up to 690 V	230 V	400 V	500 V	690 V	1000 V	Rated operational current I_e (at 40 °C)	Version	NO	NC	V		Order No.	Price per PU			kg	
AC operation^{1) 2)} · 50/60 Hz																	
630	200	335	434	600	--	700	4	4	110 ... 132	120 ... 240	A	3TF68 44-0CF7		1	1 unit	101	20.000
											A	3TF68 44-0CM7		1	1 unit	101	20.000
630	200	335	434	600	600	700	4	4	110 ... 132	120 ... 240	D	3TF68 44-8CF7		1	1 unit	101	20.000
											B	3TF68 44-8CM7		1	1 unit	101	20.000
820	260	450	600	800	--	910	4	4	110 ... 132	120 ... 240	A	3TF69 44-0CF7		1	1 unit	101	22.200
											A	3TF69 44-0CM7		1	1 unit	101	22.200
820	260	450	600	800	800	910	4	4	110 ... 132	120 ... 240	D	3TF69 44-8CF7		1	1 unit	101	22.200
											D	3TF69 44-8CM7		1	1 unit	101	22.200
DC operation · DC economy circuit²⁾																	
630	200	335	434	600	--	700	3	3	24 DC		D	3TF68 33-1DB4		1	1 unit	101	19.500
					600						D	3TF68 33-8DB4		1	1 unit	101	19.500
820	260	450	600	800	--	910	3	3	24 DC		D	3TF69 33-1DB4		1	1 unit	101	22.500
					800						D	3TF69 33-8DB4		1	1 unit	101	22.500
AC operation · 50/60 Hz²⁾																	
Version for AC controls which are subject to strong interference																	
630	200	335	434	600	--	700	3	3	110 ... 120	120 ... 240	C	3TF68 33-1QG7		1	1 unit	101	21.000
									220 ... 240		D	3TF68 33-1QL7		1	1 unit	101	21.000
									380 ... 420		D	3TF68 33-1QV7		1	1 unit	101	21.000
					600	700	3	3	220 ... 240		D	3TF68 33-8QL7		1	1 unit	101	21.000
820	260	450	600	800	--	910	3	3	110 ... 120	120 ... 240	D	3TF69 33-1QG7		1	1 unit	101	23.000
									220 ... 240		D	3TF69 33-1QL7		1	1 unit	101	23.000
									380 ... 420		D	3TF69 33-1QV7		1	1 unit	101	23.000
					800	910	3	3	110 ... 120	120 ... 240	D	3TF69 33-8QG7		1	1 unit	101	23.000
											D	3TF69 33-8QL7		1	1 unit	101	23.000

3TC44 17-4A... reversing contactors included in the scope of supply.

1) Built-in surge suppression: varistor circuit.

2) For EMC see [Technical Information LV 1 T](#).

3TF68/69 vacuum contactors are supplied with integrated overvoltage damping for the main current paths (for description see [Technical Information LV 1 T](#)). The surge suppression circuit is not required for operation in circuits with DC choppers, frequency converters or speed-variable

operating mechanisms, for example. It could be damaged by the voltage peaks and harmonics and cause phase-to-phase short-circuits. For this reason, the contactors can also be supplied without integrated overvoltage damping. Without additional price.

The order number must include "Z" and the order code "A02".

Rated control supply voltages (the 10th and 11th position of the order number must be changed)

Contactor type	3TF68 ... C/D, 3TF69 ... C/D
AC operation	
Solenoid coils for 50/60 Hz	
110 ... 132 V AC	F7
200 ... 240 V AC	M7
230 ... 277 V AC	P7
380 ... 460 V AC	Q7
500 ... 600 V AC	S7
DC operation	
24 V DC	B4
110 V DC	F4
125 V DC	G4
220 V DC	M4
230 V DC	P4

* You can order this quantity or a multiple thereof.

3RT, 3TB, 3TF Contactors for Switching Motors

3TB5 contactors with DC solenoid system,
3-pole, 55 ... 200 kW

Selection and ordering data

Auxiliary and control conductors: screw terminals
Main conductors: busbar connections



3TB50

Size	Rated data						Auxiliary contacts		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	AC-2 and AC-3 (up to 55 °C)		AC-1				Version				Order No.	Price per PU				
	Operational current I_e up to 690 V	Ratings of induction motors at 50 Hz and				Operational current I_e (at 40 °C)										
		230 V	400 V	500 V	690 V		NO	NC	V DC							kg
DC operation - DC solenoid system																
6	110	37	55	75	90	170	2	2	24	A	3TB50 17-0BB4		1	1 unit	101	6.500
8	170	55	90	110	132	230	2	2	24	B	3TB52 17-0BB4		1	1 unit	101	8.500
10	250	75	132	160	200	325	2	2	24	D	3TB54 17-0BB4		1	1 unit	101	16.500
12	400	115	200	255	355	425	2	2	24	D	3TB56 17-0BB4		1	1 unit	101	16.500

For accessories, see page 3/119.

For spare parts, see page 3/127.

Rated control supply voltages (the 10th and 11th position of the order number must be changed)

Rated control supply voltage U_s	Contactor type	3TB50/3TB52/3TB54	3TB56
DC operation			
24 V DC		B4	B4
110 V DC		F4	--
220 V DC		M4	M4

3RT, 3TB, 3TF Contactors for Switching Motors

3TF2 contactors, 3-pole, 2.2 ... 4 kW

Overview

AC and DC operation

IEC 60947 (VDE 0660).

The contactors are suitable for use in any climate.

The contactors with screw terminals are finger-safe according to EN 50274.

The contactors are available in versions with screw terminals, 6.3 mm plug-in terminals and solder pin connections for soldering in printed circuit boards.

Selection and ordering data

Size 00

AC-1: operational current $I_e = 16 A$ (at 55 °C)

Screw terminals

Rated data		Utilization categories AC-2 and AC-3				Auxiliary contacts		DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	at 400/380 V	Ratings of induction motors at 50 Hz and				Ident. No.	Version							
		230/220 V	400/380 V	500 V	690/660 V									
A	kW	kW	kW	kW			NO	NC						kg

Contactors with screw terminals - for screw and snap-on mounting onto 35 mm standard mounting rail



3TF20 ...-0...
3TF28 ...-0...

AC operation										Screw terminals					
5	1.3	2.2	2.9	3.8	10E	1	--	B	3TF28 10-0AP0		1	1 unit	101	0.200	
					01E	--	1	C	3TF28 01-0AP0		1	1 unit	101	0.200	
9	2.4	4	4	4	10E	1	--	A	3TF20 10-0AP0		1	1 unit	101	0.200	
					01E	--	1	A	3TF20 01-0AP0		1	1 unit	101	0.200	
DC operation - DC solenoid system															
5	1.3	2.2	2.9	3.8	10E	1	--	C	3TF28 10-0BB4		1	1 unit	101	0.220	
					01E	--	1	C	3TF28 01-0BB4		1	1 unit	101	0.220	
9	2.4	4	4	4	10E	1	--	A	3TF20 10-0BB4		1	1 unit	101	0.220	
					01E	--	1	A	3TF20 01-0BB4		1	1 unit	101	0.220	

Contactors with screw terminals 6.3 mm x 0.8 mm - for screw and snap-on mounting onto 35 mm standard mounting rail



3TF20 ...-3...

AC operation										Flat connectors					
9	2.4	4	4	--	10E	1	--	C	3TF20 10-3AP0		1	1 unit	101	0.170	
					01E	--	1	C	3TF20 01-3AP0		1	1 unit	101	0.170	
DC operation - DC solenoid system															
9	2.4	4	4	--	10E	1	--	C	3TF20 10-3BB4		1	1 unit	101	0.190	
					01E	--	1	C	3TF20 01-3BB4		1	1 unit	101	0.190	

Contactors with flat connectors 6.3 mm x 0.8 mm - for screw fixing (diagonal)



3TF20 ...-7...

AC operation															
9	2.4	4	4	--	10E	1	--	C	3TF20 10-7AP0		1	1 unit	101	0.160	
					01E	--	1	C	3TF20 01-7AP0		1	1 unit	101	0.160	
DC operation - DC solenoid system															
9	2.4	4	4	--	10E	1	--	C	3TF20 10-7BB4		1	1 unit	101	0.190	
					01E	--	1	C	3TF20 01-7BB4		1	1 unit	101	0.190	

Contactors with solder pin connections for printed circuit boards - for screw fixing (diagonal)



3TF20 ...-6...

AC operation										Solder pin connections					
9	2.4	4	4	--	10E	1	--	C	3TF20 10-6AP0		1	1 unit	101	0.160	
					01E	--	1	C	3TF20 01-6AP0		1	1 unit	101	0.160	
DC operation - DC solenoid system															
9	2.4	4	4	--	10E	1	--	C	3TF20 10-6BB4		1	1 unit	101	0.190	
					01E	--	1	C	3TF20 01-6BB4		1	1 unit	101	0.190	

For accessories, see page 3/119.

* You can order this quantity or a multiple thereof.

3RT, 3TB, 3TF Contactors for Switching Motors

3TF2 contactors, 3-pole, 2.2 ... 4 kW

Rated data Utilization categories AC-2 and AC-3		Auxiliary contacts		DT	Screw terminals	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e at 400/ 380 V	Ratings of induction motors at 50 Hz and				Ident. No.	Version	Order No.	Price per PU	
	230/ 220 V	400/ 380 V	500 V	690/ 660 V					
A	kW	kW	kW	kW					kg

Contactors with permanently mounted auxiliary switch blocks with screw terminals, width 45 mm for screw and snap-on mounting onto 35 mm standard mounting rail



AC operation

5	1.3	2.2	2.9	3.8	11E	1	1	C	3TF29 11-0AP0	1	1 unit	101	0.230
					22E	2	2	C	3TF29 22-0AP0	1	1 unit	101	0.230
9	2.4	4	4	4	11E	1	1	C	3TF22 11-0AP0	1	1 unit	101	0.230
					22E	2	2	C	3TF22 22-0AP0	1	1 unit	101	0.230

DC operation · DC solenoid system

3TF22 ...-0... 3TF29 ...-0...	5	1.3	2.2	2.9	3.8	11E	1	1	C	3TF29 11-0BB4	1	1 unit	101	0.250
						22E	2	2	C	3TF29 22-0BB4	1	1 unit	101	0.250
	9	2.4	4	4	4	11E	1	1	C	3TF22 11-0BB4	1	1 unit	101	0.250
						22E	2	2	C	3TF22 22-0BB4	1	1 unit	101	0.250

For accessories, see page 3/119.

Rated control supply voltages (the 10th and 11th position of the order number must be changed)

Contactor type	3TF20, 3TF28	
Rated control supply voltage U_s		
AC operation		
Solenoid coils for AC 50 and 60 Hz		
50 Hz	60 Hz	
24 V AC	29 V AC	B0
110 V AC	132 V AC	F0
230/220 V AC	276 V AC	P0 ¹⁾
AC operation		
Solenoid coils for AC 50/60 Hz		
230 V AC		L2
DC operation		
24 V DC		B4

Contactor type	3TF22, 3TF29	
Rated control supply voltage U_s		
AC operation		
Solenoid coils for AC 50 and 60 Hz		
50 Hz	60 Hz	
230/220 V AC	276 V AC	P0 ¹⁾
DC operation		
24 V DC		B4

¹⁾ Operating range at 220 V:
0.85 to 1.15 x U_s ; lower operating range limit according to IEC 60947.

Please inquire about other voltages.