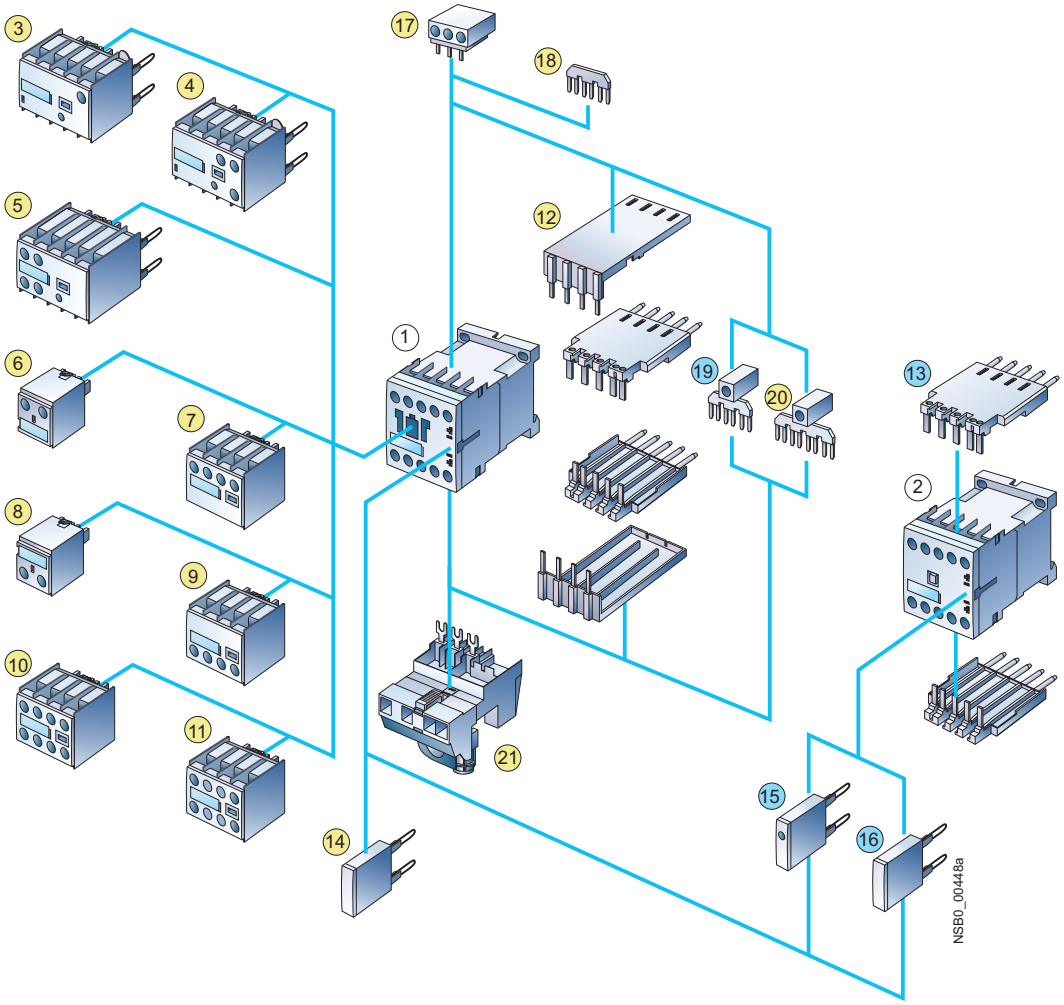
Overview

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 timing relay block, ON-delay (page 3/107)
4 Solid-state timing relay block, OFF-delay (page 3/107)
5 Auxiliary switch block with solid-state time delay (page 3/106) (ON or OFF-delay or wye-delta function)
6 1-pole auxiliary switch block, cable entry from above (page 3/102)
7 2-pole auxiliary switch block, cable entry from above (page 3/102)
8 1-pole auxiliary switch block, cable entry from below (page 3/102)
9 2-pole auxiliary switch block, cable entry from below (page 3/102)
10 4-pole auxiliary switch block (page 3/102) (terminal designations according to EN 50012 or EN 50005)
11 2-pole auxiliary switch block, standard version or solid-state compatible version (pages 3/102, 3/105) (terminal designations according to EN 50005)
12 Solder pin adapter for contactors with 4-pole auxiliary switch block (page 3/112)
13 Solder pin adapter for contactors and coupling relays (page 3/111)
14 Additional load module for increasing the permissible residual current (page 3/110)
15 Surge suppressor with LED (page 3/109)
16 Surge suppressor without LED (page 3/109)
17 Three-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 3/112)
20 Link for paralleling, 4-pole, with terminal (page 3/112)
21 Connection module (adapter and plug) for contactors with screw-type connection (page 3/111)

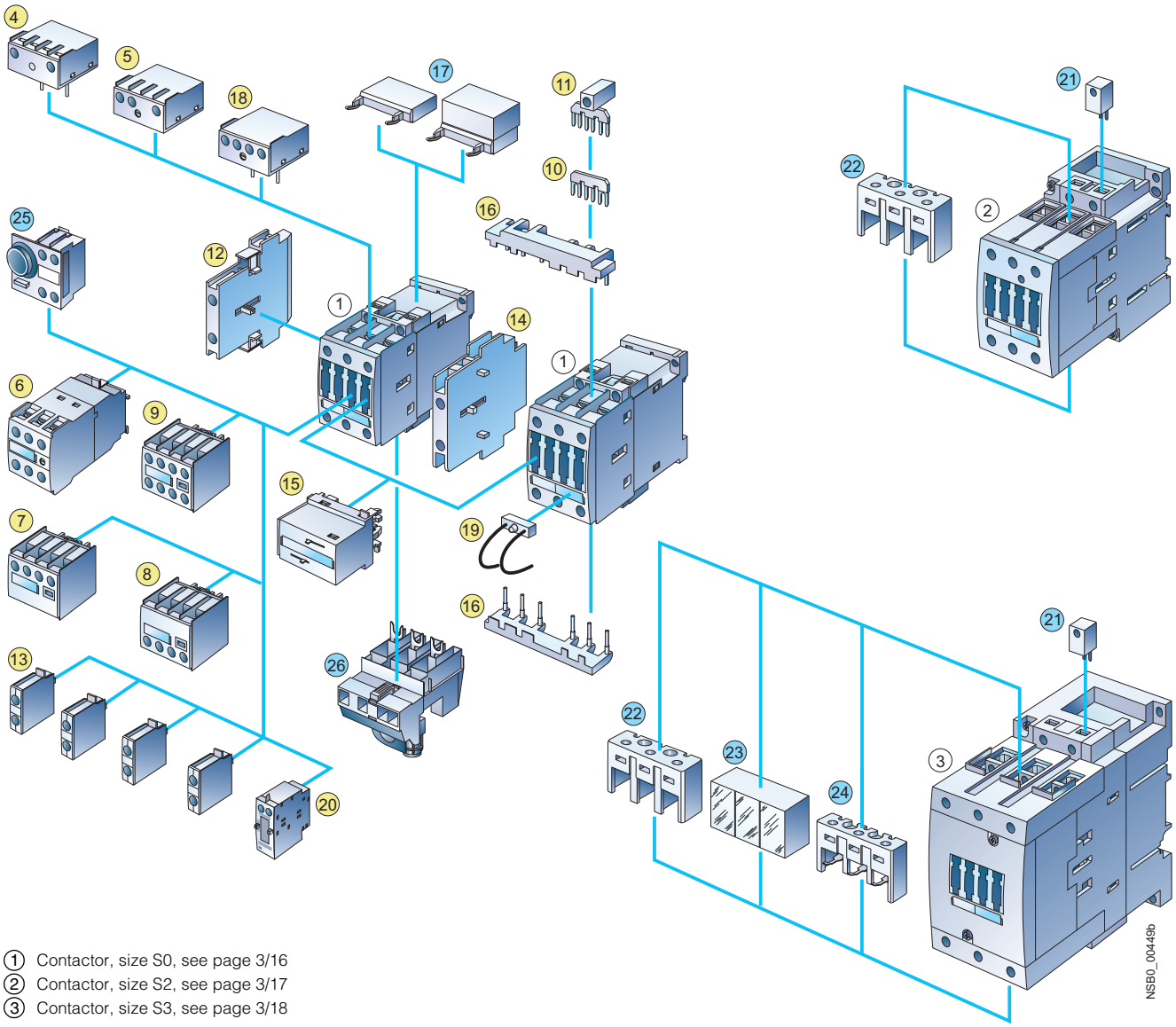
○ For contactors
○ For contactors and coupling relays (interface)

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 Chapter 5 "Protection Equipment" → "Overload Relays".

For fuseless load feeders, see Chapter 6 "Load Feeders, Motor Starters and Soft Starters" → "3RA Fuseless Load Feeders".

General data

3RT1 contactors
Sizes S0 to S3 with mountable accessories



(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 timing relay block, ON-delay (page 3/107)
(5) Solid-state timing relay block, OFF-delay (page 3/107)
(6) Auxiliary switch block with solid-state time delay (page 3/106) (ON or OFF-delay or wye-delta function)
(7) 2-pole auxiliary switch block, cable entry from above (page 3/103)
(8) 2-pole auxiliary switch block, cable entry from below (page 3/103)
(9) 4-pole auxiliary switch block (page 3/102, 3/103) (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 3/112)
(12) 2-pole auxiliary switch block, laterally mountable left or right (page 3/104) (terminal designations according to EN 50012 or EN 50005)
(13) Single-pole auxiliary switch block (up to 4 can be snapped on) (page 3/103)
(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 3/108) (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 3/111)
(19) LED module for indicating contactor operation (page 3/111)

Only for size S0:
(25) Pneumatic delay block (page 3/107)
(26) Connection module (adapter and plug) for contactors with screw-type connection (page 3/111)

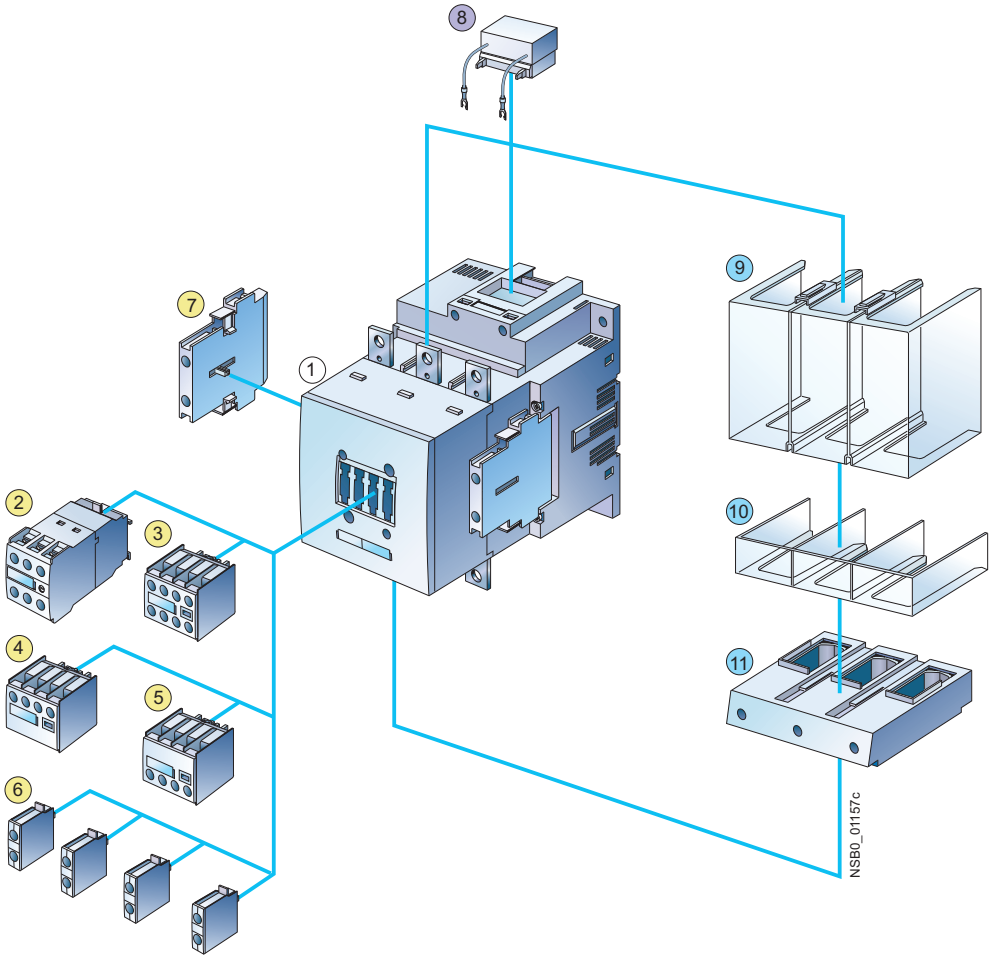
Only for sizes S0 and S2:
(20) Mechanical latching (page 3/107)

Only for sizes S2 and S3:
(21) Coil repeat terminal for making contactor assemblies (page 3/37)
(22) Terminal cover for box terminals (page 3/113)

Only for size S3:
(23) Terminal cover for cable lugs and busbar connections (page 3/113)
(24) Auxiliary conductor terminal, 3-pole (page 3/111)

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 3/106) (ON or OFF-delay or wye-delta function)
③ 4-pole auxiliary switch block (page 3/102, 3/103) (terminal designations according to EN 50012 or EN 50005)
④ 2-pole auxiliary switch block, cable entry from above (page 3/103)
⑤ 2-pole auxiliary switch block, cable entry from below (page 3/103)
⑥ Single-pole auxiliary switch block (up to 4 can be snapped on) (page 3/103)
⑦ 2-pole auxiliary switch block, laterally mountable left or right (page 3/104) (terminal designations according to EN 50012 or EN 50005), identical for S0 to S12
⑧ Surge suppressor (RC element) (page 3/109), for plugging into top of withdrawable coil

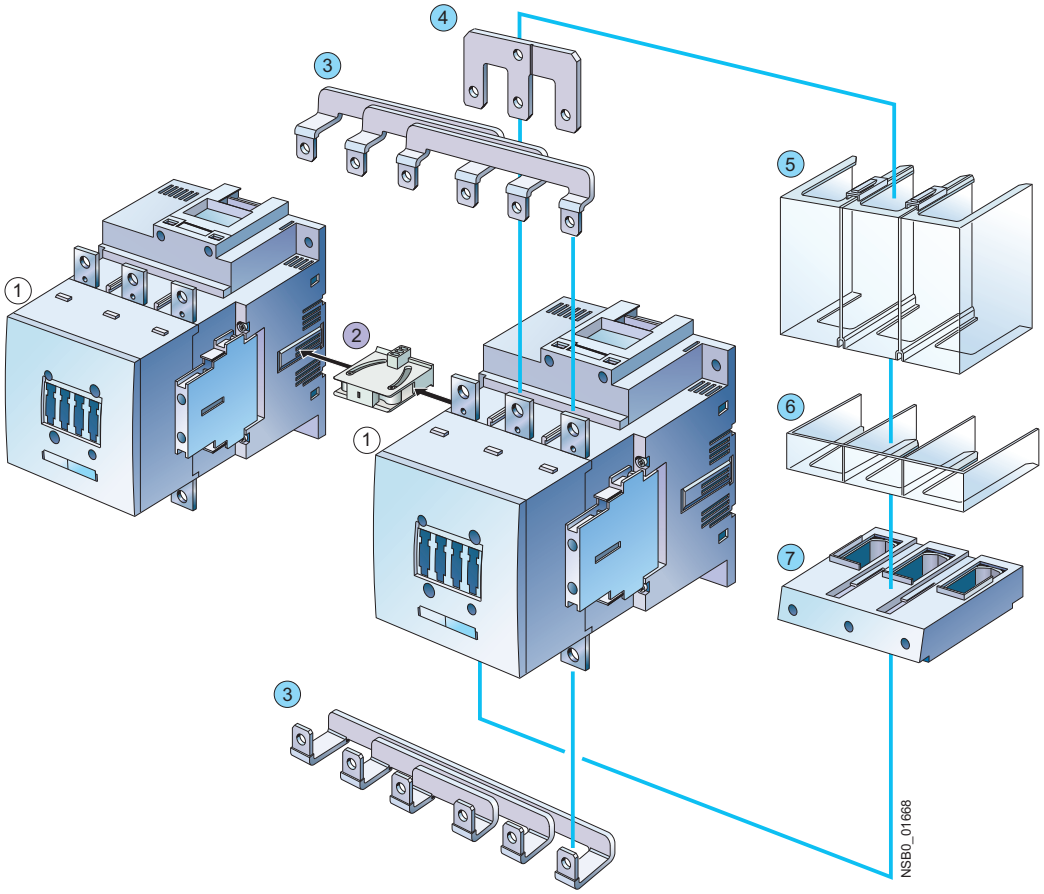
⑨ Terminal cover for cable lug and busbar connection (page 3/113), different for sizes S6 and S10/S12
⑩ Terminal cover for box terminal, (page 3/113), different for sizes S6 and S10/S12
⑪ Box terminal block (page 3/113), different for sizes S6 and S10/S12

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

For mountable overload relays see Chapter 5 "Protection Equipment" → "Overload Relays".

General data

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



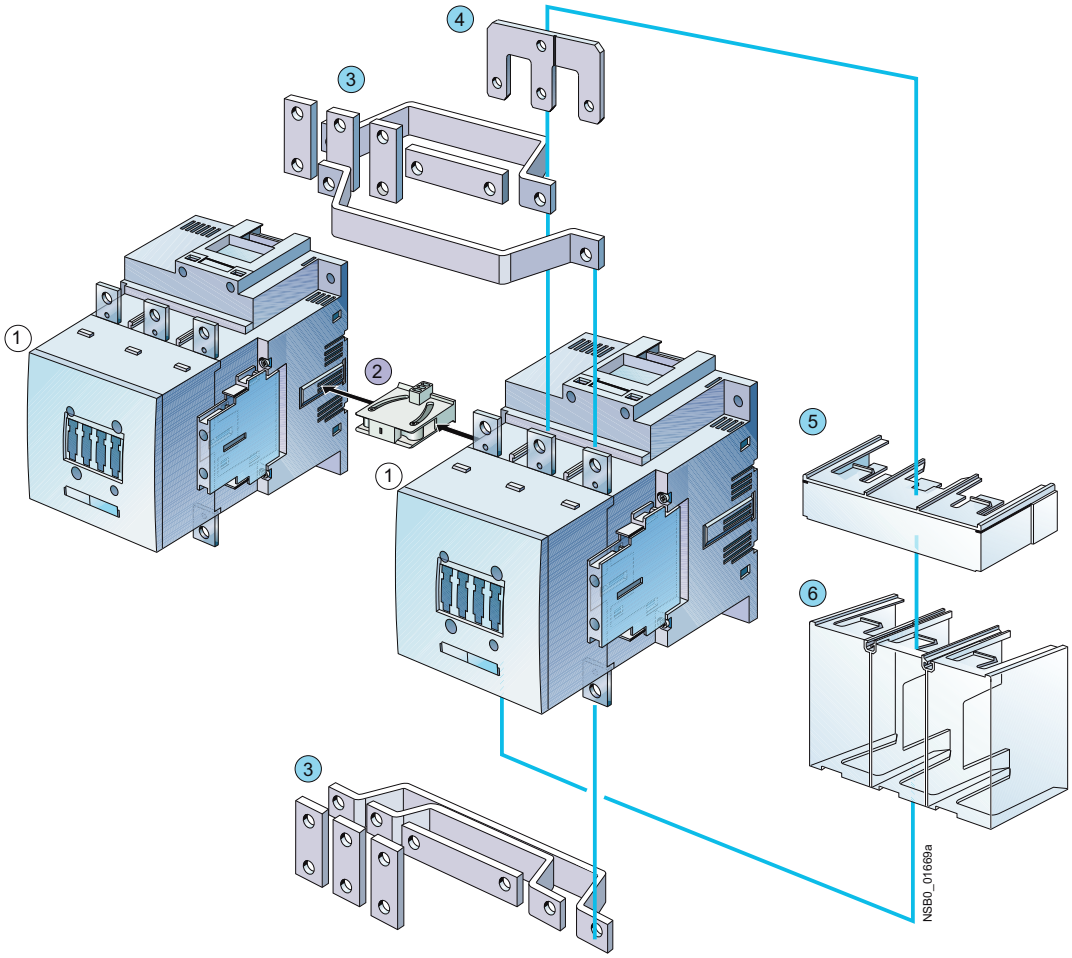
(1) 3RT10 and 3RT14 air-break contactors, size S6 (page 3/23 and 3/51)

(2) 3RA19 54-2A mechanical interlocks, 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 3/112)
(5) Terminal cover for cable lug and busbar connection (page 3/113), different for sizes S6 and S10/S12
(6) Terminal cover for box terminal, (page 3/113), different for sizes S6 and S10/S12
(7) Box terminal block (page 3/113), different for sizes S6 and S10/S12

◯ Accessories identical for sizes S6 to S12
◯ Accessories differ according to size

For mountable overload relays see Chapter 5 "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)

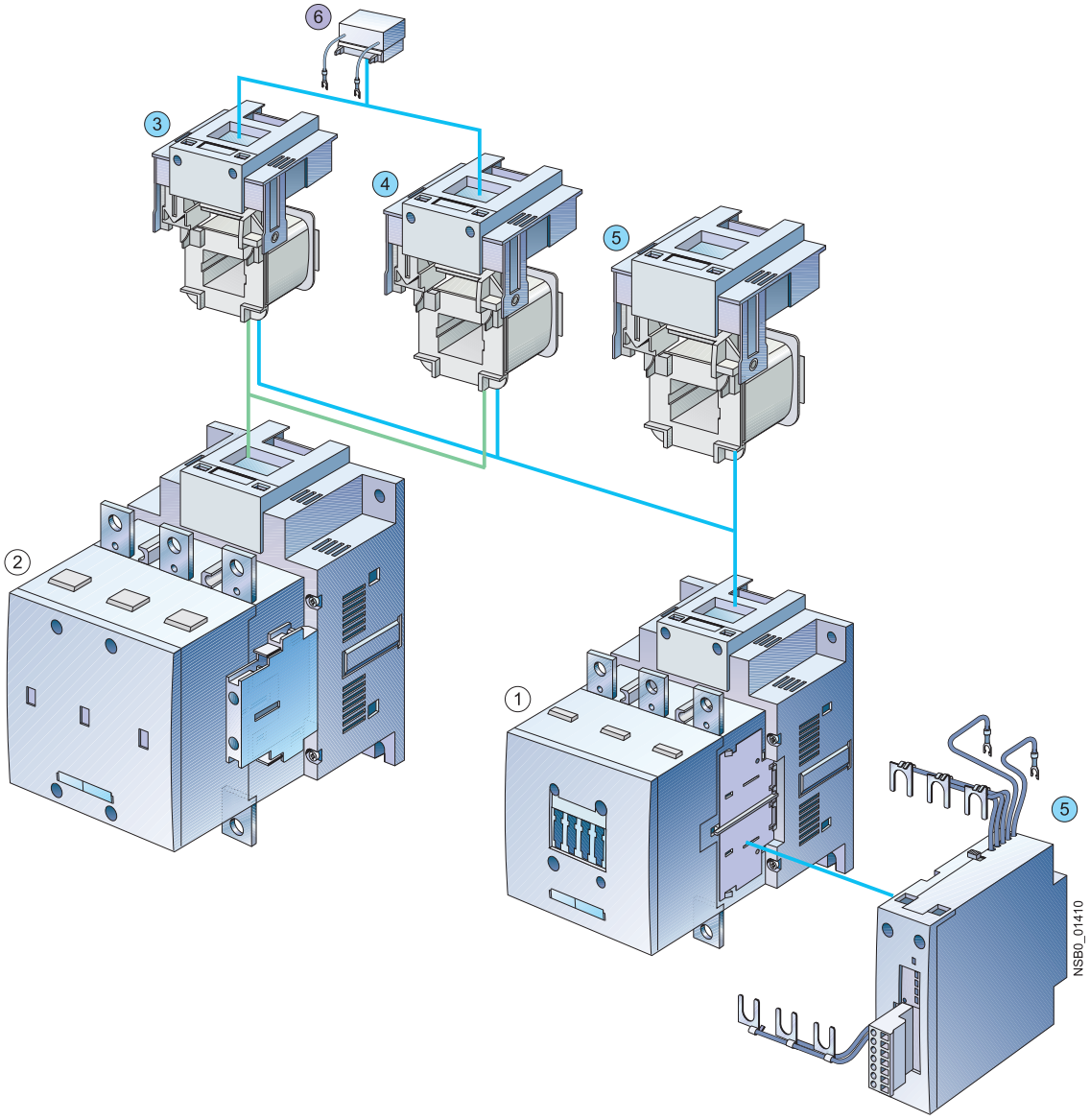
② Mechanical interlock, laterally mountable (page 3/37)
③ 3RA19 wiring modules on the top and bottom (page 3/38)
④ 3RT19 56-4BA31 link for paralleling (star jumper), 3-pole, with through-hole (page 3/112)
⑤ Terminal cover for box terminal, (page 3/113), different for sizes S6 and S10/S12
⑥ Terminal cover for cable lug and busbar connection (page 3/113), different for sizes S6 and S10/S12

○ Accessories identical for sizes S6 to S12
● Accessories differ according to size

For mountable overload relays see Chapter 5 "Protection Equipment" → "Overload Relays".

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 coils 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 coils 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 3/108), plug-mountable on withdrawable coils
- 3RT1...-.**A**.. with conventional operating mechanism
- 3RT1...-.**N**.. with solid-state operating mechanism

○ Identical for sizes S6 to S12
● Different according to size

For mountable overload relays see Chapter 5 "Protection Equipment" → "Overload Relays".

Overview

Sizes S00 to S3, up to 45 kW

AC and DC operation

IEC 60947-1, EN 60947-1,
IEC 60947-4-1, EN 60947-4-1

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 contacts.

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 Accessories on page 3/97).

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) or 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 currents ≤ 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 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 attentuated against voltage peaks (noise suppression diode 6 to 10 times; diode assemblies 2 to 6 times, varistor +2 to 5 ms).

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)

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

For details of the auxiliary switch fittings for the contactors S0 to S12 see Accessories, page 3/97.

- 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

Version 3RT1. ..-.A:

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,
e. g. 110-115-120-127 V UC or 220-230-240 V UC. 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.

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 AC/DC ($U_{S\,min}$ 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 x $U_{S\,min}$ to 1.1 x $U_{S\,max}$ results in an extended coil operating range of at least 0.7 to 1.25 x 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 above 0.8 x $U_{S\,min}$ the electronics will reliably switch the contactor ON, and for voltages below the value 0.5 x $U_{S\,min}$ 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 conform to 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

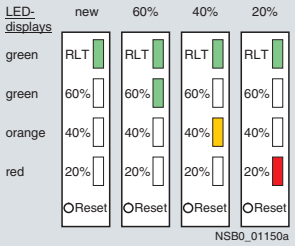
Note:
In connection with converters, the control cables must be routed separately from the load cables to the converter.

Indication of remaining lifetime (RLT)

Main contactor contacts are working parts which therefore 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 remaining lifetime indication 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).

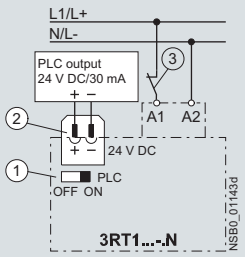


- Early warning to replace contacts
- Optimum utilization of contact material
- Visual inspection of the condition of contacts no longer necessary
- Reduction of ongoing operating costs
- Optimum planning of maintenance measures
- Avoidance of unforeseen plant downtimes

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

2 control options:

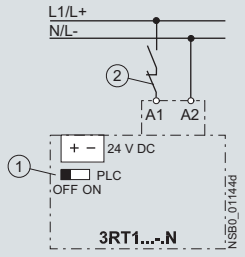
■ Control without a coupling link directly through a 24 V DC/≥ 30 mA PLC output (EN 61131-2). Connection by means of 2-pole plug-in connection. The screwless spring-type connection is part of the scope of supply. The control supply voltage which supplies the solenoid operating mechanism must be connected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



① Slide switch must be in "PLC ON" position
② Plug-in connection, 2-pole
③ Emergency shutdown – optional

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.

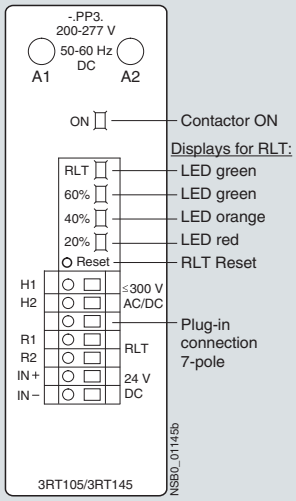


① Slide switch must be in "PLC OFF" position
② Emergency shutdown – optional

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

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

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

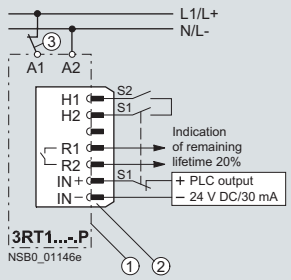


To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The control inputs of the contactor are connected to a 7-pole plug-in connection; the screwless spring-type connection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

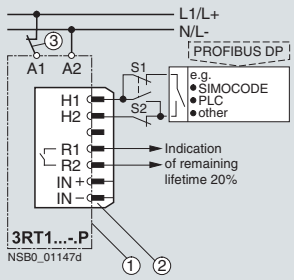
■ Contactor control without a coupling link directly through a 24 V DC/≥ 30 mA PLC output (EN 61131-2) by way of terminals IN+/IN-.



① Solid-state module of 3RT1...-.P contactor
② Plug-in connection, 7-pole
S1 Selector switch for switching from automatic control through PLC semiconductor output to local control
S2 Local control option
③ Emergency shutdown – optional

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 at connections H1/H2, e. g. by
- PLC or
- SIMOCODE.

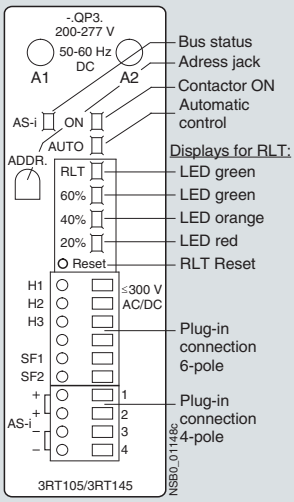


① Solid-state module of 3RT1...-.P contactor
② Plug-in connection, 7-pole
S1 Selector switch for switching from automatic control (e. g. through SIMOCODE or PLC relay output) to local control
S2 Local control option
③ Emergency shutdown – optional

Contact loading: U_S/approx. 5 mA.

When operated through SIMOCODE, a communication link to PROFIBUS DP is also provided.

Version 3RT1. ..-.Q: Communication-capable with integrated AS-Interface and remaining lifetime indicator (RLT)



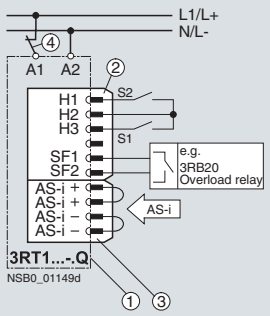
To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The contactor itself is controlled by way of the integrated AS-Interface interface. The inputs and outputs are connected 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 displays:
  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")
  - Indication of remaining lifetime (RLT)
- AS-Interface addressing socket "ADDR":
  The contactor address can be assigned after installation.

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 connector 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
  - Indication of remaining lifetime (RLT)
  - Signal through free input, e. g. overload relay tripped.



① Solid-state module of 3RT1...-.Q contactor
② Plug-in connection, 6-pole
③ Plug-in connection, 4-pole
S1 Selector switch for switching from automatic control (e. g. through AS-Interface to local control; S1 open: Automatic mode
S2 Local control option
④ Emergency shutdown – optional

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.

Technical specifications

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

Indication behavior of the LEDs

State		**LEDs**
AS-Interface communication	OK	ON
	Fault	ON
Station address	0 (zero)	Flashing
		Flashing

Contactor diagnostics using the user program

- Inputs

Input signals			**Device status**
DI 0	"Ready"	0	Device not ready/manual operation
		1	Device ready/automatic mode
DI 1	"Running"	0	Contactor off
		1	Contactor on
DI 2	"Remaining lifetime"	0	Remaining lifetime RLT > 20 %
		1	Remaining lifetime RLT ≤ 20 %
DI 3	"Free input"	0	No input signal at SF1/2
		1	Input signal at SF1/2

- Outputs

Output signals		**Device status**
DO 0	"Running"	0	Contactor off
		1	Contactor on
DO 1		0	--
		1	--
DO 2		0	--
		1	--
DO 3		0	--
		1	--

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										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version								
								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 TH 35 standard mounting rail												
Size S00[1]												
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	B	**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 S00[1]												
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 3/102.
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 × U_s,
at 60 Hz: 0.85 ... 1.1 × U_s.

* You can order this quantity or a multiple thereof.

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** for coil 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	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				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 TH 35 standard mounting rail												
Size S0												
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-1AB00**	0.350	B	**3RT10 23-3AB00**	0.350
						110	▶	**3RT10 23-1AF00**	0.350	B	**3RT10 23-3AF00**	0.350
						230	▶	**3RT10 23-1AP00**	0.350	▶	**3RT10 23-3AP00**	0.350
12	**5.5**	40[1]	--	--	--	24	▶	**3RT10 24-1AB00**	0.350	B	**3RT10 24-3AB00**	0.350
						110	▶	**3RT10 24-1AF00**	0.350	B	**3RT10 24-3AF00**	0.350
						230	▶	**3RT10 24-1AP00**	0.350	▶	**3RT10 24-3AP00**	0.350
17	**7.5**	40[1]	--	--	--	24	▶	**3RT10 25-1AB00**	0.350	B	**3RT10 25-3AB00**	0.350
						110	▶	**3RT10 25-1AF00**	0.350	B	**3RT10 25-3AF00**	0.350
						230	▶	**3RT10 25-1AP00**	0.350	▶	**3RT10 25-3AP00**	0.350
25	**11**	40[1]	--	--	--	24	▶	**3RT10 26-1AB00**	0.350	B	**3RT10 26-3AB00**	0.350
						110	▶	**3RT10 26-1AF00**	0.350	B	**3RT10 26-3AF00**	0.350
						230	▶	**3RT10 26-1AP00**	0.350	▶	**3RT10 26-3AP00**	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	▶	**3RT10 23-1AB04**	0.400		--	
						110	▶	**3RT10 23-1AF04**	0.400		--	
						230	▶	**3RT10 23-1AP04**	0.400		--	
12	**5.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 24-1AB04**	0.400		--	
						110	▶	**3RT10 24-1AF04**	0.400		--	
						230	▶	**3RT10 24-1AP04**	0.400		--	
17	**7.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 25-1AB04**	0.400		--	
						110	▶	**3RT10 25-1AF04**	0.400		--	
						230	▶	**3RT10 25-1AP04**	0.400		--	
25	**11**	40[1]	**22 E**	2	2	24	▶	**3RT10 26-1AB04**	0.400		--	
						110	▶	**3RT10 26-1AF04**	0.400		--	
						230	▶	**3RT10 26-1AP04**	0.400		--	
Size S0												
With permanently mounted auxiliary switch block for safety applications according to SUVA Terminal designations according to EN 50012						At 50/60 Hz V AC						
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 3/103.
For spare parts, see page 3/115.
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).

* You can order this quantity or a multiple thereof.

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 AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals for coil terminals	Weight per PU approx.
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No. Price per PU			Order No. Price per PU	
500 V	**400 V**	690 V		NO	NC							
A	**kW**	A				V AC			kg			kg
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S2												
32	**15**	50	--	--	--	24	▶	**3RT10 34-1AB00**	0.850	B	**3RT10 34-3AB00**	0.850
						110	▶	**3RT10 34-1AF00**	0.850	B	**3RT10 34-3AF00**	0.850
						230	▶	**3RT10 34-1AP00**	0.850	▶	**3RT10 34-3AP00**	0.850
40	**18.5**	60	--	--	--	24	▶	**3RT10 35-1AB00**	0.850	B	**3RT10 35-3AB00**	0.850
						110	▶	**3RT10 35-1AF00**	0.850	B	**3RT10 35-3AF00**	0.850
						230	▶	**3RT10 35-1AP00**	0.850	▶	**3RT10 35-3AP00**	0.850
50	**22**	60	--	--	--	24	▶	**3RT10 36-1AB00**	0.850	B	**3RT10 36-3AB00**	0.850
						110	▶	**3RT10 36-1AF00**	0.850	B	**3RT10 36-3AF00**	0.850
						230	▶	**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	▶	**3RT10 34-1AB04**	0.950		--	
						110	▶	**3RT10 34-1AF04**	0.950		--	
						230	▶	**3RT10 34-1AP04**	0.950		--	
40	**18.5**	60	**22 E**	2	2	24	▶	**3RT10 35-1AB04**	0.950		--	
						110	▶	**3RT10 35-1AF04**	0.950		--	
						230	▶	**3RT10 35-1AP04**	0.950		--	
50	**22**	60	**22 E**	2	2	24	▶	**3RT10 36-1AB04**	0.950		--	
						110	▶	**3RT10 36-1AF04**	0.950		--	
						230	▶	**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	B	**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 3/103.
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 (2 NO + 2 NC according to EN 50012; 22E).

* You can order this quantity or a multiple thereof.

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

3RT10 4.-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** for coil 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	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No. Price per PU			Order No. Price per PU	
500 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC			kg			kg
For screw and snap-on mounting onto TH 35 and TH 75 standard mounting rail												
Size S3												
65	**30**	100	--	--	--	24	▶	**3RT10 44-1AB00**	1.800	B	**3RT10 44-3AB00**	1.800
						110	▶	**3RT10 44-1AF00**	1.800	B	**3RT10 44-3AF00**	1.800
						230	▶	**3RT10 44-1AP00**	1.800	▶	**3RT10 44-3AP00**	1.800
80	**37**	120	--	--	--	24	▶	**3RT10 45-1AB00**	1.800	B	**3RT10 45-3AB00**	1.800
						110	▶	**3RT10 45-1AF00**	1.800	B	**3RT10 45-3AF00**	1.800
						230	▶	**3RT10 45-1AP00**	1.800	▶	**3RT10 45-3AP00**	1.800
95	**45**	120	--	--	--	24	▶	**3RT10 46-1AB00**	1.800	B	**3RT10 46-3AB00**	1.800
						110	▶	**3RT10 46-1AF00**	1.800	B	**3RT10 46-3AF00**	1.800
						230	▶	**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	▶	**3RT10 44-1AB04**	1.950		--	
						110	▶	**3RT10 44-1AF04**	1.950		--	
						230	▶	**3RT10 44-1AP04**	1.950		--	
80	**37**	120	**22 E**	2	2	24	B	**3RT10 45-1AB04**	1.950		--	
						110	▶	**3RT10 45-1AF04**	1.950		--	
						230	▶	**3RT10 45-1AP04**	1.950		--	
95	**45**	120	**22 E**	2	2	24	B	**3RT10 46-1AB04**	1.950		--	
						110	▶	**3RT10 46-1AF04**	1.950		--	
						230	▶	**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 3/103.
For spare parts, see page 3/116.

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

* You can order this quantity or a multiple thereof.

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												
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price per PU			Order No.	Price per PU	
400 V	**400 V**	690 V												
A	**kW**	A		NO	NC	V DC				kg				kg
For screw and snap-on mounting onto TH 35 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 3/102.
For multi-unit packing and reusable packaging, see "Appendix" → "Ordering notes"

* You can order this quantity or a multiple thereof.

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** for coil 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	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No. Price per PU			Order No. Price per PU	
400 V	**400 V**	690 V		NO NC								
A	**kW**	A				V DC			kg			kg
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S0												
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-1BB40**	0.580	▶	**3RT10 23-3BB40**	0.580
						220	B	**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	A	**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	A	**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	A	**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	B	**3RT10 23-1BM44**	0.650		--	
12	**5.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 24-1BB44**	0.650		--	
						220	B	**3RT10 24-1BM44**	0.650		--	
17	**7.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 25-1BB44**	0.650		--	
						220	B	**3RT10 25-1BM44**	0.650		--	
25	**11**	40[1]	**22 E**	2	2	24	▶	**3RT10 26-1BB44**	0.650		--	
						220	B	**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 3/103.
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 (2 NO + 2 NC according to EN 50012; 22E).

* You can order this quantity or a multiple thereof.

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 3.-3B.40

3RT10 3.-1B.44

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**	Weight per PU approx.	DT	**Cage Clamp terminals** for coil 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	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No. Price per PU			Order No. Price per PU	
500 V	**400 V**	690 V		NO	NC							
A	**kW**	A				V DC			kg			kg
For screw and snap-on mounting onto TH 35 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	B	**3RT10 34-1BB44-3MA0**	1.550		--	
40	**18.5**	50	**22 E**	2	2	24	B	**3RT10 35-1BB44-3MA0**	1.550		--	
50	**22**	50	**22 E**	2	2	24	B	**3RT10 36-1BB44-3MA0**	1.550		--	

For other voltages see page 3/26, for contactors with mounted auxiliary switch block please inquire.
For accessories, see page 3/103.
For spare parts, see page 3/116.
For multi-unit packing and reusable packaging, see "Appendix" → "Ordering notes".

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

* You can order this quantity or a multiple thereof.

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

DC operation · DC solenoid system

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

3RT10 4.-1B.40

3RT10 4.-3B.40

3RT10 4.-1B.44

Rated data AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**	Weight per PU approx.	DT	**Cage Clamp terminals** for coil terminals	Weight per PU approx.
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No. Price per PU			Order No. Price per PU	
500 V	**400 V**	690 V		NO	NC							
A	**kW**	A				V DC			kg			kg
For screw and snap-on mounting onto TH 35 and TH 75 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
Size S3												
With mounted auxiliary switch block (removable)[1] Terminal designations according to EN 50012												
65	**30**	100	**22 E**	2	2	24	▶	**3RT10 44-1BB44**	2.900		--	
						220	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 3/103.
For spare parts, see page 3/116.
For multi-unit packing and reusable packaging, see "Appendix" → "Ordering notes".

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

* You can order this quantity or a multiple thereof.

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

AC/DC operation (40 Hz to 60 Hz, DC)
Withdrawable coils with integrated coil circuit (Varistor)
Auxiliary and control conductors: screw terminals
Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]

3RT1. 5.

3RT1. 6.

3RT1. 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C					AC-1, T_u: 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.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to	Version									
	500 V	230 V	**400 V**	500 V	690 V	690 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Conventional operating mechanisms																
											Screw terminals					
S6	115	37	**55**	75	110	160	2	2	110 ... 127	▶	**3RT10 54-1AF36**		1	1 unit	101	3.600
									220 ... 240	▶	**3RT10 54-1AP36**		1	1 unit	101	3.600
	150	45	**75**	90	132	185	2	2	110 ... 127	▶	**3RT10 55-6AF36**		1	1 unit	101	3.500
									220 ... 240	▶	**3RT10 55-6AP36**		1	1 unit	101	3.500
	185	55	**90**	110	160	215	2	2	110 ... 127	▶	**3RT10 56-6AF36**		1	1 unit	101	3.500
									220 ... 240	▶	**3RT10 56-6AP36**		1	1 unit	101	3.500
S10	225	55	**110**	160	200	275	2	2	110 ... 127	▶	**3RT10 64-6AF36**		1	1 unit	101	6.500
									220 ... 240	▶	**3RT10 64-6AP36**		1	1 unit	101	6.500
	265	75	**132**	160	250	330	2	2	110 ... 127	▶	**3RT10 65-6AF36**		1	1 unit	101	6.500
									220 ... 240	▶	**3RT10 65-6AP36**		1	1 unit	101	6.500
	300	90	**160**	200	250	330	2	2	110 ... 127	▶	**3RT10 66-6AF36**		1	1 unit	101	6.500
									220 ... 240	▶	**3RT10 66-6AP36**		1	1 unit	101	6.500
S12	400	132	**200**	250	400	430	2	2	110 ... 127	▶	**3RT10 75-6AF36**		1	1 unit	101	10.500
									220 ... 240	▶	**3RT10 75-6AP36**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	2	2	110 ... 127	▶	**3RT10 76-6AF36**		1	1 unit	101	10.500
									220 ... 240	▶	**3RT10 76-6AP36**		1	1 unit	101	10.500
Conventional operating mechanisms																
											Cage Clamp terminals for coil and auxiliary switch terminals					
S6	115	37	**55**	75	110	160	2	2	110 ... 127	B	**3RT10 54-3AF36**		1	1 unit	101	3.600
									220 ... 240	B	**3RT10 54-3AP36**		1	1 unit	101	3.600
	150	45	**75**	90	132	185	2	2	110 ... 127	B	**3RT10 55-2AF36**		1	1 unit	101	3.600
									220 ... 240	B	**3RT10 55-2AP36**		1	1 unit	101	3.600
	185	55	**90**	110	160	215	2	2	110 ... 127	B	**3RT10 56-2AF36**		1	1 unit	101	3.600
									220 ... 240	B	**3RT10 56-2AP36**		1	1 unit	101	3.600
S10	225	55	**110**	160	200	275	2	2	110 ... 127	B	**3RT10 64-2AF36**		1	1 unit	101	6.600
									220 ... 240	B	**3RT10 64-2AP36**		1	1 unit	101	6.600
	265	75	**132**	160	250	330	2	2	110 ... 127	B	**3RT10 65-2AF36**		1	1 unit	101	6.600
									220 ... 240	B	**3RT10 65-2AP36**		1	1 unit	101	6.600
	300	90	**160**	200	250	330	2	2	110 ... 127	B	**3RT10 66-2AF36**		1	1 unit	101	6.600
									220 ... 240	B	**3RT10 66-2AP36**		1	1 unit	101	6.600
S12	400	132	**200**	250	400	430	2	2	110 ... 127	B	**3RT10 75-2AF36**		1	1 unit	101	10.500
									220 ... 240	B	**3RT10 75-2AP36**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	2	2	110 ... 127	B	**3RT10 76-2AF36**		1	1 unit	101	10.500
									220 ... 240	B	**3RT10 76-2AP36**		1	1 unit	101	10.500

For other voltages, see page 3/26.
For accessories, see page 3/103.
For spare parts, see page 3/117

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-**6**A.36; for Cage Clamp terminals the **"3"** must be replaced by **"2"**, e. g. 3RT10 54-**2**A.36.

*** You can order this quantity or a multiple thereof.**

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

AC/DC operation (40 Hz to 60 Hz, DC)
Withdrawable coils with integrated coil circuit (Varistor)
Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]
Auxiliary and control conductors: Screw terminals

3RT1. 5.

3RT1. 6.

3RT1. 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C					AC-1, T_u: 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.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to	Version									
	500 V	230 V	**400 V**	500 V	690 V	690 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Solid-state operating mechanisms · for 24 V DC PLC output																
											Screw terminals					
S6	115	37	**55**	75	110	160	2	2	96 … 127	A	**3RT10 54-1NF36**		1	1 unit	101	3.500
									200 … 277	►	**3RT10 54-1NP36**		1	1 unit	101	3.500
	150	45	**75**	90	132	185	2	2	96 … 127	A	**3RT10 55-6NF36**		1	1 unit	101	3.500
									200 … 277	►	**3RT10 55-6NP36**		1	1 unit	101	3.500
	185	55	**90**	110	160	215	2	2	96 … 127	A	**3RT10 56-6NF36**		1	1 unit	101	3.500
									200 … 277	►	**3RT10 56-6NP36**		1	1 unit	101	3.500
S10	225	55	**110**	160	200	275	2	2	96 … 127	A	**3RT10 64-6NF36**		1	1 unit	101	6.700
									200 … 277	A	**3RT10 64-6NP36**		1	1 unit	101	6.700
	265	75	**132**	160	250	330	2	2	96 … 127	A	**3RT10 65-6NF36**		1	1 unit	101	6.700
									200 … 277	A	**3RT10 65-6NP36**		1	1 unit	101	6.700
	300	90	**160**	200	250	330	2	2	96 … 127	B	**3RT10 66-6NF36**		1	1 unit	101	6.700
									200 … 277	A	**3RT10 66-6NP36**		1	1 unit	101	6.700
S12	400	132	**200**	250	400	430	2	2	96 … 127	A	**3RT10 75-6NF36**		1	1 unit	101	10.500
									200 … 277	A	**3RT10 75-6NP36**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	2	2	96 … 127	A	**3RT10 76-6NF36**		1	1 unit	101	10.500
									200 … 277	A	**3RT10 76-6NP36**		1	1 unit	101	10.500
Solid-state operating mechanisms · for 24 V DC PLC output																
											Cage Clamp terminals for coil and auxiliary switch terminals					
S6	115	37	**55**	75	110	160	2	2	96 … 127	B	**3RT10 54-3NF36**		1	1 unit	101	3.500
									200 … 277	B	**3RT10 54-3NP36**		1	1 unit	101	3.500
	150	45	**75**	90	132	185	2	2	96 … 127	B	**3RT10 55-2NF36**		1	1 unit	101	3.500
									200 … 277	B	**3RT10 55-2NP36**		1	1 unit	101	3.500
	185	55	**90**	110	160	215	2	2	96 … 127	B	**3RT10 56-2NF36**		1	1 unit	101	3.500
									200 … 277	B	**3RT10 56-2NP36**		1	1 unit	101	3.500
S10	225	55	**110**	160	200	275	2	2	96 … 127	B	**3RT10 64-2NF36**		1	1 unit	101	6.700
									200 … 277	B	**3RT10 64-2NP36**		1	1 unit	101	6.700
	265	75	**132**	160	250	330	2	2	96 … 127	B	**3RT10 65-2NF36**		1	1 unit	101	6.700
									200 … 277	B	**3RT10 65-2NP36**		1	1 unit	101	6.700
	300	90	**160**	200	250	330	2	2	96 … 127	B	**3RT10 66-2NF36**		1	1 unit	101	6.700
									200 … 277	B	**3RT10 66-2NP36**		1	1 unit	101	6.700
S12	400	132	**200**	250	400	430	2	2	96 … 127	B	**3RT10 75-2NF36**		1	1 unit	101	10.500
									200 … 277	B	**3RT10 75-2NP36**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	2	2	96 … 127	B	**3RT10 76-2NF36**		1	1 unit	101	10.500
									200 … 277	B	**3RT10 76-2NP36**		1	1 unit	101	10.500

For other voltages, see page 3/26.
For accessories, see page 3/103.
For spare parts, see page 3/115.

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-**6**A.36; for Cage Clamp terminals the **"3"** must be replaced by **"2"**, e. g. 3RT10 54-**2**A.36.

* You can order this quantity or a multiple thereof.

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

AC/DC operation (40 Hz to 60 Hz, DC)
Withdrawable coils with integrated coil circuit (Varistor)
Auxiliary and control conductors: screw terminals
Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]
Remaining lifetime indicator (RLT)

3RT10 56-6P. .

3RT10 56-6Q. .

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C Operational current I_e up to 500 V	Ratings of induction motors at 50 Hz and 230 V	400 V	500 V	690 V	AC-1, T_u: 40 °C Operational current I_e up to 690 V	Auxiliary contacts, lateral Version NO	NC	Rated control supply voltage U_s	DT	Screw terminals Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	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	B	**3RT10 54-1PF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 54-1PP35**		1	1 unit	101	4.000
	150	45	**75**	90	132	185	1	1	96 … 127	B	**3RT10 55-6PF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 55-6PP35**		1	1 unit	101	4.000
	185	55	**90**	110	160	215	1	1	96 … 127	B	**3RT10 56-6PF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 56-6PP35**		1	1 unit	101	4.000
S10	225	55	**110**	160	200	275	1	1	96 … 127	B	**3RT10 64-6PF35**		1	1 unit	101	7.000
									200 … 277	B	**3RT10 64-6PP35**		1	1 unit	101	7.000
	265	75	**132**	160	250	330	1	1	96 … 127	B	**3RT10 65-6PF35**		1	1 unit	101	7.000
									200 … 277	B	**3RT10 65-6PP35**		1	1 unit	101	7.000
	300	90	**160**	200	250	330	1	1	96 … 127	B	**3RT10 66-6PF35**		1	1 unit	101	7.000
									200 … 277	B	**3RT10 66-6PP35**		1	1 unit	101	7.000
S12	400	132	**200**	250	400	430	1	1	96 … 127	B	**3RT10 75-6PF35**		1	1 unit	101	10.500
									200 … 277	B	**3RT10 75-6PP35**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	1	1	96 … 127	B	**3RT10 76-6PF35**		1	1 unit	101	10.500
									200 … 277	B	**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	B	**3RT10 54-1QF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 54-1QP35**		1	1 unit	101	4.000
	150	45	**75**	90	132	185	1	1	96 … 127	B	**3RT10 55-6QF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 55-6QP35**		1	1 unit	101	4.000
	185	55	**90**	110	160	215	1	1	96 … 127	B	**3RT10 56-6QF35**		1	1 unit	101	4.000
									200 … 277	B	**3RT10 56-6QP35**		1	1 unit	101	4.000
S10	225	55	**110**	160	200	275	1	1	96 … 127	B	**3RT10 64-6QF35**		1	1 unit	101	7.000
									200 … 277	B	**3RT10 64-6QP35**		1	1 unit	101	7.000
	265	75	**132**	160	250	330	1	1	96 … 127	B	**3RT10 65-6QF35**		1	1 unit	101	7.000
									00 … 277	B	**3RT10 65-6QP35**		1	1 unit	101	7.000
	300	90	**160**	200	250	330	1	1	96 … 127	B	**3RT10 66-6QF35**		1	1 unit	101	7.000
									200 … 277	B	**3RT10 66-6QP35**		1	1 unit	101	7.000
S12	400	132	**200**	250	400	430	1	1	96 … 127	B	**3RT10 75-6QF35**		1	1 unit	101	10.500
									200 … 277	B	**3RT10 75-6QP35**		1	1 unit	101	10.500
	500	160	**250**	355	400	610	1	1	96 … 127	B	**3RT10 76-6QF35**		1	1 unit	101	10.500
									200 … 277	B	**3RT10 76-6QP35**		1	1 unit	101	10.500

For other voltages, see page 3/26.
For accessories, see page 3/103.
For spare parts, see page 3/117.

[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.

*** You can order this quantity or a multiple thereof.**

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 / Rated control supply voltage U_s	3RT10 1	3RT10 2, 3RT10 3, 3RT10 4	3RT14 4	3RT13 1, 3RT15 1	3RT13 2 ... 3RT13 4, 3RT15 2 and 3RT15 3	3RT16
Sizes S00 ... S3						
AC operation[1]						
Solenoid coils for 50 Hz (exception: Size S00: 50 and 60 Hz[2])						
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 Hz[2]						
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 Canada[3]**)**						
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 operation[1]						
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 mechanisms

$U_{s\,min}$ ... $U_{s\,max}$[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/DC	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/DC	B3	--
96 ... 127 V AC/DC	F3	F3
200 ... 277 V	P3	P3

Examples

AC operating mechanism	3RT10 23-1A**P0**0	Contactor with screw terminals; with solenoid coil for 50 Hz for rated control supply voltage 230 V AC.
	3RT10 23-1A**G2**0	Contactor with screw terminals; with solenoid coil for 50/60 Hz for rated control supply voltage 110 V AC.
DC operating mechanism	3RT10 34-3B**B4**0	Contactor with Cage Clamp terminals; for rated control supply voltage 24 V DC.
	3RT10 34-3B**G4**0	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 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 × U_s.

4) Coil operating range
Size S00: at 50/60 Hz: 0.85 to 1.1 × 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 × U_s.

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

6) Operating range:
0.8 x $U_{s\,min}$ to 1.1 × $U_{s\,max}$.

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

Overview

UC operation

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

Two types of solenoid operation are available:
- Conventional operating mechanism, version 3RT12. .-. A
- Solid-state operating mechanism, version 3RT12. .-. N

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.

Vacuum interrupters

In contrast with the 3RT10 contactors – the main contacts operate in air under atmospheric conditions – the contact gaps of the 3RT12 vacuum contactors are contained in hermetically enclosed vacuum contact tubes. Neither arcs nor arcing gases are produced. The particular benefit of 3RT12 vacuum contactors, however, is that their electrical endurance is at least twice as long as that of 3RT10 contactors. They are therefore particularly well suited to frequent switching in jogging/mixed operation, e. g. in crane control systems.

Note:
Vacuum contactors are basically unsuitable for switching DC voltage.

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)
Withdrawable coils with integrated coil circuit (Varistor)
Auxiliary and control conductors: screw terminals
Main conductors: busbar connections

3RT12 6.

3RT12 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C					AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to										
	1000 V	230 V	**400 V**	500 V	690 V	1000 V										
	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	A	**3RT12 64-6AF36**		1	1 unit	101	7.300
									220 ... 240	A	**3RT12 64-6AP36**		1	1 unit	101	7.300
	265	75	**132**	160	250	330	2	2	110 ... 127	A	**3RT12 65-6AF36**		1	1 unit	101	7.300
									220 ... 240	A	**3RT12 65-6AP36**		1	1 unit	101	7.300
	300	90	**160**	200	250	330	2	2	110 ... 127	A	**3RT12 66-6AF36**		1	1 unit	101	7.300
									220 ... 240	A	**3RT12 66-6AP36**		1	1 unit	101	7.300
S12	400	132	**200**	250	400	610	2	2	110 ... 127	A	**3RT12 75-6AF36**		1	1 unit	101	10.500
									220 ... 240	A	**3RT12 75-6AP36**		1	1 unit	101	10.500
	500	160	**250**	355	500	610	2	2	110 ... 127	A	**3RT12 76-6AF36**		1	1 unit	101	10.500
									220 ... 240	A	**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	B	**3RT12 64-6NF36**		1	1 unit	101	7.300
									200 ... 277	B	**3RT12 64-6NP36**		1	1 unit	101	7.300
	265	75	**132**	160	250	330	2	2	96 ... 127	B	**3RT12 65-6NF36**		1	1 unit	101	7.300
									200 ... 277	B	**3RT12 65-6NP36**		1	1 unit	101	7.300
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT12 66-6NF36**		1	1 unit	101	7.300
									200 ... 277	B	**3RT12 66-6NP36**		1	1 unit	101	7.300
S12	400	132	**200**	250	400	610	2	2	96 ... 127	B	**3RT12 75-6NF36**		1	1 unit	101	10.500
									200 ... 277	B	**3RT12 75-6NP36**		1	1 unit	101	10.500
	500	160	**250**	355	500	610	2	2	96 ... 127	B	**3RT12 76-6NF36**		1	1 unit	101	10.500
									200 ... 277	B	**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 3/104.

*** You can order this quantity or a multiple thereof.**

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

Selection and ordering data

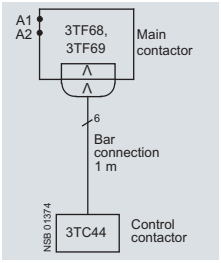
Auxiliary and control conductors: screw terminals
Main conductors: busbar connections, size 14

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 may have to be fitted onto the connecting bars, depending on the configuration with other devices (see Accessories and Spare Parts on page 3/121)

3TF68



3TF6. 33-.Q.7

Rated data AC-2 and AC-3 (up to 55 °C) Operational current I_e up to 690 V	Ratings of induction motors at 50 Hz and 230 V	400 V	500 V	690 V	1000 V	AC-1 Operational current I_e (at 40 °C)	Auxiliary contacts Version NO	NC	Rated control supply voltage U_s	DT	Screw terminals Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
A	kW	**kW**	kW	kW	kW	A			V							kg
AC operation[1)2)] · 50/60 Hz																
630	200	**335**	434	600	--	700	4	4	110 ... 132 AC	A	**3TF68 44-0CF7**		1	1 unit	101	20.000
									200 ... 240 AC	A	**3TF68 44-0CM7**		1	1 unit	101	20.000
630	200	**335**	434	600	600	700	4	4	110 ... 132 AC	D	**3TF68 44-8CF7**		1	1 unit	101	20.000
									200 ... 240 AC	B	**3TF68 44-8CM7**		1	1 unit	101	20.000
820	260	**450**	600	800	--	910	4	4	110 ... 132 AC	A	**3TF69 44-0CF7**		1	1 unit	101	22.200
									200 ... 240 AC	A	**3TF69 44-0CM7**		1	1 unit	101	22.200
820	260	**450**	600	800	800	910	4	4	110 ... 132 AC	D	**3TF69 44-8CF7**		1	1 unit	101	22.200
									200 ... 240 AC	D	**3TF69 44-8CM7**		1	1 unit	101	22.200
DC operation · DC economy circuit[2)]																
630	200	**335**	434	600	--	700	3	3	DC 24	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	DC 24	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 Hz[2)3)] · Version for AC controls which are subject to strong interference																
630	200	**335**	434	600	--	700	3	3	110 ... 120 AC	C	**3TF68 33-1QG7**		1	1 unit	101	21.000
									220 ... 240 AC	D	**3TF68 33-1QL7**		1	1 unit	101	21.000
									380 ... 420 AC	D	**3TF68 33-1QV7**		1	1 unit	101	21.000
					600	700	3	3	220 ... 240 AC	D	**3TF68 33-8QL7**		1	1 unit	101	21.000
820	260	**450**	600	800	--	910	3	3	110 ... 120 AC	D	**3TF69 33-1QG7**		1	1 unit	101	23.000
									220 ... 240 AC	D	**3TF69 33-1QL7**		1	1 unit	101	23.000
									380 ... 420 AC	D	**3TF69 33-1QV7**		1	1 unit	101	23.000
					800	910	3	3	110 ... 120 AC	D	**3TF69 33-8QG7**		1	1 unit	101	23.000
									220 ... 240 AC	D	**3TF69 33-8QL7**		1	1 unit	101	23.000

For accessories, see page 3/120, for spare parts, see page 3/130.

1) Built-in surge suppression: varistor circuit.

2) For EMC see note on Technical Information on page 3/1.
3TF68/69 vacuum contactors are supplied with integrated overvoltage damping for the main current paths (see note on Technical Information on page 3/1). 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"**.

3) With this version, a solenoid system with DC economy circuit and rectifier unit is used. A 3TC44 17-4A. . switchover contactor iis included in the scope of supply of the vacuum contactor.

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	F7
200 ... 240 V	M7
230 ... 277 V	P7
380 ... 460 V	Q7
500 ... 600 V	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.

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

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

The 3TB5 contactors are suitable for use in any climate.

They are finger-safe according to EN 50274.

Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices (see Accessories and Spare Parts on page 3/121) .

3TB50

Size	Rated data AC-2 and AC-3 (up to 55 °C) Operational current I_e up to 690 V	Ratings of induction motors at 50 Hz and 230 V	400 V	500 V	690 V	AC-1 Operational current I_e (at 40 °C)	Auxiliary contacts Version NO	NC	Rated control supply voltage U_s	DT	Screw terminals Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	A	kW	**kW**	kW	kW	A			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 3/120.
For spare parts, see page 3/128.

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

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

* You can order this quantity or a multiple thereof.

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

Overview

AC and DC operation

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

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	Ratings of induction motors at 50 Hz and				Ident. No.	Version								
At 400/ 380 V	230/ 220 V	**400/ 380 V**	500 V	690/ 660 V		NO	NC							
A	kW	**kW**	kW	kW										kg
Contactors with screw terminals · for screw and snap-on mounting onto TH 35 standard mounting rail														
									Screw terminals					
AC operation														
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 6.3 mm x 0.8 mm flat connectors · for screw and snap-on mounting onto TH 35 standard mounting rail														
									Flat connectors					
AC operation														
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 6.3 mm x 0.8 mm flat connectors · for screw fixing (diagonal)														
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)														
									Solder pin connections					
AC operation														
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

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

3TF20..-3...

3TF20..-7...

3TF20..-6...

For accessories see pages 3/122 and 3/123.

* You can order this quantity or a multiple thereof.

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	Ratings of induction motors at 50 Hz and				Ident. No.	Version			Order No.	Price € per PU				
At 400/ 380 V	230/ 220 V	**400/ 380 V**	500 V	690/ 660 V		NO	NC							
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 TH 35 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														
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

3TF22 . .-0. . .,
3TF29 . .-0. . .

For accessories see pages 3/122 and 3/123.

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 × U_s; lower operating range limit according to IEC 60947.

Please inquire about other voltages.

* You can order this quantity or a multiple thereof.