Everything Easy: SIRIUS Modular System



SIRIUS

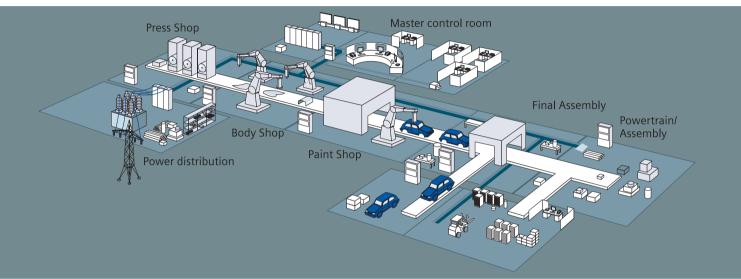
 $\label{thm:continuity} \mbox{Highly flexible system-based switching, protecting and starting.} \\ \mbox{Answers for industry.}$



20

22

Everything for the electrical cabinet: SIRIUS Modular System.



Everything. Easy. SIRIUS

For more than 110 years now we have been developing and manufacturing industrial control products. We have always followed the philosophy to make it easier to use-whether in the electrical control panels, in the field or directly at the machine. Today we have combined our complete range of industrial controls under one star: SIRIUS

An important element of our SIRIUS industrial controls is the extensive range of products that we can offer associated with protecting, controlling, switching motor loads and systems. You can look to the future with **confidence**. From well proven and reliable contactors, relays, MPCBs, soft starters ... upto innovative SIRIUS SC solid state switching devices for use in the toughest conditions. With SIRIUS you always switch simply, safely and reliably. With SIRIUS industrial controls, you can look to the future with confidence.

Pressing, equipping, transporting. These functions run in many automated production environments. You'll find everything that you need to switch, protect and start motors with the extensive portfolio of the modular SIRIUS system.





| Contents Page SIRIUS Modular System | No |
|---|-----------|
| An overview and components of modular system | 2 |
| Load feeders | 6 |
| Contactors for every application | 7 |
| S00 structure S00 selection and ordering data: Circuit breakers, contactors, soft starters, overload rela | 10 ays |
| S0 structure S0 selection and ordering data: Circuit breakers, contactors/solid-state contactors and reversing contactors, soft starters, overload relays | 12 |
| S2 structure S2 selection and ordering data: Circuit breakers, contactors, soft starters, overload relays | 14 |
| S3 structure S3 selection and ordering data: Circuit breakers, contactors, soft starters, overload rela | 16 ays |
| S6, S10, S12 structure S6, S10, S12 selection and ordering data: Contactors, overload relays, soft starters | 18 |

Selection and ordering data

Accessories

contactor relay, latched contactor relay,

low consumption coil contactor relay and contactors, AC-1 duty contactor 4 pole contactor, 2NO 2NC contactor

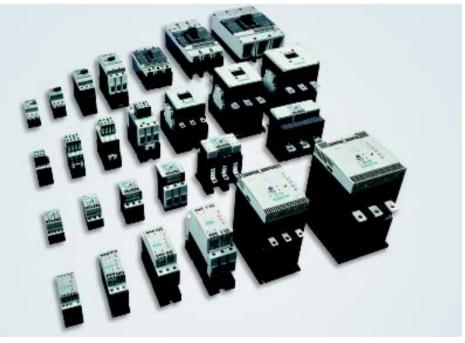
Everything fits: The modular SIRIUS system.

When it comes to configuring electrical control panels everything must go quickly, simply and flexibly. How can all of these be fulfilled? With unique, modular SIRIUS system that offers everything required for switching, protecting and starting motors and plants.

This is a modular range of standard components up to 250kW/415V where everything is optimally harmonized with one another. Industrial controls can be so simple with SIRIUS system.

Ongoing development and continuous innovation ensure that our customers – today and tomorrow – are best equipped with SIRIUS, and profit from cost-effective solutions. All of the components of the modular SIRIUS system distinguish themselves due to their space-saving design and high degree of flexibility. Engineering, mounting & installation, wiring and maintenance can be simply implemented and in a time-saving fashion. It doesn't make any difference if you wish to configure your load feeders with circuit breakers or overload relays, contactors or soft starters – SIRIUS always has the optimum product for your particular application.





| The advantages of the S | IRIUS modular system at a glance |
|-------------------------|--|
| Load feeders | Up to 250 kW/415 V – can be simply assembled using standard device |
| Modular design | Everything fits together as required |
| Accessories | Innovative accessories offer cost effective solutions |
| Configuration | Saves time with simple wiring and commissioning |
| Communication | Can be connected to AS-Interface and PROFIBUS DP |
| Service/maintenance | Extremely long service life, reliable and low maintenance |
| Approvals | Approved and certified worldwide – e.g. IEC, UL, CSA, CCC, marine engineering |
| Mounting | Screwed or click fit for permanent, safe and reliable mounting |
| Environmental issues | Environmentally-compatible production processes and materials Materials can be recycled Low power loss |
| Aesthetics | Ergonomically designed Has received the iF Product Design Award |
| | |

An overview of the SIRIUS Modular System.



^{*} With high switching frequencies, we recommend application of the solid-state contactors / reversing contactors

Switching. Protecting. Starting. The components of the SIRIUS Modular System.



Far more than ON/OFF: SIRIUS 3RV circuit breakers

SIRIUS 3RV motor protection circuit breakers are compact, currentlimiting circuit breakers. They quarantee safe reliable shutdown when short circuits occur and protect loads and plants against overload. Furthermore, they are suitable for operationally switching load feeders and safely disconnecting the plant or system from the line supply when service is being carried. SENTRON 3VL circuit breakers are suitable for applications above 100 A. As infeed and load feeder breaker, they protect plants and motors against short circuit and overload.



Rugged and reliable: SIRIUS 3RT contactors

You can easily find what you require in this complete family -with only seven sizes for the power range up to 250kW/415V.

Secondly-you can completely depend on SIRIUS contactors- and we mean completely. These benefits distinguish themselves due to high operational reliability, long lifetime, always the best electrical contacts and the rugged character - even at high ambient temperatures. It goes without saying that the contactors have everything that you expect from the modular SIRIUS system.



Competently mastering high switching frequencies: SIRIUS 3RF solid-state contactors

SIRIUS solid-state contactors (size S0) for motor switching are characterized by their virtually unlimited service life - even under harsh conditions and with high switching frequencies. The threephase solid-state contactors switch motors up to 7.5 kW. A special reversing contactor version facilitates a continuous reversal of the rotational direction of motors up to 3 kW. The compact devices in 45 or 90 mm width can be combined with motor protection circuit breakers or microprocessor based overload relays – for the fast and easy assembly of fuseless and fused motor feeders.



Tripping when things get tough: SIRIUS 3RU and 3RB overload relays

The overload relays of the SIRIUS family, available as either thermal or microprocessor based versions, protect loads connected to the main circuit, as a function of the current, and also protect other switching and protective devices in the particular load feeder. The solid-state SIRIUS 3RB2 overload relays guarantee seamless motor and plant protection from 0.1 A to 630 A. Due to the wide setting ranges, the current range is covered with a minimum number of versions.

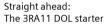


Gentle starting: SIRIUS 3RW soft starters

SIRIUS 3RW soft starters offer a seamless range that covers all standard and high-feature motor starting applications. They can be used in the widest range of applications to exploit the advantages of soft starting for the easy and efficient realization of optimum machine concepts. The compact two-phase-controlled 3RW30 facilitates efficient and space-saving soft starting up to 55 kW (with 415 V). The 3RW40 additionally offers soft stopping as well as integrated intrinsic device and motor protection functions, thanks to which an additional overload relay becomes reduntant. Device versions up to a rating of 55 kW (with 415 V) are available.

Made easy: Engineered load feeders







Phases interchanged: The 3RA12 reversing starter



Two stages – one start: The 3RA14 star-delta combination

Ready for immediate use:

Standard, modular components that are optimally harmonized with one another and are quite simple to combine-with the same accessories and many other additional synergies. Well-proven modular SIRIUS system offers you all of this so that you can simply engineer your load feeders. SIRIUS system includes everything that you require to switch, protect and start motors and plants.

Engineering, installation, wiring and service & maintenance are extremely simple and save time. Our modular SIRIUS system offers you the optimum product for every application. It doesn't matter whether you wish to engineer load feeders with circuit-breakers or overload relays, contactors or soft starters.

- DOL starters up to 22 kW the optimum starter combination for all motors.
- Reversing starters up to 11 kW the matching combination for reversing motors.
- Star-delta combinations up to 75 kW the solution for running-up motors in stages.
- Soft starters when soft starting and stopping is required.

Everything: Contactor for every application

Auxiliary contactors

SIRIUS auxiliary contactors reliably control output signals and interlock switching devices in control and auxiliary circuits. Cross-ribbing technique ensures high contact reliability.



The 3RT10 3-pole contactors are the optimum choice to control three-phase motors. With just seven sizes, they cover a power range from 3 to 250 kW / 415 V for AC and DC control



Due to its significant high electrical life 3RT12 vacuum contactors become an ideal choice for applications where low downtime is crucial. Suitability of switching upto 1000V offer another application area for these contactors.

4-pole contactors

3RT contactor is available in 4NO & 2NO+2NC configuration for power contactors. 4NO configuration is ideally suitable for switching the source requiring neutral isolation. Changing the polarity of hoisting gear motors can be easily met with use of 2NO+2NC configuration with just one contactor. Two separate loads can be switched by 2NO+2NC contactors thus saving cost of additional contactor.



When it comes to switching power capacitors, the 3RT16 capacitor contactors are the best choice.



The high performance 3RT14 AC-1 contactors are in their element everywhere resistive rated currents have to be switched. 3RT14 offers an economical choice for applications involving AC-1 duty switching such as heater loads, soft starter bypass or VFD switching.

Everything Easy: SIRIUS contactor for every application

Low consumption coils

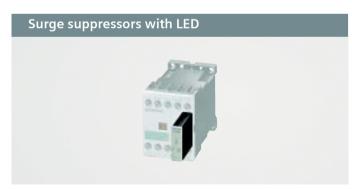
SIRIUS range of low–consumption coil contactors consume power as low as 2.3W @ 24V DC. Hence, these can be directly driven by PLC output, thus eliminating use of interposing relays. These contactors come with built-in surge suppressor and a wide operating range of 0.7–1.25 x Us.



Critical applications might require the process to continue even after failure of control voltage. The contactor is designed to remain in ON state even on failure of control voltage ensuring less downtime. This is achieved by mechanical latch which can be delatched electrically or manually.



Replacement of the magnetic coil of a contactor can be cumbersome, especially for big contactors. This might lead to larger down times which is not affordable in processing industries. SIRIUS contactors for large sizes viz., S6 to S12 (115A onwards to 500A) have withdrawable coils which can be replaced within no time and without the use of any special tools. Moreover these coils are suitable for AC 50/60Hz or DC. Thus reducing the cost of inventory.



Surge suppressor with LED, as an accessory to the contactor, serves dual purpose. The suppressor protects the system from surges and the LED indicates the energized state of the contactor.



SIRIUS LED indication module is a unique feature which indicates the energized state of a contactor. The LED glows when the control supply is switched ON indicating the energized state, of the contactor. In case of non-compartmentalised panels, a large number of contactors are mounted side-by-side on a common DIN rail. This feature helps in a easy identification of the "ON" or "OFF" state of contactor.



Large size contactors cannot be driven directly by a PLC output as the 'VA' burden of the coil is too large. Generally, a relay board is used as an interface between the PLC and the contactor coil. SIRIUS range of contactors with solid state coil have the required electronics imbibed within the contactor to be controlled directly by the PLC. This eliminates the need of the interface module, thereby saving cost.

Everything Easy: SIRIUS contactor for every application

Contact ribbing

Surface contamination is the most common cause of control circuit contact faults. This leads to erroneous control signals which can cause accident. Identifying the faulty contactor results in long downtime. Cross-ribbing the contact areas is an extremely effective way of increasing contact reliability. All the auxiliary contacts of the SIRIUS contactors have this feature. This ensures a contact reliability at 17V, 1mA and probability of contact faults is less that 1 fault per 100 million operating cycles.



All SIRIUS contactors upto size S3 (95A AC-3) allow coil to be connected either from top or from bottom or diagonally. This simplifies the wiring & provides high degree of flexibility in the overall configuration.



The degree of contact erosion is not merely the number of ON/OFF operations, it depends on the loading, operating mode, etc. To avoid unforeseen down times in a plant, the erosion of the contacts have to be monitored regularly. SIRIUS contactor with remaining lifetime indication takes over this task. It electronically identifies, evaluates and stores the actual progress of erosion of the main contacts and outputs a warning when specified limits are reached.



SIRIUS 3RB range of Microprocessor based motor protection relays offer protection for motors against various faults viz., overload, phase failure, earth fault, etc. The higher end 3RB relays with large setting (1:10) also offer thermistor protection. They are modular in design and can accommodate add on modules such as internal earth fault protection module, analog output module, overload warning module, ground fault signalling module, etc.



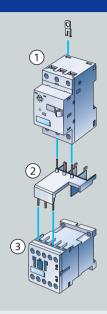
The output signal of a PLC is not strong enough to switch on a contactor coil. SIRIUS coupling link can be used to overcome this shortfall. The coupling link is mounted onto the coil terminals of the contactor. The PLC signal is supplied to the coupling link which in turn energizes the coil of the contactor. Thus saving cost of an additional interposing relay.



Overload can be a frequent phenomenon in the industry. Each time an overload occurs, the MPCB trips thereby protecting the system. However, as the life of the MPCB is limited as compared to contactor, this frequent tripping is not desirable. SIRIUS range of 3RV MPCB with relay function overcomes this problem. The MPCB trips only on occurrence of a short circuit. During overload condition, the MPCB senses the overload and signals the contactor to drop-off thereby saving on the life of MPCB.

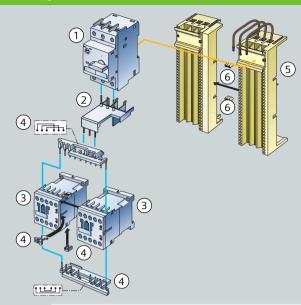
S00 design

Direct start



| | Version | Order No. | | | |
|---|----------------|----------------------------------|--|--|--|
| 1 Size S00 circuit breaker | | | | | |
| 2 Link module | AC/DC | 3RA1911-1AA00 | | | |
| 3 Size S00 contactor | | | | | |
| For busbar mounting (alternative) | | | | | |
| Busbar adapter | 40 mm 60 mm | 8US10 51-5DM07 8US12 51-5DM07 | | | |
| For rail mounting (diagram) | | | | | |
| Directly snapped onto a mounting rail without adapter | | | | | |

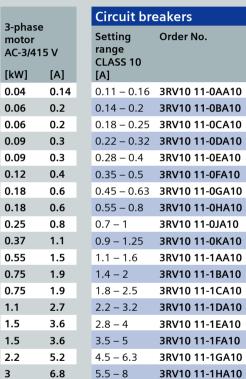
Reversing start



| | Version | Order No. |
|--|------------------|----------------------------------|
| 1 Size S00 circuit breaker | | |
| 2 Connector | | 3RA19 11-1AA00 |
| 3 2 Size S00 contactors | | |
| 4 Wiring kit: upper link module, lower link module, 2 connecting clips, mechanical interlock (these can be eliminated) | | 3RA19 13-2A |
| For busbar mounting (diagram) | | |
| 5 Controlgear support | 40 mm 60 mm | 8US10 50-5AM00 8US12 50-5AM00 |
| 6 Busbar adapter | 40 mm 60 mm | 8US10 51-5DM07 8US12 51-5DM07 |
| 7 Link wedges (1 Order No. = 100 wedges) | | 8US19 98-1AA00 |
| For rail mounting (alternative) | | |
| Directly snapped onto mounting rail | s without adapte | r |

S00 selection and ordering data





7 – 10

9 – 12

3RV10 11-1JA10

3RV10 11-1KA10

4

5.5

9

11.5



| Contac | tors _ | | |
|------------------------------|------------|-----------------------|----------------------------------|
| Control supply voltage | AC3 [A] | Auxiliary switches | Order No. |
| | | | |
| AC | 7 | 1NC | 3RT10 15-1A2 |
| | 7 | 1NO | 3RT10 15-1A1 |
| DC | 7 | 1NC | 3RT10 15-1B2 |
| | 7 | 1NO | 3RT10 15-1B1 |
| | | | |
| AC | 9 | 1NC | 3RT10 16-1AP02 |
| | 9 | 1NO | 3RT10 16-1AP01 |
| DC | 9 | 1NC | 3RT10 16-1BB42 |
| 1.0 | 9 | 1NO | 3RT10 16-1BB41 |
| AC | 12 | 1NC | 3RT10 17-1AP02 |
| DC | 12 12 | 1NO 1NC | 3RT10 17-1AP01 3RT10 17-1BB42 |
| DC | 12 | 1NO | 3RT10 17-18842 3RT10 17-18841 |
| | 12 | INO | 3K11U 17-10B41 |



| Control | Rated | Order No. |
|-------------------|-------------------------|----------------|
| supply voltage | operating current le | [A] |
| | | |
| 24230 \ | / AC/DC | |
| | 3 | 3RW30 03-1CB54 |
| 24 V AC/D | C | |
| | 6 | 3RW30 14-1CB04 |
| 110230 | V AC/DC | |
| | 6 | 3RW30 14-1CB14 |
| 24 V AC/D | С | |
| | 9 | 3RW30 16-1CB04 |
| 110230 | V AC/DC | |
| | 9 | 3RW30 16-1CB14 |
| 24 V AC/D | С | |
| | 12.5 | 3RW30 24-1AB04 |
| 110230 | V AC/DC | |
| | 12.5 | 3RW30 24-1AB14 |



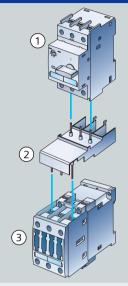
1) For the suitable circuit breaker connection module, please refer to the catalog

| Overload | relays | | |
|------------------------------|----------------------|------------------|---|
| Setting range CLASS 10 | Thermal Order No. | Setting range | Electronic Order No. |
| [A] | [A] | | |
| 0.11 – 0.16 | 3RU11 16-0AB0 | | |
| 0.14 – 0.2 | 3RU11 16-0BB0 | | |
| 0.18 – 0.25 | 3RU11 16-0CB0 | 0.1 - 0.4 | 3RB2□1□-□RB0 |
| 0.22 - 0.32 | 3RU11 16-0DB0 | | |
| 0.28 – 0.4 | 3RU11 16-0EB0 | | |
| 0.35 – 0.5 | 3RU11 16-0FB0 | | |
| 0.45 – 0.63 | 3RU11 16-0GB0 | | |
| 0.55 – 0.8 | 3RU11 16-0HB0 | 0.32 – 1.25 | 3RB2□1□-□NB0 |
| 0.7 – 1 | 3RU11 16-0JB0 | | |
| 0.9 – 1.25 | 3RU11 16-0KB0 | | |
| 1.1 – 1.6 | 3RU11 16-1AB0 | | |
| 1.4 – 2 | 3RU11 16-1BB0 | | |
| 1.8 – 2.5 | 3RU11 16-1CB0 | 1 – 4 | 3RB2□1□-□PB0 |
| 2.2 – 3.2 | 3RU11 16-1DB0 | | |
| 2.8 – 4 | 3RU11 16-1EB0 | | |
| 3.5 – 5 | 3RU11 16-1FB0 | | |
| 4.5 – 6.3 | 3RU11 16-1GB0 | | |
| 5.5 – 8 | 3RU11 16-1HB0 | | |
| 7 – 10 | 3RU11 16-1JB0 | 3 –12 | 3RB2□1□-□SB0 |
| 9 – 12 | 3RU11 16-1KB0 | CLA: | 5S 10 0 6 1 SS 530* 1 3 4 th ground-fault detection |
| | | , | vatable) and electrical ote reset |

Coil Codes: AC: B0-24V 50/60 Hz, F0-110 50/60 Hz, P0-230V 50/60Hz, V0-400 50/60Hz DC: B4-24VDC, F4-110VDC, M4-220VDC

S0 design

Direct start

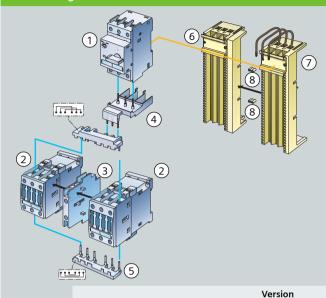


| | Version | Order No. |
|---|----------------|----------------------------------|
| 1 Size SO circuit breaker | | |
| 2 Link module | AC DC | 3RA19 21-1AA00 3RA19 21-1BA00 |
| 3 Size S0 contactor, solid-state contactor, solid-state reversing contactor; soft starter | | |
| For busbar mounting (alternative) | | |
| Busbar adapter | 40 mm 60 mm | 8US10 51-5DM07 8US12 51-5DM07 |

For rail mounting (diagram)

Directly snapped onto a mounting rail without adapter

Reversing start



| | | Version | Order No. |
|-----|--|----------------|----------------------------------|
| 1 | Size S0 circuit breaker 2 Size S0 connectors | | |
| 3 | Mechanical interlock | | 3RA19 24-2B |
| (4) | Link module | AC DC | 3RA19 21-1AA00 3RA19 21-1BA00 |
| 5 | Wiring kit: upper link module, lower link module | | 3RA19 23-2A |
| | For busbar mounting (diagram) | | |
| 6 | Controlgear support | 40 mm 60 mm | 8US10 50-5AM00 8US12 50-5AM00 |
| 7 | Busbar adapter | 40 mm 60 mm | 8US10 51-5DM07 8US12 51-5DM07 |
| 8 | Link wedges (1 Order No. = 100 wedges) | | 8US19 98-1AA00 |
| | For rail mounting (alternative) | | |
| | Rail adapter | | 3RA19 22-1AA00 |
| | Side module (1 Order No. = 10 modules) | | 3RA19 02-1B |
| | Link wedges (1 Order No. = 100 wedges) | 8US19 98-1AA | 00 |

S0 selection and ordering data

















- 1) With 3RW40: for rated device operating voltage Ue: 200–480 V (see catalog for Ue: 415–600 V)
- 2) Fan available as accessory

Setting

range

[A]

3) Mounting on circuit breaker (MSP) by means of 3RA 19 21-1AA00 connection module

Electronic

Order No.

0 6 1

4) For the suitable circuit breaker connection module, please refer to the catalog

CLASS 10

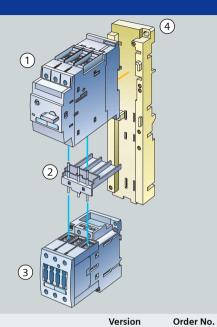
| | | CHARLES AND ADDRESS OF THE PARTY OF THE PART | | ALT-AL | , | or proper | 的形式 | · · · · · · · · · · · · · · · · · · · | THE REAL PROPERTY. | | 100000 | | |
|-----------------------------|------|--|----------------|------------------------|------------|-----------------------|--|---------------------------------------|-------------------------------|--|------------------------------|----------------------|---|
| | | Circuit br | eakers (MPCB) | Contac | tors | | | Soft sta | rters ⁴⁾ | | Overload | relays | l |
| 3-phase motor AC-3/41 | 15 V | Setting range CLASS 10 | Order No. | Control supply voltage | AC3 [A] | Auxiliary contacts | Order No. | Control- supply voltage | Rated operating current | Order No. | Setting range CLASS 10 | Thermal Order No. | |
| [kW] | [A] | [A] | | | | | | | le [A] | | [A] | | |
| 4 | 9 | 7 – 10 | 3RV10 21-1JA10 | AC DC | 9 9 | - | 3RT10 23-1A0 3RT10 23-1B0 | 110–230 | 9 | 3RW30 16-1CB14 | 3 – 12 | 3RU11 26-1JB0 | |
| | | | | | | | | 110–230 | | | | | |
| 5.5 | 11.5 | 9 – 12.5 | 3RV10 21-1KA10 | AC DC | 12 12 | _ _ | 3RT10 24-1A0 3RT10 24-1B0 | 24 V ²⁾ AC/ | 12.5 DC | 3RW40 24-1BB14 ¹⁾ | 9 – 12.5 | 3RU11 26-1KB0 | |
| | | | | | | | | | 12.5 | 3RW40 24-1BB04 ¹⁾ | | | |
| 7.5 | 15.5 | 11 – 16 | 3RV10 21-4AA10 | | | | | 110–230 | | | 11 – 16 | 3RU11 26-4AB0 | |
| | | | | AC DC | 17 17 | _ | 3RT10 25-1A0 3RT10 25-1B0 | 24 V AC/D | 25 C | 3RW30 26-1AB14 | | | |
| 7.5 | 15.5 | 14 – 20 | 3RV10 21-4BA10 | | | | | 110–230 | 25 V ²⁾ AC/DC | 3RW30 26-1AB04 | 14 – 20 | 3RU11 26-4BB0 | |
| | | | | | | | | 110 230 | 25 | 3RW40 26-1BB14 ¹⁾ | | | |
| 11 | 22 | 17 – 22 | 3RV10 21-4CA10 | | | | | 24 V ²⁾ AC/I | OC . | | 17 – 22 | 3RU11 26-4CB0 | |
| | | | | AC DC | 25 25 | _ | 3RT10 26-1A0 3RT10 26-1B0 | | 25 | 3RW40 26-1BB04 ¹⁾ | | | |
| 11 | 22 | 20 – 25 | 3RV10 21-4DA10 | DC | 23 | _ | 3K110 20-1B0 | | | | 20 – 25 | 3RU11 26-4DB0 | |
| | | | | Solid-s | tate c | ontactor | s | Solid-st | ate revers | ing contactors | | | |
| 1.5 | 3.8 | 2.8 – 4 | 3RV10 21-1EA10 | | | | | 110–230 24 V DC | V AC | 3RF24 03-1BD24 ³⁾ 3RF24 03-1BD04 ³⁾ | | | |
| 2.2 | 5.2 | 4.5 – 6.3 | 3RV10 21-1GA10 | 110–230 24 V DC | V AC | _ | 3RF24 05-1BB24 ³⁾ 3RF24 05-1BB04 ³⁾ | 110–230 24 V DC | V AC | 3RF24 05-1BD24 ³⁾ 3RF24 05-1BD04 ³⁾ | | | |
| 3 | 7.4 | 5.5 – 8 | 3RV10 21-1HA10 | | | | | 110–230 24 V DC | V AC | 3RF24 10-1BD24 ³⁾ 3RF24 10-1BD04 ³⁾ | | | |
| 4 | 9.2 | 7 – 10 | 3RV10 21-1JA10 | 110–230 24 V DC | V AC | | 3RF24 10-1BB24 ³⁾ 3RF24 10-1BB04 ³⁾ | | | | | | |
| 5.5 | 12.5 | 9 – 12.5 | 3RV10 21-1KA10 | 110–230 24 V DC | V AC | - - | 3RF24 12-1BB24 ³⁾ 3RF24 12-1BB04 ³⁾ | | | | | | |
| 7.5 | 16 | 11 – 16 | 3RV10 21-4AA10 | 110–230 24 V DC | V AC | - | 3RF24 16-1BB24 ³⁾ 3RF24 16-1BB04 ³⁾ | | | | | | |

|) | 9 – 12.5 | 3RU11 26-1KB0 | | CLASS 530* 1 3 4 * With ground-fault detection (activatable) and electrical remote reset |
|---|----------|---------------|--------|---|
| | 11 – 16 | 3RU11 26-4AB0 | 6 – 25 | 3RB2□2□-□QB0 |
| | 14 – 20 | 3RU11 26-4BB0 | | |
|) | 17 – 22 | 3RU11 26-4CB0 | | |
| | 20 – 25 | 3RU11 26-4DB0 | | |
| | | | | |
| | | | 1 – 4 | 3RB2□2□-□P B0 |
| | | | | |
| | | | | |
| 4 | | | 3 – 12 | 3RB2□2□-□SB0 |
| | | | | |
| | | | 6 – 25 | 3RB□2□2-□QB0 |

Coil Codes: AC: C2-24V 50/60 Hz, G2-110V 50/60 Hz, L2-230V 50/60 Hz, V0-400V 50/60 Hz DC : B4-24VDC, F4-110VDC, M4-220VDC

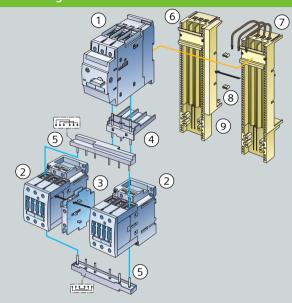
S2 design

Direct start



| | | 0.40 |
|-----------------------------------|----------------|----------------------------------|
| 1 Size S2 circuit breaker | | |
| 2 Link module | AC DC | 3RA19 31-1AA00 3RA19 31-1BA00 |
| 3 Size S2 contactor | | |
| For busbar mounting (alternative) | | |
| Busbar adapter | 40 mm 60 mm | 8US10 61-5FP08 8US12 61-5FP08 |
| For rail mounting (diagram) | | |
| 4 Rail adapter | | 3RA19 32-1AA00 |

Reversing start

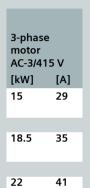


| | | Version | Order No. |
|----|--|----------|----------------------------------|
| 1) | Size S2 circuit breaker 2 Size S2 connectors | | |
| 3 | Mechanical interlock | | 3RA19 24-2B |
| 4 | Link module | AC DC | 3RA19 31-1AA00 3RA19 31-1BA00 |
| 5) | Wiring kit: upper link module, lower link module | | 3RA19 33-2A |
| | For busbar mounting (diagram) | | |
| 6 | Controlgear support | 60 mm | 8US12 60-5AP00 |
| 7) | Busbar adapter | 60 mm | 8US12 61-5FP08 |
| 8 | Link wedges (1 Order No. = 100 wedges) | | 8US19 98-1AA00 |
| 9 | Side module | | 8US19 98-2BM00 |
| | For rail mounting (alternative) | | |
| | Rail adapter | | 3RA19 32-1AA00 |
| | Link wedges (1 Order No. = 100 wedges) | | 8US19 98-1AA00 |

S2 selection and ordering data







41

22

| Circuit breakers (MPCB) | | | Contactors | | | | |
|-------------------------------------|----------------|--|------------------------------|------------|-----------------------|------------------------------|--|
| Setting range CLASS 10 [A] | Order No. | | Control supply voltage | AC3 [A] | Auxiliary contacts | Order No. | |
| 22 – 32 | 3RV10 31-4EA10 | | AC DC | 32 32 | - | 3RT10 34-1A0 3RT10 34-1B0 | |
| 28 – 40 | 3RV10 31-4FA10 | | | | | | |
| | | | AC DC | 40 40 | - - | 3RT10 35-1A0 3RT10 35-1B0 | |
| 36 – 45 | 3RV10 31-4GA10 | | | | | | |
| | | | AC | 50 | - | 3RT10 36-1A0 | |
| 40 – 50 | 3RV10 31-4HA10 | | DC | 50 | - | 3RT10 36-1B0 | |



| | Soft starters | | | | |
|---|-------------------------------|---|----------------|--|--|
| | Control- supply voltage | Rated operating current le [A] | Order No. | | |
| | | | | | |
| | 110-230 | / AC/DC | | | |
| | | 32 | 3RW30 34-1AB14 | | |
| | 24 V AC/D | C | | | |
| | | 32 | 3RW30 34-1AB04 | | |
| | 110-230 | / AC/DC | | | |
| | | 45 | 3RW30 36-1AB14 | | |
| | 24 V AC/D | С | | | |
| 4 | | 45 | 3RW30 36-1AB04 | | |

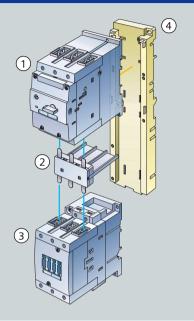


| Overload | relays | | |
|------------------------------|----------------------|------------------|--|
| Setting range CLASS 10 | Thermal Order No. | Setting range | Electronic Order No. |
| [A] | | [A] | |
| 22 – 32 | 3RU11 36-4EB0 | | |
| | | | |
| 28 – 40 | 3RU11 36-4FB0 | | |
| | | 12 5 – 50 | 3RB2□3□-□UB0 |
| 36 – 45 | 3RU11 36-4GB0 | 1.2,5 | |
| | | | |
| 40 – 50 | 3RU11 36-4HB0 | | ASS 10 0 6 1 |
| | | * W (ac | ASS 530* 1 3 4 Vith ground-fault detection tivatable) and electrical note reset |

Coil Codes: AC : C2-24V 50/60 Hz, G2-110V 50/60 Hz, L2-230V 50/60 Hz, V0-400V 50 Hz DC : B4-24VDC, F4-110VDC, M4-220VDC

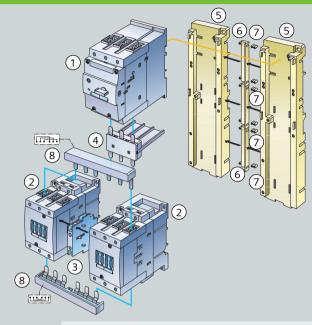
S3 design

Direct start



| | Version | Order No. |
|-----------------------------|----------|----------------------------------|
| 1 Size S3 circuit breaker | | |
| 2 Link module | AC DC | 3RA19 41-1AA00 3RA19 41-1BA00 |
| 3 Size S3 contactor | | |
| For rail mounting (diagram) | | |
| 4 Rail adapter | | 3RA19 42-1A |

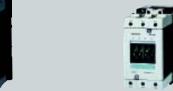
Reversing start



| | Version | Order No. |
|--|----------|----------------------------------|
| 1 Size S3 circuit breaker | | |
| 2 2 Size S3 connectors | | |
| 3 Mechanical interlock | | 3RA19 24-2B |
| 4 Link module | AC DC | 3RA19 41-1AA00 3RA19 41-1BA00 |
| 5 Rail adapter | | 3RA19 42-1AA00 |
| 6 Side modules for rail adapters (1 Order No. = 10 adapters) | | 3RA19 02-1B |
| 7 Link wedges (1 Order No. = 100 wedges | ;) | 8US19 98-1AA00 |
| 8 Wiring kit: upper link module, lower link module | | 3RA19 43-2A |

S3 selection and ordering data













| | | Circuit br | Circuit breakers (MPCB) | | Contactors | | | |
|--------------------------------|-----|------------------------------|-------------------------|--|------------------------|------------|-----------------------|------------------------------|
| 3-phase motor AC-3/415 V | | Setting range CLASS 10 | Order No. | | Control supply voltage | AC3 [A] | Auxiliary contacts | Order No. |
| [kW] | [A] | [A] | | | | | | |
| 30 | 55 | 42 – 63 | 3RV10 41-4JA10 | | AC DC | 65 65 | - | 3RT10 44-1A0 3RT10 44-1B0 |
| | | | | | | | | |
| 37 | 67 | 57 – 75 | 3RV10 41-4KA10 | | | | | |
| | | | | | AC | 80 | - | 3RT10 45-1A0 |
| | | | | | DC | 80 | - | 3RT10 45-1B0 |
| 45 | 80 | 70 – 90 | 3RV10 41-4LA10 | | | | | |
| | | | | | AC | 95 | - | 3RT10 46-1A0 |
| 45 | 80 | 80 – 100 | 3RV10 41-4MA10 | | DC | 95 | - | 3RT10 46-1B0 |
| | | | | | | | | |

| Control- supply voltage | Rated operating current le [A] | Order No. |
|-------------------------------|---|------------------------------|
| | | |
| 110-230 | / AC/DC | |
| | 63 | 3RW30 44-1AB14 |
| 24 V AC/D | C | |
| | 63 | 3RW30 44-1AB04 |
| 110-230 | / AC/DC | |
| | 100 | 3RW30 46-1AB141) |
| 24 V AC/D | C | |
| | 100 | 3RW30 46-1AB04 ¹⁾ |

| Overload relays | | | | | | | |
|------------------------------|----------------------|------------------|---|--|--|--|--|
| Setting range CLASS 10 | Thermal Order No. | Setting range | Electronic Order No. | | | | |
| [A] | | [A] | | | | | |
| 45 – 63 | 3RU11 46-4JB0 | | | | | | |
| | | | | | | | |
| 57 – 75 | 3RU11 46-4KB0 | | | | | | |
| | | 25 – 100 | 3RB2□4□-□EB0 | | | | |
| 70 – 90 | 3RU11 46-4LB0 | | | | | | |
| | | | | | | | |
| 80 – 100 | 3RU11 46-4MB0 | | SS 10 0 6 1 | | | | |
| | | * W (act | SS 530* 1 3 4 ith ground-fault detection ivatable) and electrical ote reset | | | | |

Coil Codes: AC : C2-24V 50/60 Hz, G2-110V 50/60 Hz, L2-230V 50/60 Hz, V0-400V 50/60 Hz DC : B4-24VDC, F4-110VDC, M4-220VDC

S6, S10, S12 selection and ordering data



| S6 | | | | |
|--------------------------------|-----|--|--|--|
| 3-phase motor AC-3/415 V | | | | |
| [kW] | [A] | | | |
| 55 | 115 | | | |
| | | | | |
| 75 | 150 | | | |
| 00 | 105 | | | |
| 90 | 185 | | | |

| Contactors | |
|--|-----------------------|
| Contactor without coil operating mechanism | Auxiliary Switches |
| 3RT10 54-6LA06 | 2NO + 2NC |
| | |
| 3RT10 55-6LA06 | 2NO + 2NC |
| | |
| 3RT10 56-6LA06 | 2NO + 2NC |
| | |

| Coil operating mechanism | | | | |
|--|----------------|--|--|--|
| Electromagnetic coil operating mechanism | Order No. | | | |
| Conventional | 3RT19 55-5A.31 | | | |
| | | | | |
| OR | | | | |
| | | | | |
| for 24V DC PLC Output | 3RT19 55-5N.31 | | | |
| | | | | |



| Overload | d relays¹) | |
|------------------|-------------------------|---------------------------------------|
| Setting range | Electronic Order No. | Version |
| [A] | | |
| 50 – 200 | 3RB2□5□-□FW2 | with straight- through transformer |
| 50 – 200 | 3RB2□5□-□FC2 | with busbar connection |
| | | |



| Soft starters | | | |
|-------------------------------|---|----------------|--|
| Control- supply voltage | Rated operating current le [A] | Order No. | |
| 230 V AC | 134 | 3RW40 55-6BB44 | |
| | | | |
| 115 V AC | 134 | 3RW40 55-6BB34 | |
| | | | |
| 230 V AC | 162 | 3RW40 56-6BB44 | |
| | | | |
| 115 V AC | 162 | 3RW40 56-6BB34 | |
| | | | |







| S10 | |
|---------------------------|-----|
| 3-phas motor AC-3/4 | |
| [kW] | [A] |
| 110 | 225 |
| 132 | 265 |
| | |
| 160 | 300 |

| Contactors | | | Coil ope |
|--|-----------------------|---|--------------------------------------|
| Contactor without coil operating mechanism | Auxiliary Switches | | Electroma coil opera mechanisi |
| 3RT10 64-6LA06 | 2NO + 2NC | | Conventio |
| | | | |
| 3RT10 65-6LA06 | 2NO + 2NC | + | OR |
| | | | |
| 3RT10 66-6LA06 | 2NO + 2NC | | for 24V DO |
| | | | |

| Coil operating mechanism | | |
|--|----------------|--|
| Electromagnetic coil operating mechanism | Order No. | |
| Conventional | 3RT19 65-5A.31 | |
| | | |
| OR | | |
| | | |
| for 24V DC PLC Output | 3RT19 65-5N.31 | |
| | | |

| Overload relays ¹⁾ | | |
|-------------------------------|-------------------------|-------------|
| Setting range | Electronic Order No. | Version |
| [A] | | |
| FF 250 | 222222 | 241 1 1 |
| 55 – 250 | 3RB2□6□-□GC2 | with busbar |
| | | connection |
| 160 – 630 | 3RB2□6□-□MC2 | with busbar |
| | | connection |
| | | |

| Soft starters | | |
|-------------------------------|-------------------------------|----------------|
| Control- supply voltage | Rated operating current | Order No. |
| | le [A] | |
| 230 V AC | 230 | 3RW40 73-6BB44 |
| | | |
| 115 V AC | 230 | 3RW40 73-6BB34 |
| | | |
| 230 V AC | 280 | 3RW40 74-6BB44 |
| | | |
| 115 V AC | 280 | 3RW40 74-6BB34 |
| | | |



| S12 | | | |
|--------|------------|--|--|
| 3-phas | е | | |
| motor | | | |
| AC-3/4 | AC-3/415 V | | |
| [kW] | [A] | | |
| 200 | 400 | | |
| | | | |
| 250 | 500 | | |

| Contactors | |
|--|-----------------------|
| Contactor without coil operating mechanism | Auxiliary Switches |
| 3RT10 75-6LA06 | 2NO + 2NC |
| | |
| 3RT10 76-6LA06 | 2NO + 2NC |

| Electromagnetic coil operating mechanism | Order No. |
|--|----------------|
| Conventional | 3RT19 75-5A.31 |
| OR | |
| for 24V DC PLC Output | 3RT19 75-5N.31 |
| | |



| Overloa | d relays1) | |
|------------------|---|---------------------------|
| Setting range | Electronic Order No. | Version |
| [A] | | |
| 160 – 630 | 3RB2□6□-□MC2 | with busbar connection |
| * With | 530* 1 3 4 ground-fault detection table) and electrical | |



| Soft starters | | |
|-------------------------------|--|--|
| Rated operating current | Order No. | |
| le [A] | | |
| 356 | 3RW40 75-6BB44 | |
| | | |
| 356 | 3RW40 75-6BB34 | |
| | | |
| 432 | 3RW40 76-6BB44 | |
| | | |
| 432 | 3RW40 76-6BB34 | |
| | Rated operating current le [A] 356 356 432 | |

SENTRON 3VL circuit breakers are suitable for the fuseless short-circuit and overload protection of soft starters of size S6 or larger. For further information, please refer to the catalogue.

Coil Codes: For conventional: B-23...26V 40 to 60 Hz, F-110...127V 40 to 60 Hz, P-220...240V 40 to 60 Hz For 24V DC PLC output: B-21...27V 40 to 6 Hz, F-96...127V 40 to 60 Hz, P-200...277V 40 to 60 Hz

¹⁾ For thermal overload relay use 3UR6 range

Selection and ordering data

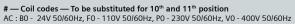
| 3RH1 contactor relay | | | | | |
|--|----------|----------|--|------------------------------|--|
| Operational current le AC-15 / AC-14 at 230V | Contacts | Contacts | Electromagnetic coil operating mechanism | Type# | |
| Α | NO | NC | | | |
| Size S00 | | | | | |
| 6 | 4 | - | AC DC | 3RH11 40-1A0 3RH11 40-1B0 | |
| | 3 | 1 | AC DC | 3RH11 31-1A0 3RH11 31-1B0 | |
| | 2 | 2 | AC DC | 3RH11 22-1A0 3RH11 22-1B0 | |

| 3RH14 latched | 3RH14 latched contactor relay | | | | | |
|--|-------------------------------|----------|--|------------------------------|--|--|
| Operational current le AC-15 / AC-14 at 230V | Contacts | Contacts | Electromagnetic coil operating mechanism | Type# | | |
| Α | NO | NC | | | | |
| Size S00 | | | | | | |
| 6 | 4 | - | AC DC | 3RH14 40-1A0 3RH14 40-1B0 | | |
| | 3 | 1 | AC DC | 3RH14 31-1A0 3RH14 31-1B0 | | |
| | 2 | 2 | AC DC | 3RH14 22-1A0 3RH14 22-1B0 | | |

3RH11 low consumption coil coupling relays

Rated control supply voltage U_s =24 V DC, Coil operating range 0.7 to 1.25xUs Power Consumption of the coils 2.3W at 24V DC (No auxiliary contacts can be mounted)

| Operational current le AC-15 / AC-14 at 230V | Contacts | Contacts | Electromagnetic coil operating mechanism | Туре |
|--|-------------|-------------|--|--|
| Α | NO | NC | | |
| Size S00 | | | | |
| 6 | 4 3 2 | - 1 2 | DC (24V) | 3RH11 40-1KB40 3RH11 31-1KB40 3RH11 22-1KB40 |



DC : B4 - 24V, F4 - 110V, M4 - 220V



3RT10 low consumption coil contactors

Rated control supply voltage Us =24 V DC, Coil operating range 0.7 to 1.25 xUs

Power Consumption of the coils 2.3W for S00 & 4.2W for S0. No auxiliary contacts for S00 can be mounted and 2 single pole auxiliary contact for S0 can be mounted.

| AC-2 & AC-3 Operation current I _e upto 415V | Rating of induction motor at 50 Hz and 415V | Auxillary contacts | | Туре |
|--|---|--------------------|-------|----------------------------------|
| Α | kW | NO | NC | |
| Size S00 | | | | |
| 7 | 3 | 1 | 1 | 3RT10 15-1KB41 3RT10 15-1KB42 |
| 9 | 4 | 1 | 1 | 3RT10 16-1KB41 3RT10 16-1KB42 |
| 12 | 5.5 | 1 | 1 | 3RT10 17-1KB41 3RT10 17-1KB42 |
| Size S0 | | | | |
| 12 | 5.5 | | | 3RT10 24-1KB40 |
| 17 | 7.5 | | | 3RT10 25-1KB40 |
| 25 | 11 | | | 3RT10 26-1KB40 |









Selection and ordering data

| 3RT14 A | 3RT14 AC1 duty contactor | | | | | |
|---------|--|--|------------------------------|--|--|--|
| SIZE | AC-1 Operational current le upto 690V A | Electromagnetic coil operating mechanism | Туре | | | |
| S3 | 140 | AC DC | 3RT14 46-1A0 3RT14 46-1B0 | | | |
| S6 | 275 | AC/DC | 3RT14 56-6A.36 | | | |
| S10 | 400 | AC/DC | 3RT14 66-6A.36 | | | |
| S12 | 690 | AC/DC | 3RT14 76-6A.36 | | | |





— Coil codes

For S3 — To be substituted for 10th and 11th position

AC : C2 - 24V 50/60Hz, G2 - 110V 50/60Hz, L2 - 230V 50/60Hz, V0 - 400V 50Hz

DC: B4 - 24V, F4 - 110V, M4 - 220V

For S6 to S12 — To be substituted for 10th position

AC(40-60Hz) / DC : B — 23—26V, F — 110—127V, P — 220—240V

| 3RT13 4-Pole contactor | | | | | |
|------------------------|--|--|------------------------------|--|--|
| SIZE | AC-1 Operational current le upto 690V A | Electromagnetic coil operating mechanism | Туре | | |
| S00 | 18/16 | AC DC | 3RT13 16-1A0 3RT13 16-1B0 | | |
| S00 | 22/20 | AC DC | 3RT13 17-1A0 3RT13 17-1B0 | | |
| S0 | 35/30 | AC DC | 3RT13 25-1A0 3RT13 25-1B0 | | |
| S0 | 40/35 | AC DC | 3RT13 26-1A0 3RT13 26-1B0 | | |
| S2 | 60/55 | AC DC | 3RT13 36-1A0 3RT13 36-1B0 | | |
| S 3 | 110/100 | AC DC | 3RT13 44-1A0 3RT13 44-1B0 | | |
| S 3 | 140/120 | AC DC | 3RT13 46-1A0 3RT13 46-1B0 | | |





| 3K115 | 3KTT5 ZNO+ZNC contactor | | | | | |
|-------|--|--|------------------------------|--|--|--|
| SIZE | AC-1 Operational current le upto 690V A | Electromagnetic coil operating mechanism | Туре | | | |
| S00 | 18 | AC DC | 3RT15 16-1A0 3RT15 16-1B0 | | | |
| S00 | 22 | AC DC | 3RT15 17-1A0 3RT15 17-1B0 | | | |
| S0 | 40 | AC DC | 3RT15 26-1A0 3RT15 26-1B0 | | | |
| S2 | 55 | AC DC | 3RT15 35-1A0 3RT15 35-1B0 | | | |

Coil codes — To be substituted for 10th and 11th position

AC : B0 - 24V 50/60Hz, D0 - 42V 50/60Hz, F0 - 110V 50/60Hz, P0 - 230V 50/60Hz, V0 - 400V 50Hz

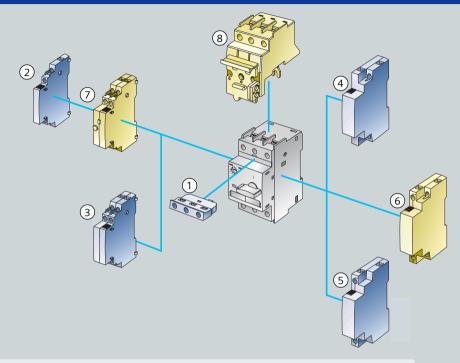
DC: B4 - 24V, F4 - 110V, M4 - 220V

Coil codes — To be substituted for 10th and 11th position

AC : B0 - 24V 50/60Hz, D0 - 42V 50/60Hz, F0 - 110V 50/60Hz, P0 - 230V 50/60Hz, V0 - 400V 50Hz

DC: B4 - 24V, F4 - 110V, M4 - 220V

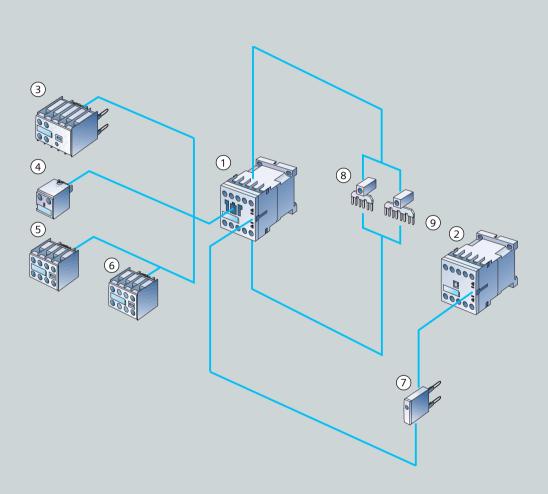
Circuit breakers



| | Version | For Size | Order No. |
|--|-------------------------|-------------------|---|
| 1 Transverse auxiliary switch | 1W 1NO + 1NC 2NO | S00, S0, S2, S3 | 3RV19 01-1D 3RV19 01-1E 3RV19 01-1F |
| 2 Transverse auxiliary switch with 2 contacts | 1NO + 1NC 2NO 2NC | S00, S0, S2, S3 | 3RV19 01-1A 3RV19 01-1B 3RV19 01-1C |
| 3 Transverse auxiliary switch with 4 contacts | 2NO + 2NC | S00, S0, S2, S3 | 3RV19 01-1J |
| 4 Shunt release | 230 V AC | S00, S0, S2, S3 | 3RV19 02-1DP0 |
| 5 Undervoltage release | 230 V AC | S00, S0, S2, S3 | 3RV19 02-1AP0 |
| 6 Undervoltage release with leading auxiliary switches | 230 V AC | S00 S0, S2, S3 | 3RV19 12-1CP0 3RV19 22-1CP0 |
| 7 Signaling switch | | S0, S2, S3 | 3RV19 21-1M |
| 8 Isolator module | | S0 S2 | 3RV19 28-1A 3RV19 38-1A |

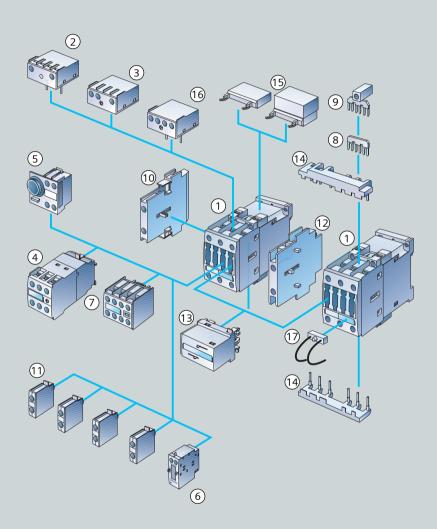
| | Version | | For Size | Order No. | | |
|---|--|------------------|--------------------|--|--|--|
| Insulated 3-phase busbar systems | | | | | | |
| RNA HAM | 3-phase busbars, modular space for 2 switches for 3 switches for 4 switches for 5 switches | cing 45 mm | S00, S0 | 3RV19 15-1AB 3RV19 15-1BB 3RV19 15-1CB 3RV19 15-1DB | | |
| Pallet | 3-phase busbars, modular spa for 2 switches for 3 switches for 4 switches | cing 55 mm | S2 | 3RV19 35-1A 3RV19 35-1B 3RV19 35-1C | | |
| нин нан нин | 3-phase line-side terminal, connection from the top | | \$00 \$0 \$2 | 3RV19 15-5A 3RV19 25-5AB 3RV19 35-5A | | |
| Door-coupling rotary operating mechanisms | | | | | | |
| | Black Extension shaft Extension shaft with support bracket | 130 mm 330 mm | S0, S2, S3 | 3RV19 26-1B 3RV19 36-1B 3RV19 46-1B | | |

Contactors S00

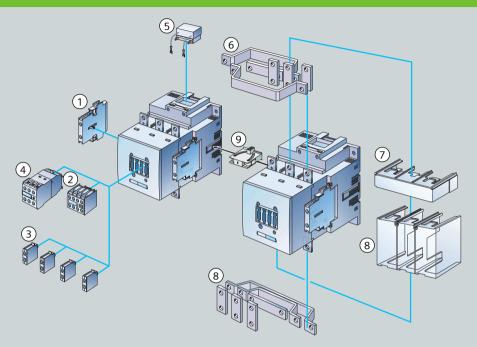


| | Version | Order No. |
|--|------------------------------------|----------------------------------|
| 1 Contactor (example) control supply voltage | 4 kW/415 V, 1NO 230 V, 50/60 Hz | 3RT10 16-1AP01 |
| 2 Contactor relay (example) control supply voltage | 4 kW/415 V, 1NO 230 V, 50/60 Hz | 3RT10 16-1KB41 |
| 3 Solid-state timer 200 240V AC 50/60 Hz ON delay OFF delay | 0.5 – 10 s 0.5 – 10 s | 3RT19 16-2ED21 3RT19 16-2FL21 |
| 4 1-pole auxiliary switch block, cable entry from above | 1NO 1NC | 3RH19 11-1AA10 3RH19 11-1AA01 |
| 5 4-pole auxiliary switch block, (terminal designations acc. to DIN EN 50 005) | 2NO + 2NC | 3RH19 11-1FA22 |
| 6 2-pole auxiliary switch block, solid-state compatible design (acc. to DIN EN 50 005) | 1NO + 1NC | 3RH19 11-1NF11 |
| 7 Surge suppressor with LED (varistor) | 127–240 V AC 12–24 V DC | 3RT19 16-1JL00 3RT19 16-1JJ00 |
| 8 Link for paralleling, 3-pole, with terminal | - | 3RT19 16-4BB31 |
| 9 Link for paralleling, 4-pole, with terminal | - | 3RT19 16-4BB41 |

Contactors S0 – S3



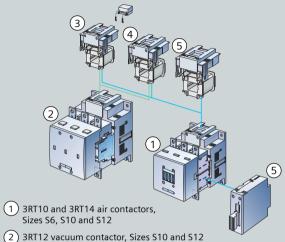
| | Version | For Size | Order No. |
|---|--|----------------------------|--|
| 1 Contactor, size S0 (example) control supply voltage | 7.5 kW/415 V 230 V, 50 Hz | | 3RT10 25-1AC00 |
| For sizes S0 to S3: | | | |
| 2 Solid-state timer with semi conductor output (90240V 50/60 Hz), ON delay | 0.5 – 10 s | | 3RT19 26-2CH21 |
| 3 Solid-state timer with semi conductor output (90240V 50/60 Hz), OFF delay | 0.5 – 10 s | | 3RT19 26-2DH21 |
| 4 Solid-state timer ON delay (200240V 50/60 Hz) OFF delay (200240V 50/60 Hz) | 0.5 – 10 s 0.5 – 10 s | | 3RT19 26-2ED21 3RT19 26-2FL21 |
| 5 Pneumatic delay block ON delay OFF delay | 0.1 – 30 s 1 – 60 s 0.1 – 30 s 1 – 60 s | S0 S0 S0 S0 | 3RT19 26-2PA01 3RT19 26-2PA11 3RT19 26-2PR01 3RT19 26-2PR11 |
| 6 Mechanical latching | 24 AC/DC 110 AC/DC 230 AC/DC | S0, S2 S0, S2 S0, S2 | 3RT19 26-3AB31 3RT19 26-3AF31 3RT19 26-3AP31 |
| 4-pole auxiliary switch block (terminal designations acc. to DIN EN 50 012 or DIN EN 50 005) | 2NO + 2NC | | 3RH19 21-1FA22 |
| 8 Link for paralleling (star jumper), 3-pole, without terminal | - | S0 S2 S3 | 3RT19 26-4BA31 3RT19 36-4BA31 3RT19 46-4BA31 |
| 9 Link for paralleling, 3-pole, with terminal | - | S0 S2 S3 | 3RT19 26-4BB31 3RT19 36-4BB31 3RT19 46-4BB31 |
| 10 2-pole auxiliary switch block, can be laterally mounted (left or right) | 1NO + 1NC | S0 – S12 | 3RH19 21-1EA11 |
| 1-pole auxiliary switch block (up to 4 can be snapped on) | 1NO 1NC | S0 – S12 S0 – S12 | 3RH19 21-1CA10 3RH19 21-1CA01 |
| (12) Mechanical interlock, can be laterally mounted | _ | S0 – S3 | 3RA19 24-2B |
| (13) Mechanical interlock, can be mounted at the front | _ | S0 – S3 | 3RA19 24-1A |
| (14) Wiring connectors at the top and bottom (reversing operation) | - - - | S0 S2 S3 | 3RA19 23-2A 3RA19 33-2A 3RA19 43-2A |
| (15) Surge suppressor (varistor, RC coupling, diode combination), can be mounted at the top or bottom | - | S0 – S3 | 3RT19 26-1BD00 |
| 16 Interface for mounting directly onto the contactor coil | - | S0 – S3 | 3RH19 24-1GP11 |
| 17) LED module to indicate contactor operation | - | S0 – S3 | 3RT19 26-1QT00 |



| | Version | Order No. |
|---|--|----------------------------------|
| 2-pole auxiliary switch block, can be laterally 1 – 2nd block (left/right), DIN EN 50 005 | mounted 1NO + 1NC 2NO | 3RH19 21-1KA11 3RH19 21-1KA20 |
| 2 4-pole auxiliary switch block, can be mounted – with classification No. 58, DIN EN 50 012 – with classification No. 14, DIN EN 50 012 | at the front 2NO + 2NC 2NO + 2NC | 3RH19 21-1FA22 |
| 3 1-pole auxiliary switch block, can be mounted at the front | 1NO 1NC | 3RH19 21-1CA10 3RH19 21-1CA01 |
| 4 Auxiliary switch block, solid-state time-delay ON delay, 200–240 V AC OFF delay, 200–240 V AC | 1NO + 1NC 0 10 s 0.5 10 s | 3RT19 26-2ED21 3RT19 26-2FL21 |

| | Version | Order No. |
|--|------------------------------|---|
| 5 RC element, 127 240 V AC | | 3RT19 56-1CD00 |
| 6 Wiring connectors, top and bottom | for S6 for S10 for S12 | 3RA19 53-2M 3RA19 63-2A 3RA19 73-2A |
| 7 Connection cover for box terminals | for S6 for S10/S12 | 3RT19 56-4EA2 3RT19 66-4EA2 |
| 8 Terminal cover for cable lug and busbar connection | for S6 for S10/S12 | 3RT19 56-4EA1 3RT19 66-4EA1 |
| 9 Mechanical interlock | | 3RA19 54-2A |

Operating mechanism types



- (3) Withdrawable coils for contactors with conventional operating mechanism 3RT1...-.A..
- Withdrawable coils for contactors with electronic operating mechanism 3RT1...-.N..
- (5) Withdrawable coils and laterally mounted module (can be plugged in) for contactors with electronic operating mechanism and remaining lifetime signal 3RT1...-.P.. and 2RT1...-.Q

| Size | 3-phase motor AC-3/ 415 V kW | Contactor without coil Order No. | Withdrawable coil for conventional control supply voltage 220 240 V AC/DC Order No. | pperating mechanism electronic 200 277 V AC/DC Order No. |
|------|--|--|---|---|
| S6 | 55 | 3RT10 54-6LA06 | 3RT19 55-5AP31 | 3RT19 55-5NP31 |
| | 75 | 3RT10 55-6LA06 | | |
| | 90 | 3RT10 56-6LA06 | | |
| S10 | 110 | 3RT10 64-6LA06 | 3RT19 65-5AP31 | 3RT19 65-5NP31 |
| | 132 | 3RT10 65-6LA06 | | |
| | 160 | 3RT10 66-6LA06 | | |
| S12 | 200 | 3RT10 75-6LA06 | 3RT19 75-5AP31 | 3RT19 75-5NP31 |
| | 250 | 3RT10 76-6LA06 | | |

Accessories for 3RU11 thermal overload relays and 3RB20/21 electronic overload relays



| Version | For Size | Order No. |
|--|-----------------|--|
| Adapter for stand-alone assembly for 3RB20/21 for separately mounting the overload relays, screw-type and snap-on fastening on TH 35 DIN rails | S00 S0 | 3RB29 13-0AA1 3RB29 23-0AA1 |
| Terminal support for stand-alone assembly for 3RU for separately mounting the overload relays, screw-type and snap-on fastening on TH 35 DIN rails, size S3 also for TH 75 DIN rails | S00 S0 S2 | 3RU19 16-3AA01 3RU19 26-3AA01 3RU19 36-3AA01 |
| | S3 | 3RU19 46-3AA01 |



| Mechanical RESET for 3RU11 and 3RB20/21 comprising: | | |
|--|----------------|----------------|
| Resetting plunger, holder and former | S00 to S10/S12 | 3RU19 00-1A |
| Pushbutton with extended stroke (12 mm), IP65, Ø 22 mm | S00 to S10/S12 | 3SB30 00-0EA11 |
| Extension plunger for compensation of the distance between a pushbutton and the relay's release button | S00 to S10/S12 | 3SX1335 |



| Cable release with holder for RESET 3RU11 and 3RB20/21 | | | |
|--|---------------|----------------|-------------|
| for holes 6.5 mm diameter | length 400 mm | S00 to S10/S12 | 3RU19 00-1B |
| in the panel; | length 600 mm | S00 to S10/S12 | 3RU19 00-1C |
| max. panel thickness, 8 mm | | | |

| Version | For Size | Order No. |
|--|----------------|------------------------------|
| Sealable cover, transparent for 3RB20/21 to cover the setting elements | S00 to S10/S12 | 3RB29 84-0 |
| Terminal covers for 3RU11 and 3RB20/21 Cover for cable lug and busbar connection | S3 S6 | 3RT19 46-4EA 3RT19 56-4EA |
| | S10/S12 | 3RT19 66-4EA |
| Cover for box terminals | S2 S3 | 3RT19 36-4EA 3RT19 46-4EA |
| | S6 S10/S12 | 3RT19 56-4EA 3RT19 66-4EA |
| Cover for the screw connection between the contactor and | S6 S10/S12 | 3RT19 56-4EA 3RT19 66-4EA |
| overload relay without box terminals (1x is required for each combination) | 310/312 | 3.1.13 00 4EA |

to 70 mm²

to 120 mm² to 240 mm²

for round and ribbon cables

S6 S6

S10/S12

3RT19 55-4G 3RT19 56-4G

3RT19 66-4G

Moulded-plastic enclosures for surface mounting

Enclosures for direct-on-line starter

| Version | For contactor & overload relay Size | Order No. | Qty |
|-----------------------------|--|---------------|-----|
| With PE/ground terminal | S00 | 3RE19 13-1CB1 | 1 |
| With N & PE/ground terminal | SO | 3RE19 23-1CB2 | 1 |
| With N & PE/ground terminal | S2 | 3RE19 33-1CB3 | 1 |



Enclosures for reversing starter

With N & PE/ground terminal S00/S0 3RE19 13-2CB3



Your partners

WEST

Offices:

Ahmedabad - 380009
 3rd Floor, Prerna Arbour
 Girish Cold Drinks Cross Roads
 Off. C. G. Road

2: +91 79 40207600 Fax: +91 79 40207699

Mumbai - 400018
 130, Pandurang Budhkar Marg, Worli
 ∷ +91 22 24987000-02
 Fax: +91 22 24987312

• Nagpur - 440010 5th Floor, Landmark Building, Ramdas Peth ☎: +91 712 6633000 Fax: +91 712 6633111

Pune - 411016
 Tower B / 701 - 705, ICC Trade Tower 403A, Senapati Bapat Road
 ☎ : +91 20 2570 6000
 Fax: +91 20 2570 6060

Territory managers:

Aurangabad - 431210
 A9, Yogeshwari Vrundavan
Nr. Malhar Chowk, Garkheda Parisar
Prerna Nagar
Mobile: +91 9766316446
E-mail: santosh.rajhans@siemens.com

• Baroda - 390007 1st Floor, Vanijya Bhavan, Race Course Road ☎: +91 265 2325810 / 12, 6692110 Mobile: +91 98255 06963 E-mail: sreejagannath.mohanta@siemens.com

Bhilai - 490001
 C/o Mr. S.H. Siddiqui
 Sector -1, Street -9, Quarter No. 1A
 Mobile: +91 9826127525
 E-mail: sandeep.barde@siemens.com

Indore - 452001
 521, Suniket Apartments
 Shri Nagar Extension, Khajrana Main Road
 Mobile: +91 98266 41970
 E-mail: vineet.saxena@siemens.com

Kolhapur - 416001
 B-7, Mahagaonkar Complex
 1147/E, Rajaram Road, Opp. Kamala College
 ∷ +91 231 2536626
 Mobile: +91 9822558876

E-mail: amol.pandit@siemens.com

Nashik - 422101
 8B, Shubhamangal Apartment
 Chavan Mala, Nasik Road
 Mobile: +919822193204
 E-mail: nitinkumar.deshpande@siemens.com

Raipur - 492007
Flat No. 103, First Floor, Block B
Shilp Enclave, Near LAS Colony
Shankar Nagar
Mobile: +91 9425057945
E-mail: braiesh.rathor@siemens.com

Rajkot - 360005
 D-3 Aalap Century, University Road
 Mobile: +91 98255 06962
 E-mail: bhushan.sawant@siemens.com

Surat - 395004
 59, Ground Floor, Shreejinagar Part-1
 Dhabholi Char Rasta, Ved Road, Katargam
 Mobile: +91 99250 01779
 E-mail: chandrakant.keshrani@siemens.com

Vapi - 396195
Flat No. 302, Samrajaya IV
Royal Residency, Charwada Road
:+91 260 6451156
Mobile:+91 98251 47957
-Mail: siemens vapi@sancharnet.in

SOUTH

Offices:

• Bangalore - 560001 1st Floor, Jyothimahal, #49, St. Marks Road ☎: +91 80 22042000 Fax: +91 80 22224131

• Chennai - 600034 4, Mahatma Gandhi Road 2: +91 44 28334000 Fax: +91 44 28334088

• Coimbatore - 641018
7th Floor, East Wing, Global Towers
1057, Avinashi Road
\$\mathref{\pi}\$: +91 422 4336300

Fax: +91 422 4336310

Territory managers:

Belgaum - 590003
H/No 713, Narvekar Lane
Shahapur, Karnataka
 Se Fax: +91 831 2495156
Mobile: +91 9740277991
E-mail: anand. oawade®siemens.com

Cochin - 682016
 K.G. Oxford Business Centre
 39/4609, 3rd Floor, Sreekandath Road
 Ravipuram

☎: +91 484 4028611/22/33/44 Fax: +91 484 2380201 E-mail: sajeen.s@siemens.com

• Madurai - 625010 8/12, Ground Floor Sakthi Vellammal Street, S.S.Colony ☎ : +91 452-2601751 Mobile: +91 98946 17780

Pondicherry - 605001
 32, Second Floor, St. Theresa Street
 ★ Fax: +91 413 4500101
 Mobile: +91 9840472727
 F-mail: elankumarak.pandian@siemens.com

Salem - 636 008
3/25, Santhosh Nagar, PACB Back Side
Chinnathirupathi
Mobile: +91 98946 17772
E-Mail: rubengerald@vahoo.com

Tiruchirappalli - 620017
T3, Illrd Floor, Vishranthi Daffodils Apartments Opp: Friends Eye Hospital, Puthur

:+91 431 4030390
Fax: +91 431 4030390
Mobile: +91 9444911221
E-mail: Akhilesh.Nair@siemens.com

Trivandrum
 Skyline City Villa, House No-8, Vetamukku Mobile: +91 98959 79604
 E-Mail: jonsa_82@yahoo.com

Vijayawada - 520010
 G-2, Shreya Towers, Moghalrajapuram
Near Jammichettu Centre
 : +91 866 6629933

≅: +91 866 6629933 Mobile: +91 9866463639 E-mail: santosh.p@siemens.com

Visakhapatnam - 530003
 B4, Mount Moriah Residency
Waltair Uplands
 ∷ +91 891 2712535
 Mobile: +91 98492 12555
 E-mail: siemensvizae@rediffmail.com

NORTH

Offices:

• Chandigarh - 160017 SCO 189 - 191, 3rd Floor, Sector 17C ☎: +91 172 4690300 Fax: +91 172 4690399

• Lucknow - 226001 28/45, Ashok Marg, Opposite Indira Bhawan ☎: +91 522 4031022, 4031000 Fax: +91 522 4031019

• New Delhi - 110002 4A, Ring Road, I.P. Estate 2: +91 11 42995000-09 Fax: +91 11 42995030

Territory managers :

Bareilly - 243001
 Flat No. T1, 129, Civil Lines
 Mobile: +91 9897019061
 E-mail: siemens.blv@gmail.com

 Dehradun - 248001
 122, Ashok Vihar, Lane No. 1, Ajabpur Kalan Mobile: +9197600 33117
 E-mail: manish.bajpai@siemens.com

Faridabad - 121006
 House No. 237, Sector 8, Faridabad
 Mobile: +91 9873696350
 E-mail: ramit.mehra@siemens.com

• Gurgaon - 122001 117-C, First Floor, Sector-30 Behind Jalvayu Vihar Mobile: +91 99710 91588 Email: siemens.qgn@gmail.com

Hardwar - 249407
 758, 1st Floor, Model Colony
 Awas Vikas, Jwalapur
 Fax: +91 1334 - 265491
 Mobile: +91 9897070133
 E-mail: naveen.khare@siemens.com

 Jalandhar - 144001
 H. No. 448R, First Floor, Pushpa Niwas Near Geeta Mandir, Model Town, Punjab Mobile: +91 9779194445
 E-mail: ankush.saini@siemens.com

Order No.: 102127346

• Kota - 324002 48, Model Town, Khedli Pkatak, Rajasthan ☎ : +91 744 2340523 Mobile: +91 9784842605 E-mail:aitt.parashar@siemens.com

• Ludhiana - 141009 H. No.3127, Urban Estate Sector 38, Chandigarh Road Mobile : +91 9876047929 E-mail: sunil.singla@siemens.com

 Ludhiana - 141004
 H. No. 281, 1st Floor, E Block, B.R.S. Nagar Mobile: +91 9872000936
 E-Mail: singh.harpal@siemens.com

• Ludhiana - 141004 H.No. 3996, 1st Floor, Sector 32A Urban Estate, Chandigarh Road ☎ & Fax: +91 161-5017741 Mobile: +91 9815130172 E-Mail: nitinbansal@siemens.com

• Jaipur - 302006 6, Park Street, Opp. Pink City Petrol Pump M.I. Road, Rajasthan ☎: +91 141 2370274, 2377956 Fax: +91 141 2370482 Mobile: +91 9829244313

E-mail: peeush.gupta@siemens.com

Kanpur - 208013
 106, Agarwal Apartments
 Near Hari Har Dham Mandir
 Shyam Nagar, Uttar Pradesh
 ★ Fax: +91 512 2423348
 Mobile: +91 9839102434
 E-mail: siemens_knp@satyam.net.in

 Renukoot - 231217
 Above ICICI Prudential Office, Patel Nager Murdhawa, Distt. Sonebhadra, U.P. Mobile: +91 9838007897
 E-mail: siemens_upeast@sify.com

• Udaipur - 313001 303, Oasis Park, PP singhal Marg Ambavgarh ☎ : +91-294-2430345 Fax: +91-294-2430345 Mobile: +91 9829039120 E-mail: ankur.singh@siemens.com

EAST

Offices:

• Kolkata - 700042 43 Shanti Palli, R B Connector Eastern Metropolitan Bypass ☎: +91 33 24449000, 24428641-47 Fax: +91 33 24449010 / 13

Territory managers:

Bhubaneswar - 751002
109, Harapriya Apartment
Vivekananda Marg
 : +91 674 3200627
Mobile: +91 9937009749
E-mail: anitban.aditva@siemens.com

Bhubaneswar - 751013
 Flat No. - E 303, "Jyotsna Enclave"
 (Beside Hotel Mayfair) Jaydev Vihar
 Mobile: +91 9337058366
 E-mail: shounak.pal@siemens.com

• Durgapur - 713216 4/6, Matangini Hazra Bithi Ground Floor, City Center ☎: +91343 2605286 Mobile: +919830185007 E-mail: sourav.paul@siemens.com

• Guwahati - 781003 G1, Hill View Apartment, Navagraha Path Chenikuthi Hill Side ☎ : +91 361 2663988 Mobile: +91 9864037562, 9864110684 E-mail: amarnath.karmakar@siemens.com, hinlah datta@siemens.com

Jamshedpur - 831005
 823, Udaygiri, Vijaya's Heritage, Ulyan, Kadma
 ☆: +916576451637
 Mobile: +919934311352
 E-mail: shaibal.parial@siemens.com

Ranchi - 834001
 Flat No. 403, Rishab Tower
 Near Line Tank, Behind Firayalels
 E-mail: sourav.dasgupta@siemens.com

• Rourkela - 769004 T-15 Civil Town ☎ : +91 661 2401724 Mobile: +91 9437041724 E-mail: sanjoy.ganguly@siemens.com

Siemens Ltd.
Automation and Drives Division
LV Control & Distribution Products
Thane Belapur Road
Thane 400601

Fax: +91 22 27623729

E-mail: lvsgr-mktg.india@siemens.com

Customer Care Toll free no. 1800 220 987. Email: adscs.india@siemens.com