Note:

Products with our Siemens EcoTech label are marked in the catalog with this symbol:

Siemens EcoTech

See www.siemens.com/sirius/SiemensEcoTech

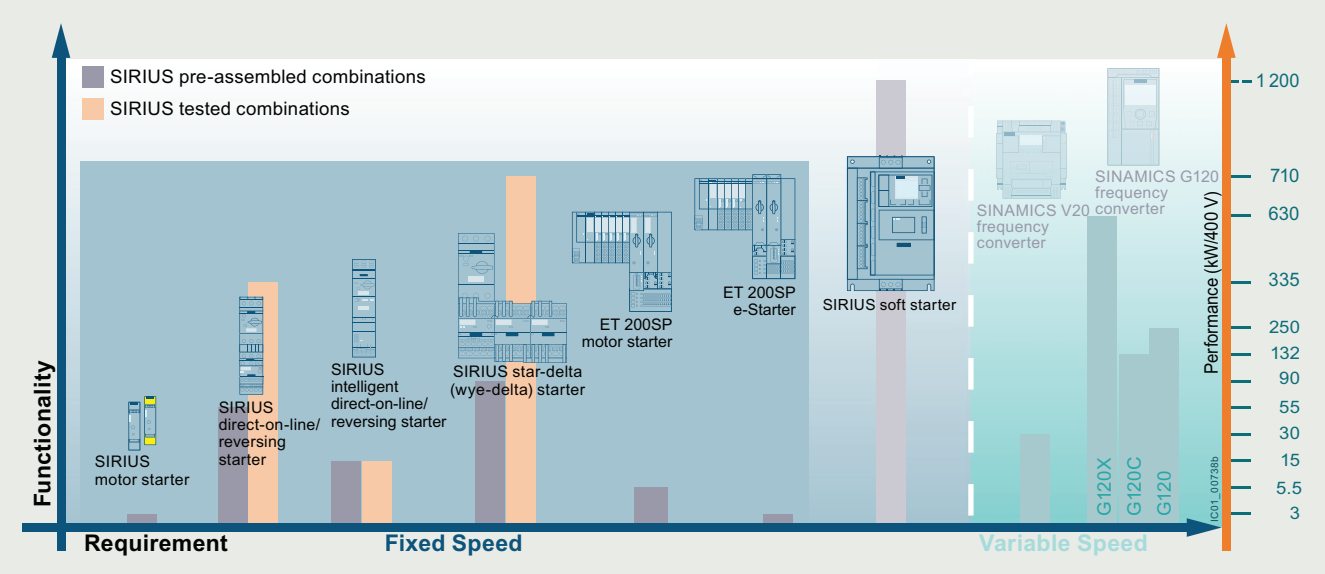
Introduction

Overview

Central and compact starter solutions

Our range offers you many different possibilities for simple and practical starter solutions in the control cabinet. Features common to all our load feeders, compact starters and motor starters: Like all SIRIUS devices, they are optimally coordinated with each other, have a very compact design and are particularly easy and quick to install and wire up.

In addition, there is a seamless range of SIRIUS 3RW soft starters available for soft starting in the control cabinet (see page 6/2).



Central and compact starter solutions

Decision support for motor start – Starting and operating three-phase asynchronous motors efficiently

Decision support tool for motor start

This tool guides you to the optimum individual drive solution via a short query about the application.

Based on this solution approach, you will then be directed to the right product configurator for selecting the appropriate products, see www.siemens.com/motorstart-guide.


3RA2110


3RA2210


3RA2130,
3RA2150


3RA61


3RA62

		Type	Page
SIRIUS 3RA2 load feeders			
	• The 3RA2 fuseless load feeders consist of the 3RV2 motor starter protector and the 3RT2 contactor. The motor starter protector and contactor are prewired and mechanically and electrically connected in preassembled kits (link modules, wiring kits and DIN-rail or busbar adapters). • 4 sizes (S00, S0, S2, S3) • Can be supplied for direct-on-line starting or reversing operation as - a complete unit or - single devices for customer assembly • Can be supplied with screw or spring-loaded terminals		8/6
3RA21 direct-on-line starters for DIN-rail mounting or screw fixing	• Rated control supply voltage 50/60 Hz 230 V AC and 24 V DC	**3RA21**	8/24
3RA21 direct-on-line starters for 60 mm busbars	• Rated control supply voltage 50/60 Hz 230 V AC and 24 V DC	**3RA21**	8/32
3RA22 reversing starters for DIN-rail mounting or screw fixing	• Rated control supply voltage 50/60 Hz 230 V AC and 24 V DC	**3RA22**	8/36
3RA22 reversing starters for 60 mm busbars	• Rated control supply voltage 50/60 Hz 230 V AC and 24 V DC	**3RA22**	8/42
Accessories for 3RA2 direct-on-line and reversing starters			8/47
Infeed system	• The infeed system is a convenient means of energy supply and distribution for a group of several motor starter protectors or complete load feeders with screw or spring-loaded terminals up to size S0.	**3RV29**	7/67, 8/58
SIRIUS 3RA6 compact starters			
	• Integrated functionality of a motor starter protector, contactor and electronic overload relay and various functions of optional mountable accessories • Can be used for direct starting of standard three-phase motors up to 32 A		8/59
3RA61 direct-on-line starters	• Up to 15 kW/400 V, weld-free, wide setting range, removable terminals	**3RA61**	8/67
3RA62 reversing starters	• Up to 15 kW/400 V, weld-free, wide setting range, removable terminals	**3RA62**	8/69
Accessories for 3RA6 direct-on-line and reversing starters		**3RA69**	8/71
Add-on modules for AS-Interface		**3RA69**	8/75
Infeed system for 3RA6	• Modular expandability, up to 100 A, terminals up to 70 mm^2	**3RA68**	8/77
	• 3-phase infeeds and expansion modules		8/80
	• Expansion modules		8/81
	• Accessories for infeed systems for 3RA6		8/82

Introduction

3RA8411,
3RA8412

3RA8511,
3RA8512

3RC7140

3RC7141

		Type	Page
SIRIUS 3RA8 intelligent load feeders			
	• The 3RA8 intelligent load feeders consist of the 3RV2 motor starter protector/circuit breaker, the 3RT2 contactor, and the 3RC7 intelligent link module. • 2 sizes (S00, S0) • Standard or High Feature version • Can be supplied as a complete unit for direct-on-line starting or reversing operation • Available with spring-loaded terminals		8/84
3RA84 direct-on-line starters	• Up to 32 A/400 V	**3RA84**	8/89
3RA85 reversing starters	• Up to 32 A/400 V	**3RA85**	8/89
Infeed system	• The infeed system is a convenient means of energy supply and distribution for a group of several motor starter protectors or complete load feeders up to size S0.	**3RV29**	7/67, 8/58
Accessories	• Communication cable, power cable	**3RC79**	8/96
SIRIUS 3RC7 intelligent link modules			
	• The 3RC7 intelligent link modules enable the implementation of intelligent load feeders consisting of 3RV2 motor starter protectors/circuit breakers and 3RT2 contactors. • 2 sizes (S00, S0) • Standard or High Feature version • Can be supplied for direct-on-line starting or reversing operation • Available with spring-loaded terminals		8/90
3RC7140 direct-on-line starters	• Up to 32 A/400 V	**3RC7140**	8/95
3RC7141 reversing starters	• Up to 32 A/400 V	**3RC7141**	8/95
Accessories	• Adapter for stand-alone installation, communication cable, power cable, mounting kits	**3RC79**	8/96


3RD1000


3RK1308


3RK1308


3RK1908-0


3RM12


3RM13

		Type	Page
ET 200SP e-Starters			
	• Fully electronic in the SIMATIC ET 200SP I/O system • For switching and protecting 1-phase and 3-phase loads up to 3 kW from 48 to 480 V AC		8/98
3RD1000 reversing starters	• Reversing functionality with fully electronic short-circuit protection	**3RD1000-0B.00-0EP0**	8/103
BaseUnits	• Mounting components for infeed and for integration into the ET 200SP I/O system	**3RK1908-0AP00**	8/104
Basic 4DI (LC) submodule	• Module with four digital inputs for the use of additional functions such as "manual local operation", "implementation of fast inputs" and "end position disconnection"	**3RD1000-1MB00-0BP0**	8/104
Accessories	• Cover for BaseUnit and infeed bus, additional mechanical mounting unit, fan	**6SE7, 3RK19, 3RD1000**	8/105
ET 200SP motor starters			
	• In hybrid technology in the SIMATIC ET 200SP I/O system • For switching and protecting three-phase asynchronous motors, 1-phase AC motors and 1-phase asynchronous motors up to 5.5 kW (at 400 V)		8/106
3RK1308 direct-on-line starters	• Direct-on-line starting with electronic overload protection	**3RK1308-0A.0**	8/112
3RK1308 reversing starters	• Reversing functionality with electronic overload protection	**3RK1308-0B.0**	8/112
3RK1308 fail-safe direct-on-line starters	• Direct-on-line starting with electronic overload protection	**3RK1308-0C.0**	8/112
3RK1308 fail-safe reversing starters	• Reversing functionality with electronic overload protection	**3RK1308-0D.0**	8/112
BaseUnits	• Mounting components for infeed and for integration into the ET 200SP I/O system	**3RK1908-0AP00**	8/113
3DI/LC submodule	• Module with three digital inputs for the use of additional functions such as "Quick stop", and for manual local operation	**3RK1908-1AA00**	8/113
Accessories	• Cover for BaseUnit and infeed bus, additional mechanical mounting unit, fan	**3RK19, 3RW49**	8/114
SIRIUS 3RM1 motor starters			
	• For switching three-phase motors up to 3 kW (at 400 V) and resistive loads up to 10 A at AC voltages up to 500 V under normal operating conditions • Space-saving design (width 22.5 mm)		8/115
	• Direct-on-line starting with electronic overload protection	**3RM10**	8/122
3RM12 reversing starters	• Reversing functionality with electronic overload protection	**3RM12**	8/122
3RM11 Failsafe direct-on-line starters	• As 3RM10 plus safety-related shutdown	**3RM11**	8/122
3RM13 Failsafe reversing starters	• As 3RM12 plus safety-related shutdown	**3RM13**	8/122
Accessories for 3RM1 motor starters	• 3RM19 3-phase infeed system for the main circuit	**3RM19**	8/124
	• Fuse modules for the use of 3RM1 motor starters on 8US busbar systems and mounting rails	**3RM19**	8/124
	• Adapters	**8US1**	8/124
	• Cover profiles	**8US1922**	8/125
	• Device connectors for the control circuit	**3ZY1212**	8/125
	• Spare terminals for main and control circuits	**3ZY11**	8/126
	• Push-in lugs for wall mounting, integrated sealable cover, coding pins	**3ZY1**	8/126

General data

Overview

3RA2 load feeders

3RA22 reversing starters for DIN-rail mounting or screw fixing with screw terminals

The 3RA2 fuseless load feeders consist of the 3RV2 motor starter protector and the 3RT2 electromechanical contactor. The devices are electrically and mechanically connected using preassembled kits (link modules, wiring kits and DIN-rail or busbar adapters).

Around 500 preassembled 3RA2 combinations can be ordered for direct-on-line and reversing starting of standard three-phase motors up to 65 A (approx. 37 kW/400 V). Preassembled kits are available as accessories for the power range up to 45 kW. The desired fuseless load feeder can thus be quickly and economically assembled by the customer. A time saving is also achieved in connection with switchgear acceptances, as – unlike with conventional wiring systems – there is no need to rectify possible wiring errors.

In the 3RA2 load feeder, the 3RV2 motor starter protector is responsible for overload and short-circuit protection. Upstream protective devices, such as melting fuses or limiters, are superfluous here, as the motor starter protector is short-circuit-proof up to 150 kA at 400 V.

The 3RT2 contactor is particularly suitable for extremely complex switching tasks requiring the greatest endurance.

The 3RA2 load feeders are available with setting ranges from 0.14 to 65 A in sizes S00, S0 and S2. Load feeders in size S3 up to 100 A are available for customer assembly:

Size	Width Direct-on-line starters/ reversing starters	Max. rated current $I_{n\ max}$	For three-phase motors up to
	mm	A	kW
S00	45/90	16	7.5
S0	45/90	32	15
S2	55/120	65	37
S3	70/150	100	45

The size of the 3RA2 load feeders is based on the size of the contactor:

Size 3RA2	S00	S0	S2	S3
Size of 3RV2 motor starter protector	S00	S00[1], S0	S2	S3
Size of 3RT2 contactor	S00	S0	S2	S3

[1] The combination of an S00 motor starter protector with an S0 contactor is possible only for screw terminal versions.

More information

Homepage, see www.siemens.com/sirius-control

SiePortal, see www.siemens.com/product_catalog_siep?3RA2

Online configurator, see www.siemens.com/sirius/configurators

TIA Selection Tool Cloud (TST Cloud), see www.siemens.com/tstcloud/?node=LoadFeeder

Decision support for motor start – Starting and operating three-phase asynchronous motors efficiently, see www.siemens.com/motorstart-guide

Operating conditions

3RA2 load feeders are climate-proof. They are intended for use in enclosed rooms in which no harsh operating conditions (such as dust, caustic vapors, hazardous gases) prevail. Suitable covers must be provided for installation in dusty and damp locations.

Behavior in the event of short circuit

EN 60947-4-1 (VDE 0660 Part 102) or IEC 60947-4-1 make a distinction between two different types of coordination, which are referred to as type of coordination "1" and type of coordination "2". Any short circuits that occur are cleared safely by both types of coordination. The only differences concern the extent of the damage caused to the device by a short circuit.

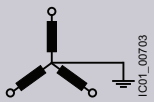
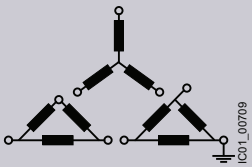
ToC 1 Type of coordination "1"
The load feeder may be non-operational after a short circuit has been cleared. Damage to the contactor or to the overload release is permissible.

ToC 2 Type of coordination "2"
There must be no damage to the overload release or to any other component after a short circuit has been cleared. The load feeder can resume operation without needing to be renewed. At most, welding of the contactor contacts is permissible if they can be disconnected easily without any significant deformation.

The types of coordination are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Voltage data

The data for 3-phase power systems according to IEC 60947-4-1 are valid for the following line system configurations:

Voltage U_e	Line system configurations	
	Three-phase four-wire systems	Three-phase three-wire systems
	 IC01_00703	 IC01_00709
V	V	V
230	--	230
400	230/400	400
440	260/440	440
500	--	500
690	400/690	690 (only from size S3)

-- Not specified

Tripping times

All 3RA2 load feeders described here are designed for normal starting, in other words for overload tripping times of less than 10 s (Class 10). At warm operating temperature the tripping times are shorter, depending on the particular device and the setting range. The exact values can be derived from the tripping characteristics of the motor starter protectors.

Connection methods

For all 3RA2 feeders up to 32 A, spring-loaded terminals are available as well as screw terminals. To connect two devices with spring-loaded terminals, there are plug-in link modules for sizes S00 and S0 which enable very quick mounting of the feeders and a vibration-resistant assembly.

To connect a motor starter protector with screw terminals to a contactor with spring-loaded terminals there are special hybrid link modules for the sizes S00 and S0.

	Screw terminals
	Spring-loaded terminals
	The connection method is indicated in the corresponding tables by the symbols shown on orange backgrounds.

3RA2 complete units

The 3RA2 fuseless load feeders can be ordered as preassembled complete units for direct-on-line starting (3RA21) or for reversing operation (3RA22) with screw or spring-loaded terminals. From size S2, complete units for direct-on-line starting (3RA21) are only available with screw terminals.

Control supply voltages of 230 V AC 50 Hz and 24 V DC are available.

A distinction is also drawn between whether the feeder is mounted on a 35 mm DIN rail, on a flat surface using screws, or on a 60 mm busbar system.

3RA21 load feeders in the S0 size must be configured on DIN-rail adapters if high vibration and shock loads (railways, power plant construction, etc.) are involved.

A vibration and shock kit is available for mounting on busbar adapters.

Accessories

As the 3RA2 fuseless load feeders are constructed from 3RV2 motor starter protectors and 3RT2 contactors, the same accessories – such as auxiliary switches, undervoltage releases or door-coupling rotary operating mechanisms – can be used for the 3RA2 fuseless load feeders as for these motor starter protectors and contactors.

In particular, certain accessories have been optimized for the fuseless load feeders. These include the top-connected, transverse auxiliary switch on the motor starter protector, which is available in a range of different versions. Special auxiliary switches that can be snapped on from below are available for the contactor. These two accessories enable the fuseless load feeders to be wired simply without having to route cables through the device.

Incoming power supply

A total of four different incoming power supply options are available (see 3RV29 infeed system for load feeders on page 8/58).

Customer assembly of fuseless load feeders

Whereas preassembled 3RA2s can be ordered up to 65 A, combinations in size S3 up to 100 A (approx. 45 kW/400 V) are also available for customer assembly.

The standard devices can be combined optimally – in terms of both technical specifications and dimensions, thanks to the modular system of the SIRIUS series.

The fuseless load feeders can thus be assembled easily by the customer. It is simply necessary to assemble the standard 3RV2 motor starter protector, the 3RT2 contactor and the appropriate assembly kit.

Single devices and assembly kits, see the Selection and ordering data for 3RA21 direct-on-line starters or 3RA22 reversing starters, page 8/24 or 8/36 onwards.

Assembly kits for direct-on-line starting or reversing operation for mounting on DIN rails or busbars, see page 8/52.

For size S3 direct-on-line starters and sizes S0, S2 and S3 reversing starters, it is imperative that a DIN-rail adapter is used to ensure the necessary mechanical strength. If a busbar adapter is used (not possible for size S3), then a DIN-rail adapter is not necessary.

SENTRON 3VA circuit breakers and SIRIUS 3RT contactors are available for rated currents >100 A.

Single devices for customer assembly can be ordered if other rated control supply voltages are required. Assembly kits can be used to facilitate assembly.

Customers can also assemble tested combinations of motor starter protectors with electronic switching devices (soft starters, solid-state contactors) and load feeders with additional monitoring and control devices (3RR monitoring relays, SIMOCODE 3UF).

For the electrical and mechanical connection of protection equipment and controls, there are preassembled kits (link modules, wiring kits and DIN-rail or busbar adapters).

The following types of configuration are possible:

- Direct-on-line/reversing starting
- Star-delta (wye-delta) starting
- Solid-state/soft starting

For more information and assignment tables for combinations of the 3RA2 generation for customer assembly, see

- Digital Configuration Manual for load feeders, https://imp.siemens.com/digital-engineering-manual/dem
- Configuration Manual for load feeders, see https://support.industry.siemens.com/cs/ww/en/view/39714188
- Equipment Manual, https://support.industry.siemens.com/cs/ww/en/view/60284351

General data

Customer assembly of fused load feeders

The flexible, modular system of SIRIUS also enables the configuration of fused load feeders up to 100 A (approx. 45 kW/400 V). 45 mm installation widths are also possible up to 32 A.

Compact 3NW7...-1 cylindrical fuse holders for IEC fuses size 10 x 38 mm, or 3NW7...-1HG holders for Class CC UL fuses, can be used for this purpose.

For more information about fuse systems, see Catalog LV 10.

Communication link through IO-Link

Load feeders can also be assembled with IO-Link for connection to the higher-level control system. For each feeder, this requires a contactor with a voltage tap onto which a 3RA2711 function module is plugged (various versions for direct-on-line, reversing and star-delta (wye-delta) starters). The design of the SIRIUS load feeders permits a group of up to four SIRIUS controls to be conveniently connected through the standardized open system IO-Link to a control system, thus reducing wiring considerably compared to the conventional parallel wiring method. The electrical connection is made using only three standard cables.

The function modules perform not only the communication (contactor operation and feedback, ready signal) but also the electrical interlocking (for reversing and star-delta (wye-delta) starters) and the timing relay function (star-delta (wye-delta) reversing time).

Communication information and supply voltages are passed on through flat ribbon cables so that the complete control current wiring on the feeder is no longer needed.

The monitoring and maintenance of a plant is made considerably easier by transmitting diverse diagnostics data from the function modules (e.g. missing main and auxiliary voltage, local disconnection…) through IO-Link to the higher-level control system. Also, feeders equipped for IO-Link can be conveniently controlled from the control cabinet door using the optional operator panel.

More information:

- IO-Link, see page 2/83 onwards
- 3RA27 function modules, see pages 3/70, 3/76 and 3/99

Contactors with voltage tap

For configuring load feeders with IO-Link, contactors with voltage taps are required. These contactors are not included as standard in the preassembled 3RA2 load feeders. A load feeder with communication link must be assembled therefore from single devices.

Mounting

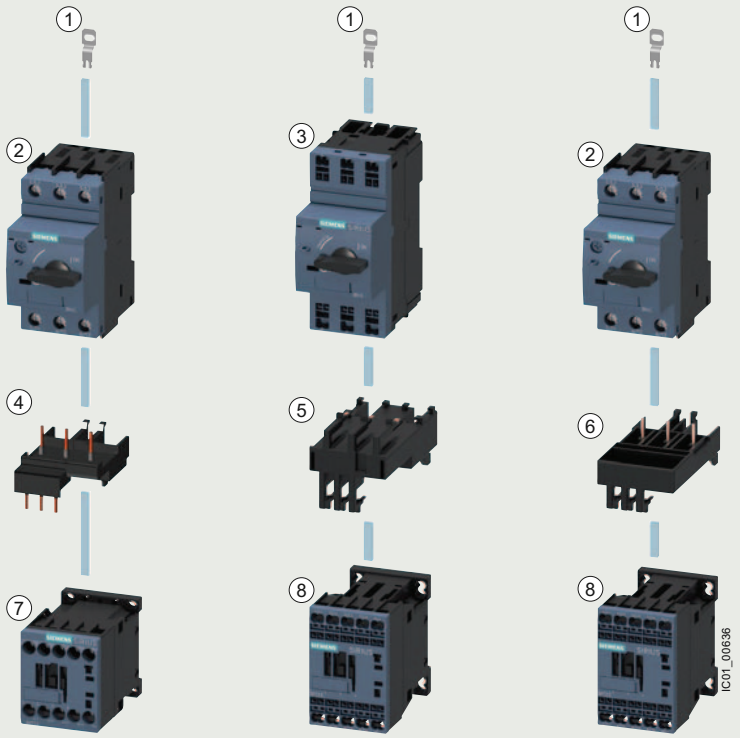
3RA2 fuseless load feeders can be supplied:

- For mounting on TH 35-15 DIN rail according to IEC 60715
- For mounting on busbar adapters (busbar center-to-center spacing 60 mm, busbar thickness 5 to 10 mm with beveled edges)

The fuseless load feeders are also suitable for screw fixing using two 3RV2928-0B push-in lugs.

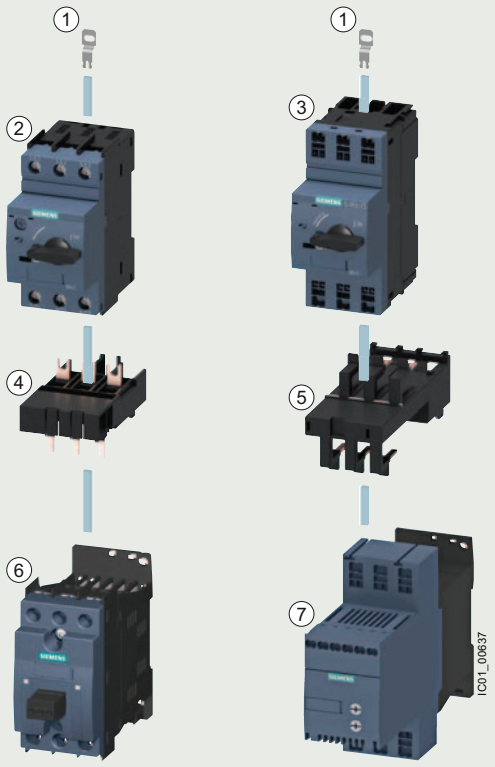
3RA2 fuseless load feeders can also be installed using the 3RV29 infeed system (S0 and S00 only, see page 7/67).

Direct-on-line starting • For DIN-rail mounting or screw fixing • Sizes S00 and S0



1. **2 push-in lugs**
   3RV2928-0B
   (only for screw fixing)
2. **Motor starter protector**
   Size S00/S0
   Screw terminals
3. **Motor starter protector**
   Size S00/S0
   Spring-loaded terminals
4. **Link module**
   (Screw terminals)
   3RA1921-1DA00 (for S00)
   3RA2921-1AA00 (for S0, AC contactor)
   3RA2921-1BA00 (for S0, DC contactor)
5. **Link module**
   (Spring-loaded terminals)
   3RA2911-2AA00 for S00
   3RA2921-2AA00 for S0
6. **Link module**
   (Hybrid)
   3RA2911-2FA00 for S00
   3RA2921-2FA00 for S0
7. **Contactor**
   Size S00/S0
   Screw terminals
8. **Contactor**
   Size S00/S0
   Spring-loaded terminals

Left: 3RA21 load feeder with screw terminals
Center: 3RA21 load feeder with spring-loaded terminals
Right: Motor starter protector combination with screw terminals, with contactor with spring-loaded terminals

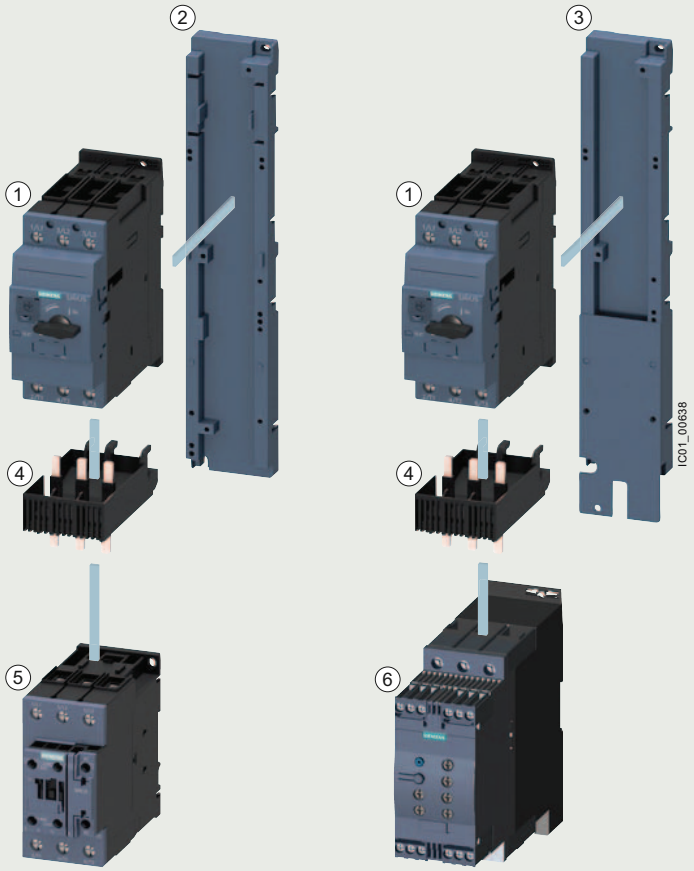


1. **2 push-in lugs**
   3RV2928-0B
   (only for screw fixing)
2. **Motor starter protector**
   Size S00/S0
   Screw terminals
3. **Motor starter protector**
   Size S00/S0
   Screw terminals/spring-loaded terminals
4. **Link module**
   3RA2921-1BA00 (Screw terminals)
5. **Link module**
   3RA2921-1BA00 for S00/S0 and screw terminals
   3RA2911-2GA00 for S00 and spring-loaded terminals
   3RA2921-2GA00 for S0 and spring-loaded terminals
6. **Solid-state switching device** (Screw terminals)
7. **Soft starter**
   Size S00/S0
   Screw terminals/spring-loaded terminals

Left: Motor starter protector combination with solid-state switching device with screw terminals
Right: Motor starter protector combination with soft starter with spring-loaded terminals

General data

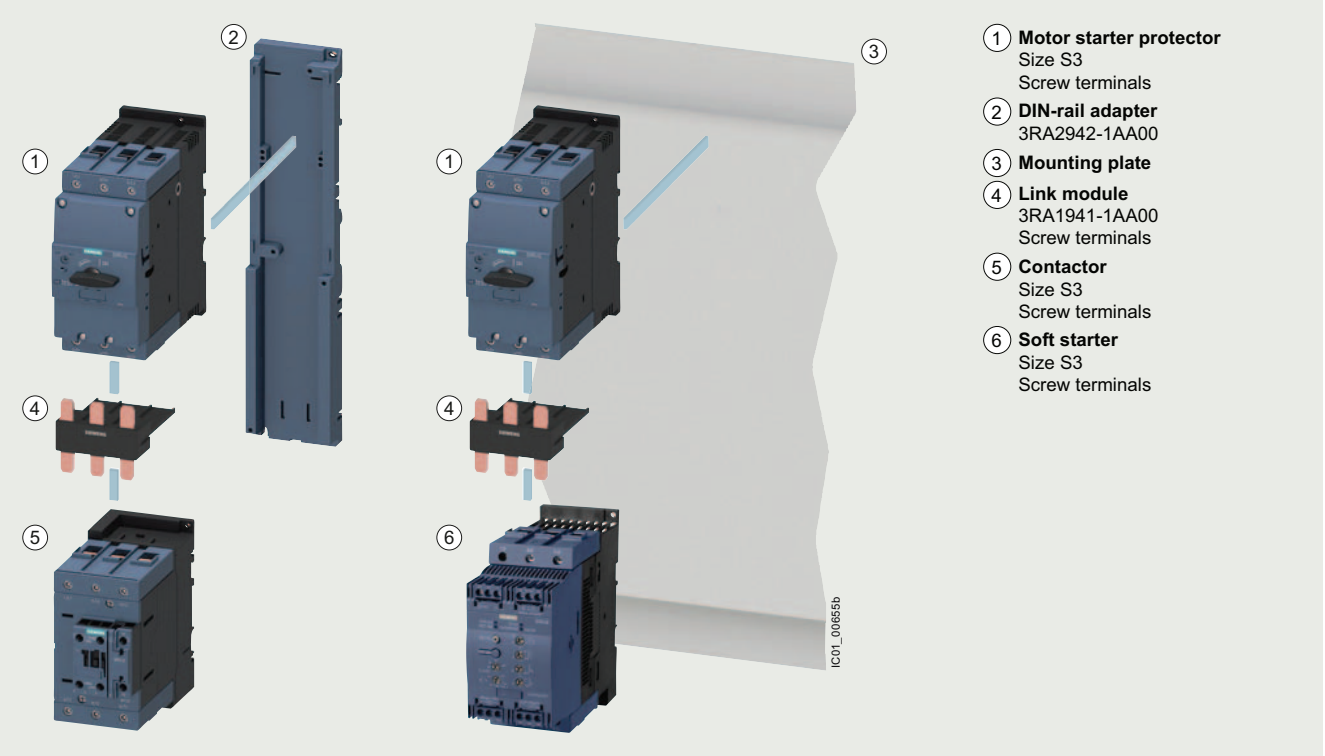
Direct-on-line starting • For DIN-rail mounting • Size S2



1. **Motor starter protector**
   Size S2
   Screw terminals
2. **DIN-rail adapter** (optional)
   3RA2932-1AA00
   Alternatively, the device can be mounted on two DIN rails spaced at a distance of 175 mm without a DIN-rail adapter.
3. **DIN-rail adapter**
   3RA2932-1CA00
4. **Link module**
   3RA2931-1AA00
   Screw terminals
5. **Contactor**
   Size S2
   Screw terminals
6. **Soft starter**
   Size S2
   Screw terminals

Left: 3RA21 load feeder with screw terminals
Right: Motor starter protector combination with soft starter with screw terminals

Direct-on-line starting • For DIN-rail mounting • Size S3

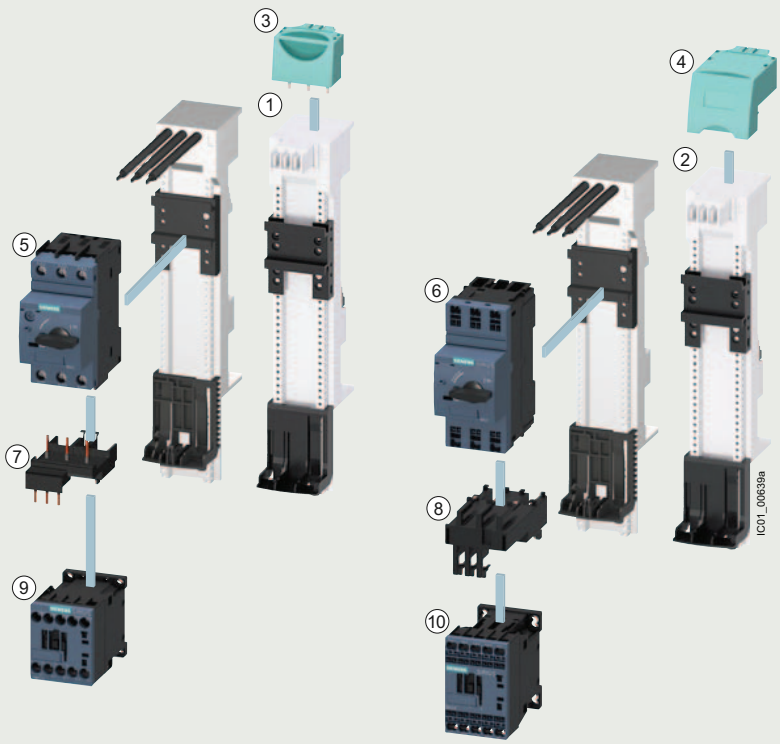


1. **Motor starter protector**
   Size S3
   Screw terminals
2. **DIN-rail adapter**
   3RA2942-1AA00
3. **Mounting plate**
4. **Link module**
   3RA1941-1AA00
   Screw terminals
5. **Contactor**
   Size S3
   Screw terminals
6. **Soft starter**
   Size S3
   Screw terminals

3RA21 load feeder for direct-on-line starting and DIN-rail mounting in size S3
(the version with screw terminals is shown in the illustration)

General data

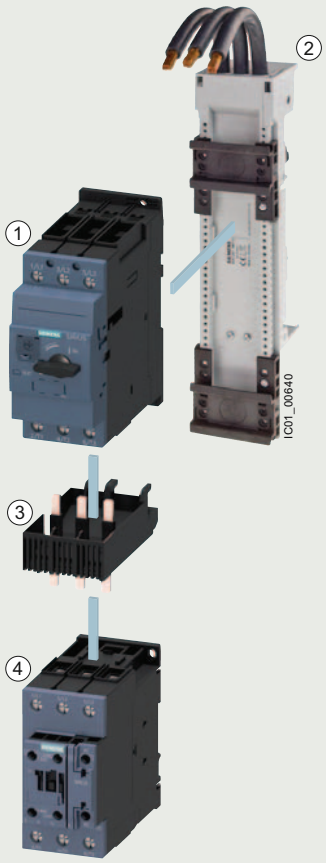
Direct-on-line starting • For 60 mm busbar systems • Sizes S00 and S0



1. **60 mm busbar adapter for screw terminals/plug-in connector**
   8US1251-5DS10 for S00
   8US1251-5NT10 for S0
   or
   8US1216-5AT80 for S00 and S0
2. **60 mm busbar adapter for spring-loaded terminals/plug-in connector**
   8US1251-5DT11 for S00
   8US1251-5NT11 for S0
   or
   8US1216-5AT80 for S00 and S0
3. **Plug-in connector**
   Size S00
   3RV29.7-5CA00
4. **Plug-in connector**
   Size S0
   3RV29.7-5AA00
5. **Motor starter protector**
   Size S00/S0
   Screw terminals
6. **Motor starter protector**
   Size S00/S0
   Spring-loaded terminals
7. **Link module**
   Screw terminals
   3RA1921-1DA00 for S00
   3RA2921-1AA00 for S0, AC contactor
   3RA2921-1BA00 for S0, DC contactor
8. **Link module**
   3RA2911-2AA00 for S00
   3RA2921-2AA00 for S0
   (additional 3RA2911-1CA00 spacer for height compensation on AC contactors size S0 with spring-loaded terminals)
9. **Contactor**
   Size S00/S0
   Screw terminals
10. **Contactor**
    Size S00/S0
    Spring-loaded terminals

Left: 3RA21 load feeder for direct-on-line starting with busbar adapter with screw terminals
Right: 3RA21 load feeder for direct-on-line starting with busbar adapter with spring-loaded terminals

Direct-on-line starting • For 60 mm busbar systems • Size S2

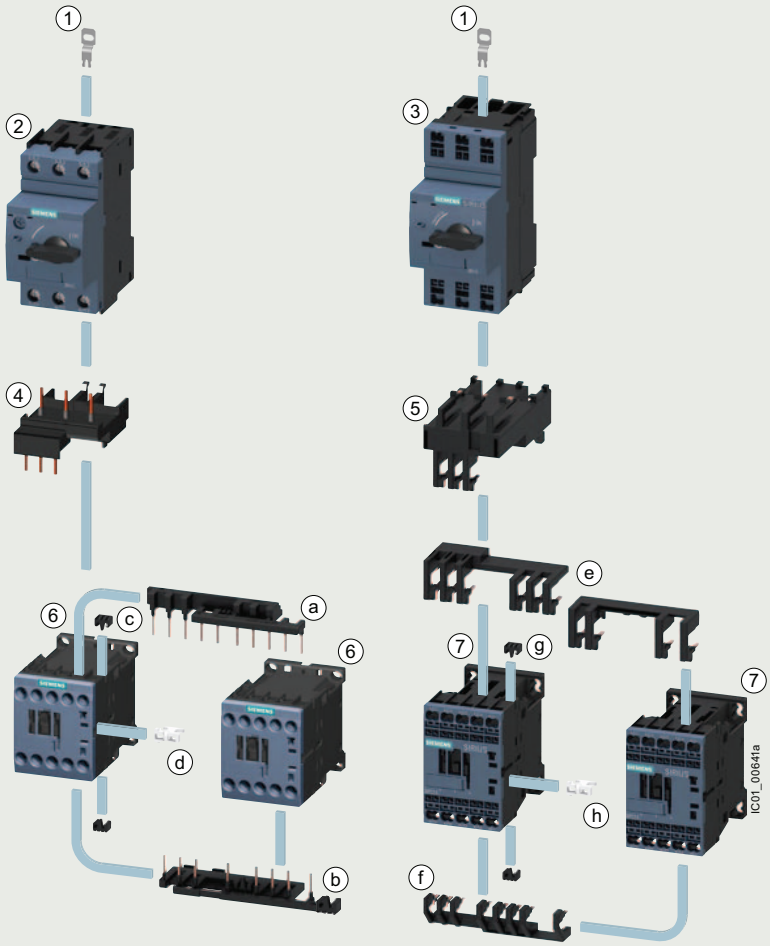


1. **Motor starter protector**
   Size S2
   Screw terminals
2. **Busbar adapter 60 mm**
   8US1261-6MT10
3. **Link module**
   3RA2931-1AA00
   Screw terminals
4. **Contactor**
   Size S2
   Screw terminals

3RA21 load feeder for direct-on-line starting with busbar adapter with screw terminals

General data

Reversing operation • For DIN-rail mounting or screw fixing • Size S00



1. **Push-in lug**
   3RV2928-0B
   (only for screw fixing)
2. **Motor starter protector**
   Size S00/S0
   Screw terminals
3. **Motor starter protector**
   Size S00/S0
   Spring-loaded terminals
4. **Link module**
   Screw terminals
   3RA1921-1DA00 for S00
   3RA2921-1AA00 for S0, AC contactor
   3RA2921-1BA00 for S0, DC contactor
5. **Link module**
   Spring-loaded terminals
   3RA2911-2AA00 for S00
   3RA2921-2AA00 for S0
6. **Contactor**
   Size S00/S0
   Screw terminals
7. **Contactor**
   Size S00/S0
   Spring-loaded terminals

Wiring kit
3RA2913-2AA1

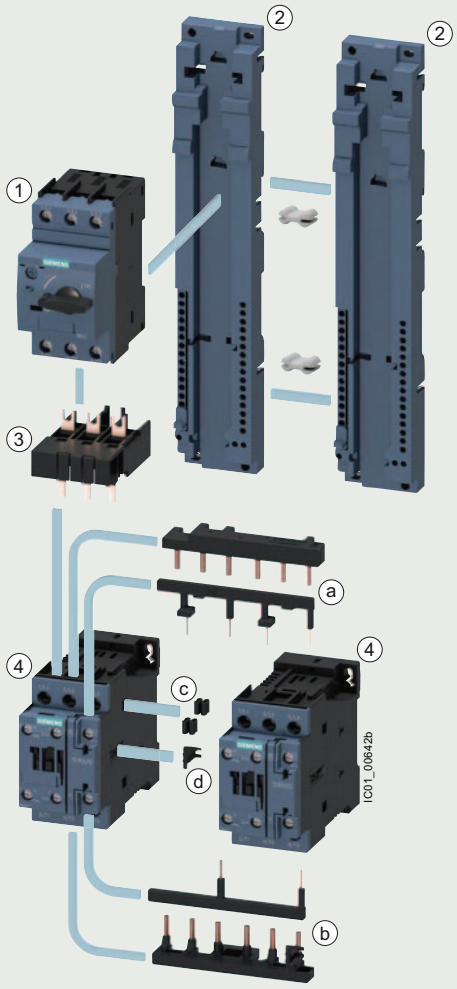
- a Upper wiring module
- b Lower wiring module
- c Two connecting clips for two contactors
- d Mechanical interlock
  (can be removed if necessary)

Wiring kit
3RA2913-2AA2

- e Upper wiring module
- f Lower wiring module
- g Two connecting clips for two contactors
- h Mechanical interlock
  (can be removed if necessary)

Left: 3RA22 load feeder with screw terminals with push-in lugs with two contactors for reversing operation and 3RA2913-2AA1 wiring kit for connection of the contactors (including mechanical interlock and connecting clips)
Right: 3RA22 load feeder with spring-loaded terminals with push-in lugs with two contactors for reversing operation and 3RA2913-2AA2 wiring kit (including mechanical interlock and connecting clips)

Reversing operation • For DIN-rail mounting • Size S0



RH mounting kit for reversing operation and DIN-rail mounting in size S0

Screw terminals
3RA2923-1BB1

Spring-loaded terminals
3RA2923-1BB2[1)]

Consisting of:
- Wiring kit for the main and auxiliary circuits
- Two DIN-rail adapters
- Two connecting wedges
- Mechanical interlock
- Two connecting clips
- Fixing accessories

(1) **Motor starter protector**
Size S0
Screw terminals/spring-loaded terminals

(2) **DIN-rail adapters**
3RA2922-1AA00

with two connecting wedges
8US1998-1AA00

(3) **Link module**
Screw terminals
3RA2921-1AA00 for S0, AC contactor
3RA2921-1BA00 for S0, DC contactor

Spring-loaded terminals
3RA2921-2AA00[2)]

(4) **Contactor**
Size S0
Screw terminals/spring-loaded terminals

Wiring kit
Screw terminals
3RA2923-2AA1

Spring-loaded terminals
3RA2923-2AA2

(a) Upper wiring module

(b) Lower wiring module

(c) Two connecting clips for two contactors

(d) Mechanical interlock
(can be removed if necessary)

[1)] Contains two 3RA2911-1CA00 spacers for height compensation on AC contactors size S0 with spring-loaded terminals.

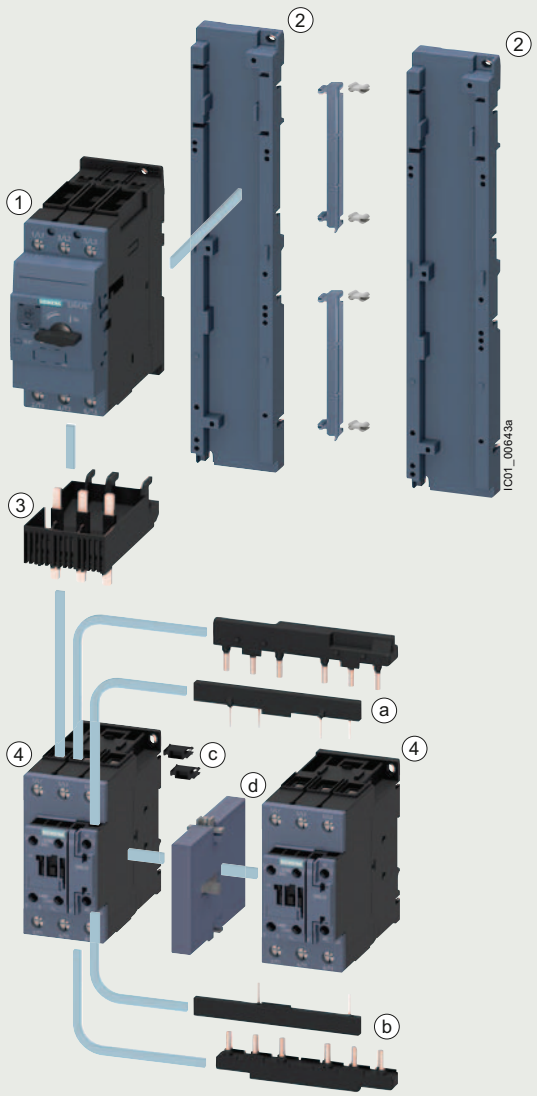
[2)] Additionally two 3RA2911-1CA00 spacers for height compensation on AC contactors size S0 with spring-loaded terminals.

3RA22 load feeder for reversing operation and DIN-rail mounting in size S0 (the version with screw terminals is shown in the illustration)

RH mounting kits for reversing operation and DIN-rail mounting in size S0, see page 8/54.

General data

Reversing operation • For DIN-rail mounting • Size S2



RH mounting kit for reversing operation and DIN-rail mounting in size S2

3RA2933-1BB1

Consisting of:
- Wiring kit for the main and auxiliary circuits
- Two DIN-rail adapters
- Two side modules
- Four connecting wedges
- Mechanical interlock
- Two connectors for two contactors
- Fixing accessories

(1) **Motor starter protector**
Size S2
Screw terminals

(2) **DIN-rail adapters**
3RA2932-1AA00
with two side modules
3RA2902-1B
and four connecting wedges
8US1998-1AA00

(3) **Link module**
3RA2931-1AA00
Screw terminals

(4) **Contactor**
Size S2
Screw terminals

Wiring kit
Screw terminals
3RA2933-2AA1

(a) Upper wiring module

(b) Lower wiring module

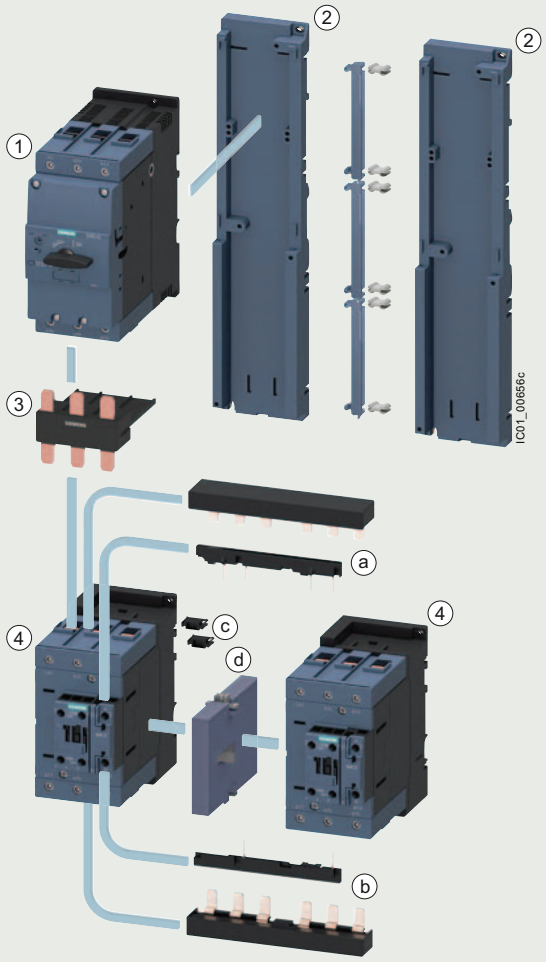
(c) Two connectors for two contactors

(d) Mechanical interlock
3RA2934-2B (not part of the wiring kit, must be ordered separately)

3RA22 load feeder for reversing operation and DIN-rail mounting in size S2 (the version with screw terminals is shown in the illustration)

RH mounting kits for reversing operation and DIN-rail mounting in size S2, see page 8/54.

Reversing operation • For DIN-rail mounting • Size S3



RH mounting kit for reversing operation and DIN-rail mounting in size S3

3RA2943-1BB1

Consisting of:
- Wiring kit for the main and auxiliary circuits
- Two DIN-rail adapters
- Three side modules
- Six connecting wedges
- Mechanical interlock
- Two connectors for two contactors
- Fixing accessories

(1) **Motor starter protector**
Size S3

(2) **DIN-rail adapters**
3RA2942-1AA00
with two side modules
3RA2902-1B
and four connecting wedges
8US1998-1AA00

(3) **Link module**
3RA1941-1AA00

(4) **Contactor**
Size S3

Wiring kit
Screw terminals
3RA2943-2AA1

(a) Upper wiring module

(b) Lower wiring module

(c) Two connectors for two contactors

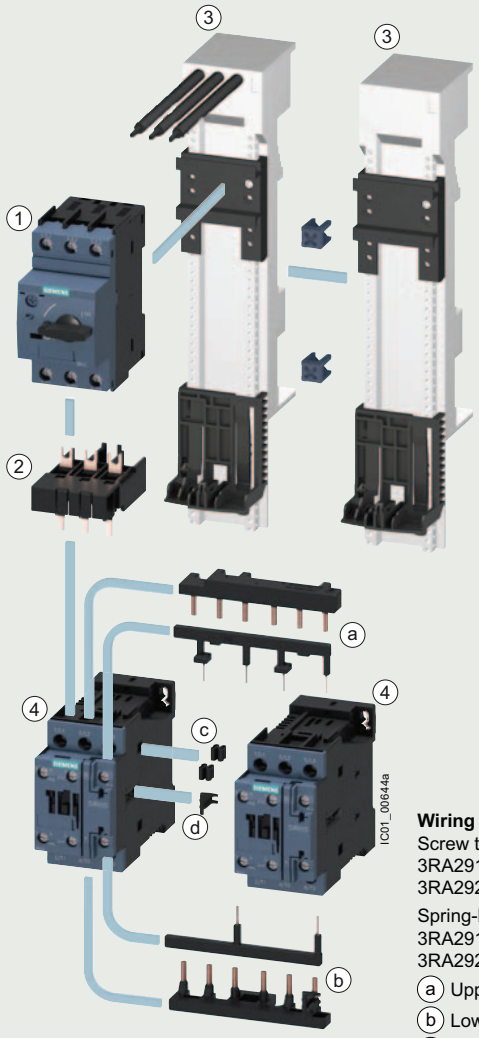
(d) Mechanical interlock
3RA2934-2B (not part of the wiring kit, must be ordered separately)

3RA22 load feeder for reversing operation and DIN-rail mounting in size S3 (the version with screw terminals is shown in the illustration)

RH mounting kits for reversing operation and DIN-rail mounting in size S3, see page 8/54.

General data

Reversing operation • For 60 mm busbar systems • Sizes S00 and S0



Wiring kit
Screw terminals
3RA2913-2AA1 for S00
3RA2923-2AA1 for S0

Spring-loaded terminals
3RA2913-2AA2 for S00
3RA2923-2AA2 for S0

(a) Upper wiring module
(b) Lower wiring module
(c) Two connecting clips for two contactors
(d) Mechanical interlock
(can be removed if necessary)

RS mounting kit for reversing operation and busbar mounting in size S00/S0

Screw terminals
3RA2913-1DB1 for S00
3RA2923-1DB1 for S0

Spring-loaded terminals
3RA2913-1DB2 for S00
3RA2923-1DB2 for S0[1)]

Consisting of:
- Wiring kit for the main and auxiliary circuits
- Busbar adapter
- Device holder
- Two connecting wedges
- Mechanical interlock
- Two connecting clips for two contactors
- Fixing accessories

(1) **Motor starter protector**
Size S00/S0
Screw terminals/spring-loaded terminals

(2) **Link module**
Screw terminals
3RA1921-1DA00 for S00
3RA2921-1AA00 for S0, AC contactor
3RA2921-1BA00 for S0, DC contactor

Spring-loaded terminals
3RA2911-2AA00 for S00
3RA2921-2AA00 for S0[2)]

(3) **60 mm busbar adapter**
Screw terminals
8US1251-5DS10 for S00/S0
8US1251-5NT10 for S0

Spring-loaded terminals
8US1251-5DT11 for S00/S0
8US1251-5NT11 for S0

2 connecting wedges
8US1998-1AA10

60 mm device holder
8US1250-5AS10 or
8US1250-5AT10
(according to length of left adapter)

(4) **Contactor**
Size S00/S0
Screw terminals/spring-loaded terminals

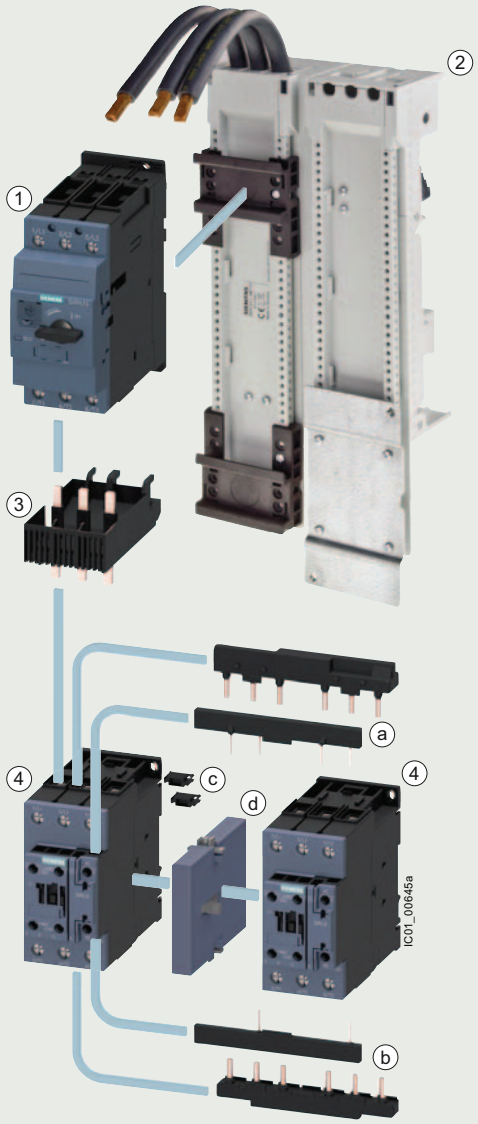
[1)] Contains two 3RA2911-1CA00 spacers for height compensation on AC contactors size S0 with spring-loaded terminals.

[2)] Additionally two 3RA2911-1CA00 spacers for height compensation on AC contactors size S0 with spring-loaded terminals.

3RA22 load feeder for reversing operation and 60 mm busbar
(the version with screw terminals is shown in the illustration)

RS mounting kits for reversing operation and busbar mounting in size S00/S0, see page 8/56.

Reversing operation • For 60 mm busbar systems • Size S2



RS mounting kit for reversing operation and busbar mounting in size S2

3RA2933-1DB1

Consisting of:
- Wiring kit for the main and auxiliary circuits
- Busbar adapter
- Mechanical interlock
- Two connectors for two contactors
- Fixing accessories

(1) **Motor starter protector**
Size S2
Screw terminals

(2) **Busbar adapter 60 mm**
8US1211-6MT10

(3) **Link module**
3RA2931-1AA00
Screw terminals

(4) **Contactor**
Size S2
Screw terminals

Wiring kit
Screw terminals
3RA2933-2AA1

(a) Upper wiring module
(b) Lower wiring module
(c) Two connectors for two contactors
(d) Mechanical interlock
3RA2934-2B (not part of the wiring kit, must be ordered separately)

3RA22 load feeder for reversing operation and 60 mm busbar in size S2 (the version with screw terminals is shown in the illustration)

RS mounting kits for reversing operation and busbar mounting in size S2, see page 8/56.

General data

Article number scheme

Product versions		Article number																
SIRIUS load feeders		**3RA2**	□	□	**0**	**–**	□	□	□	□	□	**–**	□	□	□	□	
Product function	Direct-on-line starter		**1**														for motor standard output 0.06 ... 45 kW
	Reversing starter		**2**														for motor standard output 0.06 ... 45 kW
Size	S00			**1**													
	S0			**2**													
	e.g. 3 = S2			□													at I_q = 100 kA at 400 V
	e.g. 5 = S2			□													at I_q = 150 kA at 400 V
Setting range of the overload release	e.g. 0B = 0.14 ... 0.2 A						□	□									
Assembly, assembly type, connection method	e.g. A = S00, S0, S2								□								Direct mounting, screw terminals
Contactor size, rated power at 400 V AC	e.g. 15 = S00/3 kW									□	□						
Version of auxiliary switches on contactor	e.g. 0 = S0, S2												□				1 NO + 1 NC integrated in contactor
	e.g. 1 = S00												□				1 NO integrated in contactor
	e.g. 2 = S00												□				1 NC integrated in contactor
Solenoid coil operating range (contactor)	e.g. A = S00, S0, S2													□			AC 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$, standard coil without RC circuit
Rated control supply voltage (contactor)	230 V AC														**P**	**0**	50/60 Hz AC for S00, 50 Hz AC for S0 ... S3
	24 V DC														**B**	**4**	
Example		**3RA2**	**1**	**1**	**0**	**–**	**0**	**B**	**A**	**1**	**5**	**–**	**1**	**A**	**P**	**0**	

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

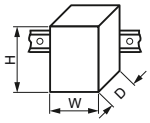
For your orders, please use the article numbers quoted in the selection and ordering data.

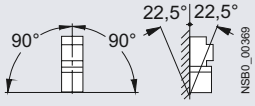
Benefits

- Minimum planning and assembly work and far less wiring with the preassembled complete units (only one article number 3RA2)
- Plug-in connectors available from the motor starter protector to all types of SIRIUS controls, for quicker and error-free assembly of feeders with screw and spring-loaded terminals
- High planning reliability through consistent combination tests for fuseless and fused configuration according to IEC and UL/CSA
- Comprehensive approvals for use world-wide on request, see page 16/9 onwards.
- High operational reliability through short-circuit breaking capacity of 150 kA with type of coordination "1" and "2"
- Uniform accessories for sizes S00, S0, S2 and S3
- Spring-loaded terminals possible throughout: Enhanced operational reliability (vibration-resistant wiring) and less wiring work thanks to plug-in connections (S00 and S0 only)
- Power loss 5 to 10% smaller than for comparable devices, hence lower energy consumption
- Connection of feeders to the control system through standardized system connection (IO-Link), for fast integration in TIA and less wiring work

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RA2	Digital Configuration Manual for load feeders, see https://imp.siemens.com/digital-engineering-manual/dem
Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60284351	Configuration Manual for load feeders, see https://support.industry.siemens.com/cs/ww/en/view/39714188
	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16289/faq

Direct-on-line starters/ reversing starters	Size	Connection method	Mounting	Control voltage	Width W	Height H	Depth D
					mm	mm	mm
Mounting dimensions							
Direct-on-line starters	S00	Screw terminals	DIN rails	AC/DC	45	167	97
3RA21.	3RA211.		Busbar adapters	AC/DC	45	200	155
(Size S3 or larger only available for customer assembly)		Spring-loaded terminals	DIN rails	AC/DC	45	198	97
			Busbar adapters	AC/DC	45	260	155
	S0	Screw terminals	DIN rails	AC	45	193	97
	3RA212.			DC	45	193	107
			Busbar adapters	AC	45	260	155
				DC	45	260	165
		Spring-loaded terminals	DIN rails	AC/DC	45	243	107
			Busbar adapters	AC/DC	45	260	165
	S2	Screw terminals	DIN rails	AC/DC	55	274	150
	3RA213./3RA215.		Busbar adapters	AC/DC	55	350	208
	S3 (customer assembly only)	Screw terminals	DIN-rail adapters	AC/DC	70	333	198
Reversing starters	S00	Screw terminals	DIN rails	AC/DC	90	170	97
3RA22.	3RA221.		Busbar adapters	AC/DC	90	200	155
(Size S2 or larger only available for customer assembly)		Spring-loaded terminals	DIN rails	AC/DC	90	204	97
			Busbar adapters	AC/DC	90	260	155
	S0	Screw terminals	DIN-rail adapters	AC	90	265	120.3
	3RA222.			DC	90	265	130
			Busbar adapters	AC	90	260	155
				DC	90	260	165
		Spring-loaded terminals	DIN-rail adapters	AC/DC	90	270	131
			Busbar adapters	AC/DC	90	260	165
	S2 (customer assembly only)	Screw terminals	DIN rails	AC/DC	120	295	175
			Busbar adapters	AC/DC	120	361	208
	S3 (customer assembly only)	Screw terminals	DIN-rail adapters	AC/DC	150	333	198

Type			3RA2.1	3RA2.2	3RA213, 3RA215	For customer assembly
Size			S00	S0	S2	S3
Number of poles			3	3	3	3
Mechanics and environment						
Permissible ambient temperature						
• During operation		°C	-20 ... +60			
• During storage and transport		°C	-55 ... +80			
Weight		kg	0.6 ... 1.5	0.8 ... 2.3	2.2 ... 2.5	4.0 ... 4.2
Permissible mounting position			 Important: According to DIN 43602, start command "I" at the right or top			
Shock resistance	IEC 60068-2-27	*g*/ms	6/11 (sine pulse)			On request
Degree of protection IP on the front	According to IEC 60529		IP20			
Touch protection on the front	According to IEC 60529		Finger-safe for vertical touching from the front			

General data

Type			**3RA2.1**	**3RA2.2**	**3RA213, 3RA215**	**For customer assembly**
Size			**S00**	**S0**	**S2**	**S3**
Number of poles			**3**	**3**	**3**	**3**
Electrical specifications						
Standards			• IEC 60947-1, EN 60947-1 (VDE 0660 Part 100) • IEC 60947-2, EN 60947-2 (VDE 0660 Part 101) • IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)			
Max. rated current $I_{n\ max}$ (= max. rated operational current I_e)		A	16	32	65	100
Rated operational voltage U_e		V	690			
Rated frequency		Hz	50/60			
Rated insulation voltage U_i (pollution degree 3)		V	690			
Rated impulse withstand voltage U_{imp}		kV	6			
Trip class (Class)	According to IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)		10			
Rated short-circuit current I_q At 50/60 Hz 400 V AC	According to IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)	kA	150		3RA213: 100 3RA215: 150	With 3RV2041: 100 With 3RV2042: 150
Types of coordination	According to IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)		See Selection and ordering data, page 8/24 onwards			
Power loss P_v of all main conducting paths Dependent on rated current I_n (upper setting range)			See technical specifications of the individual devices: • Switching devices – Contactors and contactor assemblies, page 3/25 onwards • Protection equipment → Motor starter protectors/circuit breakers, page 7/16 onwards			
Power consumption of the solenoid coils with contactors			See technical specifications of the contactor, page 3/25 onwards			
Solenoid coil operating range with contactors						
Endurance of the motor starter protector						
• Mechanical endurance		Operating cycles	100 000		Up to 52 A: 50 000	25 000
• Electrical endurance		Operating cycles	100 000		From 59 A: 20 000	25 000
• Max. switching frequency per hour (motor starts)		1/h	15			
Endurance of contactor						
• Mechanical endurance		Operating cycles	30 million	10 million		
• Electrical endurance		Operating cycles	See endurance characteristic curves of the contactors, page 3/26 onwards			
Phase failure sensitivity of the motor starter protector	According to IEC 60947-1, EN 60947-1 (VDE 0660 Part 102)		✓			
Isolating features of the motor starter protector	According to IEC 60947-2, EN 60947-2 (VDE 0660 Part 101)		✓			
Main and EMERGENCY-STOP switch features of the motor starter protector and accessories	According to IEC 60204-1, EN 60204-1 (VDE 0113 Part 1)		✓ (With overvoltage releases of category "1" under conditions of proper use)			
Protective separation between main and auxiliary circuits	According to EN 60947-1, Appendix N	V	Up to 400			
Mirror contacts for contactors Integrated auxiliary switches			✓ According to IEC 60947-4-1, Annex F			

✓ Function available

Conductor cross-sections of main circuit

Type		3RA2.10	3RA2.20	3RA2130-4E..., 3RA2130-4P..., 3RA2130-4U..., 3RA2130-4V...	3RA2130-4W..., 3RA2130-4X..., 3RA2130-4J..., 3RA2130-4K..., 3RA2150	For customer assembly
Size		S00	S0	S2		S3
Connection type		**Screw terminals**				**Screw terminals with box terminal**
Terminal screw		M3, Pozidriv size 2	M4, Pozidriv size 2	M6, Pozidriv size 2		4 mm Allen screw
Operating tool	mm	⌀ 5 ... 6	⌀ 5 ... 6	⌀ 5 ... 6		Allen screw
Prescribed tightening torque	Nm	0.8 ... 1.2	2 ... 2.5	3.0 ... 4.5		4.5 ... 6
Conductor cross-sections (min./max.), one or two conductors can be connected						
• Solid or stranded	mm^2	2 x (0.75 ... 2.5)[1], 2 x (0.5 ... 1.5)[1], only for contactor 2 x 4	2 x (1 ... 2.5)[1], 2 x (2.5 ... 10)[1]	2 x (1 ... 25)[1], 1 x (1 ... 35)[1]	2 x (1 ... 35)[1], 1 x (1 ... 50)[1]	2 x (2.5 ... 16)[1], 2 x (10 ... 50)[1], 1 x (10 ... 70)[1]
• Finely stranded with end sleeve (DIN 46228)	mm^2	2 x (0.5 ... 1.5)[1], 2 x (0.75 ... 2.5)[1]	2 x (1 ... 2.5)[1], 2 x (2.5 ... 6)[1], 1 x 10	2 x (1 ... 16)[1], 1 x (1 ... 25)[1]	2 x (1 ... 25)[1], 1 x (1 ... 35)[1]	2 x (2.5 ...35)[1], 1 x (2.5 ... 50)[1]
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)[1], only for contactor 2 x (18 ... 14)[1], 2 x 12	2 x (16 ... 12)[1], 2 x (14 ... 8)[1]	2 x (18 ... 3)[1], 1 x (18 ... 2)[1]	2 x (18 ... 2)[1], 1 x (18 ... 1)[1]	2 x (10 ... 1/0)[1], 1 x (10... 2/0)[1]
• Flat ribbon cables conductors (number x width x thickness)	mm	--				2 x (6 x 9 x 0.8)
Connection type		**Spring-loaded terminals**				
Operating tool	mm	3.0 x 0.5 and 3.5 x 0.5				
Conductor cross-sections (min./max.), one or two conductors can be connected						
• Solid or stranded	mm^2	2 x (0.5 ... 4)	2 x (1 ... 10)	--		
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)	2 x (1 ... 6)	--		
• Finely stranded with end sleeve (DIN 46228)	mm^2	2 x (0.5 ... 2.5)	2 x (1 ... 6)	--		
• AWG cables, solid or stranded	AWG	2 x (20 ... 12)	2 x (18 ... 8)	--		
Max. outer diameter of the conductor insulation	mm	3.6	3.6	--		

[1] If two different conductor cross-sections are connected to one clamping point, both cross-sections must be in the range specified.

Conductor cross-sections for auxiliary and control circuits

Type		3RA2110 3RA2210	3RA2120 3RA2220	3RA2130 3RA2150	For customer assembly
Size		S00	S0	S2	S3
Connection type		**Screw terminals**			
Terminal screw		M3, Pozidriv size 2			
Operating tool	mm	⌀ 5 ... 6			
Prescribed tightening torque	Nm	0.8 ... 1.2			
Conductor cross-sections (min./max.), one or two conductors can be connected					
• Solid or stranded	mm^2	2 x (0.5 ... 1.5)[1], 2 x (0.75 ... 2.5)[1]			
• Finely stranded with end sleeve (DIN 46228)	mm^2	2 x (0.5 ... 1.5)[1], 2 x (0.75 ... 2.5)[1]			
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)[1], 2 x (20 ... 16)[1], 2 x 12 for contactor S00 only			
Connection type		**Spring-loaded terminals**			
Operating tool	mm	3.0 x 0.5 and 3.5 x 0.5			
Conductor cross-sections (min./max.), one or two conductors can be connected					
• Solid or stranded	mm^2	2 x (0.5 ... 2.5)			
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)			
• Finely stranded with end sleeve (DIN 46228)	mm^2	2 x (0.5 ... 1.5)			
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)			
Max. outer diameter of the conductor insulation	mm	3.6			

[1] If two different conductor cross-sections are connected to one clamping point, both cross-sections must be in the range specified.

3RA21 direct-on-line starters > for DIN-rail mounting or screw fixing *IE3/IE4 ready* AC-3e

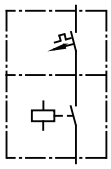
Selection and ordering data


3RA2110


3RA2120


3RA2150

Direct-on-line starting



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0, S2 and S3
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor sizes S0, S2 and S3: 1 NO + 1 NC

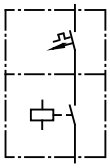
Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA					
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1AP01	1921-1DA00	**3RA2110-0BA15-1AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10			**3RA2110-0CA15-1AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2110-0DA15-1AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2110-0EA15-1AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2110-0FA15-1AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2110-0GA15-1AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2110-0HA15-1AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2110-0JA15-1AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2110-0KA15-1AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2110-1AA15-1AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2110-1BA15-1AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2110-1CA15-1AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2110-1DA15-1AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2110-1EA15-1AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1AP00	2921-1AA00	**3RA2120-1FA24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10			**3RA2120-1GA24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2120-1HA24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2120-1JA24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2120-1KA24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1AP00		**3RA2120-4AA26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1AP00		**3RA2120-4BA27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2120-4CA27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2120-4DA27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2120-4NA27-0AP0**		1	1 unit	41D
	15	29[4)]	27 ... 32	21-4EA10			**3RA2120-4EA27-0AP0**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1AP00	2931-1AA00	**3RA2150-4EA35-0AP0**		1	1 unit	41D
	18.5	35	28 ... 36	32-4PA10			**3RA2150-4PA35-0AP0**		1	1 unit	41D
	18.5	35	32 ... 40	32-4UA10			**3RA2150-4UA35-0AP0**		1	1 unit	41D
	22	41	35 ... 45	32-4VA10	36-1AP00		**3RA2150-4VA36-0AP0**		1	1 unit	41D
	22	41	42 ... 50	32-4WA10			**3RA2150-4WA36-0AP0**		1	1 unit	41D
	30	55	49 ... 59	32-4XA10	37-1AP00		**3RA2150-4XA37-0AP0**		1	1 unit	41D
	30	55	54 ... 65	32-4JA10			**3RA2150-4JA37-0AP0**		1	1 unit	41D
	37[5)]	66	62 ... 75	32-4KA10	38-1AP00		**3RA2150-4KA38-0AP0**		1	1 unit	41D
S3	Size S3 available on request						Size S3 is only available for customer assembly				

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
5) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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


3RA2110

Direct-on-line starting



Rated control supply voltage 50/60 Hz 230 V AC for S00
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches: Contactor size S00: 1 NO

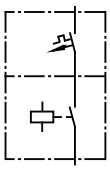
Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**					
S00	Feeders for lower outputs, see table for type of coordination "2" on the previous page.										
	1.5	3.6	3.5 ... 5	11-1FA10	15-1AP01	1921-1DA00	**3RA2110-1FA15-1AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10			**3RA2110-1GA15-1AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2110-1HA15-1AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1AP01		**3RA2110-1JA16-1AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1AP01		**3RA2110-1KA17-1AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1AP01		**3RA2110-4AA18-1AP0**		1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.

3RA21 direct-on-line starters > for DIN-rail mounting or screw fixing *IE3/IE4* ready AC-3e

3RA2130

Direct-on-line starting



Rated control supply voltage
50 Hz 230 V AC for S2 and S3
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor sizes S2 and S3: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	**Comprising the following single devices**			**Fuseless load feeder**		PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ Contactor	+ Link module	**Screw terminals**				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 100 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**					
S2	15	29	22 ... 32	31-4EA10	35-1AP00	2931-1AA00	**3RA2130-4EA35-0AP0**		1	1 unit	41D
	18.5	35	28 ... 36	31-4PA10			**3RA2130-4PA35-0AP0**		1	1 unit	41D
	18.5	35	32 ... 40	31-4UA10			**3RA2130-4UA35-0AP0**		1	1 unit	41D
	22	41	35 ... 45	31-4VA10	36-1AP00		**3RA2130-4VA36-0AP0**		1	1 unit	41D
	22	41	42 ... 50	31-4WA10			**3RA2130-4WA36-0AP0**		1	1 unit	41D
	30	55	49 ... 59	31-4XA10	37-1AP00		**3RA2130-4XA37-0AP0**		1	1 unit	41D
	30	55	54 ... 65	31-4JA10			**3RA2130-4JA37-0AP0**		1	1 unit	41D
	37[4)]	66	62 ... 73	31-4KA10	38-1AP00		**3RA2130-4KA38-0AP0**		1	1 unit	41D
S3	Size S3 available on request						Size S3 is only available for customer assembly				

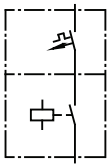
1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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


3RA2110


3RA2120

Direct-on-line starting



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0
With spring-loaded terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor size S0: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ Contactor	+ Link module	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	**3RT20**	**3RA29**	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2AP01	11-2AA00	**3RA2110-0BE15-1AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20			**3RA2110-0CE15-1AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2110-0DE15-1AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2110-0EE15-1AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2110-0FE15-1AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2110-0GE15-1AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2110-0HE15-1AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2110-0JE15-1AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2110-0KE15-1AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2110-1AE15-1AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2110-1BE15-1AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2110-1CE15-1AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2110-1DE15-1AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2110-1EE15-1AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2AP00	21-2AA00	**3RA2120-1FE24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20			**3RA2120-1GE24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2120-1HE24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2120-1JE24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2120-1KE24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2AP00		**3RA2120-4AE26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2AP00		**3RA2120-4BE27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2120-4CE27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2120-4DE27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2120-4NE27-0AP0**		1	1 unit	41D
	15	29[4)]	27 ... 32	21-4EA20			**3RA2120-4EE27-0AP0**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2AP01	11-2AA00	**3RA2110-1FE15-1AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20			**3RA2110-1GE15-1AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2110-1HE15-1AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2AP01		**3RA2110-1JE16-1AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2AP01		**3RA2110-1KE17-1AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2AP01		**3RA2110-4AE18-1AP0**		1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

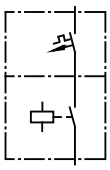
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate


3RA2110


3RA2120


3RA2150

Direct-on-line starting



Rated control supply voltage 24 V DC
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor sizes S0, S2 and S3: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA					
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1BB41	1921-1DA00	**3RA2110-0BA15-1BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10			**3RA2110-0CA15-1BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2110-0DA15-1BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2110-0EA15-1BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2110-0FA15-1BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2110-0GA15-1BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2110-0HA15-1BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2110-0JA15-1BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2110-0KA15-1BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2110-1AA15-1BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2110-1BA15-1BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2110-1CA15-1BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2110-1DA15-1BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2110-1EA15-1BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1BB40	2921-1BA00	**3RA2120-1FA24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10			**3RA2120-1GA24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2120-1HA24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2120-1JA24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2120-1KA24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1BB40		**3RA2120-4AA26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1BB40		**3RA2120-4BA27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2120-4CA27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2120-4DA27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2120-4NA27-0BB4**		1	1 unit	41D
	15	29[4)]	27 ... 32	21-4EA10			**3RA2120-4EA27-0BB4**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1NB30	2931-1AA00	**3RA2150-4EA35-0NB3**		1	1 unit	41D
	18.5	35	28 ... 36	32-4PA10			**3RA2150-4PA35-0NB3**		1	1 unit	41D
	18.5	35	32 ... 40	32-4UA10			**3RA2150-4UA35-0NB3**		1	1 unit	41D
	22	41	35 ... 45	32-4VA10	36-1NB30		**3RA2150-4VA36-0NB3**		1	1 unit	41D
	22	41	42 ... 50	32-4WA10			**3RA2150-4WA36-0NB3**		1	1 unit	41D
	30	55	49 ... 59	32-4XA10	37-1NB30		**3RA2150-4XA37-0NB3**		1	1 unit	41D
	30	55	54 ... 65	32-4JA10			**3RA2150-4JA37-0NB3**		1	1 unit	41D
	37[5)]	66	62 ... 73	32-4KA10	38-1NB30		**3RA2150-4KA38-0NB3**		1	1 unit	41D
S3	Size S3 available on request						Size S3 is only available for customer assembly				

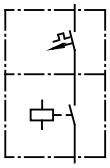
1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
5) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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

AC-3e ***IE3/IE4* ready** **3RA21 direct-on-line starters > for DIN-rail mounting or screw fixing**


3RA2110

Direct-on-line starting



Rated control supply voltage 24 V DC
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	**Comprising the following single devices**			**Fuseless load feeder**		PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ Contactor	+ Link module	**Screw terminals**				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
				3RV20	**3RT20**	**3RA**		ToC 1			
S00	Feeders for lower outputs, see table for type of coordination "2" on the previous page.										
	1.5	3.6	3.5 ... 5	11-1FA10	15-1BB41	1921-1DA00	**3RA2110-1FA15-1BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10			**3RA2110-1GA15-1BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2110-1HA15-1BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1BB41		**3RA2110-1JA16-1BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1BB41		**3RA2110-1KA17-1BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1BB41		**3RA2110-4AA18-1BB4**		1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.

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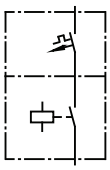
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RA21 direct-on-line starters > for DIN-rail mounting or screw fixing *IE3/IE4* ready AC-3e

3RA2130

Direct-on-line starting



Rated control supply voltage 24 V DC
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor sizes S2 and S3: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ Contactor	+ Link module	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 100 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**		ToC 2			
S2	15	29	22 ... 32	31-4EA10	35-1NB30	2931-1AA00	**3RA2130-4EA35-0NB3**		1	1 unit	41D
	18.5	35	28 ... 36	31-4PA10			**3RA2130-4PA35-0NB3**		1	1 unit	41D
	18.5	35	32 ... 40	31-4UA10			**3RA2130-4UA35-0NB3**		1	1 unit	41D
	22	41	35 ... 45	31-4VA10	36-1NB30		**3RA2130-4VA36-0NB3**		1	1 unit	41D
	22	41	42 ... 50	31-4WA10			**3RA2130-4WA36-0NB3**		1	1 unit	41D
	30	55	49 ... 59	31-4XA10	37-1NB30		**3RA2130-4XA37-0NB3**		1	1 unit	41D
	30	55	54 ... 65	31-4JA10			**3RA2130-4JA37-0NB3**		1	1 unit	41D
	37[4)]	66	62 ... 73	31-4KA10	38-1NB30		**3RA2130-4KA38-0NB3**		1	1 unit	41D
S3	Size S3 available on request						Size S3 is only available for customer assembly				

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

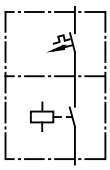
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

AC-3e ***IE3/IE4 ready*** **3RA21 direct-on-line starters > for DIN-rail mounting or screw fixing**


3RA2110


3RA2120

Direct-on-line starting



Rated control supply voltage 24 V DC
With spring-loaded terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor size S0: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	**3RT20**	**3RA29**	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2BB41	11-2AA00	**3RA2110-0BE15-1BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20			**3RA2110-0CE15-1BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2110-0DE15-1BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2110-0EE15-1BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2110-0FE15-1BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2110-0GE15-1BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2110-0HE15-1BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2110-0JE15-1BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2110-0KE15-1BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2110-1AE15-1BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2110-1BE15-1BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2110-1CE15-1BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2110-1DE15-1BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2110-1EE15-1BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2BB40	21-2AA00	**3RA2120-1FE24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20			**3RA2120-1GE24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2120-1HE24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2120-1JE24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2120-1KE24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2BB40		**3RA2120-4AE26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2BB40		**3RA2120-4BE27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2120-4CE27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2120-4DE27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2120-4NE27-0BB4**		1	1 unit	41D
	15	29[4)]	27 ... 32	21-4EA20			**3RA2120-4EE27-0BB4**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2BB41	11-2AA00	**3RA2110-1FE15-1BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20			**3RA2110-1GE15-1BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2110-1HE15-1BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2BB41		**3RA2110-1JE16-1BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2BB41		**3RA2110-1KE17-1BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2BB40		**3RA2110-4AE18-1BB4**		1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

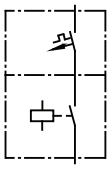
3RA21 direct-on-line starters > for 60 mm busbars *IE3/IE4 ready* AC-3e

Selection and ordering data


3RA2110


3RA2120

Direct-on-line starting



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0 and S2
With screw terminals

- With busbar adapter
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor sizes S0 and S2: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module + Busbar adapter	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1AP01	1921-1DA00	**3RA2110-0BD15-1AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 8US1251-	**3RA2110-0CD15-1AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10		5DS10	**3RA2110-0DD15-1AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2110-0ED15-1AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2110-0FD15-1AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2110-0GD15-1AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2110-0HD15-1AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2110-0JD15-1AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2110-0KD15-1AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2110-1AD15-1AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2110-1BD15-1AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2110-1CD15-1AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2110-1DD15-1AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2110-1ED15-1AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1AP00	2921-1AA00	**3RA2120-1FD24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 8US1251-	**3RA2120-1GD24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10		5DT10	**3RA2120-1HD24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2120-1JD24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2120-1KD24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1AP00	2921-1AA00	**3RA2120-4AD26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1AP00	+ 8US1251-	**3RA2120-4BD27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10		5NT10	**3RA2120-4CD27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2120-4DD27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2120-4ND27-0AP0**		1	1 unit	41D
	15	29[3]	27 ... 32	21-4EA10			**3RA2120-4ED27-0AP0**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1AP00	2931-1AA00	Size S2 is only available for customer assembly.				
	18.5	35	28 ... 36	32-4PA10		+ 8US1261-					
	18.5	35	32 ... 40	32-4UA10		6MT10					
	22	41	35 ... 45	32-4VA10	36-1AP00						
	22	41	42 ... 50	32-4WA10							
	30	55	49 ... 59	32-4XA10	37-1AP00						
	30	55	54 ... 65	32-4JA10							
	37[4]	66	62 ... 73	32-4KA10	38-1AP00						
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA10	15-1AP01	1921-1DA00	**3RA2110-1FD15-1AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 8US1251-	**3RA2110-1GD15-1AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10		5DS10	**3RA2110-1HD15-1AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1AP01		**3RA2110-1JD16-1AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1AP01		**3RA2110-1KD17-1AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1AP01		**3RA2110-4AD18-1AP0**		1	1 unit	41D

[1] Auxiliary switches, see Accessories, page 8/47.

[2] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

[3] Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

[4] Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

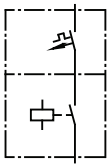
* You can order this quantity or a multiple thereof.
Illustrations are approximate

AC-3e ***IE3/IE4 ready*** **3RA21 direct-on-line starters > for 60 mm busbars**


3RA2110


3RA2120

Direct-on-line starting



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0
With spring-loaded terminals

- With busbar adapter
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor size S0: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module + Busbar adapter	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				**3RV20**	**3RT20**	**3RA29**					
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2AP01	11-2AA00	**3RA2110-0BH15-1AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 8US1251-	**3RA2110-0CH15-1AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20		5DT11	**3RA2110-0DH15-1AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2110-0EH15-1AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2110-0FH15-1AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2110-0GH15-1AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2110-0HH15-1AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2110-0JH15-1AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2110-0KH15-1AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2110-1AH15-1AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2110-1BH15-1AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2110-1CH15-1AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2110-1DH15-1AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2110-1EH15-1AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2AP00	21-2AA00	**3RA2120-1FH24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 8US1251-	**3RA2120-1GH24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20		5NT11[3]	**3RA2120-1HH24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2120-1JH24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2120-1KH24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2AP00		**3RA2120-4AH26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2AP00		**3RA2120-4BH27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2120-4CH27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2120-4DH27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2120-4NH27-0AP0**		1	1 unit	41D
	15	29[4]	27 ... 32	21-4EA20			**3RA2120-4EH27-0AP0**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".										
	1.5	3.6	3.5 ... 5	11-1FA20	15-2AP01	11-2AA00	**3RA2110-1FH15-1AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 8US1251-	**3RA2110-1GH15-1AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20		5DT11	**3RA2110-1HH15-1AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2AP01		**3RA2110-1JH16-1AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2AP01		**3RA2110-1KH17-1AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2AP01		**3RA2110-4AH18-1AP0**		1	1 unit	41D

[1] Auxiliary switches, see Accessories, page 8/47.

[2] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

[3] A 3RA2911-1CA00 spacer for height compensation on AC contactors size S0 with spring-loaded terminals is included in the scope of supply.

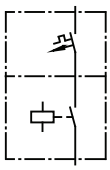
[4] Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

3RA21 direct-on-line starters > for 60 mm busbars *IE3/IE4* ready AC-3e

3RA2110

3RA2120

Direct-on-line starting



Rated control supply voltage 24 V DC
With screw terminals

- With busbar adapter
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor sizes S0 and S2: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ Contactor	+ Link module + Busbar adapter	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1BB41	1921-1DA00	**3RA2110-0BD15-1BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 8US1251-	**3RA2110-0CD15-1BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10		5DS10	**3RA2110-0DD15-1BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2110-0ED15-1BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2110-0FD15-1BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2110-0GD15-1BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2110-0HD15-1BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2110-0JD15-1BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2110-0KD15-1BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2110-1AD15-1BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2110-1BD15-1BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2110-1CD15-1BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2110-1DD15-1BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2110-1ED15-1BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1BB40	2921-1BA00	**3RA2120-1FD24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 8US1251-	**3RA2120-1GD24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10		5DT10	**3RA2120-1HD24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2120-1JD24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2120-1KD24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1BB40	2921-1BA00	**3RA2120-4AD26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1BB40	+ 8US1251-	**3RA2120-4BD27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10		5NT10	**3RA2120-4CD27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2120-4DD27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2120-4ND27-0BB4**		1	1 unit	41D
	15	29[3]	27 ... 32	21-4EA10			**3RA2120-4ED27-0BB4**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1NB30	2931-1AA00	Size S2 is only available for customer assembly.				
	18.5	35	28 ... 36	32-4PA10		+ 8US1261-					
	18.5	35	32 ... 40	32-4UA10		6MT10					
	22	41	35 ... 45	32-4VA10	36-1NB30						
	22	41	42 ... 50	32-4WA10							
	30	55	49 ... 59	32-4XA10	37-1NB30						
	30	55	54 ... 65	32-4JA10							
	37[4]	66	62 ... 73	32-4KA10	38-1NB30						
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA10	15-1BB41	1921-1DA00	**3RA2110-1FD15-1BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 8US1251-	**3RA2110-1GD15-1BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10		5DS10	**3RA2110-1HD15-1BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1BB41		**3RA2110-1JD16-1BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1BB41		**3RA2110-1KD17-1BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1BB41		**3RA2110-4AD18-1BB4**		1	1 unit	41D

[1] Auxiliary switches, see Accessories, page 8/47.

[2] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

[3] Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

[4] Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

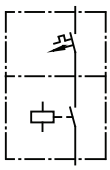
* You can order this quantity or a multiple thereof.
Illustrations are approximate

AC-3e ***IE3/IE4* ready** **3RA21 direct-on-line starters > for 60 mm busbars**


3RA2110


3RA2120

Direct-on-line starting



Rated control supply voltage 24 V DC
With spring-loaded terminals

- With busbar adapter
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- Integrated auxiliary switches:
  Contactor size S00: 1 NO,
  Contactor size S0: 1 NO + 1 NC

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ Contactor	+ Link module + Busbar adapter	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA29	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2BB41	11-2AA00	**3RA2110-0BH15-1BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 8US1251-	**3RA2110-0CH15-1BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20		5DT11	**3RA2110-0DH15-1BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2110-0EH15-1BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2110-0FH15-1BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2110-0GH15-1BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2110-0HH15-1BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2110-0JH15-1BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2110-0KH15-1BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2110-1AH15-1BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2110-1BH15-1BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2110-1CH15-1BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2110-1DH15-1BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2110-1EH15-1BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2BB40	21-2AA00	**3RA2120-1FH24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 8US1251-	**3RA2120-1GH24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20		5NT11	**3RA2120-1HH24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2120-1JH24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2120-1KH24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2BB40		**3RA2120-4AH26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2BB40		**3RA2120-4BH27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2120-4CH27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2120-4DH27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2120-4NH27-0BB4**		1	1 unit	41D
	15	29[3]	27 ... 32	21-4EA20			**3RA2120-4EH27-0BB4**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2BB41	11-2AA00	**3RA2110-1FH15-1BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 8US1251-	**3RA2110-1GH15-1BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20		5DT11	**3RA2110-1HH15-1BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2BB41		**3RA2110-1JH16-1BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2BB41		**3RA2110-1KH17-1BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2BB40		**3RA2110-4AH18-1BB4**		1	1 unit	41D

[1] Auxiliary switches, see Accessories, page 8/47.

[2] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

[3] Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

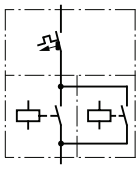
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

Selection and ordering data

3RA2210

3RA2220

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0, S2 and S3
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- With 2 DIN-rail adapters for size S0 for mechanical reinforcement (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With contactor sizes S0, S2 and S3, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RH mounting kit[4)]/Wiring kit	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA					
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1AP02	1921-1DA00	**3RA2210-0BA15-2AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 2913-2AA1	**3RA2210-0CA15-2AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2210-0DA15-2AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2210-0EA15-2AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2210-0FA15-2AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2210-0GA15-2AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2210-0HA15-2AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2210-0JA15-2AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2210-0KA15-2AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2210-1AA15-2AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2210-1BA15-2AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2210-1CA15-2AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2210-1DA15-2AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2210-1EA15-2AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1AP00	2921-1AA00	**3RA2220-1FB24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2923-1BB1	**3RA2220-1GB24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2220-1HB24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2220-1JB24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2220-1KB24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1AP00		**3RA2220-4AB26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1AP00		**3RA2220-4BB27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2220-4CB27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2220-4DB27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2220-4NB27-0AP0**		1	1 unit	41D
	15	29[5)]	27 ... 32	21-4EA10			**3RA2220-4EB27-0AP0**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1AP00	2931-1AA00	Size S2 is only available for customer assembly.				
	18.5	35	28 ... 36	32-4PA10		+ 2933-1BB1					
	18.5	35	32 ... 40	32-4UA10							
	22	41	35 ... 45	32-4VA10	36-1AP00						
	22	41	42 ... 50	32-4WA10							
	30	55	49 ... 59	32-4XA10	37-1AP00						
	30	55	54 ... 65	32-4JA10							
	37[6)]	66	62 ... 73	32-4KA10	38-1AP00						
S3	Size S3 available on request						Size S3 is only available for customer assembly.				

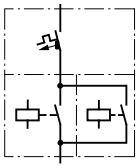
1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) RH = Mounting kit for reversing operation and DIN-rail mounting in sizes S0 and S2.
5) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
6) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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

AC-3e ***IE3/IE4* ready** **3RA22 reversing starters > for DIN-rail mounting or screw fixing**


3RA2210

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RH mounting kit[4)]/Wiring kit	Screw terminals			
							Article No.			
	kW	A	A							
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**				
S00	Feeders for lower outputs, see table for type of coordination "2" on the previous page.									
	1.5	3.6	3.5 ... 5	11-1FA10	15-1AP02	1921-1DA00	**3RA2210-1FA15-2AP0**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2913-2AA1	**3RA2210-1GA15-2AP0**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2210-1HA15-2AP0**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1AP02		**3RA2210-1JA16-2AP0**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1AP02		**3RA2210-1KA17-2AP0**	1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1AP02		**3RA2210-4AA18-2AP0**	1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) RH = Mounting kit for reversing operation and DIN-rail mounting in sizes S0 and S2.

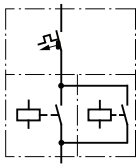
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RA22 reversing starters > for DIN-rail mounting or screw fixing *IE3/IE4* ready AC-3e


3RA2210


3RA2220

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0
With spring-loaded terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- With two DIN-rail adapters for size S0 for mechanical reinforcement (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With the contactor S0, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RH mounting kit[4)]/Wiring kit	Spring-loaded terminals			
							Article No.	Basic price per PU		
	kW	A	A							
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")										
				3RV20	3RT20	3RA29	ToC 2			
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2AP02	11-2AA00	**3RA2210-0BE15-2AP0**	1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 2913-2AA2	**3RA2210-0CE15-2AP0**	1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2210-0DE15-2AP0**	1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2210-0EE15-2AP0**	1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2210-0FE15-2AP0**	1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2210-0GE15-2AP0**	1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2210-0HE15-2AP0**	1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2210-0JE15-2AP0**	1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2210-0KE15-2AP0**	1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2210-1AE15-2AP0**	1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2210-1BE15-2AP0**	1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2210-1CE15-2AP0**	1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2210-1DE15-2AP0**	1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2210-1EE15-2AP0**	1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2AP00	21-2AA00	**3RA2220-1FF24-0AP0**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 2923-1BB2[5)]	**3RA2220-1GF24-0AP0**	1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2220-1HF24-0AP0**	1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2220-1JF24-0AP0**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2220-1KF24-0AP0**	1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2AP00		**3RA2220-4AF26-0AP0**	1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2AP00		**3RA2220-4BF27-0AP0**	1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2220-4CF27-0AP0**	1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2220-4DF27-0AP0**	1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2220-4NF27-0AP0**	1	1 unit	41D
	15	29[6)]	27 ... 32	21-4EA20			**3RA2220-4EF27-0AP0**	1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")										
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1			
	1.5	3.6	3.5 ... 5	11-1FA20	15-2AP02	11-2AA00	**3RA2210-1FE15-2AP0**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 2913-2AA2	**3RA2210-1GE15-2AP0**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2210-1HE15-2AP0**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2AP02		**3RA2210-1JE16-2AP0**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2AP02		**3RA2210-1KE17-2AP0**	1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2AP02		**3RA2210-4AE18-2AP0**	1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) RH = Mounting kit for reversing operation and DIN-rail mounting in size S0.
5) The RH mounting kit also includes the 3RA2911-1CA00 spacer for height compensation on AC contactors size S0 with spring-loaded terminals.
6) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

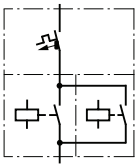
* You can order this quantity or a multiple thereof.
Illustrations are approximate

AC-3e ***IE3/IE4* ready** **3RA22 reversing starters > for DIN-rail mounting or screw fixing**


3RA2210


3RA2220

Reversing operation



Rated control supply voltage 24 V DC
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- With two DIN-rail adapters for size S0 for mechanical reinforcement (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With contactor sizes S0, S2 and S3, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RH mounting kit[4)]/Wiring kit	Screw terminals			
							Article No.			
	kW	A	A							
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA				
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1BB42	1921-1DA00	**3RA2210-0BA15-2BB4**	1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 2913-2AA1	**3RA2210-0CA15-2BB4**	1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2210-0DA15-2BB4**	1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2210-0EA15-2BB4**	1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2210-0FA15-2BB4**	1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2210-0GA15-2BB4**	1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2210-0HA15-2BB4**	1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2210-0JA15-2BB4**	1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2210-0KA15-2BB4**	1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2210-1AA15-2BB4**	1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2210-1BA15-2BB4**	1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2210-1CA15-2BB4**	1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2210-1DA15-2BB4**	1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2210-1EA15-2BB4**	1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1BB40	2921-1BA00	**3RA2220-1FB24-0BB4**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2923-1BB1	**3RA2220-1GB24-0BB4**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2220-1HB24-0BB4**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2220-1JB24-0BB4**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2220-1KB24-0BB4**	1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1BB40		**3RA2220-4AB26-0BB4**	1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1BB40		**3RA2220-4BB27-0BB4**	1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2220-4CB27-0BB4**	1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2220-4DB27-0BB4**	1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2220-4NB27-0BB4**	1	1 unit	41D
	15	29[5)]	27 ... 32	21-4EA10			**3RA2220-4EB27-0BB4**	1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1NB30	2931-1AA00	Size S2 is only available for customer assembly.			
	18.5	35	28 ... 36	32-4PA10		+ 2933-1BB1				
	18.5	35	32 ... 40	32-4UA10						
	22	41	35 ... 45	32-4VA10	36-1NB30					
	22	41	42 ... 50	32-4WA10						
	30	55	49 ... 59	32-4XA10	37-1NB30					
	30	55	54 ... 65	32-4JA10						
	37[6)]	66	62 ... 73	32-4KA10	38-1NB30					
S3	Size S3 available on request						Size S3 is only available for customer assembly.			

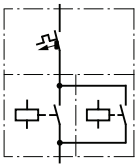
1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) RH = Mounting kit for reversing operation and DIN-rail mounting in sizes S0 and S2.
5) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
6) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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

3RA22 reversing starters > for DIN-rail mounting or screw fixing *IE3/IE4* ready AC-3e

3RA2210

Reversing operation



Rated control supply voltage 24 V DC
With screw terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + Wiring kit	Screw terminals			
							Article No.			Basic price per PU
	kW	A	A							
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**	ToC 1			
S00	Feeders for lower outputs, see table for type of coordination "2" on the previous page.									
	1.5	3.6	3.5 ... 5	11-1FA10	15-1BB42	1921-1DA00	**3RA2210-1FA15-2BB4**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2913-2AA1	**3RA2210-1GA15-2BB4**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2210-1HA15-2BB4**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1BB42		**3RA2210-1JA16-2BB4**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1BB42		**3RA2210-1KA17-2BB4**	1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1BB42		**3RA2210-4AA18-2BB4**	1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.

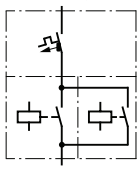
* You can order this quantity or a multiple thereof.
Illustrations are approximate

AC-3e ***IE3/IE4* ready** **3RA22 reversing starters > for DIN-rail mounting or screw fixing**


3RA2210


3RA2220

Reversing operation



Rated control supply voltage 24 V DC
With spring-loaded terminals

- Screw fixing with two push-in lugs per load feeder possible[1)]
- Without DIN-rail adapter for size S00
- With two DIN-rail adapters for size S0 for mechanical reinforcement (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[2)] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With the contactor S0, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[3)]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RH mounting kit[4)]/Wiring kit	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA29	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2BB42	11-2AA00	**3RA2210-0BE15-2BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 2913-2AA2	**3RA2210-0CE15-2BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2210-0DE15-2BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2210-0EE15-2BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2210-0FE15-2BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2210-0GE15-2BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2210-0HE15-2BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2210-0JE15-2BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2210-0KE15-2BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2210-1AE15-2BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2210-1BE15-2BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2210-1CE15-2BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2210-1DE15-2BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2210-1EE15-2BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2BB40	21-2AA00	**3RA2220-1FF24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 2923-1BB2	**3RA2220-1GF24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2220-1HF24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2220-1JF24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2220-1KF24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2BB40		**3RA2220-4AF26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2BB40		**3RA2220-4BF27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2220-4CF27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2220-4DF27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2220-4NF27-0BB4**		1	1 unit	41D
	15	29[5)]	27 ... 32	21-4EA20			**3RA2220-4EF27-0BB4**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2BB42	11-2AA00	**3RA2210-1FE15-2BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 2913-2AA2	**3RA2210-1GE15-2BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2210-1HE15-2BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2BB42		**3RA2210-1JE16-2BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2BB42		**3RA2210-1KE17-2BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2BB42		**3RA2210-4AE18-2BB4**		1	1 unit	41D

1) Push-in lugs, see Accessories, page 8/54.
2) Auxiliary switches, see Accessories, page 8/47.
3) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
4) RH = Mounting kit for reversing operation and DIN-rail mounting in size S0.
5) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

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

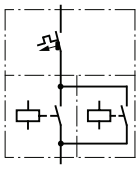
3RA22 reversing starters > for 60 mm busbars *IE3/IE4* ready AC-3e

Selection and ordering data


3RA2210


3RA2220

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0 and S2
With screw terminals

- With busbar adapter and device holder (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With contactor sizes S0 and S2, an integrated NO contact is still available for free use.

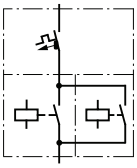
Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RS mounting kit[3]/Wiring kit	Screw terminals			
							Article No.	Basic price per PU		
	kW	A	A							
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA	ToC 2			
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1AP02	1921-1DA00	**3RA2210-0BD15-2AP0**	1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 2913-1DB1	**3RA2210-0CD15-2AP0**	1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2210-0DD15-2AP0**	1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2210-0ED15-2AP0**	1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2210-0FD15-2AP0**	1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2210-0GD15-2AP0**	1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2210-0HD15-2AP0**	1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2210-0JD15-2AP0**	1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2210-0KD15-2AP0**	1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2210-1AD15-2AP0**	1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2210-1BD15-2AP0**	1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2210-1CD15-2AP0**	1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2210-1DD15-2AP0**	1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2210-1ED15-2AP0**	1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1AP00	2921-1AA00	**3RA2220-1FD24-0AP0**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2923-1DB1	**3RA2220-1GD24-0AP0**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2220-1HD24-0AP0**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2220-1JD24-0AP0**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2220-1KD24-0AP0**	1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1AP00		**3RA2220-4AD26-0AP0**	1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1AP00		**3RA2220-4BD27-0AP0**	1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2220-4CD27-0AP0**	1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2220-4DD27-0AP0**	1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2220-4ND27-0AP0**	1	1 unit	41D
	15	29[4]	27 ... 32	21-4EA10			**3RA2220-4ED27-0AP0**	1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1AP00	2931-1AA00	Size S2 is only available for customer assembly.			
	18.5	35	28 ... 36	32-4PA10		+ 2933-1DB1				
	18.5	35	32 ... 40	32-4UA10						
	22	41	35 ... 45	32-4VA10	36-1AP00					
	22	41	42 ... 50	32-4WA10						
	30	55	49 ... 59	32-4XA10	37-1AP00					
	30	55	54 ... 65	32-4JA10						
	37[5]	66	62 ... 73	32-4KA10	38-1AP00					

1) Auxiliary switches, see Accessories, page 8/47.
2) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
3) RS = Mounting kit for reversing operation and busbar mounting.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
5) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

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

3RA2210

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00
With screw terminals

- With busbar adapter and device holder (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder	PU (UNIT, SET, M)	PS*	PG
	Standard output *P*	Motor current *I* (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RS mounting kit[3]/Wiring kit	Screw terminals			
							Article No.			
	kW	A	A							
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")				**3RV20**	**3RT20**	**3RA**	ToC 1			
S00	Feeders for lower outputs, see table for type of coordination "2" on the previous page.									
	1.5	3.6	3.5 ... 5	11-1FA10	15-1AP02	1921-1DA00	**3RA2210-1FD15-2AP0**	1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2913-1DB1	**3RA2210-1GD15-2AP0**	1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2210-1HD15-2AP0**	1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1AP02		**3RA2210-1JD16-2AP0**	1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1AP02		**3RA2210-1KD17-2AP0**	1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1AP02		**3RA2210-4AD18-2AP0**	1	1 unit	41D

1) Auxiliary switches, see Accessories, page 8/47.
2) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
3) RS = Mounting kit for reversing operation and busbar mounting.

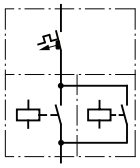
8

3RA22 reversing starters > for 60 mm busbars *IE3/IE4 ready* AC-3e

3RA2210

3RA2220

Reversing operation



Rated control supply voltage
50/60 Hz 230 V AC for S00, 50 Hz 230 V AC for S0
With spring-loaded terminals

- With busbar adapter and device holder (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With the contactor S0, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RS mounting kit[3]/Wiring kit	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA29	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2AP02	11-2AA00	**3RA2210-0BH15-2AP0**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 13-1DB2	**3RA2210-0CH15-2AP0**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2210-0DH15-2AP0**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2210-0EH15-2AP0**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2210-0FH15-2AP0**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2210-0GH15-2AP0**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2210-0HH15-2AP0**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2210-0JH15-2AP0**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2210-0KH15-2AP0**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2210-1AH15-2AP0**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2210-1BH15-2AP0**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2210-1CH15-2AP0**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2210-1DH15-2AP0**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2210-1EH15-2AP0**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2AP00	21-2AA00	**3RA2220-1FH24-0AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 23-1DB2[4]	**3RA2220-1GH24-0AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2220-1HH24-0AP0**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2220-1JH24-0AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2220-1KH24-0AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2AP00		**3RA2220-4AH26-0AP0**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2AP00		**3RA2220-4BH27-0AP0**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2220-4CH27-0AP0**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2220-4DH27-0AP0**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2220-4NH27-0AP0**		1	1 unit	41D
	15	29[5]	27 ... 32	21-4EA20			**3RA2220-4EH27-0AP0**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2AP02	11-2AA00	**3RA2210-1FH15-2AP0**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 13-1DB2	**3RA2210-1GH15-2AP0**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2210-1HH15-2AP0**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2AP02		**3RA2210-1JH16-2AP0**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2AP02		**3RA2210-1KH17-2AP0**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2AP02		**3RA2210-4AH18-2AP0**		1	1 unit	41D

1) Auxiliary switches, see Accessories, page 8/47.

2) The actual starting and rated data of the motor to be protected must be considered when selecting the units.

3) RS = Mounting kit for reversing operation and busbar mounting.

4) The RS mounting kit also includes the 3RA2911-1CA00 spacer for height compensation on AC contactors size S0 with spring-loaded terminals.

5) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

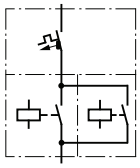
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

AC-3e ***IE3/IE4* ready** **3RA22 reversing starters > for 60 mm busbars**


3RA2210


3RA2220

Reversing operation



Rated control supply voltage 24 V DC
With screw terminals

- With busbar adapter and device holder (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With contactor sizes S0 and S2, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RS mounting kit[3]/Wiring kit	Screw terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")				3RV20	3RT20	3RA	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA10	15-1BB42	1921-1DA00	**3RA2210-0BD15-2BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA10		+ 2913-1DB1	**3RA2210-0CD15-2BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA10			**3RA2210-0DD15-2BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA10			**3RA2210-0ED15-2BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA10			**3RA2210-0FD15-2BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA10			**3RA2210-0GD15-2BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA10			**3RA2210-0HD15-2BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA10			**3RA2210-0JD15-2BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA10			**3RA2210-0KD15-2BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA10			**3RA2210-1AD15-2BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA10			**3RA2210-1BD15-2BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA10			**3RA2210-1CD15-2BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA10			**3RA2210-1DD15-2BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA10			**3RA2210-1ED15-2BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	11-1FA10	24-1BB40	2921-1BA00	**3RA2220-1FD24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2923-1DB1	**3RA2220-1GD24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2220-1HD24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10			**3RA2220-1JD24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10			**3RA2220-1KD24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA10	26-1BB40		**3RA2220-4AD26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA10	27-1BB40		**3RA2220-4BD27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA10			**3RA2220-4CD27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA10			**3RA2220-4DD27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA10			**3RA2220-4ND27-0BB4**		1	1 unit	41D
	15	29[4]	27 ... 32	21-4EA10			**3RA2220-4ED27-0BB4**		1	1 unit	41D
S2	15	29	22 ... 32	32-4EA10	35-1NB30	2931-1AA00	Size S2 is only available for customer assembly.				
	18.5	35	28 ... 36	32-4PA10		+ 2933-1DB1					
	18.5	35	32 ... 40	32-4UA10							
	22	41	35 ... 45	32-4VA10	36-1NB30						
	22	41	42 ... 50	32-4WA10							
	30	55	49 ... 59	32-4XA10	37-1NB30						
	30	55	54 ... 65	32-4JA10							
	37[5]	66	62 ... 73	32-4KA10	38-1NB30						
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA10	15-1BB42	1921-1DA00	**3RA2210-1FD15-2BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA10		+ 2913-1DB1	**3RA2210-1GD15-2BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA10			**3RA2210-1HD15-2BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA10	16-1BB42		**3RA2210-1JD16-2BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA10	17-1BB42		**3RA2210-1KD17-2BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA10	18-1BB42		**3RA2210-4AD18-2BB4**		1	1 unit	41D

1) Auxiliary switches, see Accessories, page 8/47.
2) The actual starting and rated data of the motor to be protected must be considered when selecting the units.
3) RS = Mounting kit for reversing operation and busbar mounting.
4) Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.
5) Maximum permissible current setting at motor starter protector 65 A, as the maximum permissible current of the 3RA2931-1AA00 link module is 65 A.

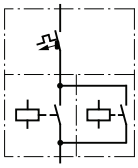
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RA22 reversing starters > for 60 mm busbars IE3/IE4 ready AC-3e

3RA2210

3RA2220

Reversing operation



Rated control supply voltage 24 V DC
With spring-loaded terminals

- With busbar adapter and device holder (included in the scope of supply)
- The motor starter protector and contactor are mechanically and electrically connected by means of the link module.
- Auxiliary switches[1] can easily be fitted on the motor starter protector and the contactor thanks to the modular system.
- With the contactor S0, an integrated NO contact is still available for free use.

Size	Standard three-phase motor 4-pole at 400 V AC[2]		Adjustable current response value of the inverse-time delayed overload release	Comprising the following single devices			Fuseless load feeder		PU (UNIT, SET, M)	PS*	PG
	Standard output P	Motor current I (guide value)		Motor starter protector	+ 2 contactors	+ Link module + RS mounting kit[3]/Wiring kit	Spring-loaded terminals				
							Article No.	Basic price per PU			
	kW	A	A								
Type of coordination "2" at I_q = 150 kA at 400 V (also compatible with type of coordination "1")											
				3RV20	3RT20	3RA29	ToC 2				
S00	0.06	0.2	0.14 ... 0.2	11-0BA20	15-2BB42	11-2AA00	**3RA2210-0BH15-2BB4**		1	1 unit	41D
	0.06	0.2	0.18 ... 0.25	11-0CA20		+ 13-1DB2	**3RA2210-0CH15-2BB4**		1	1 unit	41D
	0.09	0.3	0.22 ... 0.32	11-0DA20			**3RA2210-0DH15-2BB4**		1	1 unit	41D
	0.09	0.3	0.28 ... 0.4	11-0EA20			**3RA2210-0EH15-2BB4**		1	1 unit	41D
	0.12	0.4	0.35 ... 0.5	11-0FA20			**3RA2210-0FH15-2BB4**		1	1 unit	41D
	0.18	0.6	0.45 ... 0.63	11-0GA20			**3RA2210-0GH15-2BB4**		1	1 unit	41D
	0.18	0.6	0.55 ... 0.8	11-0HA20			**3RA2210-0HH15-2BB4**		1	1 unit	41D
	0.25	0.85	0.7 ... 1	11-0JA20			**3RA2210-0JH15-2BB4**		1	1 unit	41D
	0.37	1.1	0.9 ... 1.25	11-0KA20			**3RA2210-0KH15-2BB4**		1	1 unit	41D
	0.55	1.5	1.1 ... 1.6	11-1AA20			**3RA2210-1AH15-2BB4**		1	1 unit	41D
	0.75	1.9	1.4 ... 2	11-1BA20			**3RA2210-1BH15-2BB4**		1	1 unit	41D
	0.75	1.9	1.8 ... 2.5	11-1CA20			**3RA2210-1CH15-2BB4**		1	1 unit	41D
	1.1	2.7	2.2 ... 3.2	11-1DA20			**3RA2210-1DH15-2BB4**		1	1 unit	41D
	1.5	3.6	2.8 ... 4	11-1EA20			**3RA2210-1EH15-2BB4**		1	1 unit	41D
S0	1.5	3.6	3.5 ... 5	21-1FA20	24-2BB40	21-2AA00	**3RA2220-1FH24-0BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	21-1GA20		+ 23-1DB2	**3RA2220-1GH24-0BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	21-1HA20			**3RA2220-1HH24-0BB4**		1	1 unit	41D
	4	8.5	7 ... 10	21-1JA20			**3RA2220-1JH24-0BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	21-1KA20			**3RA2220-1KH24-0BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	21-4AA20	26-2BB40		**3RA2220-4AH26-0BB4**		1	1 unit	41D
	7.5	15.5	13 ... 20	21-4BA20	27-2BB40		**3RA2220-4BH27-0BB4**		1	1 unit	41D
	11	22	16 ... 22	21-4CA20			**3RA2220-4CH27-0BB4**		1	1 unit	41D
	11	22	18 ... 25	21-4DA20			**3RA2220-4DH27-0BB4**		1	1 unit	41D
	15	28	23 ... 28	21-4NA20			**3RA2220-4NH27-0BB4**		1	1 unit	41D
	15	29[4]	27 ... 32	21-4EA20			**3RA2220-4EH27-0BB4**		1	1 unit	41D
Type of coordination "1" at I_q = 150 kA at 400 V (motor starter protector is compatible with type of coordination "2")											
S00	Feeders for lower outputs, see table for type of coordination "2".						ToC 1				
	1.5	3.6	3.5 ... 5	11-1FA20	15-2BB42	11-2AA00	**3RA2210-1FH15-2BB4**		1	1 unit	41D
	2.2	4.9	4.5 ... 6.3	11-1GA20		+ 13-1DB2	**3RA2210-1GH15-2BB4**		1	1 unit	41D
	3	6.5	5.5 ... 8	11-1HA20			**3RA2210-1HH15-2BB4**		1	1 unit	41D
	4	8.5	7 ... 10	11-1JA20	16-2BB42		**3RA2210-1JH16-2BB4**		1	1 unit	41D
	5.5	11.5	9 ... 12.5	11-1KA20	17-2BB42		**3RA2210-1KH17-2BB4**		1	1 unit	41D
	7.5	15.5	10 ... 16	11-4AA20	18-2BB42		**3RA2210-4AH18-2BB4**		1	1 unit	41D

[1] Auxiliary switches, see Accessories, page 8/47.

[2] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

[3] RS = Mounting kit for reversing operation and busbar mounting.

[4] Suitable for use with IE3 and IE4 motors up to a starting current of 256 A. For higher starting currents we recommend using size S2.

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

Overview

The accessories listed here are parts and add-ons for the 3RA2 direct-on-line and reversing starters as well as components for the customer assembly of fuseless load feeders.

Selection and ordering data

Accessories for motor starter protectors

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


3RV2901-1E


3RV2901-2E


3RV2901-1A


3RV2901-2A

Version	For motor starter protectors	Screw terminals		Spring-loaded terminals	
		Article No.	Price per PU	Article No.	Price per PU
	Size				
Auxiliary switches[1]					
Transverse auxiliary switches For mounting on the front					
1 CO	S00 ... S3	**3RV2901-1D**		**--**	
1 NO + 1 NC		**3RV2901-1E**		**3RV2901-2E**	
2 NO		**3RV2901-1F**		**3RV2901-2F**	
Lateral auxiliary switches For mounting on the left					
1 NO + 1 NC	S00 ... S3	**3RV2901-1A**		**3RV2901-2A**	

1) Each motor starter protector can be fitted with one transverse and one lateral auxiliary switch. The lateral auxiliary switch with 2 NO + 2 NC is used without a transverse auxiliary switch.

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


3RV2902-1A..


3RV2902-2A..

Rated control supply voltage U_s				For motor starter protectors	Screw terminals		Spring-loaded terminals	
AC 50 Hz	AC 60 Hz	AC 50/60 Hz 100% OP[1]	AC/DC 50/60 Hz, DC 5 s OP[2]		Article No.	Price per PU	Article No.	Price per PU
V	V	V	V	Size				
Auxiliary releases for motor starter protectors[3]								
Undervoltage releases								
230	240	--	--	S00 ... S3	**3RV2902-1AP0**		**3RV2902-2AP0**	
Shunt releases								
--	--	210 ... 240	190 ... 330	S00 ... S3	**3RV2902-1DP0**		**3RV2902-2DP0**	

1) The voltage range is valid for 100% (infinite) ON period. The response voltage lies at 0.9 of the lower limit of the voltage range.
2) The voltage range is valid for 5 s ON period at 50/60 Hz AC and DC. The response voltage lies at 0.85 of the lower limit of the voltage range.
3) One auxiliary release can be mounted on the right per motor starter protector (does not apply to 3RV21 motor starter protectors with overload relay function).

For the complete range of accessories for the motor starter protectors, see page 7/45 onwards.

Accessories

Accessories for contactors

	For contactors Size	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Auxiliary switches for snapping onto the front of contactors							
			Screw terminals				
 3RH2911-1BA..		Cable entry from below					
	S00 ... S3	1-pole					
		- 1 NO	**3RH2911-1BA10**		1	1 unit	41B
		- 1 NC	**3RH2911-1BA01**		1	1 unit	41B
 3RH2911-1MA..	S00 ... S3	2-pole					
		- 1 NO + 1 NC	**3RH2911-1MA11**		1	1 unit	41B
		- 2 NO	**3RH2911-1MA20**		1	1 unit	41B
Auxiliary switches for contactors, for lateral mounting							
			Screw terminals				
 3RH2911-1DA..	S00	2 NC	**3RH2911-1DA02**		1	1 unit	41B
	S00	1 NO + 1 NC	**3RH2911-1DA11**		1	1 unit	41B
	S00	2 NO	**3RH2911-1DA20**		1	1 unit	41B
	S0/S3	2 NC	**3RH2921-1DA02**		1	1 unit	41B
	S0/S3	1 NO + 1 NC	**3RH2921-1DA11**		1	1 unit	41B
	S0/S3	2 NO	**3RH2921-1DA20**		1	1 unit	41B
			Spring-loaded terminals				
 3RH2911-2DA..	S00	2 NC	**3RH2911-2DA02**		1	1 unit	41B
	S00	1 NO + 1 NC	**3RH2911-2DA11**		1	1 unit	41B
	S00	2 NO	**3RH2911-2DA20**		1	1 unit	41B
	S0/S3	2 NC	**3RH2921-2DA02**		1	1 unit	41B
	S0/S3	1 NO + 1 NC	**3RH2921-2DA11**		1	1 unit	41B
	S0/S3	2 NO	**3RH2921-2DA20**		1	1 unit	41B
Motor feeder connectors for contactors with screw terminals (can only be used for direct-on-line starters)							
			Screw terminals				
 3RT1900-4RE01		**Motor feeder connector**					
	S00, S0	--	**3RT1900-4RE01**		1	1 unit	41B
 3RT1926-4RD01		**Adapters (essential accessories for motor feeder connector)** Ambient temperature $t_{u\,max.}$ = 60 °C					
	S00	Rated operational current I_e at AC-3 and AC-3e/400 V: 20 A	**3RT1916-4RD01**		1	1 unit	41B
	S0	Rated operational current I_e at AC-3 and AC-3e/400 V: 25 A	**3RT1926-4RD01**		1	1 unit	41B

For the complete range of accessories for the 3RT contactors, see page 3/66 onwards.

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

For contactors	Version	Rated control supply voltage U_c [1]		Article No. [2]	Price per PU	PU (UNIT, SET, M)	PS*	PG
		AC operation	DC operation					
Type		V AC	V DC					
Surge suppressors without LED for contactors (also for spring-loaded terminals)								
Size S00								
For plugging onto the front side of the contactors (with or without auxiliary switches)								
3RT2.1	**Varistors**	24 ... 48	24 ... 70	**3RT2916-1BB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2916-1BD00**		1	1 unit	41B
3RT2.1	**RC elements**	24 ... 48	24 ... 70	**3RT2916-1CB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2916-1CD00**		1	1 unit	41B
3RT2.1	**Interference suppression diode**	--	12 ... 250	**3RT2916-1DG00**		1	1 unit	41B
3RT2.1	**Diode assemblies** (diode and Zener diode) for DC operation	--	12 ... 250	**3RT2916-1EH00**		1	1 unit	41B
Size S0								
For plugging into the front side of the contactors (before installing the auxiliary switch)								
3RT2.2	**Varistors** [2]	24 ... 48	24 ... 70	**3RT2926-1BB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2926-1BD00**		1	1 unit	41B
3RT2.2	**RC elements**	24 ... 48	24 ... 70	**3RT2926-1CB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2926-1CD00**		1	1 unit	41B
3RT2.2	**Diode assemblies** for DC operation	--	24	**3RT2926-1ER00**		1	1 unit	41B
		--	30 ... 250	**3RT2926-1ES00**		1	1 unit	41B
Size S2								
For plugging into the front side of the contactors (before installing the auxiliary switch)								
3RT2.3	**Varistors** [2]	24 ... 48	24 ... 70	**3RT2936-1BB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2936-1BD00**		1	1 unit	41B
3RT2.3	**RC elements**	24 ... 48	24 ... 70	**3RT2936-1CB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2936-1CD00**		1	1 unit	41B
3RT2.3	**Diode assemblies** for DC operation	--	24	**3RT2936-1ER00**		1	1 unit	41B
		--	30 ... 250	**3RT2936-1ES00**		1	1 unit	41B
Size S3								
For plugging into the front side of the contactors (before installing the auxiliary switch)								
3RT2.4	**Varistors** [2]	24 ... 48	24 ... 70	**3RT2936-1BB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2936-1BD00**		1	1 unit	41B
3RT2.4	**Diode assemblies** for DC operation	--	24	**3RT2936-1ER00**		1	1 unit	41B
		--	30 ... 250	**3RT2936-1ES00**		1	1 unit	41B
For plugging into the two recesses on the left of the connection block for auxiliary switches and coils A1 and A2. The connecting cables are wired to A1 and A2, see also page 3/11.								
3RT2.4	**RC elements**	24 ... 48	24 ... 70	**3RT2946-1CB00**		1	1 unit	41B
		127 ... 240	150 ... 250	**3RT2946-1CD00**		1	1 unit	41B


3RT2916-1B.00


3RT2926-1E.00


3RT2936-1B.00


3RT2936-1E.00


3RT2946-1C.00

[1] Can be used for AC operation for 50/60 Hz.
Other voltages on request.

[2] The varistor is already integrated on the DC and AC/DC contactors.

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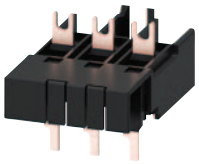
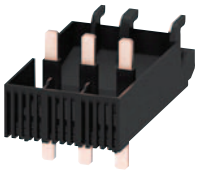
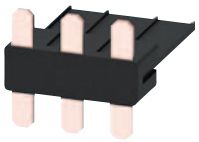
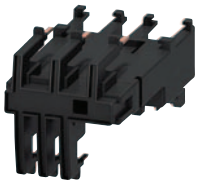
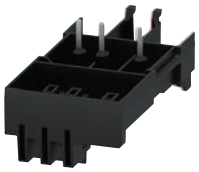
Accessories

Accessories for the customer assembly of fuseless load feeders

	For motor starter protectors	For contactors	Actuating voltage of contactor	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Size	Size						
Link modules from motor starter protector to contactor[1]								
 3RA2921-1AA00	Connection between motor starter protector and contactor with screw terminals			**Screw terminals**				
	Single-unit packaging							
	S00/S0	S00	AC,DC	**3RA1921-1DA00**		1	1 unit	41B
	S00/S0	S0	AC	**3RA2921-1AA00**		1	1 unit	41B
	S00/S0	S0	DC, AC/DC	**3RA2921-1BA00**		1	1 unit	41B
	S2	S2	AC, DC, AC/DC	**3RA2931-1AA00**		1	1 unit	41B
	S3	S3	AC, DC, AC/DC	**3RA1941-1AA00**		1	1 unit	41B
 3RA2931-1AA00								
 3RA1941-1AA00	**Multi-unit packaging**							
	S00/S0	S00	AC,DC	**3RA1921-1D**		1	10 units	41B
	S00/S0	S0	AC	**3RA2921-1A**		1	10 units	41B
	S00/S0	S0	DC, AC/DC	**3RA2921-1B**		1	10 units	41B
	S2	S2	AC, DC, AC/DC	**3RA2931-1A**		1	5 units	41B
	S3	S3	AC, DC, AC/DC	**3RA1941-1A**		1	5 units	41B
 3RA2911-2AA00	Connection between motor starter protector and contactor with spring-loaded terminals			**Spring-loaded terminals**				
	Single-unit packaging							
	S00	S00	AC,DC	**3RA2911-2AA00**		1	1 unit	41B
	S0	S0	AC[2], DC, AC/DC	**3RA2921-2AA00**		1	1 unit	41B
	Multi-unit packaging							
	S00	S00	AC,DC	**3RA2911-2A**		1	10 units	41B
	S0	S0	AC[2], DC, AC/DC	**3RA2921-2A**		1	10 units	41B
Hybrid link modules from motor starter protector to contactor[3]								
 3RA2911-2FA00	Connection between motor starter protector with screw terminals and contactor with spring-loaded terminals							
	Single-unit packaging							
	S00	S00	AC/DC	**3RA2911-2FA00**		1	1 unit	41B
	S0	S0	AC[2], DC, AC/DC	**3RA2921-2FA00**		1	1 unit	41B
 3RA2921-2FA00	**Multi-unit packaging**							
	S00	S00	AC/DC	**3RA2911-2F**		1	10 units	41B
	S0	S0	AC[2], DC, AC/DC	**3RA2921-2F**		1	10 units	41B

1) The link modules from motor starter protector to contactor cannot be used for the 3RV1011, 3RV2.21-4PA1., 3RV2.21-4FA1., 3RV2.31-4K.1., 3RV2.31-4R.1., 3RV2.32-4K.1., 3RV2.32-4R.1., 3RV27 and 3RV28 motor starter protectors/circuit breakers.

2) A spacer for height compensation on AC contactors, size S0, is optionally available, see page 8/56.

3) The hybrid link modules for motor starter protector to contactor cannot be used for the 3RV1011, 3RV2.21-4PA1., 3RV2.21-4FA1., 3RV27 and 3RV28 motor starter protectors/circuit breakers. They are only suitable for assembling direct-on-line starters.

Note:

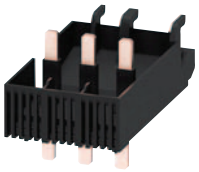
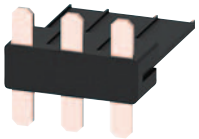
Link modules can be used in

- Size S00 up to max. 16 A
- Size S0 up to max. 32 A
- Size S2 up to max. 65 A

Hybrid link modules can be used in

- Size S00 up to max. 16 A
- Size S0 up to max. 32 A

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

	For motor starter protectors	For 3RW30, 3RW40 soft starters; 3RF34 solid-state contactors	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Size	Size					
Link modules for motor starter protector to soft starter[1] and motor starter protector to solid-state contactor[1]							
 3RA2921-1BA00	Connection between motor starter protector and soft starter/solid-state contactor with screw terminals		**Screw terminals**				
	Single-unit packaging						
	S00/S0	S00/S0	**3RA2921-1BA00**		1	1 unit	41B
	S2[2]	S2	**3RA2931-1AA00**		1	1 unit	41B
	S3[3]	S3	**3RA1941-1AA00**		1	1 unit	41B
 3RA2931-1AA00	**Multi-unit packaging**						
	S00/S0	S00/S0	**3RA2921-1B**		1	10 units	41B
	S2[2]	S2[2]	**3RA2931-1A**		1	5 units	41B
	S3[3]	S3[3]	**3RA1941-1A**		1	5 units	41B
 3RA1941-1AA00	Connection between motor starter protector and soft starter with spring-loaded terminals		**Spring-loaded terminals**				
	Single-unit packaging						
	S00	S00	**3RA2911-2GA00**		1	1 unit	41B
 3RA2921-2GA00	S0	S0	**3RA2921-2GA00**		1	1 unit	41B

1) The link modules from motor starter protector to soft starter and motor starter protector to solid-state contactor cannot be used for the 3RV1011, 3RV2.21-4PA1., 3RV2.21-4FA1., 3RV2.31-4K.1., 3RV2.31-4R.1., 3RV2.32-4K.1., 3RV2.32-4R.1., 3RV27 and 3RV28 motor starter protectors/circuit breakers.

2) To assemble the feeder between a motor starter protector and a soft starter in size S2, the 3RA2932-1CA00 DIN-rail adapter must be used.

3) It is only permitted to assemble the feeder between the motor starter protector and the soft starter in size S3 on a mounting plate.

Note:

Link modules can be used in

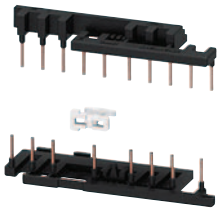
- Size S00 up to max. 16 A
- Size S0 up to max. 32 A
- Size S2 up to max. 65 A

8

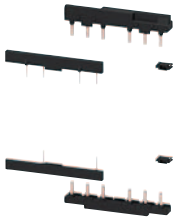
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

Accessories

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


3RA2913-2AA1


3RA2923-2AA1


3RA2933-2AA1


3RA2943-2AA1

For contactors	Size	Version	Screw terminals		Spring-loaded terminals	
Type			Article No.	Price per PU	Article No.	Price per PU
Assembly kits for reversing contactor assemblies for making 3-pole contactor assemblies						
3RT201	**S00-S00**	The assembly kit contains: Mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom				
		• For main, auxiliary and control circuits	**3RA2913-2AA1**		**3RA2913-2AA2**	
3RT202	**S0-S0**	The assembly kit contains: Mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom				
		• For main, auxiliary and control circuits[1]	**3RA2923-2AA1**		--	
		• Only for main circuit[2]	--		**3RA2923-2AA2**	
3RT203	**S2-S2**	The assembly kit contains: Two connectors for two contactors, wiring modules on the top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/108)				
		• For main and auxiliary circuits	**3RA2933-2AA1**		--	
		• Only for main circuit[3]	--		**3RA2933-2AA2**	
3RT204	**S3-S3**	The assembly kit contains: Two connectors for two contactors, wiring modules on the top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/108)				
		• For main and auxiliary circuits	**3RA2943-2AA1**		--	
		• Only for main circuit[3]	--		**3RA2943-2AA2**	

1) Use of the 3RA2923-2AA1 assembly kit in conjunction with the 3RT202.-.....-3MA0 contactors is limited because the auxiliary switches in the basic unit are not allowed to be used on account of the permanently mounted auxiliary switch.

2) Version in size S0 with spring-loaded terminals:
Only the wiring modules for the main circuit are included.
No connecting clips are included for the auxiliary and control circuit.

3) Version in sizes S2 and S3 with spring-loaded terminals in the auxiliary and control circuits: Only the wiring modules for the main circuit are included.
A cable set is included for the auxiliary circuit.

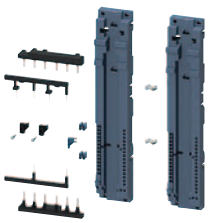
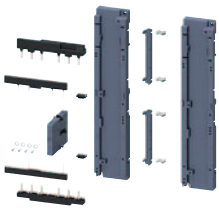
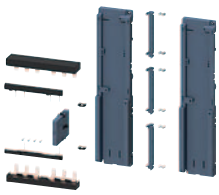
* You can order this quantity or a multiple thereof.
Illustrations are approximate

	For contactors Size			Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Link module for two contactors in series								
				Screw terminals				
3RA2916-1A	S00			**3RA2916-1A**		1	1 unit	41B
	S0			**3RA2926-1A**		1	1 unit	41B
	S2			**3RA2936-1A**		1	1 unit	41B

	For motor starter protectors	For contactors	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Mounting rails for mounting contactors for the customer assembly of 3RA21 load feeders with busbar adapters for 60 mm systems								
8US1998-7CB45			For the discrete configuration of direct-on-line starters a further mounting rail is needed for the contactor in addition to the mounting rail for the motor starter protector existing on the busbar adapter.					
	--	S0	For pushing onto the device adapter, including fixing screws	**8US1998-7CB45**		1	10 units	53W
DIN-rail adapters								
3RA2922-1AA00			For mechanical fixing of motor starter protector and contactor; for snapping onto DIN rail or for screw fixing					
	S00, S00	S00, S00	**Short, single-unit packaging**	**3RA2922-1BA00**		1	1 unit	41B
	S00, S00	S00, S00	**Short, multi-unit packaging**	**3RA2922-1B**		1	5 units	41B
	S00, S0	S00, S0	**Single-unit packaging**	**3RA2922-1AA00**		1	1 unit	41B
	S00, S0	S00, S0	**Multi-unit packaging**	**3RA2922-1A**		1	5 units	41B
	S2	S2	**Single-unit packaging**	**3RA2932-1AA00**		1	1 unit	41B
	S2	S2	**Multi-unit packaging**	**3RA2932-1A**		1	5 units	41B
	S3	S3	**Single-unit packaging**	**3RA2942-1AA00**		1	1 unit	41B
	S3	S3	**Multi-unit packaging**	**3RA2942-1A**		1	5 units	41B
3RA2932-1CA00			For mechanical fixing of motor starter protector and soft starter; for snapping onto DIN rail or for screw fixing					
	S2	S2	**Single-unit packaging**	**3RA2932-1CA00**		1	1 unit	41B
Side modules for DIN-rail adapters								
3RA2902-1B	S00 ... S3	S00 ... S3	For DIN-rail adapters 10 mm wide, 96 mm long, for widening DIN-rail adapters when using lateral auxiliary switches, 2 units required	**3RA2902-1B**		1	10 units	41B
Connecting wedges								
8US1998-1AA00			For mechanical linking of DIN-rail adapters (2 units required for mounting)	**8US1998-1AA00**		100	100 units	53W

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

Accessories

	For motor starter protectors	For contactors	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
RH mounting kits for reversing operation and DIN-rail mounting								
			RH mounting kits for screw terminals	**Screw terminals**				
 3RA2923-1BB1	S0	S0	Comprising: • Wiring kit for main and auxiliary circuit • Two DIN-rail adapters • Two connecting wedges • Mechanical interlock • Two connecting clips for two contactors • Fixing accessories Link modules must be ordered separately.	**3RA2923-1BB1**		1	1 unit	41B
 3RA2933-1BB1	S2	S2	Comprising: • Wiring kit for main and auxiliary circuit • Two DIN-rail adapters • Two side modules • Four connecting wedges • Mechanical interlock • Two connectors for two contactors • Fixing accessories Link modules must be ordered separately.	**3RA2933-1BB1**		1	1 unit	41B
 3RA2943-1BB1	S3	S3	Comprising: • Wiring kit for main and auxiliary circuit • Two DIN-rail adapters • Three side modules • Six connecting wedges • Mechanical interlock • Two connectors for two contactors • Fixing accessories Link modules must be ordered separately.	**3RA2943-1BB1**		1	1 unit	41B
			RH mounting kits for spring-loaded terminals	**Spring-loaded terminals**				
 3RA2923-1BB2	S0	S0	Comprising: • Wiring kit for main and auxiliary circuit • Two DIN-rail adapters • Two connecting wedges • Mechanical interlock • Two connecting clips for two contactors • Two spacers • Fixing accessories Link modules must be ordered separately.	**3RA2923-1BB2**		1	1 unit	41B
Push-in lugs for screw fixing								
 3RV2928-0B	S00, S0	--	For screw fixing on mounting plates • 2 units are required for circuit breakers • 1 unit is required for load feeders	**3RV2928-0B**		100	10 units	41E

Graphic overviews for RH mounting kits,
see page 8/15 onwards.

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

Busbar adapters


8US1216-5AS80


8US1216-5AT80

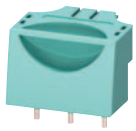

8US1251-5DS10


8US1251-5DT11


8US1250-5AS10


8US1250-5AT10


3RV2917-5AA00


3RV2917-5CA00

For load feeders	Rated current	Connecting cable	Adapter length	Adapter width	Rated voltage	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Size	A	AWG	mm	mm	V					
Busbar adapters for 60 mm systems										
For copper busbars according to DIN 46433 Width: 12 mm and 30 mm Thickness: 5 mm and 10 mm and for T and double-T special profiles										
• For load feeders with plug-in connectors										
S00, S0	32	--	200	45	690	**8US1216-5AS80**		4	1 unit	53W
S00, S0	32	--	260	45	690	**8US1216-5AT80**		4	1 unit	53W
						Screw terminals				
• For load feeders with screw terminals										
S00/S0	25	12	200	45	690	**8US1251-5DS10**		1	1 unit	53W
S00 (motor starter protector)/S0 (contactor)	25	12	260	45	690	**8US1251-5DT10**		1	1 unit	53W
S0	32	10	200	45	690	**8US1251-5NS10**		1	1 unit	53W
S0	32	10	260	45	690	**8US1251-5NT10**		1	1 unit	53W
S2	80	4	260	55	690	**8US1261-6MT10**		1	1 unit	53W
S2[1]	80	4	260	118	690	**8US1211-6MT10**		1	1 unit	53W
						Spring-loaded terminals				
• For load feeders with spring-loaded terminals										
S00	25	12	200	45	690	**8US1251-5DS11**		1	1 unit	53W
S00/S0	25	12	260	45	690	**8US1251-5DT11**		1	1 unit	53W
S0	32	10	200	45	690	**8US1251-5NS11**		1	1 unit	53W
S0	32	10	260	45	690	**8US1251-5NT11**		1	1 unit	53W
Accessories[2]										
Plug-in connectors To make contact with the 3RV2 motor starter protectors						**Screw terminals**				
• Single-unit packaging										
S00[3][4]	--	--	--	--	--	**3RV2917-5CA00**		1	1 unit	41E
S0[5][6]	--	--	--	--	--	**3RV1927-5AA00**		1	1 unit	41E
• Multi-unit packaging										
S00[3][4]	--	--	--	--	--	**3RV2917-5C**		1	10 units	41E
S0[5][6]	--	--	--	--	--	**3RV1927-5A**		1	10 units	41E
						Spring-loaded terminals				
• Single-unit packaging										
S00[3]	--	--	--	--	--	**3RV2917-5AA00**		1	1 unit	41E
S0[5]	--	--	--	--	--	**3RV2927-5AA00**		1	1 unit	41E
• Multi-unit packaging										
S00[3]	--	--	--	--	--	**3RV2917-5A**		1	10 units	41E
S0[5]	--	--	--	--	--	**3RV2927-5A**		1	10 units	41E
Device holders For lateral attachment to busbar adapters	-- --	-- --	200 260	45 45	-- --	**8US1250-5AS10** **8US1250-5AT10**		1 1	1 unit 1 unit	53W 53W
Side modules For widening busbar adapters	--	--	200	9	--	**8US1998-2BJ10**		1	10 units	53W
Vibration and shock kit For high vibration and shock loads										
S2	--	--	--	--	--	**8US1998-1DA10**		1	1 unit	53W

1) For the assembly of feeders for reversing starters comprising a motor starter protector and two contactors.

2) Additional mounting rails for busbar adapters, see page 8/53.

3) I > 14 A, please observe derating.

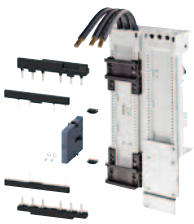
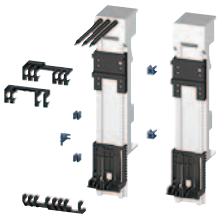
4) The plug-in connector cannot be used for the 3RV2711 and 3RV2811 circuit breakers in size S00.

5) I > 16 A, please observe derating.

6) The plug-in connector can be used for the 3RV2711, 3RV2811 (size S00) and 3RV2721, 3RV2821 (size S0) circuit breakers.

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

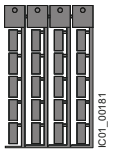
Accessories

	For motor starter protectors Size	For contactors Size	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
RS mounting kits for reversing operation and 60 mm busbar systems								
	RS mounting kits for screw terminals			**Screw terminals**				
 3RA2913-1DB1	S00, S0 S0 S00	S00 S0 S0	Comprising: • Wiring kit for main and auxiliary circuit • Busbar adapters • Device holders • Two connecting wedges • Mechanical interlock • Two connecting clips for two contactors • Fixing accessories Link modules must be ordered separately.	**3RA2913-1DB1** **3RA2923-1DB1** **3RA2923-1EB1**		1 1 1	1 unit 1 unit 1 unit	41B 41B 41B
 3RA2933-1DB1	S2	S2	Comprising: • Wiring kit for main and auxiliary circuit • Busbar adapters • Mechanical interlock • Two connectors for two contactors • Fixing accessories Link modules must be ordered separately.	**3RA2933-1DB1**		1	1 unit	41B
	RS mounting kits for spring-loaded terminals			**Spring-loaded terminals**				
 3RA2913-1DB2	S00 S0	S00 S0	Comprising: • Wiring kit for main and auxiliary circuit • Busbar adapters • Device holders • Two connecting wedges • Mechanical interlock • Two connectors for two contactors • Two spacers (for size S0 only) • Fixing accessories Link modules must be ordered separately.	**3RA2913-1DB2** **3RA2923-1DB2**		1 1	1 unit 1 unit	41B 41B

Graphic overviews for RS mounting kits, see page 8/18 onwards.

	For motor starter protectors Size	For contactors Size	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Connecting wedges								
 8US1998-1AA10	For mechanical linking of busbar adapters and device holders			**8US1998-1AA10**		1	50 units	53W
Spacers								
 3RA2911-1CA00	For height compensation on AC contactors size S0 with spring-loaded terminals			**Spring-loaded terminals**				
	S0	S0	**Single-unit packaging**	**3RA2911-1CA00**		1	1 unit	41B
	S0	S0	**Multi-unit packaging**	**3RA2911-1C**		1	5 units	41B

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

	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Tools for opening spring-loaded terminals						
 3RA2908-1A	**Screwdrivers** For all SIRIUS devices with spring-loaded terminals Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	**Spring-loaded terminals** **3RA2908-1A**		1	1 unit	41B
Blank labels						
 3RT2900-1SB20	**Unit labeling plates**[1] For SIRIUS devices, 20 mm x 7 mm, titanium gray	**3RT2900-1SB20**		100	340 units	41B
Manuals						
	Digital Configuration Manual for load feeders see https://imp.siemens.com/digital-engineering-manual/dem					
	Configuration Manual for load feeders see https://support.industry.siemens.com/cs/ww/en/view/39714188					

[1] PC labeling system for individual inscription of unit labeling plates available from: murrplastik Systemtechnik GmbH
(see page 16/18).

3RV29 infeed system for load feeders

Overview

Types of infeed for 3RA2 fuseless load feeders

On the whole four different incoming power supply possibilities are available:

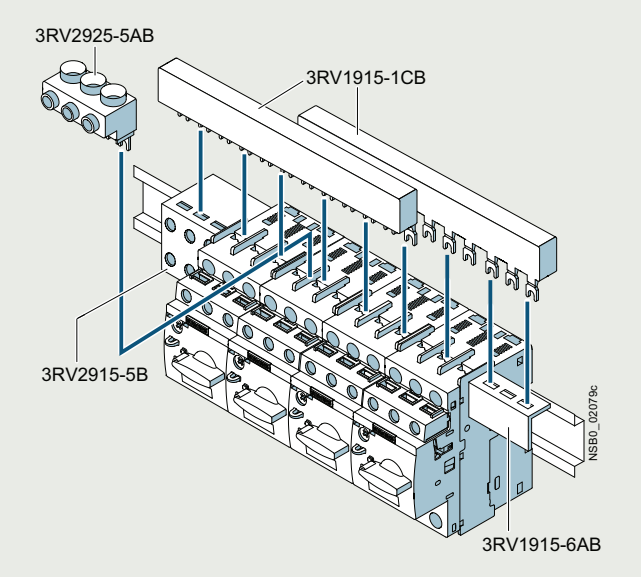
- Parallel wiring
- Use of 3-phase busbars (combination with SIRIUS motor starter protectors and contactors possible)
- 8US busbar adapters
- SIRIUS 3RV29 infeed systems

Insulated 3-phase busbar system

3-phase busbar systems provide an easy, time-saving and clearly arranged means of feeding 3RA2 load feeders with screw terminals. Different versions are available for sizes S00 and S0 and can also be used for the various different types of motor starter protectors.

The busbars are suitable for between two and five feeders. However, any kind of extension is possible by clamping the connection tags of an additional busbar (rotated 180°) underneath the terminals of the respective last motor starter protector.

A combination of feeders of different sizes is possible with sizes S00 and S0. Connecting pieces are available for this purpose. The motor starter protectors are supplied by appropriate infeed terminals.



SIRIUS 3-phase busbar system size S00/S0

The 3-phase busbar systems are finger-safe. They are designed for any short-circuit stress which can occur at the output side of connected motor starter protectors.

The 3-phase busbar systems can also be used for the assembly of "Starters (Type E)" of size S0 or S2 according to UL/CSA. However, special infeed terminals, 3RV2925-5EB for sizes S00/S0 and 3RV2935-5E for size S2, must be used for this purpose, see page 7/50.

8US busbar adapters for 60 mm systems

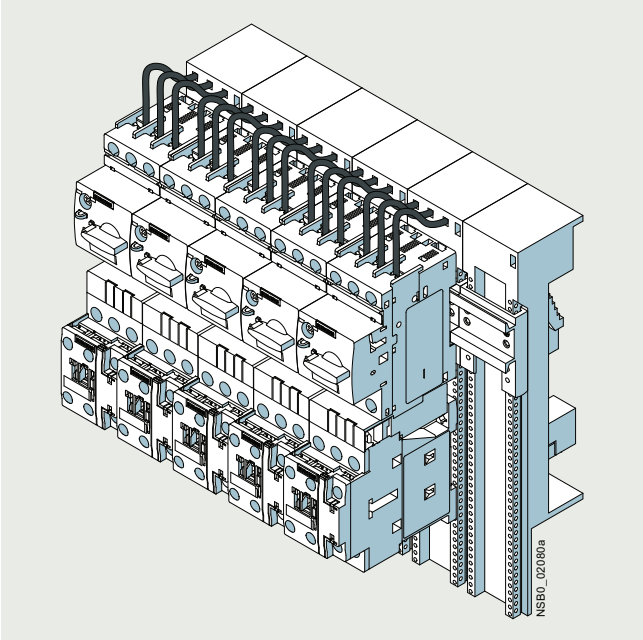
The load feeders are mounted directly with the aid of busbar adapters on busbar systems with 60 mm center-to-center spacing in order to save space and to reduce infeed times and costs.

The busbar adapters for busbar systems with 60 mm center-to-center spacing are suitable for copper busbars with a width of 12 to 30 mm. The busbars can be 4 to 5 mm or 10 mm thick.

The feeders are snapped onto the adapter and connected on the input side, either with wires or with the plug-in connectors of the SIRIUS infeed system (see page 8/55). This prepared unit is then plugged directly onto the busbar system, and is thus connected both mechanically and electrically at the same time.

For the setup of UL feeders (Type E and F), Type E terminal blocks or phase barriers must be fitted to the infeed module on the load feeder (see page 7/58).

For selection and ordering data, see page 8/55.



SIRIUS load feeders with busbar adapters snapped onto busbars

SIRIUS 3RV29 infeed system

The 3RV29 infeed system is a convenient means of incoming power supply and distribution for a group of several motor starter protectors or complete load feeders with screw or spring-loaded terminals up to size S0.

The system is based on a basic module complete with a lateral incoming unit (3-phase busbar with infeed) which has two slots.

Expansion modules are available for extending the system (3-phase busbars for system expansion).

3RV29 infeed system, see page 7/67 onwards.

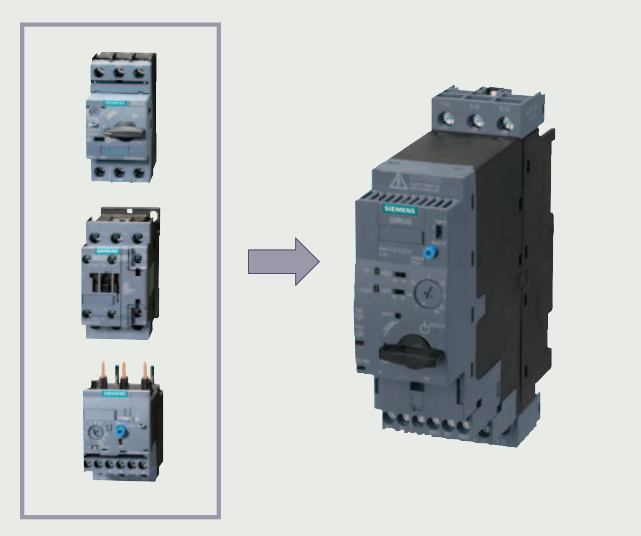
Overview

3RA6 fuseless compact starters and infeed system for 3RA6

3RA62 reversing starter

Integrated functionality

The SIRIUS 3RA6 compact starters are a generation of special load feeders with the integrated functionality of a motor starter protector, contactor and electronic overload relay. In addition, various functions of optional mountable accessories (e.g. auxiliary switches, surge suppressors) are already integrated in the SIRIUS compact starter.



3RA6 compact starters with the integrated functionality of a motor starter protector, contactor and electronic overload relay

Applications

SIRIUS compact starters can be used wherever standard three-phase motors or resistive loads up to 32 A (approx. 15 kW/400 V) are directly started or switched.

The compact starters are not suitable for the protection of DC loads.

Approvals according to IEC, UL, CSA and CCC standards have been issued for the compact starters.

More information

SiePortal, see www.siemens.com/product_catalog_siep?3RA6

Very high operational reliability

The high short-circuit breaking capacity and defined shutdown when the end of service life is reached mean that the SIRIUS compact starter achieves a very high level of operational reliability that would otherwise have only been possible with considerable additional outlay. This sets it apart from devices with similar functionality.

Safe disconnection

The auxiliary switches (NC contacts) of the 3RA6 compact starters are designed as mirror contacts. This enables their use for safe disconnection, e.g. EMERGENCY STOP up to SIL 1 (IEC 62061) or PL c (ISO 13849-1) or, if used in conjunction with an additional infeed contactor, up to SIL 3 (IEC 62061) or PL e (ISO 13849-1).

Communication link through AS-Interface

To enable the communication link through AS-Interface, an AS-i add-on module is available in several versions for mounting on the SIRIUS compact starter instead of the control circuit terminals.

The design of the AS-i add-on module permits a group of up to 62 feeders with a total of four cables to be connected to the control system. This reduces wiring work considerably compared to the parallel wiring method.

Note:

The 3RA8 intelligent load feeders are suitable for establishing a communication link with the ET 200SP distributed I/Os (see also page 8/84).

Permanent wiring/easy replacement

Using the SIRIUS infeed system for 3RA6 (see page 8/77), it is possible to carry out the wiring in advance without a compact starter having to be connected.

A compact starter is very easily replaced simply by pulling it out of the device without disconnecting the wiring.

Even with screw fixing or mounting on a DIN rail there is no need to disconnect any wiring (on account of the removable main and control circuit terminals) in order to replace a compact starter.

General data

Consistent solution from the infeed to the motor feeder

The SIRIUS infeed system for 3RA6 with integrated PE bar offers a user-friendly system for feeding in summation currents up to 100 A with a maximum conductor cross-section of 70 mm^2 and for connecting the motor cable directly without additional intermediate terminals.

Screw and spring-loaded terminals

The SIRIUS compact starters and the infeed system for 3RA6 are available with screw and spring-loaded terminals.

	Screw terminals
	Spring-loaded terminals
	The connection method is indicated in the corresponding tables by the symbols shown on orange backgrounds.

Use of load feeders in conjunction with IE3 and IE4 motors

Note:

For the use of SIRIUS 3RA6 compact starters in conjunction with highly efficient IE3 and IE4 motors, please observe the information on dimensioning and configuring, see System Manual.

For more information, see page 1/8.

Types of infeed for the 3RA6 fuseless compact starters

On the whole four different infeed possibilities are available:

- Parallel wiring
- Use of 3-phase busbars (combination with SIRIUS motor starter protectors and SIRIUS contactors possible)
- 8US busbar adapters
- SIRIUS infeed system for 3RA6 (see page 8/77 onwards)

To comply with the clearance and creepage distances demanded according to UL 508 there are the following infeed possibilities:

Type of infeed	Infeed terminal (according to UL 508, Type E)	Type
Parallel wiring	Terminal block for "Self-Protected Combination Motor Controller (Type E)"	**3RV2928-1H**
3-phase busbars	3-phase infeed terminal for the assembly of "Starters (Type E)", UL 508	**3RV2925-5EB**
Infeed system for 3RA6	Infeed left, 50/70 mm^2 screw terminal with three slots, outgoing terminal with screw/spring-loaded terminal, including PE bar	**3RA6813-8AB** (screw terminals), **3RA6813-8AC** (spring-loaded terminals)

SIRIUS 3RA6 compact starters

SIRIUS 3RA6 compact starters are universal motor feeders according to IEC 60947-6-2. As control and protective switching devices (CPS) they can connect, convey and disconnect the thermal, dynamic and electrical loads from short-circuit currents up to I_q = 53 kA, i.e. they are practically weld-free. They combine the functions of a motor starter protector, a contactor and an electronic overload relay in one enclosure. The versions available are the 45-mm-wide direct-on-line starters and the 90-mm-wide reversing starters.

The reversing starter version comes with not only an internal electrical interlock but also with a mechanical interlock to prevent simultaneous actuation of both directions of rotation.

The compact starters have isolating features according to IEC 60947-2 and can be used as disconnector units (main control switch according to EN 60204 or VDE 0113). Isolation is effected by moving the handle into the "OFF" position; disconnection by means of the control contacts is not enough.

3RA6 fuseless compact starters are available in five current setting ranges and two control voltage ranges (AC/DC):

Current setting range	At 400 V AC for three-phase motors Standard output *P*	Rated control supply voltage for 3RA61, 3RA62 compact starters
A	kW	V AC/DC
0.1 ... 0.4	0.09	24
0.32 ... 1.25	0.37	110 ... 240
1 ... 4	1.5	
3 ... 12	5.5	
8 ... 32	15	

Notes:

The 3RA2 load feeders can be used for fuseless load feeders > 32 A up to 65 A. Load feeders in size S3 up to 100 A are available for customer assembly (see also page 8/6).

The SENTRON 3VL circuit breakers and the SIRIUS 3RT contactors can be used for fuseless load feeders > 100 A.

Operating conditions

The SIRIUS 3RA6 compact starters are suitable for use in any climate. They are intended for use in enclosed rooms in which no harsh operating conditions (such as dust, caustic vapors, hazardous gases) prevail. Suitable covers must be provided for installation in dusty and damp locations.

The permissible ambient temperature during operation is -20 to +60 °C. The rated short-circuit current I_{CS} according to IEC 60947-6-2 is 53 kA at 400 V.

Note:

The maximum permissible short-circuit currents of the device versions for the various line system configurations and voltages are available upon request from Technical Support: www.siemens.com/support-request

Overload tripping times

The tripping time in the event of overload can be set on the device to normal starting conditions (Class 10) and to heavy starting conditions (Class 20). As the breaker mechanism still remains closed after an overload, resetting is possible by either local manual RESET or automatic RESET[1] after three minutes cooling time.

With automatic RESET, there is no need to open the control cabinet.

Diagnostics options

The compact starter provides the following on-site diagnostics options:

- With LEDs
  - Connection to the control voltage
  - Position of the main contacts
- With mechanical display
  - Tripping due to overload
  - Tripping due to short circuit
  - Tripping due to malfunction (end of service life reached because of worn switching contacts or a worn switching mechanism or faults in the control electronics)

These states can also be evaluated in the higher-level control system:

- With parallel wiring using the integrated auxiliary and signaling switches of the compact starter
- With AS-Interface in even greater detail via the communications interface

Four equipment versions for 3RA61 and 3RA62 compact starters

- For DIN-rail mounting or screw fixing:
  basic version including one pair of main circuit terminals and one pair of control circuit terminals
- For DIN-rail mounting or screw fixing when using the AS-i add-on module:
  without control circuit terminals because the AS-i add-on module is plugged on instead
- For use with the infeed system for 3RA6:
  without main circuit terminals because they are supplied with the infeed system and the expansion modules
- For use with the infeed system for 3RA6 and the AS-i add-on module: without terminal complement
  (also for reordering when replacing the compact starter)

[1] The automatic RESET function is not available for versions 3RA6120-.B/.C and 3RA6250-.B/-.C with a rated current of 1.25 A and 4 A. The reset can be alternatively carried out by disconnecting the supply voltage A1/A2 via the NC contacts 95/96 (overload signaling contact). The automatic RESET function is provided with this circuitry.

More components of the 3RA6

Apart from the control supply voltage, "Overload" (1 CO) and "Short circuit/Function fault" (1 NO) signaling contacts are already integrated into the 3RA61/3RA62 – and lockable via two 6-pole removable control circuit terminals. The 3RA61 has two auxiliary contacts (1 NO + 1 NC) for displaying the position of the main contacts. Unlike the 3RA61 direct-on-line starter, the 3RA62 reversing starter has one auxiliary contact (1 NO) per direction of rotation per main contact.

A slot for an optional auxiliary switch (either 2 NO, 2 NC or 1 NO + 1 NC) is available for the 3RA61 direct-on-line starters. For the 3RA62 reversing starters, two slots are available (auxiliary switches, see Accessories, page 8/72).

Force-guided operation of the auxiliary contacts

Force-guided operation between individual auxiliary circuits exists for the compact starter in the version as a direct-on-line starter for parallel wiring (3RA61) between the auxiliary circuits of the NC contacts (NC 21-22) and the NO contacts (NO 13-14) in the basic unit. In addition, the optional auxiliary switch offers force-guided contacts in the 3RA6913-1A version, each with one normally closed contact and one normally open contact.

General data

Article number scheme

Product versions		Article number																			
Compact starters		**3RA6**	□	□	□	–	□	□	□	□	□										
Product function	Direct-on-line starter		**1**	**2**	**0**							For motor standard output 0.09 ... 15 kW[1]									
	Reversing starter		**2**	**5**	**0**							For motor standard output 0.09 ... 15 kW[1]									
	Infeed system		**8**	□	□																
	Accessories																				
	• Auxiliary switch		**9**	**1**	□																
	• Terminals		**9**	**2**	□																
	• Fixing elements		**9**	**4**	□																
	• Control kit		**9**	**5**	□																
Connection methods	No terminals						**0**														
	Screw terminals						**1**														
	Spring-loaded terminals						**2**														
Setting range	0.1 ... 0.4 A							**A**													
	0.32 ... 1.25 A							**B**													
	1 ... 4 A							**C**													
	3 ... 12 A							**D**													
	8 ... 32 A							**E**													
Rated control supply voltage	24 V AC/DC								**B**	**3**		For direct-on-line/reversing starters									
	110 ... 240 V AC/DC								**P**	**3**		For direct-on-line/reversing starters									
Terminal equipment versions	None										**0**	Without main and control circuit terminals									
	1/1										**2**	With 1 pair of main circuit and 1 pair of control circuit terminals									
	0/1										**3**	Without main circuit terminals, with 1 pair of control circuit terminals									
	1/0										**4**	With 1 pair of main circuit terminals, without control circuit terminals									
Example		**3RA6**	**1**	**2**	**0**	**–**	**0**	**A**	**B**	**3**	**0**										

[1] Standard three-phase motor, basis 4-pole at 400 V AC; the actual starting and rated data of the motor to be protected must be considered when selecting the units.

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

The SIRIUS 3RA6 compact starters offer a number of benefits:

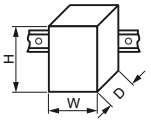
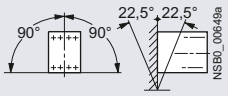
- Compact design saves space in the control cabinet
- Little planning and assembly work and far less wiring thanks to a single complete unit with one article number
- Low variance and therefore low stock levels, with two wide voltage ranges and five wide setting ranges for the rated current
- High plant availability through integrated functionalities such as prevention of main contact welding and disconnection at end of service life
- Enhanced productivity through automatic device RESET[1] in case of overload and differentiated detection of overload and short circuit
- Easy checking of the wiring and testing of the motor direction prior to commissioning thanks to optional control kits
- Quick replacement of devices thanks to removable terminals with spring-loaded and screw terminals in the main and control circuit
- Efficient power distribution through the related SIRIUS infeed system for 3RA6
- Direct connection of the motor feeder cable to the SIRIUS infeed system for 3RA6 thanks to integrated PE bar
- Connecting and looping through of incoming feeders up to a cross-section of 70 mm²
- When using the infeed system for 3RA6, possibility of directly connecting the motor cable without intermediate terminals
- Optional link to AS-Interface enables integration in Totally Integrated Automation

The SIRIUS 3RA6 compact starters create the basis for high-availability and future-proof machine concepts.

[1] The automatic RESET function is not available for versions 3RA6120-.B/.C and 3RA6250-.B/-.C with a rated current of 1.25 A and 4 A. The reset can be alternatively carried out by disconnecting the supply voltage A1/A2 via the NC contacts 95/96 (overload signaling contact). The automatic RESET function is provided with this circuitry.

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RA6 System Manual, see https://support.industry.siemens.com/cs/ww/en/view/27865747 FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16301/faq	Notes on security: In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens products and solutions represent one component of such a concept. For more information on industrial cybersecurity, see www.siemens.com/cybersecurity-industry.

Type			3RA61	3RA62
Mechanics and environment				
Mounting dimensions (W x H x D) • Screw terminals • Spring-loaded terminals		mm mm	45 x 170 x 165 45 x 191 x 165	90 x 170 x 165 90 x 191 x 165
Depth from DIN rail		mm	160	
Permissible ambient temperature • During operation (permissible operational current see Electrical specifications) • During storage • During transport		°C °C °C	-20 ... +70, restriction as from 60 depending on design -55 ... +80 -55 ... +80	
Permissible mounting position				
Shock resistance (sine-wave pulse)			a = 60 m/s² = 6 g with 10 ms; for every 3 shocks in all axes	
Vibratory load			f = 4 ... 5.8 Hz; d = 15 mm; f = 5.8 ... 500 Hz; a = 20 m/s²; 10 cycles	
Degree of protection IP on the front	According to IEC 60529		IP20	
Touch protection on the front	According to IEC 60529		Finger-safe for vertical touching from the front	
Installation altitude		m	Up to 2 000 above sea level without restriction	
Relative air humidity		%	10 ... 90	
Pollution degree			3	
Electrical specifications				
Device standard			IEC 60947-6-2	
Maximum rated operational voltage U_e		V V	690 400 for 3RA6250-.E... (reversing starter 32 A versions)	
Rated frequency		Hz	50/60	
Rated insulation voltage U_i (pollution degree 3)		V	690	
Rated impulse withstand voltage U_{imp}		kV	6	
Rated current I_e [1] and setting range of overload release	0.1 ... 0.4 A 0.32 ... 1.25 A 1 ... 4 A 3 ... 12 A 8 ... 32 A	A A A A A	0.4 1.25 4 12 32	
Permissible operational current of the compact starter [2] When several compact starters are mounted side-by-side in the 3RA6 infeed system (for more details on the various design versions, see System Manual) • For a control cabinet inside temperature of • For a control cabinet inside temperature of • For a control cabinet inside temperature of	 +40 °C +60 °C +70 °C	 % % %	 100 80 60	
Trip class (Class)	According to IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)		10/20	
Overload function Ratio of lower to upper current mark			1:4	
Rated service short-circuit breaking capacity I_{CS} at 50/60 Hz, 400 V AC		kA	53	
Rated service short-circuit breaking capacity I_{CSIT} at 50/60 Hz 400/690 V AC in IT systems		kA	1.5	

[1] For the use of 3RA6 compact starters in conjunction with highly energy-efficient IE3 and IE4 motors, please observe the information on dimensioning and configuring, see System Manual.
More information, see page 1/8.

[2] Details about installation conditions and the use of the compact starters, and particularly about the derating of the rated current, can be found in the System Manual.

General data

Type			3RA61	3RA62
Electrical specifications (continued)				
Power loss $P_{v\ max}$ of all main conducting paths Dependent on rated current I_e (upper setting range)	0.4 A 1.25 A 4 A 12 A 32 A	mW mW W W W	10 100 1 1.8 5.4	
Max. switching frequency	AC-41 AC-43 AC-44	1/h 1/h 1/h	750 250 15	
No-load switching frequency		1/h	3 600	
Isolating features of the compact starter	According to IEC 60947-3		✓ Isolation is assured only by moving the handle into the "OFF" position.	
Main and EMERGENCY-OFF switch features of the compact starter and accessories	According to IEC 60204		✓	
Protective separation	According to IEC 60947-2			
Control circuit to auxiliary circuit • Horizontal DIN rail • Other mounting position		 V V	 Up to 400 Up to 250	
Auxiliary circuit to auxiliary circuit • Horizontal DIN rail • Other mounting position		 V V	 Up to 400 Up to 250	
Main circuit to auxiliary circuit • Any mounting position		 V	 Up to 400	
EMC interference immunity	According to IEC 60947-1		Corresponds to test level 3	
Conducted interference • In the main circuit • In the auxiliary circuit	BURST according to IEC 61000-4-4	 kV kV	 4 3	
Conducted interference • In the main circuit - Conductor - Ground - Conductor - Conductor • In the auxiliary circuit - Conductor - Ground - Conductor - Conductor	SURGE according to IEC 61000-4-5	 kV kV kV kV	 4 2 2 1	
Auxiliary switches • Integrated - Position of the main contacts - Overload/short circuit and malfunction signal • Expandable - Position of the main contacts			 1 NO + 1 NC 1 CO/1 NO 2 NO, 2 NC, 1 NO + 1 NC	 2 NO
Surge suppressors			Integrated (varistor)	
Electromagnetic operating mechanisms				
Control voltage		V V	24 AC/DC 110 ... 240 AC/DC	
Frequency	At AC	Hz	50/60 (± 5%)	
Operating range			0.7 ... 1.25 U_s	
No-load switching frequency		1/h	3 600	
Line protection	At 10 kA At 50 kA	mm² mm²	2.5 4	
Shock resistance • Breaker mechanism OFF • Breaker mechanism ON		 *g* *g*	 25 15	
Functional switching				
Making capacity			12 x I_n	
Breaking capacity			10 x I_n	
Switching power depending on rated current	Up to 12 A Up to 32 A	kW kW	5.5 15	
Endurance in operating cycles • Electrical endurance	 At I_e = 0.9 x I_n and 400 V		 3 ... 10 000 000	 2 x 3 ... 10 000 000

✓ Function available

Type		3RA6120-.☐B3., 3RA6250-.☐B3. ☐ = A, B, C or D Rated operational current ≤ 12 A		3RA6120-.EB3., 3RA6250-.EB3. Rated operational current 32 A	
Rated control supply voltage	**V**	**24 AC**	**24 DC**	**24 AC**	**24 DC**
Inrush peak current	A	0.59	0.47	0.59	0.47
Holding current	A	0.13	0.12	0.17	0.14
Closed	W	2.8	2.9	3.5	3.1
Operating times, typical					
• On	ms	< 160	< 140	< 160	< 140
• Off	ms	< 35	< 35	< 30	< 30

Type		3RA6120-.☐P3., 3RA6250-.☐P3. ☐ = A, B, C or D Rated operational current ≤ 12 A				3RA6120-.EP3., 3RA6250-.EP3. Rated operational current 32 A			
Rated control supply voltage	**V**	**110 AC**	**240 AC**	**110 DC**	**240 DC**	**110 AC**	**240 AC**	**110 DC**	**240 DC**
Inrush peak current	A	0.24	0.40	0.17	0.29	0.24	0.40	0.17	0.29
Holding current	A	0.06	0.08	0.03	0.02	0.06	0.07	0.04	0.03
Closed	W	3.8	6	3.1	5.1	3.7	5.2	3.4	5.8
Operating times, typical									
• On	ms	< 160	< 140	< 150	< 140	< 160	< 140	< 150	< 140
• Off	ms	< 50	< 80	< 50	< 70	< 40	< 60	< 40	< 60

Type				3RA6
Control circuit				
Rated operational voltage				
• External auxiliary switch			V	400/690
• Internal auxiliary switch			V	400/690
• Short-circuit signaling switch			V	400
• Overload signaling switch			V	400
Switching capacity				
• External auxiliary switch	**AC-15**			
	• Up to U_e = 230 V		A	6
	• Up to U_e = 400 V		A	3
	• Up to U_e = 289/500 V		A	2
	• Up to U_e = 400/690 V		A	1
	DC-13			
	• Up to U_e = 24 V		A	6
	• Up to U_e = 60 V		A	0.9
	• Up to U_e = 125 V		A	0.55
	• Up to U_e = 250 V		A	0.27
• Internal auxiliary switch	**AC-15**			
	• Up to U_e = 230 V		A	6
	• Up to U_e = 400 V		A	3
	• Up to U_e = 289/500 V		A	2
	• Up to U_e = 400/690 V		A	1
	DC-13			
	• Up to U_e = 24 V		A	10
	• Up to U_e = 60 V		A	2
	• Up to U_e = 125 V		A	1
	• Up to U_e = 250 V		A	0.27
	• Up to U_e = 480 V		A	0.1
• Signaling switch	**AC-15**			
	• Up to U_e = 230 V		A	3
	• Up to U_e = 400 V		A	1
	DC-13			
	• Up to U_e = 24 V		A	2
	• Up to U_e = 250 V		A	0.11

General data

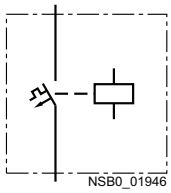
Type			3RA61, 3RA62
External auxiliary switches, internal auxiliary switches			
Endurance in operating cycles			
• Mechanical endurance			10 000 000
• Electrical endurance	**AC-15, 230 V**		
	• Up to 6 A		200 000
	• Up to 3 A		500 000
	• Up to 1 A		2 000 000
	• Up to 0.3 A		10 000 000
	DC-13, 24 V		
	• Up to 6 A		30 000
	• Up to 3 A		100 000
	• Up to 0.5 A		2 000 000
	• Up to 0.2 A		10 000 000
	DC-13, 110 V		
	• Up to 1 A		40 000
	• Up to 0.55 A		100 000
	• Up to 0.3 A		300 000
	• Up to 0.1 A		2 000 000
	• Up to 0.04 A		10 000 000
	DC-13, 220 V		
	• Up to 0.3 A		110 000
	• Up to 0.1 A		650 000
	• Up to 0.05 A		2 000 000
	• Up to 0.018 A		10 000 000
Contact reliability	At 17 V and 5 mA	Operating cycles	1 faulty switching operation per 100 000 000
Short-circuit protection			
• Short-circuit current $I_K \leq 1.1$ kA	Fuse links, operational class gG - NEOZED type 5SE - DIAZED type 5SB - LV HRC type 3NA	A	10
• Short-circuit current $I_K < 400$ A	Miniature circuit breaker up to 230 V with C characteristic	A	10
Signaling switches			
Endurance in operating cycles			
• Mechanical endurance			20 000
• Electrical endurance AC-15	At 230 V and 3 A		6 050
Contact reliability	At 17 V and 5 mA	Operating cycles	1 faulty switching operation per 100 000 000
Short-circuit protection			
• Short-circuit current $I_K \leq 1.1$ kA	Fuse links, operational class gG - NEOZED type 5SE - DIAZED type 5SB - LV HRC type 3NA	A	6
• Short-circuit current $I_K < 400$ A	Miniature circuit breaker up to 230 V with C characteristic	A	6
Overload (short-circuit current $I_K \leq 1.1$ kA)	Fuse links, operational class gG - NEOZED type 5SE - DIAZED type 5SB - LV HRC type 3NA	A	4

Selection and ordering data

3RA6120-1CB32

3RA6120-2EB32

Direct-on-line starting



Rated control supply voltage 24 V AC/DC
Width 45 mm

Rated short-circuit current I_{CS} = 53 kA at 400 V

A set of 3RA6940-0A adapters is required for screw fixing.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 42F

Standard three-phase motor 4-pole at 400 V AC[1] Standard output *P*	Setting range of the electronic overload release	Instantaneous electronic release	Article No.	Price per PU	Article No.	Price per PU
kW	A	A				
For use in the infeed system for 3RA6 and with the AS-i add-on module or as a replacement device without main and control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6120-0AB30**		**--**	
0.37	0.32 ... 1.25	56	**3RA6120-0BB30**		**--**	
1.5	1 ... 4	56	**3RA6120-0CB30**		**--**	
5.5	3 ... 12	168	**3RA6120-0DB30**		**--**	
15	8 ... 32	448	**3RA6120-0EB30**		**--**	
			Screw terminals		**Spring-loaded terminals**	
For DIN-rail mounting or screw fixing with 1 pair of main circuit terminals and 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6120-1AB32**		**3RA6120-2AB32**	
0.37	0.32 ... 1.25	56	**3RA6120-1BB32**		**3RA6120-2BB32**	
1.5	1 ... 4	56	**3RA6120-1CB32**		**3RA6120-2CB32**	
5.5	3 ... 12	168	**3RA6120-1DB32**		**3RA6120-2DB32**	
15	8 ... 32	448	**3RA6120-1EB32**		**3RA6120-2EB32**	
For use in the infeed system for 3RA6 without main circuit terminals, with 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6120-1AB33**		**3RA6120-2AB33**	
0.37	0.32 ... 1.25	56	**3RA6120-1BB33**		**3RA6120-2BB33**	
1.5	1 ... 4	56	**3RA6120-1CB33**		**3RA6120-2CB33**	
5.5	3 ... 12	168	**3RA6120-1DB33**		**3RA6120-2DB33**	
15	8 ... 32	448	**3RA6120-1EB33**		**3RA6120-2EB33**	
For DIN-rail mounting or screw fixing for use with AS-i add-on module with 1 pair of main circuit terminals, without control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6120-1AB34**		**--**	
0.37	0.32 ... 1.25	56	**3RA6120-1BB34**		**3RA6120-2BB34**	
1.5	1 ... 4	56	**3RA6120-1CB34**		**3RA6120-2CB34**	
5.5	3 ... 12	168	**3RA6120-1DB34**		**3RA6120-2DB34**	
15	8 ... 32	448	**3RA6120-1EB34**		**3RA6120-2EB34**	

[1] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

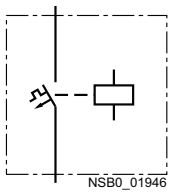
8

3RA61, 3RA62 compact starters > 3RA61 direct-on-line starters *IE3/IE4* ready

3RA6120-1CP32

3RA6120-2EP32

Direct-on-line starting



Rated control supply voltage 110 ... 240 V AC/DC
Width 45 mm

Rated short-circuit current I_{CS} = 53 kA at 400 V

A set of 3RA6940-0A adapters is required for screw fixing.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 42F

Standard three-phase motor 4-pole at 400 V AC[1] Standard output *P*	Setting range of the electronic overload release	Instantaneous electronic release	Article No.	Price per PU	Article No.	Price per PU
kW	A	A				
For use in the infeed system for 3RA6 and with the AS-i add-on module or as a replacement device without main and control circuit terminals						
0.37	0.32 ... 1.25	56	**3RA6120-0BP30**		**--**	
1.5	1 ... 4	56	**3RA6120-0CP30**		**--**	
15	8 ... 32	448	**3RA6120-0EP30**		**--**	
			Screw terminals		**Spring-loaded terminals**	
For DIN-rail mounting or screw fixing with 1 pair of main circuit terminals and 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6120-1AP32**		**3RA6120-2AP32**	
0.37	0.32 ... 1.25	56	**3RA6120-1BP32**		**3RA6120-2BP32**	
1.5	1 ... 4	56	**3RA6120-1CP32**		**3RA6120-2CP32**	
5.5	3 ... 12	168	**3RA6120-1DP32**		**3RA6120-2DP32**	
15	8 ... 32	448	**3RA6120-1EP32**		**3RA6120-2EP32**	
For use in the infeed system for 3RA6 without main circuit terminals, with 1 pair of control circuit terminals						
0.37	0.32 ... 1.25	56	**3RA6120-1BP33**		**3RA6120-2BP33**	
1.5	1 ... 4	56	**3RA6120-1CP33**		**3RA6120-2CP33**	
5.5	3 ... 12	168	**3RA6120-1DP33**		**3RA6120-2DP33**	
15	8 ... 32	448	**3RA6120-1EP33**		**3RA6120-2EP33**	

[1] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

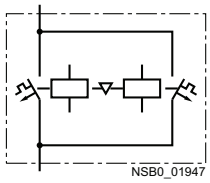
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

Selection and ordering data

3RA6250-1CB32

3RA6250-2DB32

Reversing operation



Rated control supply voltage 24 V AC/DC
Width 90 mm

Rated short-circuit current I_{CS} = 53 kA at 400 V

Two sets of 3RA6940-0A adapters are required for screw fixing.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 42F

Standard three-phase motor 4-pole at 400 V AC[1] Standard output *P*	Setting range of the electronic overload release	Instantaneous electronic release	Article No.	Price per PU	Article No.	Price per PU
kW	A	A				
For use in the infeed system for 3RA6 and with the AS-i add-on module or as a replacement device without main and control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6250-0AB30**		**--**	
0.37	0.32 ... 1.25	56	**3RA6250-0BB30**		**--**	
1.5	1 ... 4	56	**3RA6250-0CB30**		**--**	
5.5	3 ... 12	168	**3RA6250-0DB30**		**--**	
15	8 ... 32	448	**3RA6250-0EB30**		**--**	
			Screw terminals		**Spring-loaded terminals**	
For DIN-rail mounting or screw fixing with 1 pair of main circuit terminals and 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6250-1AB32**		**3RA6250-2AB32**	
0.37	0.32 ... 1.25	56	**3RA6250-1BB32**		**3RA6250-2BB32**	
1.5	1 ... 4	56	**3RA6250-1CB32**		**3RA6250-2CB32**	
5.5	3 ... 12	168	**3RA6250-1DB32**		**3RA6250-2DB32**	
15	8 ... 32	448	**3RA6250-1EB32**		**3RA6250-2EB32**	
For use in the infeed system for 3RA6 without main circuit terminals, with 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6250-1AB33**		**3RA6250-2AB33**	
0.37	0.32 ... 1.25	56	**3RA6250-1BB33**		**3RA6250-2BB33**	
1.5	1 ... 4	56	**3RA6250-1CB33**		**3RA6250-2CB33**	
5.5	3 ... 12	168	**3RA6250-1DB33**		**3RA6250-2DB33**	
15	8 ... 32	448	**3RA6250-1EB33**		**3RA6250-2EB33**	
For DIN-rail mounting or screw fixing for use with AS-i add-on module with 1 pair of main circuit terminals, without control circuit terminals						
0.09	0.1 ... 0.4	56	**3RA6250-1AB34**		**--**	
0.37	0.32 ... 1.25	56	**3RA6250-1BB34**		**--**	
1.5	1 ... 4	56	**3RA6250-1CB34**		**3RA6250-2CB34**	
5.5	3 ... 12	168	**3RA6250-1DB34**		**3RA6250-2DB34**	
15	8 ... 32	448	**3RA6250-1EB34**		**3RA6250-2EB34**	

[1] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

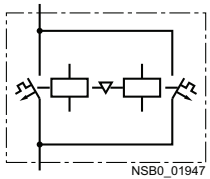
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RA61, 3RA62 compact starters > 3RA62 reversing starters *IE3/IE4* ready

3RA6250-1CP32

3RA6250-2DP32

Reversing operation



Rated control supply voltage 110 ... 240 V AC/DC
Width 90 mm

Rated short-circuit current I_{CS} = 53 kA at 400 V

Two sets of 3RA6940-0A adapters are required for screw fixing.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 42F

Standard three-phase motor 4-pole at 400 V AC[1)] Standard output *P*	Setting range of the electronic overload release	Instantaneous electronic release	Article No.	Price per PU	Article No.	Price per PU
kW	A	A				
For use in the infeed system for 3RA6 and with the AS-i add-on module or as a replacement device without main and control circuit terminals						
0.37	0.32 ... 1.25	56	**3RA6250-0BP30**		--	
15	8 ... 32	448	**3RA6250-0EP30**		--	
			Screw terminals		**Spring-loaded terminals**	
For DIN-rail mounting or screw fixing with 1 pair of main circuit terminals and 1 pair of control circuit terminals						
0.09	0.1 ... 0.4	56	--		**3RA6250-2AP32**	
0.37	0.32 ... 1.25	56	**3RA6250-1BP32**		**3RA6250-2BP32**	
1.5	1 ... 4	56	**3RA6250-1CP32**		**3RA6250-2CP32**	
5.5	3 ... 12	168	**3RA6250-1DP32**		**3RA6250-2DP32**	
15	8 ... 32	448	**3RA6250-1EP32**		**3RA6250-2EP32**	
For use in the infeed system for 3RA6 without main circuit terminals, with 1 pair of control circuit terminals						
1.5	1 ... 4	56	**3RA6250-1CP33**		--	
5.5	3 ... 12	168	**3RA6250-1DP33**		--	

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

Overview

Accessories for SIRIUS 3RA6 compact starters

The following accessories are available specially for the 3RA6 compact starters:

- Infeed system for 3RA6, see page 8/77 onwards
- AS-i add-on modules, see Add-on modules for AS-Interface, page 8/75 onwards
- External auxiliary switches: Snap-on auxiliary switch as versions 2 NO, 2 NC and 1 NO + 1 NC with screw or spring-loaded terminals; the contacts of the auxiliary switch open and close jointly with the main contacts of the compact starter. The NC contacts are designed as mirror contacts.
- Control kit: Aid for manually closing the main contacts in order to check the wiring and motor direction under conditions of short-circuit protection
- Adapter for screw fixing of the compact starter including push-in lugs
- Main circuit terminal: Available with screw and spring-loaded terminals
- Main circuit terminals mixed connection method:
  With the main circuit terminals mixed connection method it is also possible in the main circuit to switch from screw terminals on the input side to spring-loaded terminals on the outgoing side.
  This enables, for example, the side-by-side mounting of several compact starters and their cost-efficient connection using 3-phase busbars on the infeed side. The motors are then connected directly by the quick and reliably contacting spring-loaded connection technology.

Accessories for UL applications

The terminal block for "Self-Protected Combination Motor Controller (Type E)" is available for complying with the clearance and creepage distances required according to UL 508.

Accessories for infeed using 3-phase busbar systems

The 3RV1915-1.B 3-phase busbars can be used as an easy, time-saving and clearly arranged means of feeding SIRIUS 3RA6 compact starters with screw terminals. Motor starter protector sizes S00 and S0 can also be integrated.

The busbars are suitable for between two and five devices. However, any kind of extension up to a maximum summation current of 63 A is possible by clamping the connection tags of an additional busbar (rotated 180°) underneath the terminals of the respective last motor starter protector.

Motor starter protectors S00 and S0 of the 3RV2 series can be combined in any way. The motor starter protectors are supplied by appropriate infeed terminals. Special infeed terminals are required for assembling "Starters (Type E)" according to UL/CSA.

The 3-phase busbar systems have touch protection but empty connection tags must be fitted with covers. They are designed for any short-circuit stress which can occur at the output side of connected SIRIUS 3RA6 compact starters or motor starter protectors.

Busbar adapters for 60 mm systems

The compact starters are mounted directly with the aid of busbar adapters on busbar systems with 60 mm center-to-center spacing in order to save space and to reduce infeed times and costs. These compact starters are suitable for copper busbars with a width from 12 to 30 mm. The busbars can be 4 to 5 mm or 10 mm thick.

The 8US busbar system can be loaded with a maximum summation current of 630 A.

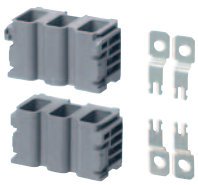
The "reversing starter" version requires a device holder alongside the busbar adapter for lateral mounting.

The compact starters are snapped onto the adapter and connected on the input side. This prepared unit is then plugged directly onto the busbar system, and is thus connected both mechanically and electrically at the same time.

For further accessories, such as incoming and outgoing terminals, flat copper profiles etc., see Catalog LV 10.

Accessories

Selection and ordering data

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories specially for 3RA6 compact starters					
 3RA6950-0A **Control kit** For mechanical actuation of the compact starter	**3RA6950-0A**		1	1 unit	42F
 3RA6940-0A **Adapter for screw fixing the compact starter** (set including push-in lugs) Direct-on-line starters require one set, reversing starters two sets.	**3RA6940-0A**		1	1 unit	42F
	Screw terminals				
 3RA6911-1A **Auxiliary switches for compact starters**					
• 2 NO	**3RA6911-1A**		1	1 unit	42F
• 2 NC	**3RA6912-1A**		1	1 unit	42F
• 1 NO + 1 NC (these auxiliary contacts are force-guided)	**3RA6913-1A**		1	1 unit	42F
 3RA6920-1A **Main circuit terminals** input and output side (1 set comprising 2 terminals)	**3RA6920-1A**		1	1 unit	42F
 3RA6920-1B **Control circuit terminals** (1 set comprising 2 terminals)					
• For 3RA61	**3RA6920-1B**		1	1 unit	42F
• For 3RA62	**3RA6920-1C**		1	1 unit	42F
	Spring-loaded terminals				
 3RA6911-2A **Auxiliary switches for compact starters**					
• 2 NO	**3RA6911-2A**		1	1 unit	42F
• 2 NC	**3RA6912-2A**		1	1 unit	42F
• 1 NO + 1 NC (these auxiliary contacts are force-guided)	**3RA6913-2A**		1	1 unit	42F
 3RA6920-2A **Main circuit terminals** input and output side (1 set comprising 2 terminals)	**3RA6920-2A**		1	1 unit	42F
 3RA6920-2B **Control circuit terminals** (1 set comprising 2 terminals)					
• For 3RA61	**3RA6920-2B**		1	1 unit	42F
• For 3RA62	**3RA6920-2C**		1	1 unit	42F
 3RA6920-3A **Main circuit terminals, mixed connection method** 1 set comprises: • 1 joint block on the input side with screw terminals • 1 joint block on the output side with spring-loaded terminals	**3RA6920-3A**		1	1 unit	42F

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

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Terminals for "Self-Protected Combination Motor Controllers (Type E)" according to UL 508 for infeed through parallel wiring with compact starters					
 3RV2928-1H **Terminal block Type E** For extended clearance and creepage distances (1 and 2 inch) Note: UL 508 demands 1-inch clearance and 2-inch creepage distance on the input side for "Combination motor controller (Type E)". Terminal blocks are not required for use according to CSA. These terminal blocks cannot be used in combination with 3RV19.5 3-phase busbars.	**3RV2928-1H**		1	1 unit	41E

Number of compact starters and motor starter protectors that can be connected without lateral accessories	Modular spacing	Rated current I_n at 690 V	For motor starter protectors	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	mm	A	Size					
3-phase busbars for infeed with 3RA6								
 3RV1915-1AB For feeding several compact starters and/or motor starter protectors with screw terminals, mounted side-by-side on DIN rails, insulated, with touch protection.								
2	45	63	S00, S0	**3RV1915-1AB**		1	1 unit	41E
 3RV1915-1BB								
3	45	63	S00, S0	**3RV1915-1BB**		1	1 unit	41E
 3RV1915-1CB								
4	45	63	S00, S0	**3RV1915-1CB**		1	1 unit	41E
 3RV1915-1DB								
5	45	63	S00, S0	**3RV1915-1DB**		1	1 unit	41E

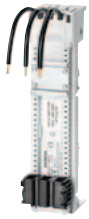
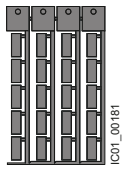
Version	Modular spacing	For motor starter protectors	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	mm	Size					
Covers for connection tags of the 3-phase busbars							
 3RV1915-6AB cover mounted on 3RV1915-1CB busbar Touch protection for empty positions	--	S00, S0	**3RV1915-6AB**		1	10 units	41E

Conductor cross-section: solid or stranded	Conductor cross-section: finely stranded with end sleeve	Conductor cross-section: AWG cables, solid or stranded	Tightening torque	For compact starters and motor starter protectors	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
mm^2	mm^2	AWG	Nm	Size					
3-phase infeed terminals for 3-phase busbars according to IEC and for assembling "Starters (Type E)" according to UL 508									
 3RV2925-5EB **Connection from top**									
2.5 ... 25	2.5 ... 16	10 ... 4	3 ... 4	S00, S0	**3RV2925-5EB**		1	1 unit	41E
3-phase infeed terminals for 3-phase busbars									
 3RV2915-5B **Connection from below**[1]									
2.5 ... 25	2.5 ... 16	10 ... 4	Input: 4; Output: 2 ... 2.5	S00, S0	**3RV2915-5B**		1	1 unit	41E

[1] This terminal is connected in place of a compact starter, please take the space requirement (45 mm) into account.

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

Accessories

	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Busbar adapters for 60 mm systems						
 8US1211-1NS10	For copper busbars according to DIN 46433 Width: 12 ... 30 mm Thickness: 4 ... 5 mm or 10 mm	**8US1211-1NS10**		1	1 unit	53W
Device holders for lateral mounting alongside the busbar adapter for 60 mm systems						
 8US1250-1AA10	Required in addition to the busbar adapter for mounting a reversing starter	**8US1250-1AA10**		1	1 unit	53W
Tools for opening spring-loaded terminals						
 3RA2908-1A	**Screwdriver** For all SIRIUS devices with spring-loaded terminals Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	**Spring-loaded terminals** **3RA2908-1A**		1	1 unit	41B
Blank labels						
 3RT2900-1SB20	**Unit labeling plates**[1] For SIRIUS devices, 20 mm x 7 mm, titanium gray	**3RT2900-1SB20**		100	340 units	41B
Manuals						
	System Manual for 3RA6 compact starter and infeed system for the 3RA6, see https://support.industry.siemens.com/cs/ww/en/view/27865747					

1) PC labeling system for individual inscription of unit labeling plates available from: murrplastik Systemtechnik GmbH (see page 16/18).

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

Overview

Various AS-i add-on modules are available for communication of the 3RA6 compact starter with the control system through AS-Interface:

- Standard version
- With two local inputs
- With two free external inputs
- With one free external input and one free external output
- With two free external outputs
- For local control

The AS-i add-on modules can be combined only in connection with compact starters with a rated control supply voltage of 24 V AC/DC.

AS-i add-on module for local control

With this new module it is also possible for the connected compact starter to be operated directly using simple switches, i.e. without recourse to AS-i communication, if required.

"Automatic" mode

NC contacts can be connected to the inputs Y2 and Y4 through the local terminals on the AS-i add-on module. If the "+" terminals are connected simultaneously to both local inputs, the AS-i add-on module will be in "Automatic" mode, i.e. it will communicate with the control system through AS-Interface.

Local control

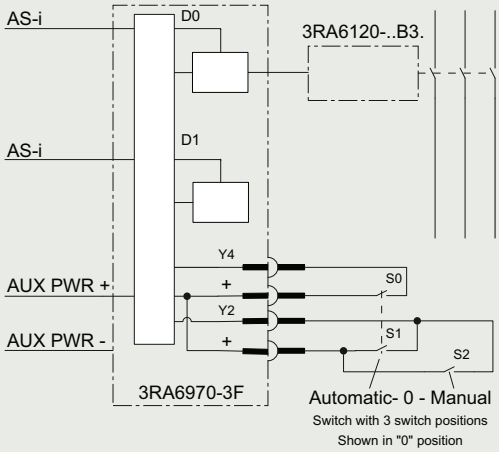
Opening the two inputs Y2 and Y4 will result in the direct disconnection of the compact starter. Operation through AS-i communication is finished and the compact starter can now be switched on and off directly using NO contacts (one NO contact per direction of rotation on the reversing starter).

"LED AUX Power" must light up green, the 24 V DC supply must be ensured and the AS-i supply voltage must no longer be applied.

Resetting to "Automatic" mode

If a "1" signal is simultaneously applied at the local inputs, the availability bit DI 0 is switched to a "1" signal.

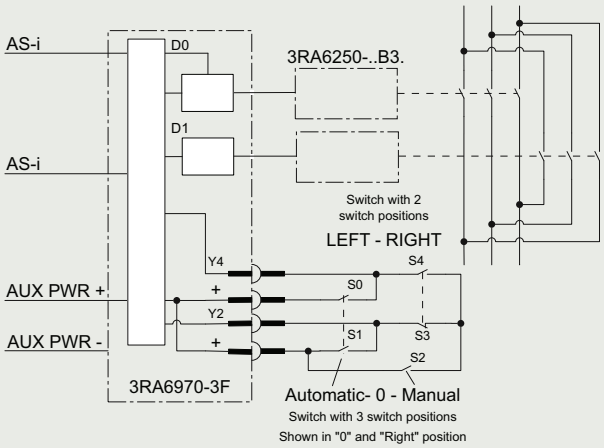
If AS-i communication is reset, the motor is first switched off and then on again when requested by the control system.



Switch with 3 switch positions			
Switch	Automatic	0	Manual
S0	Closed	Open	Open
S1	Closed	Open	Open
S2	Open	Open	Closed

NSB0_02096a

Circuit diagram example for controlling a 3RA6120 direct-on-line starter using an AS-i add-on module for local control



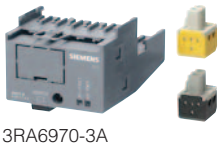
Switch with 3 switch positions			
Switch	Automatic	0	Manual
S0	Closed	Open	Open
S1	Closed	Open	Open
S2	Open	Open	Closed

Switch with 2 switch positions		
Switch	LEFT	RIGHT
S3	Open	Closed
S4	Closed	Open

NSB0_02097a

Circuit diagram example for controlling a 3RA6250 reversing starter using an AS-i add-on module for local control

Selection and ordering data

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
AS-i add-on modules					
 3RA6970-3A  3RA6970-3B to -3F	**Standard version** For communication of the compact starter with the control system through AS-Interface	**3RA6970-3A**	1	1 unit	42F
	With two local inputs For safe disconnection through local safety relays, e.g. cable-operated switches	**3RA6970-3B**	1	1 unit	42F
	With two free external inputs Replaces the digital standard inputs "Motor On" and "Group warning"	**3RA6970-3C**	1	1 unit	42F
	With one free external input and one free external output Replaces the digital standard input "Group warning"	**3RA6970-3D**	1	1 unit	42F
	With two free external outputs Only for direct-on-line starters, replaces the digital standard output "Motor CCW"	**3RA6970-3E**	1	1 unit	42F
	For local control Control of the compact starter optionally using AS-Interface or local switches	**3RA6970-3F**	1	1 unit	42F
Spare parts for AS-i add-on modules					
 3RK1901-0NA00, 3RK1901-0PA00	**Connection plugs for data and auxiliary supply cable** With 2 insulation displacement terminations for standard stranded wires 2 x 0.5 ... 0.75 mm^2				
	• Flat, yellow, extender	**3RK1901-0NA00**	1	5 units	42C
	• Flat, black, extender	**3RK1901-0PA00**	1	5 units	42C
Accessories for AS-i add-on modules					
 3RK1904-2AB02	**AS-Interface addressing unit V3.0** • For AS-Interface modules and sensors and actuators with integrated AS-Interface according to AS-i specification V3.0 • For setting the AS-i address of standard slaves, and slaves with extended addressing mode (A/B devices) • With input/output test function and many other commissioning functions • Battery operation with four type AA batteries (IEC LR6, NEDA 15) • Scope of supply: - Addressing unit with four batteries - Addressing cable, with M12 plug to addressing plug (hollow plug), length 1.5 m	**3RK1904-2AB02**	1	1 unit	42C

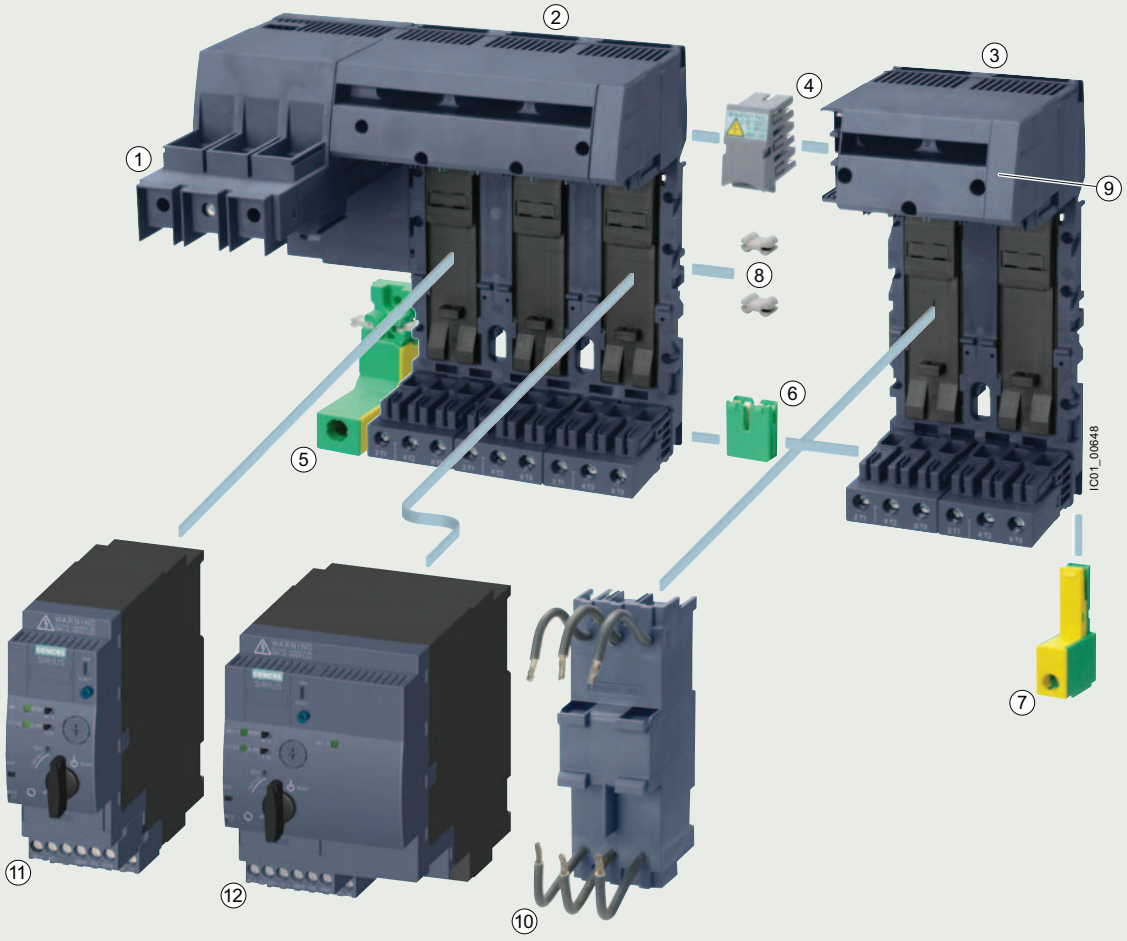
For matching AS-Interface masters, routers and power supply units, see pages 2/28, 2/38 and 2/62 onwards.

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

Overview

More information	
Homepage, see www.siemens.com/sirius-infeed-system SiePortal, see www.siemens.com/product_catalog_siep?3RA68	Online configurator, see www.siemens.com/sirius/configurators

The infeed system for 3RA6 compact starters enables far less wiring in the main circuit and, thanks to the easy exchangeability of the compact starters, reduces the usual downtimes for maintenance work during the plant's operating phase. The infeed system provides the possibility of completely prewiring the main circuit without a compact starter needing to be connected at the same time. As the result of the removable terminals in the main circuit, compact starters can be integrated in an infeed system in easy manner (without the use of tools).



1 Infeed terminal
2 3-socket expansion module
3 2-socket expansion module
4 Expansion plug
5 PE infeed
6 PE expansion plug
7 PE pick-off
8 Connecting wedges
9 End cover
10 45 mm adapter for SIRIUS motor starter protector size S0
11 3RA61 direct-on-line starter
12 3RA62 reversing starter

Infeed system for 3RA6 compact starters

Infeed system for 3RA6

In addition, the integrated PE bar means it is optionally possible to connect the motor cable directly to the infeed system without additional intermediate terminals. The infeed system for 3RA6 compact starters is designed for summation currents up to 100 A with a maximum conductor cross-section of up to 70 mm² on the infeed terminal block.

The infeed system can be mounted on a DIN rail or flat surfaces.

① *Infeed*

The 3-phase infeed is available as an infeed with screw terminal (25/35 mm² up to 63 A or 50/70 mm² up to 100 A) and as an infeed with spring-loaded terminal (25/35 mm² up to 63 A).

The infeed with spring-loaded terminal can be fitted on the left as well as on the right of an expansion module.

The infeed with screw terminal is supplied only with a 3-socket expansion module and permanently fitted on the left side.

The infeeds with screw terminal enable connection of the main conductors (L1, L2, L3) either from above or from below.

The infeed with screw terminal is supplied complete with one end cover, the infeed with spring-loaded terminal complete with two end covers.

② *3-socket expansion module*

The expansion module with three sockets for compact starters is available with screw terminals and with spring-loaded terminals.

Expansion modules enable the infeed system to be expanded and can be fitted to each other in any number.

Two expansion modules are held together with the help of two connecting wedges and one expansion plug. These assembly parts are included in the scope of supply of the respective expansion module.

When the infeed system for 3RA6 compact starters is used, the compact starters (plug-in modules) are easily assembled and disassembled even when live.

Optional possibilities:
- PE connection on motor output side
- Outfeed for external additional devices
- Connection to 3RV29 infeed system
- Integration of SIRIUS 3RV2 motor starter protectors/circuit breakers size S0 up to 25 A (using 3RA6890-0BA adapter)

③ *2-socket expansion module*

If only two instead of three additional sockets are required, then the 2-socket expansion module is the right choice. It has the same functionality as the 3-socket expansion module.

④ *Expansion plug*

Two expansion modules can be connected together using the expansion plug. Flexible expansion of the infeed system is thus possible.

⑤ *PE infeed*

This module enables a PE cable to be connected.

The PE infeed can be ordered with screw terminals and spring-loaded terminals (35 mm²) and can be fitted on the right or left of the expansion block.

⑥ *PE expansion plug*

The PE expansion plug is inserted from below and enables two PE bars to be connected.

⑦ *PE pick-off*

The PE pick-off is available with screw terminals and spring-loaded terminals (6/10 mm²). It is snapped into the infeed system from below.

⑧ *Connecting wedges*

Two connecting wedges are used to hold together two expansion modules.

⑨ *End covers*

On the last expansion module of a row, the socket provided for the expansion plug can be covered by inserting the end cover.

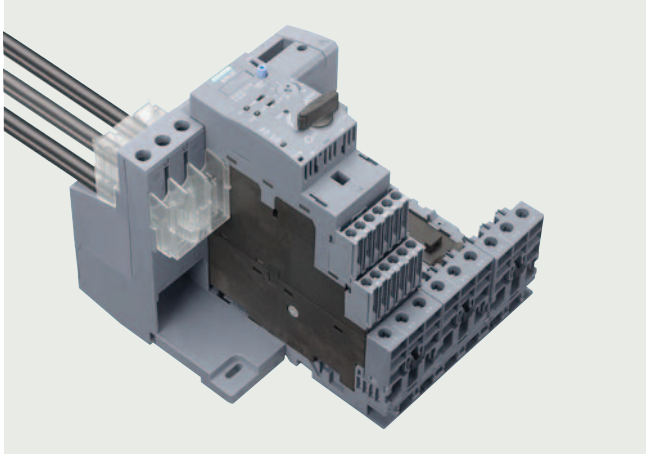
⑩ *45 mm adapter for SIRIUS motor starter protectors size S0*

SIRIUS 3RV2 motor starter protectors/circuit breakers size S0 with screw terminals can be fitted to the adapter, enabling them to be plugged into the infeed system.

Terminal covers for increasing finger protection on the front

Universally configured terminal covers are available for the 25/35 mm² and 50/70 mm² 3-phase infeeds with screw terminal:
- 3RA6880-2AB terminal covers for infeeds with screw terminal 25/35 mm² (3RA6812-8AB/-8AC)
- 3RA6880-3AB terminal covers for infeeds with screw terminal 50/70 mm² (3RA6813-8AB/-8AC)

The terminal covers can be used in two ways on the infeed terminals of the infeeds with screw terminal 25/35 mm² and 50/70 mm² (see illustration):
- If the terminals are connected, the cables are also covered:
  - by approx. 14 mm with the 3RA6880-2AB
  - by approx. 18 mm with the 3RA6880-3AB
- On clamping points without connected cables, the covers can be turned once and then pushed over the clamping points for finger-safe covering of the metal parts.



Use of the 3RA6880-2AB terminal cover on the infeed with screw terminal 25/35 mm² (3RA6812-8AB/-8AC). The upper cover increases finger protection for the connected conductors. The identical lower cover is turned for use and prevents touching of the voltage-carrying metal parts of the infeed terminal. For better recognition, the covers are shown as transparent in this illustration and not in their original color.

Terminal blocks

Using the terminal block the three phases can be fed out of the system; this means that 1-phase, 2-phase and 3-phase components can also be integrated in the system.

After the end cover is pulled out, the terminal block can be plugged onto an expansion module.

Expansion plug for SIRIUS 3RV29 infeed systems

After the end cover is pulled out, the expansion plug for the SIRIUS 3RV29 infeed system can be plugged onto an expansion module. It connects the infeed system for 3RA6 compact starters with the SIRIUS 3RV29 infeed system.

Maximum rated operational current

The following maximum rated operational currents apply for the components of the infeed system for 3RA6:

Component	Maximum rated operational current A
Infeed with screw terminal 50/70 mm²	100
Infeed with screw terminal 25/35 mm²	63
Infeed with spring-loaded terminal 25/35 mm²	63
Expansion plug	63

With side-by-side mounting of several expansion modules, the maximum rated operational current from the second expansion module to the end of the row is 63 A.

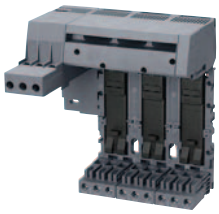
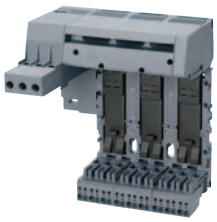
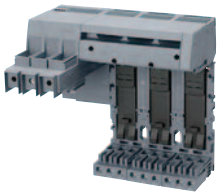
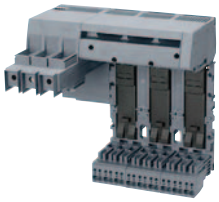
Proposal for upstream short-circuit protection devices

The following short-circuit data apply for the components of the infeed system for 3RA6 compact starters:

Conductor cross-section mm²	Maximum let-through current $I_{d,max}$ and current integral I^2t	Proposal for upstream short-circuit protection device	Maximum prospective $I_{short\ circuit}$ kA
Short-circuit protection for 3RA681.-8A. infeed with screw terminal (25/35 mm² and 50/70 mm²)			
2.5 ... 35, 2.5 ... 70	$I_{d,max}$ < 21 kA, I^2t = 530 kA²s	**3RV2041-4MA10** (LV HRC gG 3NA3; 315 A)	**50**
Short-circuit protection for infeed with spring-loaded terminal 25/35 mm², 3RA6830-5AC			
4	$I_{d,max}$ < 9.5 kA, I^2t = 85 kA²s	**3RV2021-4DA10**	**40**
6	$I_{d,max}$ < 12.5 kA, I^2t = 140 kA²s	**3RV2031-4EA10**	**30**
10	$I_{d,max}$ < 15 kA, I^2t = 180 kA²s	**3RV2031-4WA10**	**25**
16/25	$I_{d,max}$ < 19 kA, I^2t = 440 kA²s	**3RV2031-4JA10**	**65**
		3RV2041-4JA10	**65**
35	$I_{d,max}$ < 21 kA, I^2t = 530 kA²s	**3RV2041-4MA10** (LV HRC gG 3NA3; 315 A)	**50**
Short-circuit protection for terminal block, 3RV2917-5D			
1.5	$I_{d,max}$ < 7.5 kA	**5SY...** [1]	
2.5	$I_{d,max}$ < 9.5 kA		
4	$I_{d,max}$ < 9.5 kA		
6	$I_{d,max}$ < 12.5 kA		

[1] To prevent the possibility of short circuits, the cables on the terminal block must be installed so that they are short-circuit-proof.

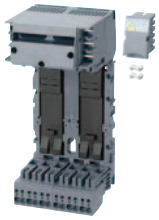
Selection and ordering data

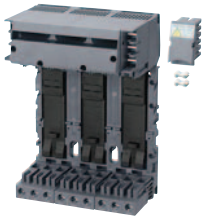
Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3-phase infeeds and expansion modules					
 3RA6812-8AB  3RA6812-8AC	***Infeeds with screw terminal 25/35 mm² on the left*** **Infeed with screw terminal on the input side** with a permanently fitted 3-socket expansion module with screw or spring-loaded terminals on the output side and integrated PE bar **Expansion module** with 3 sockets for 3 direct-on-line starters or 1 direct-on-line starter and 1 reversing starter				
		Screw terminals			
	• Screw terminals on the output side	**3RA6812-8AB**	1	1 unit	42F
		Spring-loaded terminals			
	• Spring-loaded terminals on the output side	**3RA6812-8AC**	1	1 unit	42F
 3RA6813-8AB  3RA6813-8AC	***Infeeds with screw terminal 50/70 mm² on the left*** **Infeed with screw terminal on the input side** with a permanently fitted 3-socket expansion module with screw or spring-loaded terminals on the output side and integrated PE bar **Expansion module** with 3 sockets for 3 direct-on-line starters or 1 direct-on-line starter and 1 reversing starter, suitable for UL operation according to UL 508 Type E				
		Screw terminals			
	• Screw terminals on the output side	**3RA6813-8AB**	1	1 unit	42F
		Spring-loaded terminals			
	• Spring-loaded terminals on the output side	**3RA6813-8AC**	1	1 unit	42F
 3RA6830-5AC	***Infeed with spring-loaded terminal 25/35 mm² on the left or right***				
		Spring-loaded terminals			
	Up to 63 A	**3RA6830-5AC**	1	1 unit	42F

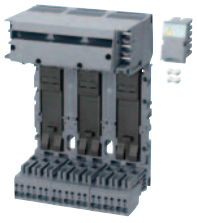
* You can order this quantity or a multiple thereof.
Illustrations are approximate

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Expansion modules					
2-socket expansion modules					
With screw or spring-loaded terminals and integrated PE bar With 2 sockets for 2 direct-on-line starters or 1 reversing starter Expansion plug and 2 connecting wedges are included in the scope of supply.					
	Screw terminals				
• Version with screw terminals	**3RA6822-0AB**		1	1 unit	42F
	Spring-loaded terminals				
• Version with spring-loaded terminals	**3RA6822-0AC**		1	1 unit	42F
3-socket expansion modules					
With screw or spring-loaded terminals and integrated PE bar With 3 sockets for 3 direct-on-line starters or 1 direct-on-line starter and 1 reversing starter Expansion plug and 2 connecting wedges are included in the scope of supply.					
	Screw terminals				
• Version with screw terminals	**3RA6823-0AB**		1	1 unit	42F
	Spring-loaded terminals				
• Version with spring-loaded terminals	**3RA6823-0AC**		1	1 unit	42F


3RA6822-0AB


3RA6822-0AC


3RA6823-0AB

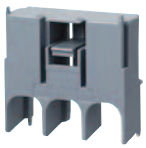

3RA6823-0AC

8

Infeed system for 3RA6

	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories for infeed systems for 3RA6						
	PE infeeds, 25/35 mm²					
 3RA6860-6AB	• Version with screw terminals	**Screw terminals** **3RA6860-6AB**		1	1 unit	42F
 3RA6860-5AC	• Version with spring-loaded terminals	**Spring-loaded terminals** **3RA6860-5AC**		1	1 unit	42F
	PE pick-offs 6/10 mm²					
 3RA6870-4AB	• Version with screw terminals	**Screw terminals** **3RA6870-4AB**		1	1 unit	42F
 3RA6870-3AC	• Version with spring-loaded terminals	**Spring-loaded terminals** **3RA6870-3AC**		1	1 unit	42F
	Expansion plugs					
 3RA6890-0EA	**PE expansion plug**	**3RA6890-0EA**		1	1 unit	42F
 3RA6890-1AB	**Expansion plug** Between 2 expansion modules Included in the scope of supply of the expansion modules	**3RA6890-1AB**		1	1 unit	42F
 3RA6890-1AA	**Expansion plug for SIRIUS 3RV29 infeed system** Connects infeed system for 3RA6 to 3RV29 infeed system	**3RA6890-1AA**		1	1 unit	42F

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

	Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories for infeed systems for 3RA6 (continued)						
	45 mm adapter					
 3RA6890-0BA	For SIRIUS 3RV2.2 motor starter protectors size S0 up to 25 A • Screw terminals (conductor cross-section AWG 10)	**Screw terminals** **3RA6890-0BA**		1	1 unit	42F
	Terminal covers for infeeds with screw terminals					
 3RA6880-2AB	**IP20 terminal covers for infeeds with screw terminals 25/35 mm² (3RA6812-8AB/-8AC)** (2 units per pack)	**3RA6880-2AB**		1	1 unit	42F
 3RA6880-3AB	**IP20 terminal covers for infeeds with screw terminals 50/70 mm² (3RA6813-8AB/-8AC)** (2 units per pack)	**3RA6880-3AB**		1	1 unit	42F
	Terminal block					
 3RV2917-5D	For integration of 1-phase, 2-phase and 3-phase external components • Spring-loaded terminals	**Spring-loaded terminals** **3RV2917-5D**		1	1 unit	41E
Tools for opening spring-loaded terminals						
	Screwdriver					
 3RA2908-1A	For all SIRIUS devices with spring-loaded terminals Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	**Spring-loaded terminals** **3RA2908-1A**		1	1 unit	41B
Manuals						
	System Manual for 3RA6 compact starter and infeed system for the 3RA6, see https://support.industry.siemens.com/cs/ww/en/view/27865747					

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

SIRIUS 3RA8 intelligent load feeders NEW

Overview

SIRIUS 3RA8 intelligent load feeder

More information

Homepage, see www.siemens.com/sirius-ilm

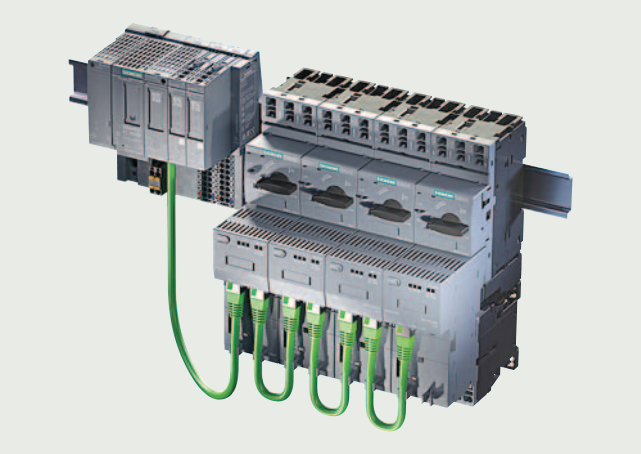
SiePortal, see www.siemens.com/product_catalog_siep?3RA8

Further components in the ET 200SP I/O system:
- Catalog ST 70
- Homepage, see www.siemens.com/et200sp

The 3RA8 intelligent load feeders consist of 3RV23 motor starter protectors and 3RT2 electromechanical contactors.

The 3RA8 intelligent load feeders are connected to the SIMATIC ET 200SP via the flexible station extension (ET connection) using the BA-Send BusAdapter.

Configuration, parameterization, and diagnostics of the feeder can be performed directly in STEP 7 (TIA Portal). The BA-Send BusAdapter supports up to 16 intelligent load feeders.



Part of the SIMATIC ET 200SP automation system

12 preassembled 3RA8 combinations can be ordered for direct-on-line and reversing starting of standard three-phase motors up to 32 A.

The feeders are equipped with either the Standard or the High Feature version of the 3RC7 intelligent link module, see also the function overview of the 3RC7 intelligent link modules on page 8/91.

In the 3RA8 intelligent load feeder, the 3RV23 motor starter protector provides short-circuit protection. Overload protection is provided by the 3RC7 intelligent link module. The intelligent load feeders are available with setting ranges from 0.4 to 32 A in sizes S00 and S0.

The table below lists the maximum power of the three-phase motor for pre-assembled 3RA8 intelligent load feeders based on the type of coordination at a voltage of 400 V AC:

Size	Type of coordination	Type	Adjustable current response value of the inverse-time delayed overload release	Power of three-phase motor
			A	kW
S00	2	3RA8.12-1EE.0	0.4 ... 4	0.12 ... 1.5
	1	3RA8.11-1KE.0	1.2 ... 12	0.55 ... 5.5
S0	2	3RA8.22-4EE.0	3.5 ... 32	1.5 ... 15

Operating conditions

The 3RA8 intelligent load feeders are climate-proof. They are intended for use in enclosed rooms in which no harsh operating conditions (such as dust, caustic vapors, hazardous gases) prevail. Suitable covers must be provided for installation in dusty and damp locations.

Behavior in the event of short circuit

EN 60947-4-1 (VDE 0660 Part 102) or IEC 60947-4-1 make a distinction between two different types of coordination, which are referred to as type of coordination 1 and type of coordination 2. Any short circuits that occur are cleared safely by both types of coordination. The only differences concern the extent of the damage caused to the device by a short circuit.

Type of coordination 1

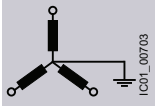
The load feeder may be non-operational after a short-circuit trip. Damage to the contactor or to the overload release is permissible.

Type of coordination 2

There must be no damage to the overload release or to any other components after a short-circuit trip. The load feeder can resume operation without needing to be renewed. At most, welding of the contactor contacts is permissible if they can be disconnected easily without any significant deformation.

Voltage data

The data for 3-phase power systems according to IEC 60947-4-1 are valid for the following line system configurations:

Voltage U_e	Line system configuration Three-phase four-wire systems 
V	V
230	--
400	230/400
440	260/440
500	--
690	400/690

-- Not specified

Tripping times

In the 3RA8 intelligent load feeder, thermal motor protection is ensured by the 3RC7 intelligent link module. The trip class (Class 10E or 20E) can be configured via STEP 7 (TIA Portal).

Connection methods

The 3RA8 intelligent load feeders are all provided with spring-loaded terminals.

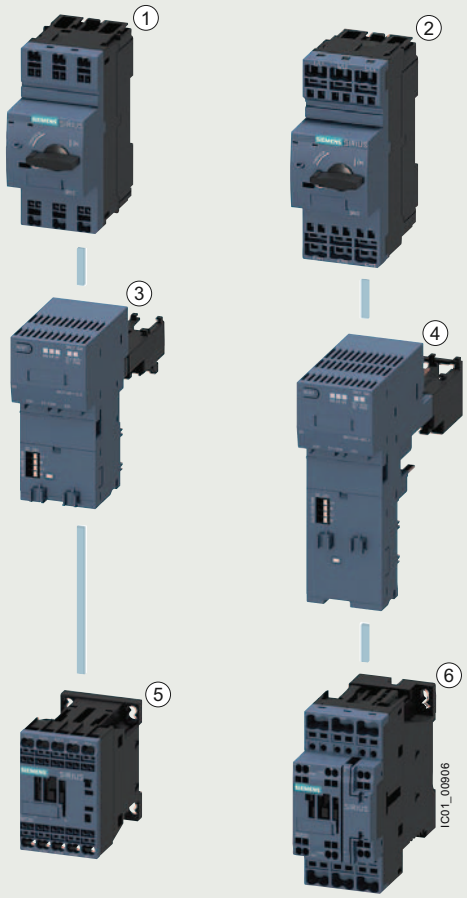
	Spring-loaded terminals
	The connection method is indicated in the corresponding tables by the symbols shown on orange backgrounds.

Mounting

The 3RA8 intelligent load feeders are suitable for the following types of mounting:

- For mounting on TH 35-15 DIN rail according to IEC 60715
- For mounting on busbar adapters (busbar center-to-center spacing 60 mm, busbar thickness 5 to 10 mm with beveled edges), see page 8/55
- For screw fixing with 3RV2928-0B push-in lug, see page 8/54
- For installation with the 3RV29 infeed system, see 3RA2 load feeders, page 8/58. For the 3RV29 infeed system, see page 7/67.

Direct-on-line starter • Sizes S00 and S0

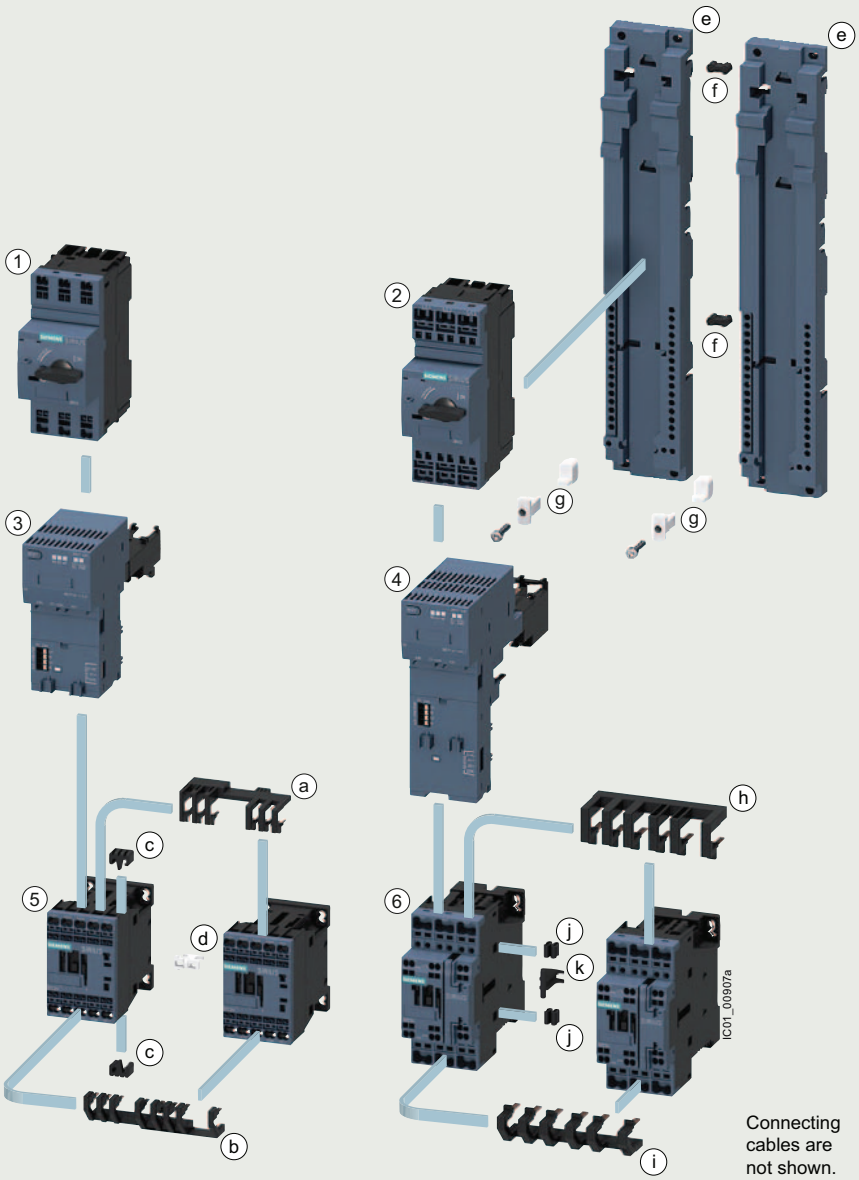


1. **Circuit breaker**
   Size S00
   Spring-loaded terminals
2. **Circuit breaker**
   Size S0
   Spring-loaded terminals
3. **Intelligent link module**
   Direct-on-line starter
   Size S00
   Spring-loaded terminals
   3RC7140-1EE00: 0.4 … 4 A, Standard
   3RC7140-1EE10: 0.4 … 4 A, High Feature
   3RC7140-1KE00: 1.2 … 12 A, Standard
   3RC7140-1KE10: 1.2 … 12 A, High Feature
4. **Intelligent link module**
   Direct-on-line starter
   Size S0
   Spring-loaded terminals
   3RC7140-4EE01: 3.5 … 32 A, Standard
   3RC7140-4EE11: 3.5 … 32 A, High Feature
5. **Contactor**
   Size S00
   Spring-loaded terminals
6. **Contactor**
   Size S0
   Spring-loaded terminals

Left: 3RA8 intelligent load feeder for direct-on-line starting with spring-loaded terminals, size S00
Right: 3RA8 intelligent load feeder for direct-on-line starting with spring-loaded terminals, size S0

SIRIUS 3RA8 intelligent load feeders NEW

Reversing starter • Sizes S00 and S0



Connecting cables are not shown.

1 **Circuit breaker**
Size S00
Spring-loaded terminals

2 **Circuit breaker**
Size S0
Spring-loaded terminals

3 **Intelligent link module Reversing starter**
Size S00
Spring-loaded terminals
3RC7141-1EE00: 0.4 … 4 A, Standard
3RC7141-1EE10: 0.4 … 4 A, High Feature
3RC7141-1KE00: 1.2 … 12 A, Standard
3RC7141-1KE10: 1.2 … 12 A, High Feature

4 **Intelligent link module Reversing starter**
Size S0
Spring-loaded terminals
3RC7141-4EE01: 3.5 … 32 A, Standard
3RC7141-4EE11: 3.5 … 32 A, High Feature

5 **Contactor**
Size S00
Spring-loaded terminals

6 **Contactor**
Size S0
Spring-loaded terminals

Wiring kit
3RA2913-2LA2
Reversing starter

a Upper wiring module
b Lower wiring module
c Two connecting clips for two contactors
d Mechanical interlock

Wiring kit
3RA2923-2LB2
Reversing starter

e Two DIN-rail adapters
f Two link wedges
g Two connecting pieces and two screw holders
h Upper wiring module
i Lower wiring module
j Two connecting clips for two contactors
k Mechanical interlock

Left: 3RA8 intelligent load feeder for reversing starting in size S00
Right: 3RA8 intelligent load feeder for reversing starting and DIN-rail mounting in size S0

Article number scheme

Product versions		Article number									
SIRIUS intelligent load feeders		**3RA8**	□	□	□	–	□	□	□	□	**0**
Product function	Direct-on-line starters		**4**								
	Reversing starters		**5**								
Size	S00			**1**							
	S0			**2**							
Type of coordination	1				**1**						
	2				**2**						
Current range	0.4 ... 4 A						**1**	**E**			
	1.2 ... 12 A						**1**	**K**			
	3.5 ... 32 A						**4**	**E**			
Connection methods	Spring-loaded terminals								**E**		
Version	Standard									**0**	
	High Feature									**1**	
Example		**3RA8**	**4**	**1**	**2**	–	**1**	**E**	**E**	**0**	**0**

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

Part of the SIMATIC automation system

- One engineering tool for the entire automation system
- Configuration and parameterization in STEP 7 (TIA Portal)
- Easy reading of status and current values
- Error and maintenance demands with stored plain text messages through integrated system diagnostics in the SIMATIC environment

Transparency down to the field level

- Measurement of current, voltage, and power (including power factor)
- Load diagnostics (1- or 3-phase)

Proactive protection

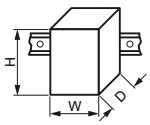
- Extended wide setting range of the overload protection function
- Preventive maintenance by detecting faults and discrepancies

Minimal effort

- Reduced wiring costs
- Standardized design due to fewer versions
- Extensive accessories

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RA8	Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/109823514

Article number			3RA8412-1EE.0	3RA8512-1EE.0	3RA8411-1KE.0	3RA8511-1KE.0	3RA8422-4EE.0	3RA8522-4EE.0
General technical specifications								
Width × height × depth		mm	45 x 198 x 131	90 x 204 x 131	45 x 198 x 131	90 x 204 x 131	45 x 243 x 150	90 x 269 x 174
Installation altitude at height above sea level, maximum		m	2 000					
Ambient temperature								
• During operation		°C	-20 ... +60					
• During storage		°C	-40 ... +80					
• During transport		°C	-40 ... +80					
Vibration resistance			5 ... 8.4 Hz, 3.5 mm; 8.4 ... 150 Hz, 1 *g*; 10 cycles/10 ... 60 Hz, 0.35 mm; 60 ... 500 Hz, 5 *g*; 10 cycles					
Shock resistance	According to IEC 60068-2-27		6 *g*/11.0 ms (3 shocks); 10 *g*/6.0 ms (1 000 shocks)					
Degree of protection IP on the front			IP20					
Touch protection on the front	According to IEC 60529		Finger-safe					
Electrical specifications								
Adjustable current response value of the inverse-time delayed overload release		A	0.4 ... 4		1.2 ... 12		3.5 ... 32	
Operational voltage at AC-3, rated value, maximum		V	690					
Operating frequency		Hz	50 ... 60					
Impulse withstand voltage		kV	6					
Conditional short-circuit current (I_q) at 400 V	According to IEC 60947-4-1	A	150 000					
Power loss (W) at rated current at AC at warm operating temperature per pole		W	2.6		3.6		6.7	
Trip class			Class 10E/Class 20E					
Type of coordination			2		1		2	
Conductor cross-sections								
Connection of the electrical connection for the main circuit			**Spring-loaded terminals**					
Type of connectable conductor cross-sections								
• For main contacts								
- Solid			2 x (0.5 ... 4 mm²)				2 x (1 ... 10 mm²)	
- Stranded			2 x (0.5 ... 4 mm²)				2 x (1 ... 10 mm²)	
- Finely stranded with end sleeve			2 x (0.5 ... 2.5 mm²)				2 x (1 ... 6 mm²)	
- For AWG cables			2 x 20 ... 12				2 x 18 ... 8	
Type of electrical connection for infeed of the supply voltage			**Spring-loaded terminals (push-in)**					
Type of connectable conductor cross-sections								
• At the inputs for supply voltage								
- Solid			0.2 ... 1.5 mm²					
- Finely stranded without end sleeve			0.2 ... 1.5 mm²					
- Finely stranded with end sleeve			0.2 ... 1.0 mm²					
- Solid for AWG cables			24 ... 16					

Selection and ordering data

Size of the load feeder	Adjustable current response value of the inverse-time delayed overload release	Type of coordination	Spring-loaded terminals		PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU			
	A						
Intelligent load feeders							
Direct-on-line starters							
Standard							
S00	0.4 ... 4	2	**3RA8412-1EE00**		1	1 unit	42L
	1.2 ... 12	1	**3RA8411-1KE00**		1	1 unit	42L
S0	3.5 ... 32	2	**3RA8422-4EE00**		1	1 unit	42L
High Feature							
S00	0.4 ... 4	2	**3RA8412-1EE10**		1	1 unit	42L
	1.2 ... 12	1	**3RA8411-1KE10**		1	1 unit	42L
S0	3.5 ... 32	2	**3RA8422-4EE10**		1	1 unit	42L
Reversing starters							
Standard							
S00	0.4 ... 4	2	**3RA8512-1EE00**		1	1 unit	42L
	1.2 ... 12	1	**3RA8511-1KE00**		1	1 unit	42L
S0	3.5 ... 32	2	**3RA8522-4EE00**		1	1 unit	42L
High Feature							
S00	0.4 ... 4	2	**3RA8512-1EE10**		1	1 unit	42L
	1.2 ... 12	1	**3RA8511-1KE10**		1	1 unit	42L
S0	3.5 ... 32	2	**3RA8522-4EE10**		1	1 unit	42L

3RA841.-1.E.0

3RA8422-4EE.0

3RA851.-1.E.0

3RA8522-4EE.0

Notes:

Individual components of the 3RA8 intelligent load feeders, see table on page 8/92.

Accessories, see page 8/96 onwards.

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

SIRIUS 3RC7 intelligent link modules NEW

Overview

SIRIUS 3RC7 intelligent link module

More information
Homepage, see www.siemens.com/sirius-ilm
SiePortal, see www.siemens.com/product_catalog_siep?3RC7
Further components in the ET 200SP I/O system: • Catalog ST 70 • Homepage, see www.siemens.com/et200sp

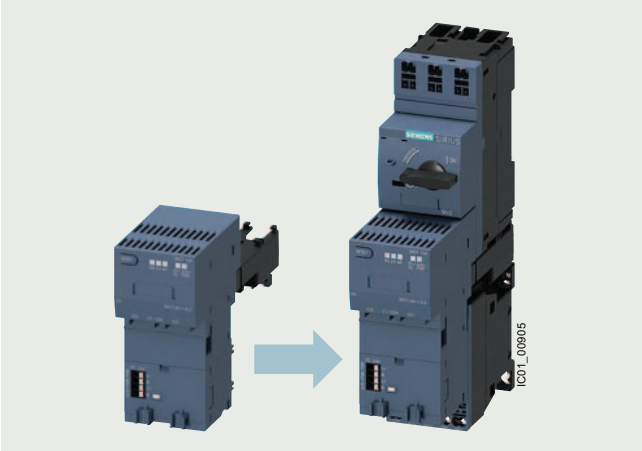
The SIRIUS 3RC7 intelligent link module is the perfect connection between the Siemens SIRIUS and SIMATIC product families. The 3RC7 intelligent link module turns conventional load feeders into digital load feeders. The SIRIUS modular system becomes a communication-capable and configurable system with SIMATIC.

Video: SIRIUS Modular System goes digital

Part of the SIRIUS modular system

The 3RC7 intelligent link module connects the 3RV2 motor starter protectors/circuit breakers and the 3RT2 contactors to form an intelligent load feeder. Intelligent load feeders can also be ordered as a 3RA8 complete unit, see page 8/89.

Control, protection, and monitoring of all AC load types are possible up to a rated current of 32 A. 1- or 3-phase loads can be operated.



SIRIUS 3RC7 intelligent link module combined with the 3RV2 motor starter protector/circuit breaker and 3RT2 contactor

The 3RC7 intelligent link module is available for direct-on-line and reversing starters (Standard or High Feature):

- Size S00: Current ranges 0.4 to 4 A and 1.2 to 12 A
- Size S0: Current range 3.5 to 32 A

The intelligent link modules are offered with spring-loaded terminals and permit very fast mounting of the load feeders and a vibration-resistant design.

Mounting

Load feeders with 3RC7 intelligent link modules are suitable for the following types of mounting:

- For 1- or 2-row mounting on TH 35-15 DIN rail according to IEC 60715 (adapter for stand-alone installation, see page 8/96)
- For mounting on busbar adapters (busbar center-to-center spacing 60 mm, busbar thickness 5 to 10 mm with beveled edges), see page 8/55
- For screw fixing with 3RV2928-0B push-in lug, see page 8/54
- For installation with the 3RV29 infeed system, see 3RA2 load feeders, page 8/58. 3RV29 infeed system, see page 7/67 onwards.

Overview of functions

The 3RC7 intelligent link module controls the 3RT2 contactor, following the commands of the controller. In the event of a fault, e.g. overload, undervoltage, or phase asymmetry, the intelligent link module switches off the 3RT2 contactor.

With the help of current and voltage measurement, detailed diagnostics of the load can be performed.

Function	3RC7 ILM Standard	3RC7 ILM High Feature
Control (contact block)	✓	✓
Electronic motor overload protection	Class 10E/ Class 20E[1)]	Class 10E/ Class 20E[1)]
RESET	✓	✓
Current measurement and monitoring	✓	✓
Current phase asymmetry	✓	✓
Line voltage detection	✓	✓
Line voltage measurement and monitoring	--	✓
Supply voltage monitoring for electronics (PWR)	✓	✓
Supply voltage monitoring for contact block (AUX-PWR)	✓	✓
Starting time monitoring	✓	✓
Power measurement	--	✓
Energy measurement	--	✓
EMERGENCY START	✓	✓
Operating temperature measurement and monitoring	✓	✓
Group diagnostics	✓	✓
Cold start	✓	✓

✓ Available

-- Not available

1) Class 20E to 20 A.

The intelligent link module in the standard version detects the voltage at its input side.

The High Feature version can also be used to measure the phase voltage and the power (including power factor) of the connected load.

With the help of the 3RC7 intelligent link module, the operating hours of the load feeder as well as of the load can be recorded. Moreover, fault-induced shutdowns can be documented.

Part of the SIMATIC ET 200SP automation system

The 3RC7 intelligent link modules are connected to the SIMATIC ET 200SP via the flexible station extension (ET connection) using the BA-Send BusAdapter.

Configuration, parameterization, and diagnostics of the intelligent load feeder can be performed directly in STEP 7 (TIA Portal).

Video: Configuration and parameterization in STEP 7 (TIA Portal)

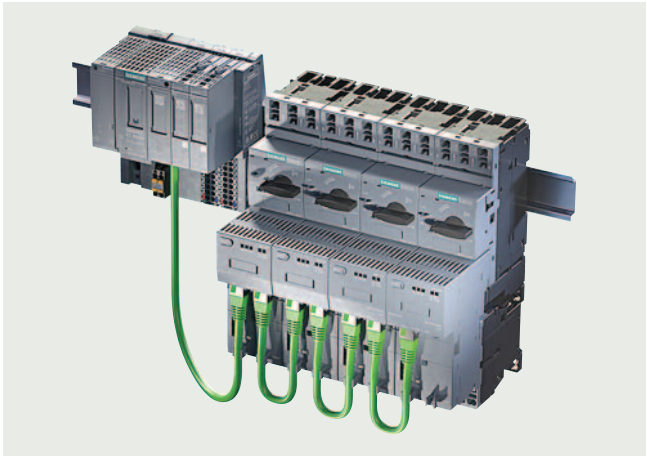
The ET 200SP BA-Send BusAdapter supports up to 16 intelligent load feeders. The distance between the BA-Send BusAdapter and the first 3RC7 intelligent link module can be up to 10 m.

Distances of up to two meters are possible between the individual intelligent load feeders.

The following devices are required for integration of the 3RC7 intelligent link module into the SIMATIC ET 200SP automation system:

- SIMATIC ET 200SP interface modules and CPUs
- BA-Send BusAdapter (6ES7193-6AS00-0AA0)
- BU-Send BaseUnit (6ES7193-6BN00-0NE0)

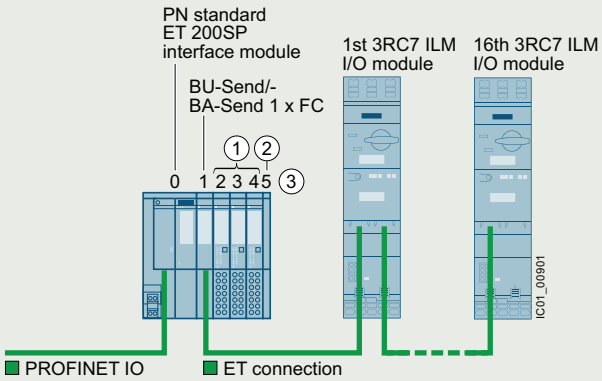
For more information on SIMATIC ET 200SP, see www.siemens.com/et200sp.



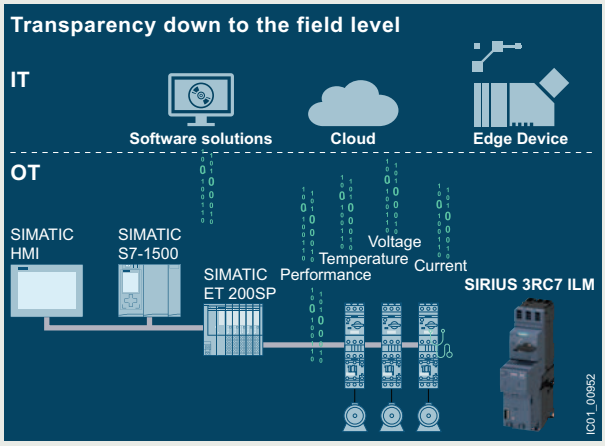
Part of the SIMATIC ET 200SP automation system

The 3RC7 intelligent link modules enable a high level of data transparency down to the field level and connect the operational technology (OT) with the overarching information technology (IT). By exchanging and using real-time data, operating processes can be optimized (condition monitoring, preventive maintenance) and the operational efficiency of the plant can be increased in a targeted manner.

SIRIUS 3RC7 intelligent link modules NEW



System overview using the example of PROFINET IO



Connectivity and transparency in the manufacturing environment

Building intelligent load feeders from individual components

Recommended combinations

Size	Type of coordination	Comprising the following individual components, which must be ordered separately					Corresponds to the following 3RA8 load feeder see page 8/89
		Motor starter protector (without overload) see page 7/35 onwards	Contactor see pages 3/49 and 3/53	3RC7 intelligent link module I_e in A see page 8/95		Mounting kit see page 8/97	
Intelligent load feeder for direct-on-line starting							
S00	2	3RV2311-1EC20	3RT2017-2BB42	0.4 ... 4	3RC714.-1EE.0[1]	--	3RA8412-1EE.0
	1	3RV2311-1KC20		1.2 ... 12	3RC714.-1KE.0[1]	--	3RA8411-1KE.0
S0	2	3RV2321-4EC20	3RT2027-2BB40	3.5 ... 32	3RC714.-4EE.1[1]	--	3RA8422-4EE.0
Intelligent load feeder for reversing starting							
S00	2	3RV2311-1EC20	3RT2017-2BB42 (2 x)	0.4 ... 4	3RC714.-1EE.0[1]	3RA2913-2LA2	3RA8512-1EE.0
	1	3RV2311-1KC20		1.2 ... 12	3RC714.-1KE.0[1]		3RA8511-1KE.0
S0	2	3RV2321-4EC20	3RT2027-2BB40 (2 x)	3.5 ... 32	3RC714.-4EE.1[1]	3RA2923-2LB2[2]/ 3RA2923-2MB2[3]	3RA8522-4EE.0

[1] 3RC7 ILM can be used as a Standard or High Feature version.

[2] To build an intelligent load feeder for reversing starting of size S0, the 3RA2923-2LB2 assembly kit must be used. The DIN-rail adapters included in the assembly kit are essential for DIN-rail mounting.

[3] To build an intelligent load feeder for reversing starting of size S0 in the 3RV29 infeed system or on the 8US busbar adapter, the 3RA2923-2MB2 assembly kit must be used.

Note:

For graphic overviews of the recommended 3RA8 load feeders, see pages 8/85 and 8/86.

Possible combinations for 400 V AC, Class 10E

Size	Type of coordination	Conditional short-circuit current I_q in kA	Rated current I_n in A	Comprising the following individual components, which must be ordered separately: Motor starter protector (without overload) see page 7/35 onwards	Contactor see pages 3/49 and 3/53	3RC7 intelligent link module see page 8/95 I_e in A	
S00	2	150	0.5 0.63 0.8 1 1.25 1.6 2 2.5 3.2 4	3RV2311-0FC20 3RV2311-0GC20 3RV2311-0HC20 3RV2311-0JC20 3RV2311-0KC20 3RV2311-1AC20 3RV2311-1BC20 3RV2311-1CC20 3RV2311-1DC20 3RV2311-1EC20	3RT2015-2BB42	0.4 ... 4	3RC714.-1EE.0
			1.6 2 2.5 3.2 4	3RV2311-1AC20 3RV2311-1BC20 3RV2311-1CC20 3RV2311-1DC20 3RV2311-1EC20	3RT2015-2BB42	1.2 ... 12	3RC714.-1KE.0
	1	150	5 6.3 8	3RV2311-1FC20 3RV2311-1GC20 3RV2311-1HC20	3RT2015-2BB42	1.2 ... 12	3RC714.-1KE.0
			10	3RV2311-1JC20	3RT2016-2BB42		
			12.5	3RV2311-1KC20	3RT2017-2BB42		
S0	2	150	4 5 6.3 8 10 12.5	3RV2321-1EC20 3RV2321-1FC20 3RV2321-1GC20 3RV2321-1HC20 3RV2321-1JC20 3RV2321-1KC20	3RT2024-2BB40	3.5 ... 32	3RC714.-4EE.1
			16	3RV2321-4AC20	3RT2026-2BB40		
			20 22 25 28 32	3RV2321-4BC20 3RV2321-4CC20 3RV2321-4DC20 3RV2321-4NC20 3RV2321-4EC20	3RT2027-2BB40		

Note:

For possible combinations with ATEX approval, see Equipment Manual.

Article number scheme

Product versions		Article number
SIRIUS intelligent link modules		**3RC7 1 4 □ – □ □ □ □ □**
Communication	ET 200SP ET connection	**1 4**
Product function	Direct-on-line starters	**0**
	Reversing starters	**1**
Current range	0.4 ... 4 A	**1 E**
	1.2 ... 12 A	**1 K**
	3.5 ... 32 A	**4 E**
Connection methods	Spring-loaded terminals	**E**
Version	Standard	**0**
	High Feature	**1**
Size	S00	**0**
	S0	**1**
Example		**3RC7 1 4 1 – 4 E E 1 1**

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

SIRIUS 3RC7 intelligent link modules NEW

Benefits

Part of the SIMATIC automation system

- One engineering tool for the entire automation system
- Configuration and parameterization in STEP 7 (TIA Portal)
- Easy reading of status and current values
- Error and maintenance demands with stored plain text messages through integrated system diagnostics in the SIMATIC environment

Transparency down to the field level

- Measurement of current, voltage, and power (including power factor)
- Load diagnostics (1- or 3-phase)

Proactive protection

- Extended wide setting range of the overload protection function
- Preventive maintenance by detecting faults and discrepancies

Minimal effort

- Reduced wiring costs
- Standardized design due to fewer versions
- Extensive accessories

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RC7	Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/109823514

Article number			3RC7140-1EE.0, 3RC7141-1EE.0	3RC7140-1KE.0, 3RC7141-1KE.0	3RC7140-4EE.1, 3RC7141-4EE.1
General data					
Installation altitude at height above sea level, maximum		m	2 000		
Ambient temperature					
• During operation		°C	-20 ... +60		
• During storage		°C	-40 ... +80		
• During transport		°C	-40 ... +80		
Vibration resistance			5 ... 8.4 Hz, 3.5 mm; 8.4 ... 150 Hz, 1 *g*; 10 cycles/10 ... 60 Hz, 0.35 mm; 60 ... 500 Hz, 5 *g*; 10 cycles		
Shock resistance	According to IEC 60068-2-27		6 *g*/11.0 ms (3 shocks); 10 *g*/6.0 ms (1 000 shocks)		
Degree of protection IP			IP20		
Touch protection on the front	According to IEC 60529		Finger-safe		
EMC interference immunity	According to IEC 60947-1		Environment A		
Conducted interference due to burst	According to IEC 61000-4-4	kV	2		
Main circuit					
Adjustable current response value of the inverse-time delayed overload release		A	0.4 ... 4	1.2 ... 12	3.5 ... 32
Operational voltage at AC-3e, rated value, maximum		V	690		
Type of current for monitoring			AC		
Operating frequency, rated value		Hz	50 ... 60		
Impulse withstand voltage		kV	6		
Trip class			Class 10E/Class 20E		
Auxiliary circuit					
Supply voltage at DC		V	24		
Auxiliary voltage at DC		V	24		
Connections					
Type of electrical connection for infeed of the supply voltage			**Spring-loaded terminals (push-in)**		
Type of connectable conductor cross-sections on the inputs for supply voltage					
• Solid			0.2 ... 1.5 mm^2		
• Finely stranded with end sleeve			0.2 ... 1.0 mm^2		
• Solid for AWG cables			24 ... 16		

Selection and ordering data

Size	Adjustable current response value of the inverse-time delayed overload release	Spring-loaded terminals (push-in)	PU (UNIT, SET, M)	PS*	PG
	A	Article No. / Price per PU			
Intelligent link modules					
Direct-on-line starters					
Standard					
S00	0.4 ... 4	**3RC7140-1EE00**	1	1 unit	42L
	1.2 ... 12	**3RC7140-1KE00**	1	1 unit	42L
S0	3.5 ... 32	**3RC7140-4EE01**	1	1 unit	42L
High Feature					
S00	0.4 ... 4	**3RC7140-1EE10**	1	1 unit	42L
	1.2 ... 12	**3RC7140-1KE10**	1	1 unit	42L
S0	3.5 ... 32	**3RC7140-4EE11**	1	1 unit	42L
Reversing starters					
Standard					
S00	0.4 ... 4	**3RC7141-1EE00**	1	1 unit	42L
	1.2 ... 12	**3RC7141-1KE00**	1	1 unit	42L
S0	3.5 ... 32	**3RC7141-4EE01**	1	1 unit	42L
High Feature					
S00	0.4 ... 4	**3RC7141-1EE10**	1	1 unit	42L
	1.2 ... 12	**3RC7141-1KE10**	1	1 unit	42L
S0	3.5 ... 32	**3RC7141-4EE11**	1	1 unit	42L


3RC7140-1.E.0


3RC7140-4EE.1


3RC7141-1.E.0


3RC7141-4EE.1

8

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

SIRIUS 3RC7 intelligent link modules NEW

	Product version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories						
		Spring-loaded terminals				
	Adapter for stand-alone installation					
 3RC7940-2TE00	• For 3RC7 with contactor size S00	**3RC7940-2TE00**		1	1 unit	42L
 3RC7940-2TE01	• For 3RC7 with contactor size S0	**3RC7940-2TE01**		1	1 unit	42L
	Communication cables					
	Between ET 200SP BusAdapter and 3RC7 ILM					
 3RC7940-0TE10	• Length 0.5 m	**3RC7940-0TE10**		1	1 unit	42L
	• Length 2 m	**3RC7940-0TE20**		1	1 unit	42L
	• Length 5 m	**3RC7940-0TE30**		1	1 unit	42L
	• Length 10 m	**3RC7940-0TE40**		1	1 unit	42L
	From 3RC7 ILM to 3RC7 ILM					
 3RC7940-0TE01	• For direct-on-line starters (side-by-side mounting)	**3RC7940-0TE01**		1	1 unit	42L
	• For reversing starters (side-by-side mounting)	**3RC7940-0TE02**		1	1 unit	42L
	• Length 0.75 m	**3RC7940-0TE03**		1	1 unit	42L
	• Length 1.5 m	**3RC7940-0TE04**		1	1 unit	42L
	• Length 2 m	**3RC7940-0TE05**		1	1 unit	42L
	Power cables					
 3RC7940-1TE01	• For direct-on-line starters	**3RC7940-1TE01**		1	1 unit	42L
	• For reversing starters	**3RC7940-1TE02**		1	1 unit	42L

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

For contactor Size	Product version	Spring-loaded terminals Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Wiring kits for reversing starters						
	RH mounting kits for spring-loaded terminals					
S00	Mounting on a DIN rail, 60 mm 8US busbar system or 3RV29 infeed system	**3RA2913-2LA2**		1	1 unit	41B
S0	Mounting on DIN rail	**3RA2923-2LB2**		1	1 unit	41B
	Mounting on 60 mm 8US busbar system or 3RV29 infeed system	**3RA2923-2MB2**		1	1 unit	41B

3RA2913-2LA2

3RA2923-2LB2

3RA2923-2MB2

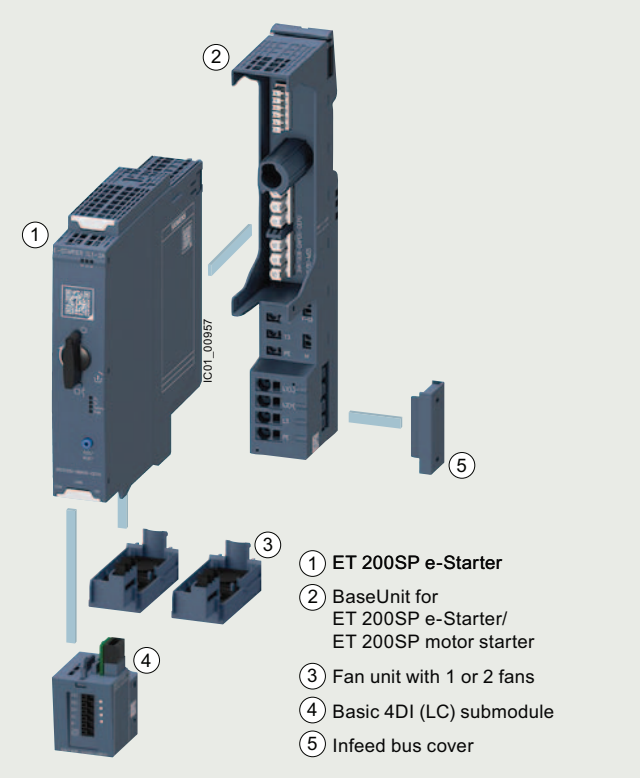
Further accessories

- DIN-rail adapters, see page 8/53
- Push-in lugs for screw fixing, see page 8/54
- Busbar adapters, see page 8/55
- Miscellaneous accessories, see page 8/56

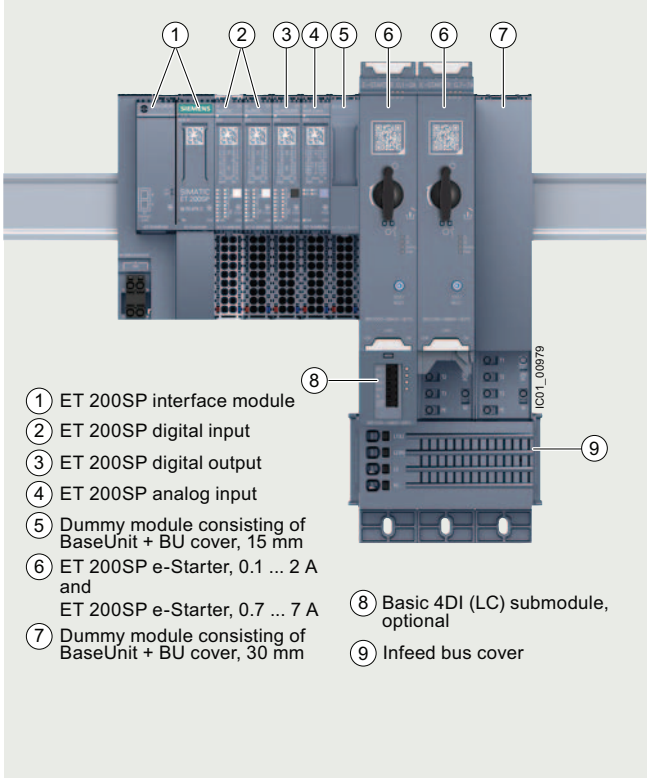
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

ET 200SP e-Starters NEW

Overview



ET 200SP e-Starter, BaseUnit, fan and Basic 4DI (LC) submodule



ET 200SP e-Starter 3RD1000 in the ET 200SP I/O system

More information

Homepage see www.siemens.com/e-Starter

SiePortal, see www.siemens.com/product_catalog_siep?3RD1000

TIA Selection Tool, see www.siemens.com/TST

Decision support for motor start – Starting and operating three-phase asynchronous motors efficiently, see www.siemens.com/motorstart-guide

SiePortal topic page, see https://support.industry.siemens.com/cs/ww/en/view/109977551

Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/109972909

Further components in the ET 200SP I/O system:
- Catalog ST 70
- SiePortal, see SIMATIC ET 200SP
- Homepage, see www.siemens.com/et200sp

ET 200SP e-Starters

ET 200SP is a scalable and extremely flexible modular I/O system with degree of protection IP20.

As I/O modules, the ET 200SP e-Starters are an integral part of this I/O system. They are fully electronic switching and protection devices for 1-phase and 3-phase loads with fully electronic short-circuit protection, reversing functionality and optimized start properties.

Video: SIMATIC ET 200SP e-Starter - Fully electronic switching and protection

Basic functionality

All versions of the ET 200SP e-Starter feature the following functionality:

- Fully pre-wired ET 200SP e-Starter for switching and protecting any three-phase loads up to 3 kW from 48 to 480 V AC
- Fully electronic short-circuit protection up to 100 kA. The switch-off is less than 5 µs and can be reset.
- Self-assembling 32 A power bus, i.e. the load voltage is only fed in once for a group of ET 200SP e-Starters
- All supply voltages connected only once, i.e. when modules are added, they are automatically connected to the next module
- Hot swapping permissible
- Digital inputs can be used optionally via a 4DI (LC) submodule.
- Control of the SIMATIC ET 200SP e-Starter from the control system and of the diagnostics status via the cyclic process image
- Diagnostics-capable for active monitoring of the switching and protection functions
- The signal states in the process image of the e-Starter provide information about protective devices (short-circuit or overload), the switching states of the ET 200SP e-Starter and system errors.
- Smart Start function to avoid high starting current peaks and torque surges
- Phase-optimized connection to avoid inrush currents
- Upgradeable to include future functions

Use of fan

All ET 200SP e-Starters are supplied as standard with a fan unit equipped with a single fan. For applications subject to harsh ambient or load conditions, a fan unit with two fans can also be ordered as an optional accessory, see page 8/114. For information on these boundary conditions, see Equipment Manual.

Interference-proof setup of ET 200SP e-Starter

For interference-proof operation of the ET 200SP station in accordance with the IEC 60947-4-2 standard, use a dummy module upstream of the first ET 200SP e-Starter. The dummy module consists of the 6ES7193-6BP00-0BA0 or 6ES7193-6BP00-0DA0 BaseUnit and the 6ES7133-6CV15-1AM0 15 mm BU cover.

The 15 mm BU cover protects the plug contacts of the BaseUnit against dirt.

Electromechanical switching devices in series with ET 200SP e-Starters

Switching an inductive load - in particular of motors < 1 kW with high inductance – with an electromechanical switching device (e.g. contactor) can cause high and steep voltage edges.

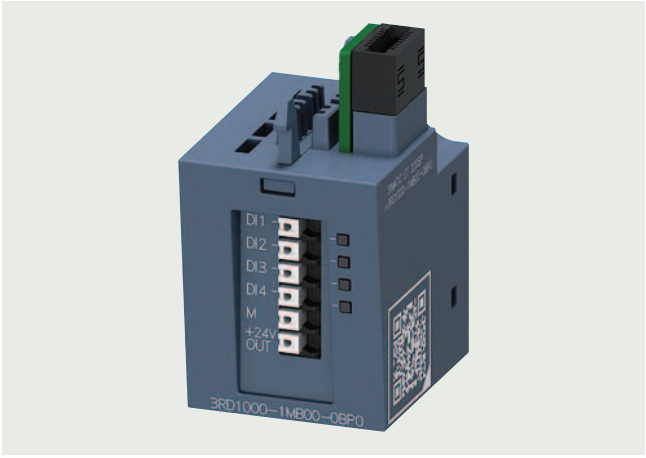
The resulting faults/damage can be prevented by first disconnecting with the ET 200SP e-Starter or by using EMC suppression modules:

- 3RT2916-1P.. EMC suppression modules for direct mounting on the contactor, see page 3/113
- For motor suppression modules that are fitted in the main circuit, see page 8/114

Note:

For more information, see https://support.industry.siemens.com/cs/ww/en/view/109758696.

Basic 4DI (LC) submodule, optional

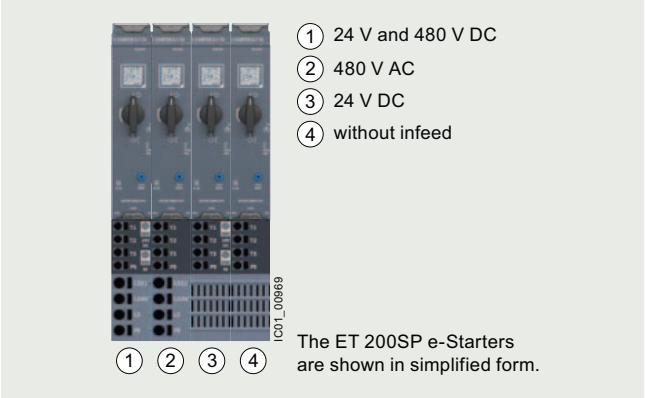


Basic 4DI (LC) submodule

This is an optional, digital input module with four inputs for local motor starter functions such as "manual local operation", "implementation of fast inputs" or "end position disconnection". For a list of all the functions provided by the Basic 4DI (LC) submodule, see chapter Functions in the Equipment Manual.

The module is plugged into the front of the ET 200SP e-Starter, which supplies it with a 24 V DC operational voltage.

BaseUnits for ET 200SP e-Starters



View of the BaseUnit infeeds for the ET 200SP e-Starters

BaseUnits are components used for mounting the ET 200SP I/O modules.

The self-assembling voltage buses integrated into the BaseUnits reduce wiring outlay to the single infeed (both of auxiliary and load voltage).

All modules following on the right are automatically supplied upon plugging the BaseUnits together, if BaseUnits are inserted with a loop-through.

The rugged design and positively driven connection technology enable use in harsh industrial conditions.

The BaseUnits are available with various infeeds for the ET 200SP e-Starters.

ET 200SP e-Starters NEW

Article number schemes

Product versions		Article number		
Motor starters		**3RD1000 – 0 B □ 0 0 – 0 E P 0**		
Current range	0.1 ... 2 A		**A**	Rated operational current 2 A
	0.7 ... 7 A		**B**	Rated operational current 7 A
Example		**3RD1000 – 0 B A 0 0 – 0 E P 0**		

Product versions		Article number	
BaseUnit		**3RK1908 – 0 A P 0 0 – 0 □ P 0**	
BU infeed	24 V DC and 480 V AC		**A**
	24 V DC		**B**
	480 V AC		**C**
	Without infeed		**D**
Example		**3RK1908 – 0 A P 0 0 – 0 A P 0**	

Note:

The article number schemes show an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

The ET 200SP e-Starters offer a number of advantages:

- Fully integrated into the ET 200SP I/O system (including TIA Selection Tool and TIA Portal)
- Extremely fast, fully electronic and resettable short-circuit protection
- Phase-optimized switching on to reduce inrush currents
- Integrated reversing functionality
- Simple integrated transmission of measured values (current, voltage, power, etc.)
- Extensive parameterization by means of TIA Portal
- Increase of plant availability through fast replacement of units (easy mounting and plug-in technology)
- Long service life and low wear thanks to fully electronic switching
- Less space required in the control cabinet (20 to 80%) as a result of greater functional density
- Comprehensive diagnostics, information and limit value monitoring for preventive maintenance
- Optional, configurable inputs via 4DI (LC) submodule
- Less wiring and testing required as a result of integrating several functions into a single device
- Lower overheads for stock-keeping and configuration as a result of reduced variance due to high functional density and wide setting range of the rated operational current
- Compatibility mode for direct replacement of the hybrid ET 200SP e-Starter without having to stop the CPU
- Smart Start function to prevent torque surges during the starting process of asynchronous motors

Standards and approvals

- IEC/EN 60947-4-2
- cULus 60947-4-2
- CCC approval for China

Application

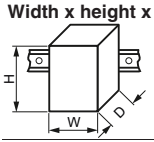
The ET 200SP e-Starters are suitable for the following applications:

- Switching, protecting and monitoring of
  - 3-phase motors with overload and fully electronic short-circuit protection
  - 1-phase motors with overload and fully electronic short-circuit protection (e.g. 230 V motors for pump applications)
  - Resistive loads with overload and short-circuit protection (e.g. for heaters)
- Plant monitoring and energy management in conveyor systems: Drive belt monitoring and blocking monitoring are possible by means of the phase asymmetry and zero current detection during current measurement, for example.
- Track switching and lifting table control in conveyor systems: Track switches can be implemented by means of the quick stop function and lifting table controls by means of the "immediate end position disconnection" function without any laborious programming.
- Safe isolation of the drive from main power supply: The isolating functions according to IEC 60947-1 offer protection against inadvertent activation during plant maintenance.

Technical specifications

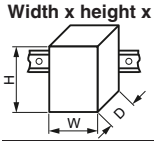
More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RD1000	Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/109972909

ET 200SP e-Starters

Article number		3RD1000-0BA00-0EP0	3RD1000-0BB00-0EP0
Product designation		**e-Starters**	
General technical specifications			
Width x height x depth 	mm	30 x 151 x 167	
Design of the switching contact		Electronic	
Design of the motor protection		Electronic	
Design of the short-circuit protection		Fully electronic	
Installation altitude at height above sea level, maximum	m	4 000, derating, see Equipment Manual	
Mounting position		Vertical, horizontal	
Mounting type		Can be plugged into BaseUnit	
Ambient temperature • During operation • During transport • During storage	 °C °C °C	 -25 ... +60 -40 ... +70 -40 ... +70	
Relative humidity during operation	%	10 ... 95	
Cable length for motor, unshielded, maximum	m	200	
Vibration resistance		f = 5 ... 8.5 Hz, d_{max} = 3.5 mm; 8.5 … 26.9 Hz, a_{max} = 10 m/s²; f = 26.9 ... 60.1 Hz, d_{max} = 0.35 mm; f = 60.1 ... 500 Hz, a_{max} = 50 m/s²; 10 cycles	
Shock resistance		6 *g*, 11 ms (3 shocks), 9 *g*, 6 ms (1 000 shocks)	
Degree of protection IP on the front according to IEC 60529		IP20	
Type of coordination		2	
Electrical specifications			
Supply voltage at DC rated value	V	24	
Operating power for AC-53a at 400 V rated value	kW	0.75	3
Operational voltage, rated value	V	480	
Operating frequency, rated value	Hz	50 ... 60	
Ultimate short-circuit current breaking capacity (I_{cu}) • at 400 V rated value • at 500 V rated value	 kA kA	 100 100	
Adjustable current response value of the inverse-time delayed overload release	A	0.1 ... 2	0.7 ... 7
Max. current-carrying capacity on starting	A	14.4	50.4
Max. permissible voltage for protective separation between main and auxiliary circuit	V	500	
Insulation voltage, rated value	V	500	
Trip class		Class 10A/10E/20E	

ET 200SP e-Starters NEW

BaseUnits for ET 200SP e-Starters

Article number		3RK1908-0AP00-0AP0	3RK1908-0AP00-0BP0	3RK1908-0AP00-0CP0	3RK1908-0AP00-0DP0
Product designation		**BaseUnit**			
General technical specifications					
Width x height x depth	mm	30 x 215 x 75			
					
Ambient temperature					
• During operation	°C	-25 ... +60			
• During transport	°C	-40 ... +70			
• During storage	°C	-40 ... +70			
Degree of protection IP on the front according to IEC 60529		IP20			
Touch protection on the front according to IEC 60529		Finger-safe			
Connections/terminals					
Type of connectable conductor cross-sections					
• At the inputs for supply voltage					
- Solid		1 x 0.5 ... 2.5 mm^2		--	
- Finely stranded with end sleeve		1 x 0.5 ... 2.5 mm^2		--	
- Finely stranded without end sleeve		1 x 0.5 ... 2.5 mm^2		--	
- Solid for AWG cables		1 x 20 ... 12		--	
• For infeed					
- Solid		1 x 1 ... 6 mm^2	--	1 x 1 ... 6 mm^2	--
- Finely stranded with end sleeve		1 x 1 ... 6 mm^2	--	1 x 1 ... 6 mm^2	--
- Finely stranded without end sleeve		1 x 1 ... 6 mm^2	--	1 x 1 ... 6 mm^2	--
- For AWG cables		1 x 18 ... 10	--	1 x 18 ... 10	--
• For load-side outgoing feeder					
- Solid		1 x 0.5 ... 2.5 mm^2			
- Finely stranded with end sleeve		1 x 0.5 ... 2.5 mm^2			
- Finely stranded without end sleeve		1 x 0.5 ... 2.5 mm^2			
- For AWG cables		1 x 20 ... 12			
Type of electrical connection for auxiliary and control circuits		Spring-loaded terminals (push-in)			
Miscellaneous					
Type of screwdriver tip		Slotted			
Size of screwdriver tip		Standard screwdriver 0.6 mm x 3.5 mm			

4DI (LC) submodule

Article number		3RD1000-1MB00-0BP0
Product designation		**4DI (LC) submodule**
Product version		**Basic**
General technical specifications		
Width x height x depth	mm	30 x 54.5 x 42.3
Number of digital inputs		4
Installation altitude at height above sea level, maximum	m	4 000
Mounting position		Vertical, horizontal
Mounting type		Can be plugged onto e-Starter
Ambient temperature		
• During operation	°C	-25 ... +40
• During transport	°C	-40 ... +70
• During storage	°C	-40 ... +70
Connections/terminals		
Connectable conductor cross-section for auxiliary contacts		
• Solid or stranded	mm^2	0.2 ... 1.5
• Finely stranded with end sleeve	mm^2	0.25 ... 1.5
• Finely stranded without end sleeve	mm^2	0.2 ... 1.5
AWG number as coded connectable conductor cross-section for auxiliary contacts		24 ... 16
Type of electrical connection for auxiliary and control circuits		Spring-loaded terminals (push-in)
Electrical specifications		
Control supply voltage at DC rated value	V	20.4 ... 28.8
Miscellaneous		
Type of screwdriver tip		Slotted
Size of screwdriver tip		Standard screwdriver 0.6 mm x 3.5 mm

Selection and ordering data

	Adjustable current response value of the inverse-time delayed overload release	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	A					
e-Starters						
	Reversing starters					
 3RD1000-0BA00-0EP0	• 0.1 ... 2	**3RD1000-0BA00-0EP0**		1	1 unit	42R
 3RD1000-0BB00-0EP0	• 0.7 ... 7	**3RD1000-0BB00-0EP0**		1	1 unit	42R

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

ET 200SP e-Starters NEW

Product version	Operational voltage of the AC infeed for motor starters	Operational voltage of the AC infeed for ET 200SP e-Starters	Supply voltage of the DC infeed	Spring-loaded terminals (push-in) Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	V	V	V					
BaseUnits								
For e-Starters and motor starters[1]								
• With AC/DC infeed	500	480	24	**3RK1908-0AP00-0AP0**		1	1 unit	42D
• With DC infeed	--	--	24	**3RK1908-0AP00-0BP0**		1	1 unit	42D
• With AC infeed	500	480	--	**3RK1908-0AP00-0CP0**		1	1 unit	42D
• Without infeed	--	--	--	**3RK1908-0AP00-0DP0**		1	1 unit	42D

3RK1908-0AP00-0AP0

[1] The voltage is looped-through from BaseUnits with infeed to subsequent BaseUnits without infeed.

Product version	Supply voltage at DC rated value	Loop through the potential group from the left	Push-in terminals Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	V						
BaseUnits							
For dummy modules							
• BU15-P16+A0+2B, dark, looping through the potential group	24	Yes	**6ES7193-6BP00-0BA0**		1	1 unit	255
• BU15-P16+A0+2D, light, opening a new potential group	24	No	**6ES7193-6BP00-0DA0**		1	1 unit	255

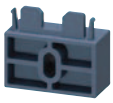
6ES7193-6BP00-0BA0

Product version	Product function: local operation	Product function: digital inputs configurable	Spring-loaded terminals (push-in) Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
4DI (LC) submodules							
Basic	Yes	Yes	**3RD1000-1MB00-0BP0**		1	1 unit	42R

3RD1000-1MB00-0BP0

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

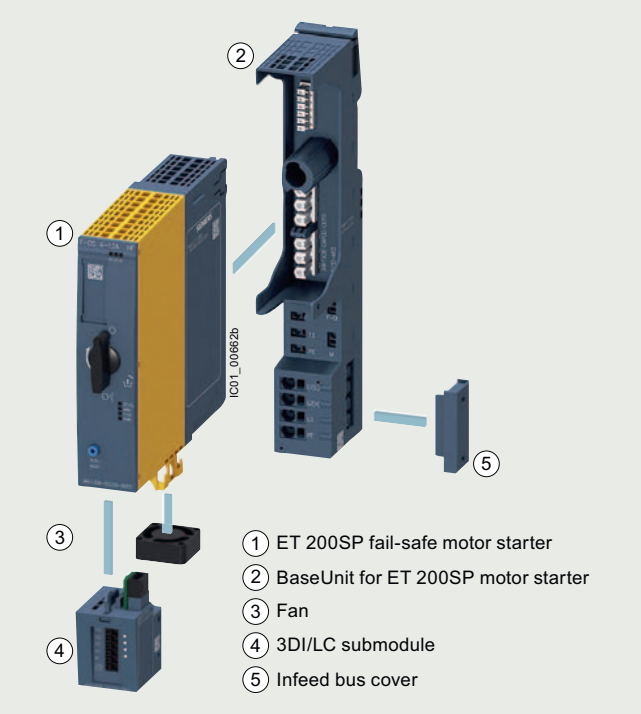
Accessories

Product designation	Product version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories						
 6ES7133-6CV15-1AM0						
BU covers						
• 15 mm	For BaseUnits Type A0 or A1	**6ES7133-6CV15-1AM0**		1	5 units	255
 3RK1908-1CA00-0BP0						
• 30 mm	For protection of empty slots	**3RK1908-1CA00-0BP0**		1	1 unit	42D
 3RK1908-1DA00-2BP0						
Infeed bus covers (1 bag containing 10 covers)	For ET 200SP	**3RK1908-1DA00-2BP0**		1	1 unit	42D
 3RK1908-1EA00-1BP0						
Additional mounting units (1 bag containing 5 additional mounting units)	Mechanical, for ET 200SP	**3RK1908-1EA00-1BP0**		1	1 unit	42D
Fan units	Can be used for 3RD1000					
 3RD1000-1FS00-0BP0						
• With 1 fan		**3RD1000-1FS00-0BP0**		1	1 unit	42R
 3RD1000-1FD00-0BP0						
• With 2 fans		**3RD1000-1FD00-0BP0**		1	1 unit	42R
Motor suppression modules						
 3RK1911-6EA00						
• Square		**3RK1911-6EA00**		1	1 unit	42D
 3RK1911-6EB00						
• Round		**3RK1911-6EB00**		1	1 unit	42D

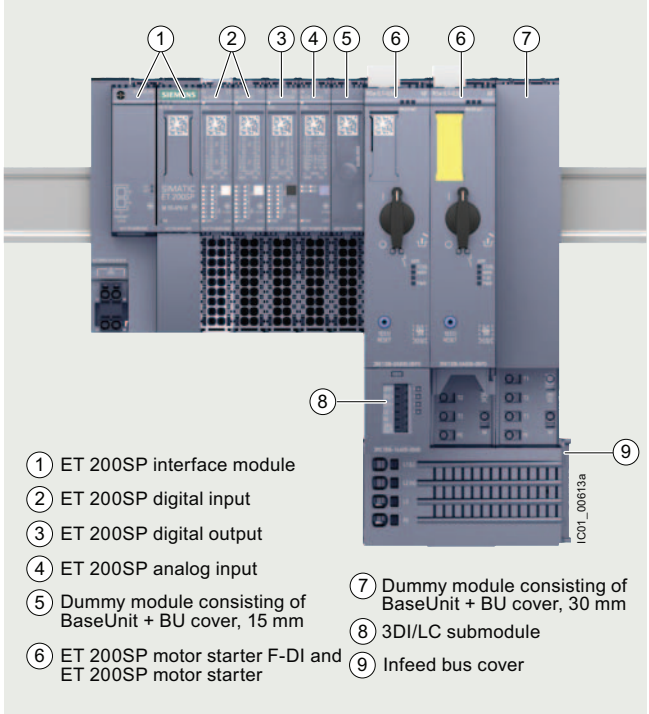
*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

ET 200SP motor starters

Overview



Motor starter, BaseUnit, fan and 3DI/LC submodule



3RK1308 motor starter in the ET 200SP I/O system

More information

Homepage, see www.siemens.com/sirius-motor-starter-et200sp

SiePortal, see www.siemens.com/product_catalog_siep?3RK1308

TIA Selection Tool, see www.siemens.com/TST

Decision support for motor start – Starting and operating three-phase asynchronous motors efficiently, see www.siemens.com/motorstart-guide

SiePortal topic page with information on the planning and operating phase, see https://support.industry.siemens.com/cs/ww/en/view/109792664

Further components in the ET 200SP I/O system:
- Catalog ST 70
- Homepage, see www.siemens.com/et200sp

ET 200SP motor starters

ET 200SP is a scalable and extremely flexible modular I/O system with degree of protection IP20.

As I/O modules, the ET 200SP motor starters are an integral part of this I/O system. They are switching and protection devices for 1- and 3-phase loads and are available as direct-on-line or reversing starters.

Video: SIMATIC ET 200SP motor starter – Flexible, powerful, space-saving

Basic functionality

All versions of the ET 200SP motor starter feature the following functionality:

- Fully pre-wired motor starters for switching and protecting any three-phase loads up to 5.5 kW from 48 V AC to 500 V AC
- Disconnection possible via fail-safe motor starters up to SIL 3 and PL e Cat. 4
- Self-assembling 32 A power bus, i.e. the load voltage is only fed in once for a group of motor starters
- All supply voltages connected only once, i.e. when modules are added, they are automatically connected to the next module
- Hot swapping is permissible
- Digital inputs can optionally be used via a 3DI/LC submodule
- Control of the motor starter from the control system and of the diagnostics status via the cyclic process image
- Diagnostics-capable for active monitoring of the switching and protection functions
- The signal states in the process image of the motor starter provide information about protective devices (short circuit or overload), the switching states of the motor starter, and system faults.

Starter kit

The 3RK1908-1SK00 starter kit is a favorably priced complete package for switching and monitoring motors in the ET 200SP system, see page 8/114.

It contains:

- A 3RK1308-0BC00-0CP0 reversing starter (0.9 to 3 A)
- A 3RK1908-0AP00-0AP0 BaseUnit with 500 V and 24 V AC/DC infeed
- An EMC distance module (comprising 6ES7193-6BP00-0BA0 BaseUnit plus 6ES7133-6CV15-1AM0 15 mm BU cover)

Use of fan

For motor starters with a 12 A rated current, the 3RW4928-8VB00 fan is included in the scope of supply.

This fan can also be ordered as an option for motor starters with lower rated currents, if the boundary conditions demand this. For information on the ambient conditions for the use of motor starters, see chapter Product features in the Equipment Manual.

Designing interference-free motor starters

For interference-free operation of the ET 200SP station in accordance with IEC 60947-4-2 standard, use a dummy module before the first motor starter. The dummy module consists of the 6ES7193-6BP00-0BA0 or 6ES7193-6BP00-0DA0 BaseUnit and the 6ES7133-6CV15-1AM0 15 mm BU cover.

The 15 mm BU cover protects the plug contacts of the BaseUnit against dirt.

Electromechanical switching devices in series with hybrid motor starters

Switching an inductive load – in particular of motors < 1 kW with high inductance – with an electromechanical switching device (e.g. contactor) can cause high and steep voltage edges.

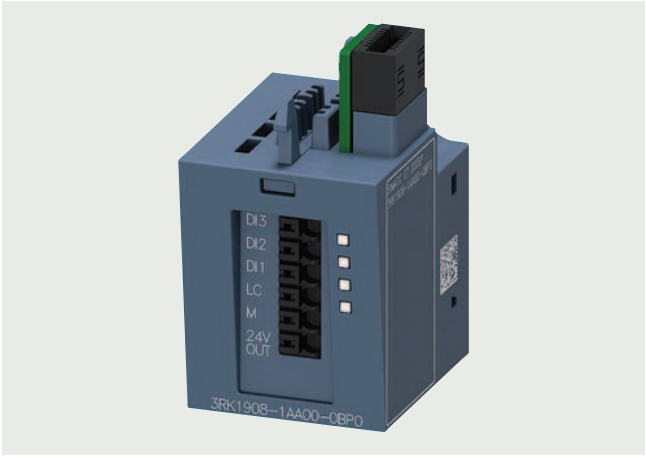
The resulting faults/damage can be prevented by first disconnecting with the hybrid motor starter or by using EMC suppression modules:

- 3RT2916-1P.. EMC suppression modules for direct mounting on the contactor, see page 3/113
- For motor suppression modules that are fitted in the main circuit, see page 8/114

Note:

For more information, see https://support.industry.siemens.com/cs/ww/en/view/109758696.

3DI/LC submodules

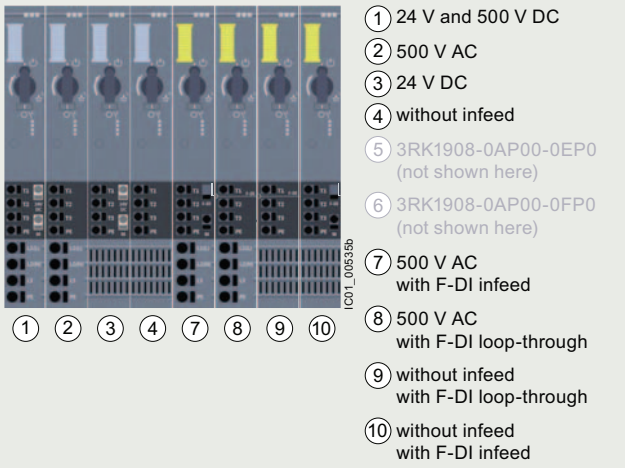


3DI/LC submodule

This is a digital input module with three inputs for local motor starter functions such as "manual local operation", "implementation of fast inputs" or "end position disconnection". For a list of all the functions permitted by the 3DI/LC submodule, see Equipment Manual, chapter Functions.

The module is plugged into the front of the motor starter from which it is supplied with an operational voltage of 24 V DC.

BaseUnits for motor starters



View of the BaseUnit infeeds for the motor starters

BaseUnits are components used for mounting the ET 200SP I/O modules.

The self-assembling voltage buses integrated into the BaseUnits reduce wiring outlay to the single infeed (both of auxiliary and load voltage).

All modules following on the right are automatically supplied upon plugging the BaseUnits together, if BaseUnits are inserted with a loop-through.

The rugged design and positively driven connection technology enables use in harsh industrial conditions.

The BaseUnits are available with various infeeds for the motor starters.

ET 200SP motor starters

Article number schemes

Product versions		Article number														
Motor starters		**3RK1308**	**–**	**0**	**□**	**□**	**0**	**0**	**–**	**0**	**C**	**P**	**0**	
Product function	Direct-on-line starters				**A**									For motor standard output 0.09 ... 5.5 kW[1]
	Reversing starters				**B**									For motor standard output 0.09 ... 5.5 kW[1]
	Fail-safe direct-on-line starters				**C**									For motor standard output 0.09 ... 5.5 kW[1]
	Fail-safe reversing starters				**D**									For motor standard output 0.09 ... 5.5 kW[1]
Current range	0.1 ... 0.4 A					**A**								Maximum current-carrying capacity when starting 4 A
	0.3 ... 1 A					**B**								Maximum current-carrying capacity when starting 10 A
	0.9 ... 3 A					**C**								Maximum current-carrying capacity when starting 30 A
	2.8 ... 9 A					**D**								Maximum current-carrying capacity when starting 90 A
	4 ... 12 A					**E**								Including fan (3RW4928-8VB00), maximum current-carrying capacity when starting 120 A
Example		**3RK1308**	**–**	**0**	**A**	**D**	**0**	**0**	**–**	**0**	**C**	**P**	**0**	

[1] For standard motors: Three-phase asynchronous motors, 1-phase or 3-phase; 1-phase AC motors; 1-phase asynchronous motors, at 400 V AC and 500 V AC; the actual starting and rated data of the motor to be protected must be considered when selecting the units.

Product versions		Article number												
BaseUnit		**3RK1908**	**–**	**0**	**A**	**P**	**0**	**0**	**–**	**0**	**□**	**P**	**0**	
BU infeed	24 V DC and 500 V AC										**A**			
	24 V DC										**B**			
	500 V AC										**C**			
	Without infeed										**D**			
	500 V AC										**G**			With F-DI infeed
	500 V AC										**H**			With F-DI loop-through
	Without infeed										**J**			With F-DI loop-through
	Without infeed										**K**			With F-DI infeed
Example		**3RK1908**	**–**	**0**	**A**	**P**	**0**	**0**	**–**	**0**	**A**	**P**	**0**	

Note:

The article number schemes show an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

The ET 200SP motor starters offer a number of advantages:

- Fully integrated into the ET 200SP I/O system (including TIA Selection Tool and TIA Portal)
- High degree of flexibility when it comes to safety applications via SIMATIC F-CPU or 3SK safety relays up to SIL 3 and PL e Cat. 4.
- Simple, integrated current value transmission
- Extensive parameterization by means of TIA Portal
- Increase of plant availability through fast replacement of units (easy mounting and plug-in technology)
- Greater endurance and reduced heat losses thanks to hybrid technology
- Less space required in the control cabinet (20 to 80%) thanks to high functional density (direct-on-line and reversing starters in same width)
- Extensive diagnostics and information for preventive maintenance
- Configurable inputs via 3DI/LC submodule
- Less wiring and testing required as a result of integrating several functions into a single device
- Lower overheads for stock-keeping and configuration as a result of the wide setting range of the electronic overload release (up to 1:3)
- Technology has lower inherent power losses than speed-controlled drive systems, so that less cooling (and smaller footprint) are possible

Standards and approvals

- IEC/EN 60947-4-2
- UL 60947-4-2
- CSA
- ATEX
- IEC 62061: SIL 3
- ISO 13849-1: PL e
- CCC approval for China

Application

The ET 200SP motor starters are suitable for the following applications:

- Switching and monitoring of
  - 3-phase motors with overload and short-circuit protection (e.g. 400 V asynchronous motors for secondary drives in conveyor systems)
  - 1-phase motors with overload and short-circuit protection (e.g. 230 V motors for pump applications)
  - Resistive loads by means of current value and diagnostics via the maintenance function (e.g. for heaters)
- Plant monitoring and energy management in conveyor systems: Drive belt monitoring and blocking monitoring are possible by means of the phase asymmetry and zero current detection during current measurement, for example.
- Track switching and lifting table control in conveyor systems: Track switches can be implemented by means of the quick stop function and lifting table controls by means of the "immediate end position disconnection" function without any laborious programming.
- Safe isolation of the drive from main power supply: The isolating functions according to IEC 60947-1 offer protection against inadvertent activation during plant maintenance.

Motor starters in the process industry

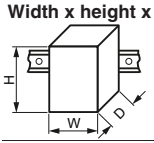
For the ET 200SP motor starters, special 3RK1908-0AP00-0.H0 BaseUnits are available that enable the devices to also be used in the ET 200SP HA I/O system. This is typically used in process engineering applications.

For more information, see https://mall.industry.siemens.com/mall/en/ww/Catalog/Products/10398144?tree=CatalogTree.

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RK1308 Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/109479973	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/21800/faq

ET 200SP motor starters

Article number		3RK1308-0A.00-0CP0, 3RK1308-0B.00-0CP0	3RK1308-0C.00-0CP0, 3RK1308-0D.00-0CP0
Product category		**Motor starters**	
General technical specifications			
Width x height x depth 	mm	30 x 142 x 150	
Design of the switching contact		Hybrid	
Design of the motor protection		Electronic	
Installation altitude at height above sea level, maximum	m	4 000, derating, see Equipment Manual	
Mounting position		Vertical, horizontal (observe derating)	
Type of mounting		Can be plugged into BaseUnit	
Ambient temperature • During operation • During transport • During storage	 °C °C °C	 -25 ... +60 -40 ... +70 -40 ... +70	
Relative humidity during operation	%	10 ... 95	
Vibration resistance		15 mm up to 6 Hz; 2 *g* up to 500 Hz	
Shock resistance		6 *g*/11 ms	
Degree of protection IP on the front according to IEC 60529		IP20	
Touch protection on the front according to IEC 60529		Finger-safe	
Performance Level (PL) according to ISO 13849-1		--	PL e
Safety Integrity Level (SIL) according to IEC 62061		--	SIL 3
Type of coordination		1	

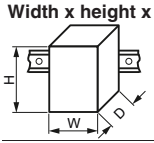
ET 200SP motor starters

Article number		3RK1308-0.A00-0CP0	3RK1308-0.B00-0CP0	3RK1308-0.C00-0CP0	3RK1308-0.D00-0CP0	3RK1308-0.E00-0CP0
Product category		**Motor starters**				
Electrical specifications						
Supply voltage at DC rated value	V	24				
Operating power for AC-53a at 400 V rated value	kW	0.12	0.25	1.1	4	5.5
Operating frequency, rated value	Hz	50 ... 60				
Operational voltage, rated value, maximum	V	500				
Ultimate short-circuit current breaking capacity (I_{cu})						
• at 400 V rated value	kA	55				
• at 500 V rated value	kA	55				
Adjustable current response value of the inverse-time delayed overload release	A	0.1 ... 0.4	0.3 ... 1	0.9 ... 3	2.8 ... 9	4 ... 12
Max. current-carrying capacity on starting	A	4	10	30	90	120
Max. permissible voltage for protective separation between main and auxiliary circuit	V	500				
Insulation voltage, rated value	V	500				
Trip class		Class OFF/5/10 can be set				

BaseUnits for motor starters

Article number		3RK1908-0AP00-0AP0	3RK1908-0AP00-0BP0	3RK1908-0AP00-0CP0, 3RK1908-0AP00-0GP0, 3RK1908-0AP00-0HP0	3RK1908-0AP00-0DP0, 3RK1908-0AP00-0JP0, 3RK1908-0AP00-0KP0
Product designation		**BaseUnit**			
General technical specifications					
Width x height x depth	mm	30 x 215 x 75			
Ambient temperature					
• During operation	°C	-25 ... +60			
• During transport	°C	-40 ... +70			
• During storage	°C	-40 ... +70			
Degree of protection IP on the front according to IEC 60529		IP20			
Touch protection on the front according to IEC 60529		Finger-safe			
Connections/terminals					
Type of connectable conductor cross-sections					
• At the inputs for supply voltage					
- Solid		1 x 0.5 ... 2.5 mm²		--	
- Finely stranded with end sleeve		1 x 0.5 ... 2.5 mm²		--	
- Finely stranded without end sleeve		1 x 0.5 ... 2.5 mm²		--	
- Solid for AWG cables		1 x 20 ... 12		--	
• For infeed					
- Solid		1 x 1 ... 6 mm²	--	1 x 1 ... 6 mm²	--
- Finely stranded with end sleeve		1 x 1 ... 6 mm²	--	1 x 1 ... 6 mm²	--
- Finely stranded without end sleeve		1 x 1 ... 6 mm²	--	1 x 1 ... 6 mm²	--
- For AWG cables		1 x 18 ... 10	--	1 x 18 ... 10	--
• For load-side outgoing feeder					
- Solid		1 x 0.5 ... 2.5 mm²			
- Finely stranded with end sleeve		1 x 0.5 ... 2.5 mm²			
- Finely stranded without end sleeve		1 x 0.5 ... 2.5 mm²			
- For AWG cables		1 x 20 ... 12			
Type of electrical connection for auxiliary and control circuits		Spring-loaded terminals (push-in)			
Miscellaneous					
Type of screwdriver tip		Slotted			
Size of screwdriver tip		Standard screwdriver 0.6 mm x 3.5 mm			

3DI/LC submodules

Article number		3RK1908-1AA00-0BP0
Product designation		**3DI/LC submodule**
General technical specifications		
Width x height x depth	mm	30 x 54.5 x 42.3
		
Product version		Accessories
Number of digital inputs		4
Installation altitude at height above sea level, maximum	m	2 000
Mounting position		Vertical, horizontal, flat
Type of mounting		Can be plugged onto motor starter
Ambient temperature		
• During operation	°C	-25 ... +60
• During transport	°C	-40 ... +70
• During storage	°C	-40 ... +70
Connections/terminals		
Connectable conductor cross-section for auxiliary contacts		
• Solid or stranded	mm^2	0.2 ... 1.5
• Finely stranded with end sleeve	mm^2	0.25 ... 1.5
• Finely stranded without end sleeve	mm^2	0.2 ... 1.5
AWG number as coded connectable conductor cross-section for auxiliary contacts		24 ... 16
Type of electrical connection for auxiliary and control circuits		Spring-loaded terminals (push-in)
Electrical specifications		
Type of voltage of the control supply voltage		DC
Control supply voltage at DC rated value	V	20.4 ... 28.8
Miscellaneous		
Type of screwdriver tip		Slotted
Size of screwdriver tip		Standard screwdriver 0.6 mm x 3.5 mm

Selection and ordering data

	Adjustable current response value of the inverse-time delayed overload release	Max. current-carrying capacity on starting	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	A	A					
Motor starters							
	Direct-on-line starters						
 3RK1308-0AB00-0CP0	0.1 ... 0.4	4	**3RK1308-0AA00-0CP0**		1	1 unit	42D
	0.3 ... 1	10	**3RK1308-0AB00-0CP0**		1	1 unit	42D
	0.9 ... 3	30	**3RK1308-0AC00-0CP0**		1	1 unit	42D
	2.8 ... 9	90	**3RK1308-0AD00-0CP0**		1	1 unit	42D
	4 ... 12	120	**3RK1308-0AE00-0CP0**		1	1 unit	42D
	Reversing starters						
 3RK1308-0BB00-0CP0	0.1 ... 0.4	4	**3RK1308-0BA00-0CP0**		1	1 unit	42D
	0.3 ... 1	10	**3RK1308-0BB00-0CP0**		1	1 unit	42D
	0.9 ... 3	30	**3RK1308-0BC00-0CP0**		1	1 unit	42D
	2.8 ... 9	90	**3RK1308-0BD00-0CP0**		1	1 unit	42D
	4 ... 12	120	**3RK1308-0BE00-0CP0**		1	1 unit	42D
	Fail-safe direct-on-line starters						
 3RK1308-0CE00-0CP0	0.1 ... 0.4	4	**3RK1308-0CA00-0CP0**		1	1 unit	42D
	0.3 ... 1	10	**3RK1308-0CB00-0CP0**		1	1 unit	42D
	0.9 ... 3	30	**3RK1308-0CC00-0CP0**		1	1 unit	42D
	2.8 ... 9	90	**3RK1308-0CD00-0CP0**		1	1 unit	42D
	4 ... 12	120	**3RK1308-0CE00-0CP0**		1	1 unit	42D
	Fail-safe reversing starters						
 3RK1308-0DE00-0CP0	0.1 ... 0.4	4	**3RK1308-0DA00-0CP0**		1	1 unit	42D
	0.3 ... 1	10	**3RK1308-0DB00-0CP0**		1	1 unit	42D
	0.9 ... 3	30	**3RK1308-0DC00-0CP0**		1	1 unit	42D
	2.8 ... 9	90	**3RK1308-0DD00-0CP0**		1	1 unit	42D
	4 ... 12	120	**3RK1308-0DE00-0CP0**		1	1 unit	42D

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

Product version	Operational voltage of the AC infeed for motor starters	Operational voltage of the AC infeed for ET 200SP e-Starters	Supply voltage of the DC infeed	Spring-loaded terminals (push-in) Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	V	V	V					
BaseUnits								
For e-Starters and motor starters[1]								
For motor starters								
• With AC/DC infeed	500	480	24	**3RK1908-0AP00-0AP0**		1	1 unit	42D
• With DC infeed	--	--	24	**3RK1908-0AP00-0BP0**		1	1 unit	42D
• With AC infeed	500	480	--	**3RK1908-0AP00-0CP0**		1	1 unit	42D
• Without infeed	--	--	--	**3RK1908-0AP00-0DP0**		1	1 unit	42D
For fail-safe motor starters								
• With AC infeed, with F-DI infeed	500	480	--	**3RK1908-0AP00-0GP0**		1	1 unit	42D
• With AC infeed, with F-DI loop-through	500	480	--	**3RK1908-0AP00-0HP0**		1	1 unit	42D
• Without AC/DC infeed, with F-DI loop-through	--	--	--	**3RK1908-0AP00-0JP0**		1	1 unit	42D
• Without AC/DC infeed, with F-DI infeed	--	--	--	**3RK1908-0AP00-0KP0**		1	1 unit	42D

3RK1908-0AP00-0AP0

[1] The voltage is looped-through from BaseUnits with infeed to subsequent BaseUnits without infeed.

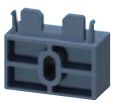
Product version	Supply voltage at DC rated value	Loop through the potential group from the left	Push-in terminals Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	V						
BaseUnits							
For dummy modules							
• BU15-P16+A0+2B, dark, looping through the potential group	24	Yes	**6ES7193-6BP00-0BA0**		1	1 unit	255
• BU15-P16+A0+2D, light, opening a new potential group	24	No	**6ES7193-6BP00-0DA0**		1	1 unit	255

6ES7193-6BP00-0BA0

Control supply voltage at DC rated value	Product function: local operation	Product function: digital inputs configurable	Spring-loaded terminals (push-in) Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
V							
3DI/LC submodules							
20.4 ... 28.8	Yes	Yes	**3RK1908-1AA00-0BP0**		1	1 unit	42D

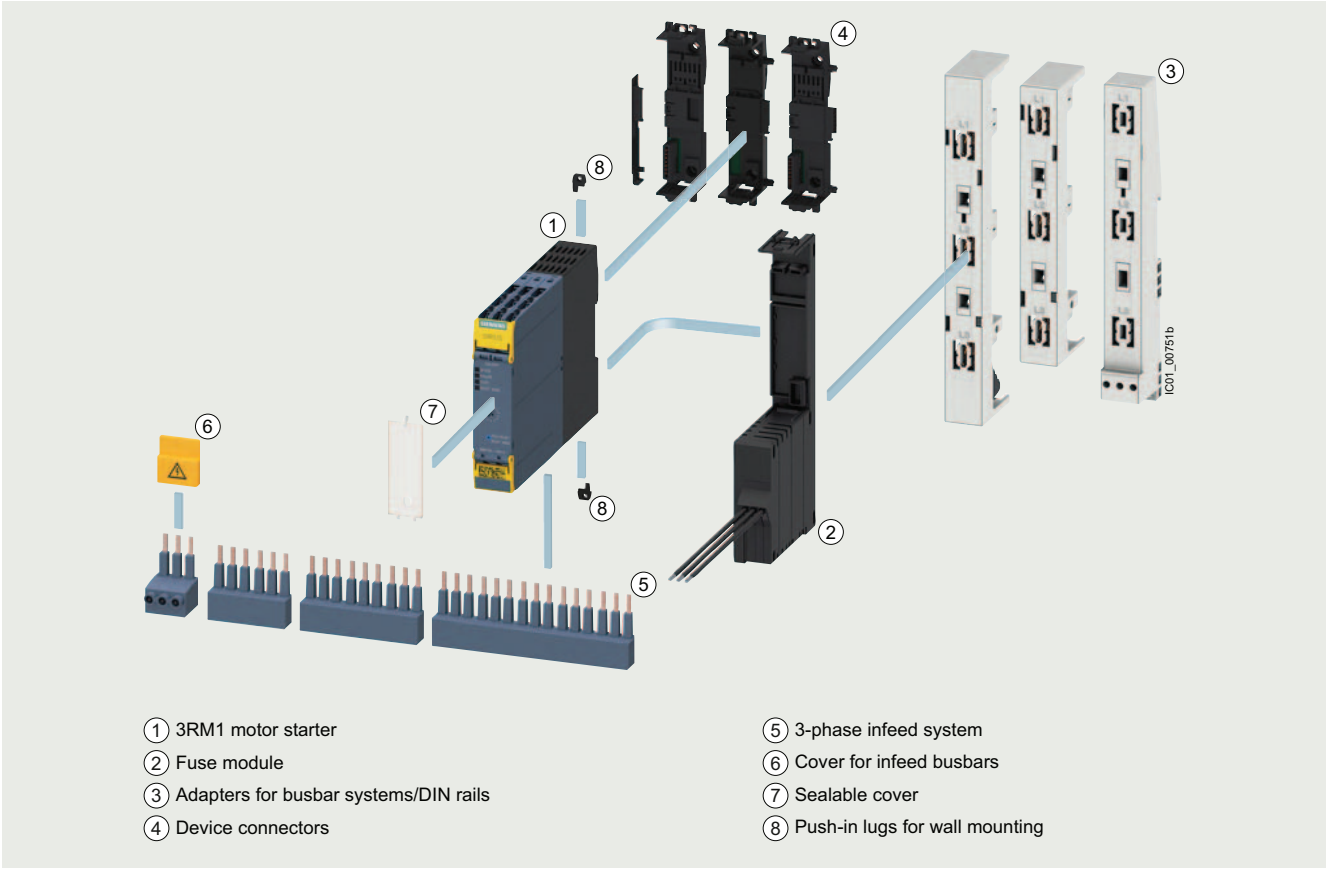
3RK1908-1AA00-0BP0

ET 200SP motor starters

	Product designation	Product version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories							
 6ES7133-6CV15-1AM0	**BU covers**						
	• 15 mm	For BaseUnits Type A0 or A1	**6ES7133-6CV15-1AM0**		1	5 units	255
 3RK1908-1CA00-0BP0	• 30 mm	For protection of empty slots, 30 mm	**3RK1908-1CA00-0BP0**		1	1 unit	42D
 3RK1908-1DA00-2BP0	**Infeed bus covers** (1 bag containing 10 covers)	For ET 200SP	**3RK1908-1DA00-2BP0**		1	1 unit	42D
 3RK1908-1EA00-1BP0	**Additional mounting base unit**	Mechanical, for ET 200SP	**3RK1908-1EA00-1BP0**		1	1 unit	42D
 3RW4928-8VB00	**Fan**	Can be used for 3RK1308	**3RW4928-8VB00**		1	1 unit	42G
	Motor suppression modules						
 3RK1911-6EA00	• Square	--	**3RK1911-6EA00**		1	1 unit	42D
 3RK1911-6EB00	• Round	--	**3RK1911-6EB00**		1	1 unit	42D
 3RK1908-1SK00	**Starter kit**	Consists of 3RK1308-0BC00-0CP0 reversing starter (0.9 ... 3 A), 3RK1908-0AP00-0AP0 BaseUnit with 500 V and 24 V AC/DC infeed, and EMC distance module (consisting of 6ES7193-6BP00-0BA0 BaseUnit plus 6ES7133-6CV15-1AM0 15 mm BU cover)	**3RK1908-1SK00**		1	1 unit	42D

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

Overview



SIRIUS 3RM1 motor starters with accessories

More information

3RM1 motor starters:
- Homepage, see www.siemens.com/sirius-motor-starter-3RM1
- SiePortal, see www.siemens.com/product_catalog_siep?3RM1
- Online configurator, see www.siemens.com/sirius/configurators

3SK safety relays for protecting the 3RM1 motor starters:
- Homepage, see www.siemens.com/sirius-safety-relays
- SiePortal, see www.siemens.com/product_catalog_siep?3SK1

TIA Selection Tool Cloud (TST Cloud), see www.siemens.com/tstcloud/?node=MotorStarter3RM1

Decision support for motor start – Starting and operating three-phase asynchronous motors efficiently, see www.siemens.com/motorstart-guide

SiePortal topic page with information on the planning and operating phase, see https://support.industry.siemens.com/cs/ww/en/view/109792664

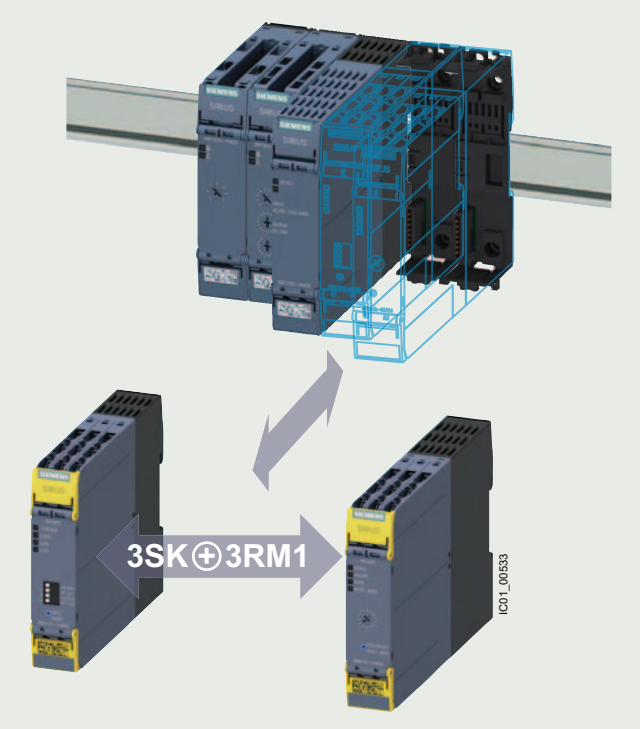
SIRIUS 3RM1 motor starters are compact devices, 22.5 mm wide, combining a large number of functions in a single enclosure. They consist of combinations of relay contacts, power semiconductors (hybrid technology), and an electronic overload relay for operational switching of three-phase motors up to 3 kW (at 400 V) and resistive loads up to 10 A at AC voltages up to 500 V.

The 3RM1 motor starters with overload protection with wide setting range are available as direct-on-line starters and reversing starters and as versions with safety-related shutdown up to SIL 3 and PL e.

Video: SIRIUS 3RM1 motor starter – Compact, economical, simple

SIRIUS 3RM1 motor starters

Seamlessly integrated safety right through to the main circuit



Problem-free integration of functional safety into the main circuit through the simple combination of 3RM1 and 3SK devices

Functional safety in the main circuit needs to be both simple and flexible.

The unique compatibility of hybrid 3RM1 fail-safe motor starters and 3SK safety relays means that integrated functional safety right through to the main circuit is no longer a problem.

Their compact design allows the motor starters to be installed to the right of the safety relay in a simple manner, just like an output expansion. The wiring of the safety-related signals to the relay can be performed simply, quickly and in an error-free manner using the device connector.

The ergonomically designed enclosure with removable terminals and terminal labeling in the hinged cover allows for the cables to be conveniently diagonally mounted from the front. Either screw or spring-loaded terminals with push-in technology are available.

Highlights

- Fail-safe disconnection of motors up to 3 kW
- Problem-free combination of fail-safe motor starters and safety relays
- End-to-end system, simple setup using device connectors
- Ergonomic enclosure

Note:

SIRIUS 3SK safety relays, see page 11/13 onwards.

Online configurator

Online configurator

An online configurator with numerous functions is available for SIRIUS 3RM1 motor starters
(see www.siemens.com/sirius/configurators)

- Create individual motor starters or a complex motor starter group
- Individual selection options, such as direct or reversing starting, spring-loaded or screw terminals, as well as motor current and control voltage
- Graphic representation of the design during configuration
- Automatic calculation of the matching motor starter protector/circuit breaker (for group configuration)

Ordering notes for multi-unit packaging

SIRIUS 3RM1 motor starters can also be ordered in practical, environment-friendly multi-unit packaging on request.

Multi-unit packaging with order code X90

When ordering products in multi-unit packaging, **"-Z"** must be added to the article number of the product concerned and the order code **"X90"** must be specified in addition.

Ordering example:

3RM1201-2AA04-Z X90;
Order quantity 12 units → Delivery of one pack containing 12 units

For more information, see page 16/7.

Article number scheme

Product versions		Article number										
Product function	Direct-on-line starters	**3RM100**	☐	**–**	☐	**AA**	☐	**4**				
	Failsafe direct-on-line starters	**3RM110**	☐	**–**	☐	**AA**	☐	**4**				With ATEX certification and safety-related shutdown
	Reversing starters	**3RM120**	☐	**–**	☐	**AA**	☐	**4**				
	Failsafe reversing starters	**3RM130**	☐	**–**	☐	**AA**	☐	**4**				With ATEX certification and safety-related shutdown
Wide setting range for electronic overload release	0.1 ... 0.5 A		**1**									For motor standard output 0 ... 0.12 kW[2]
	0.4 ... 2.0 A		**2**									For motor standard output 0.09 ... 0.75 kW[2]
	1.6 ... 7.0 A (10 A)[1]		**7**									For motor standard output 0.55 ... 3 kW[2]
Connection methods	Screw terminals				**1**							
	Spring-loaded terminals (push-in)				**2**							
	Mixed connection method				**3**							Spring-loaded terminals (push-in)
Rated control supply voltage U_s	24 V DC								**0**			
	110 ... 230 V AC; 110 V DC								**1**			
Example		**3RM130**	**1**	**–**	**2**	**AA**	**0**	**4**				

[1] Operation of resistive loads with up to 10 A.

[2] Standard three-phase motor, basis 4-pole at 400 V AC; the actual starting and rated data of the motor to be protected must be considered when selecting the units.

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

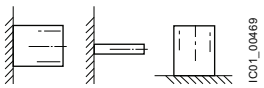
- Less space required in the control cabinet (20 to 80%) thanks to high functional density, which also means reduced wiring and testing
- Greater endurance and reduced heat losses thanks to hybrid technology
- Lower overheads for stock-keeping and configuration as a result of the wide setting range of the electronic overload release (up to 1:5)
- Fast wiring without tools for rigid conductors or conductors equipped with end sleeve thanks to spring-loaded terminals (push-in)
- Safety-related shutdown according to SIL 3 and PL e by shutting down the control supply voltage without additional devices in the main circuit
- The motor starters can be ideally combined with 3SK safety relays for safety-related shutdown (see page 11/13 onwards)
- Motor status feedback to the higher-level control system in the case of 3RM10 and 3RM12 motor starters in the 24 V DC version
- Virtually error-free wiring on the mains connection side and reduction in short-circuit protective devices by means of 3RM19 infeed system
- ATEX certification of the overload protection of the 3RM1 Failsafe motor starters: "Increased safety" type of protection EEx e according to ATEX Directive 2014/34/EU

Standards and approvals

- IEC/EN 60947-4-2
- UL 60947-4-2
- CSA C22.2 No. 60947-4-2
- ATEX
- IEC 61508: SIL 3
- IEC 62061: SIL 3
- ISO 13849-1: PL e
- CCC approval for China

Technical specifications

More information	
SiePortal, see www.siemens.com/product_catalog_siep?3RM1 Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/66295730	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16311/faq

Article number			3RM100.-.AA.4 3RM120.-.AA.4	3RM110.-.AA.4 3RM130.-.AA.4
General technical specifications				
Dimensions (W x H x D)		mm	22.5 x 100 x 141.6	
Ambient temperature				
• During operation		°C	-25 … +60	
• During storage		°C	-40 … +70	
• During transport		°C	-40 … +70	
Installation altitude at height above sea level, maximum		m	4 000, derating, see Equipment Manual	
Shock resistance			6 *g*/11 ms	
Vibration resistance			1 ... 6 Hz, 15 mm; 20 m/s², 500 Hz	
Degree of protection IP on the front	According to IEC 60529		IP20	
Touch protection on the front	According to IEC 60529		Finger-safe	
Performance Level (PL)	According to ISO 13849-1		--	PL e
Safety Integrity Level (SIL)	According to IEC 62061		--	SIL 3
Mounting position			Vertical, horizontal, standing (observe derating)	

Article number		3RM1.01	3RM1.02	3RM1.07
Main circuit				
Operational voltage, rated value, maximum	V	500		
Operating frequency	Hz	50/60		
Operational current at AC-53a at 400 V at an ambient temperature of 40 °C	A	0.5	2	7
Minimum load [%]	%	20		
Adjustable current response value of the inverse-time delayed overload release	A	0.1 ... 0.5	0.4 ... 2	1.6 ... 7

Article number		3RM1.0.-.AA04	3RM1.0.-.AA14
Control circuit			
Type of voltage of the control supply voltage		DC	AC/DC
Control supply voltage			
• At DC	V	24	110
• At AC			
- At 50 Hz	V	--	110 … 230
- At 60 Hz	V	--	110 … 230
Frequency of the control supply voltage	Hz	--/--	50/60

Article number	3RM1.0.-1AA.4	3RM1.0.-3AA.4	3RM1.0.-2AA.4
Connections/terminals			
Type of electrical connection for main circuit (1 or 2 conductors can be connected)	**Screw terminals**		**Spring-loaded terminals (push-in)**
Connectable conductor cross-section for main contacts			
• Solid	1 x (0.5 ... 4 mm²), 2 x (0.5 ... 2.5 mm²)		1 x (0.5 ... 4 mm²)
• Finely stranded			
- With end sleeve	1 x (0.5 ... 4 mm²), 2 x (0.5 ... 1.5 mm²)		1 x (0.5 ... 2.5 mm²)
- Without end sleeve	--		1 x (0.5 ... 4 mm²)
Type of electrical connection for auxiliary and control circuits (1 or 2 conductors can be connected)	**Screw terminals**	**Spring-loaded terminals (push-in)**	
Type of connectable conductor cross-sections for auxiliary contacts			
• Solid	1 x (0.5 ... 2.5 mm²), 2 x (1.0 ... 1.5 mm²)	1 x (0.5 ... 1.5 mm²), 2 x (0.5 ... 1.5 mm²)	
• Finely stranded			
- With end sleeve	1 x (0.5 ... 2.5 mm²), 2 x (0.5 ... 1.0 mm²)	1 x (0.5 ... 1.0 mm²), 2 x (0.5 ... 1.0 mm²)	
- Without end sleeve	--	1 x (0.5 ... 1.5 mm²), 2 x (0.5 ... 1.5 mm²)	
Type of connectable conductor cross-sections for AWG cables			
• For main contacts	1 x (20 ... 12), 2 x (20 ... 14)		1 x (20 ... 12)
• For auxiliary contacts	1 x (20 ... 14), 2 x (18 ... 16)	1 x (20 ... 16), 2 x (20 ... 16)	

Accessories

More information

Equipment Manual, see
https://support.industry.siemens.com/cs/ww/en/view/66295730

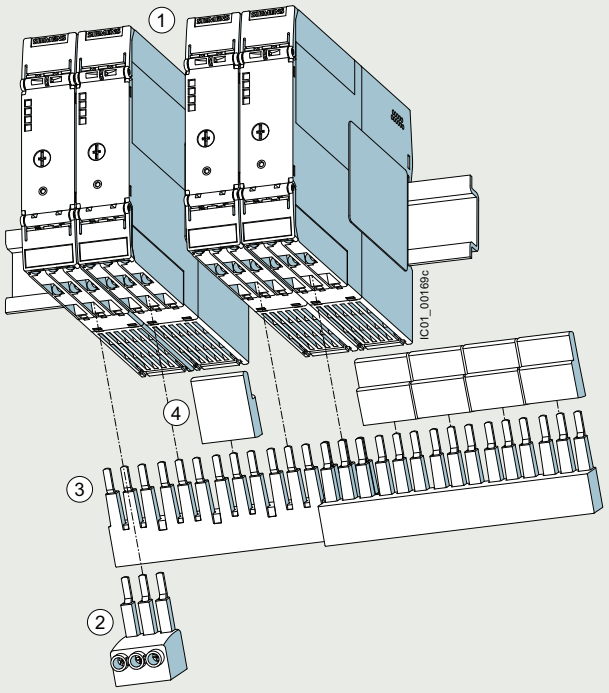
3-phase infeed system (3RM19 3-phase busbar system)

The system permits an easy, time-saving and safe means of feeding two or more 3RM1 motor starters. It can be used only with motor starters with screw terminals and in combination with 8US1716-0RK00 adapters for mounting rails in the main circuit.

The maximum summation current must not exceed 25 A.
The primary infeed is connected via a 3-phase infeed terminal.

The busbars are available in three lengths, for two, three or five motor starters. More than five devices can be connected by clamping the connection tags of a second busbar underneath, rotated 180°.

The 3-phase busbars have touch protection but empty connection tags must be fitted with covers.



1 Four 3RM1 motor starters on DIN rail with one free slot
2 3RM1920-1AA 3-phase infeed terminal
3 Two 3RM1910-1DA 3-phase busbars rotated through 180° for the connection of up to nine motor starters
4 Covers for three 3RM1910-6AA connection tags respectively for unused slots

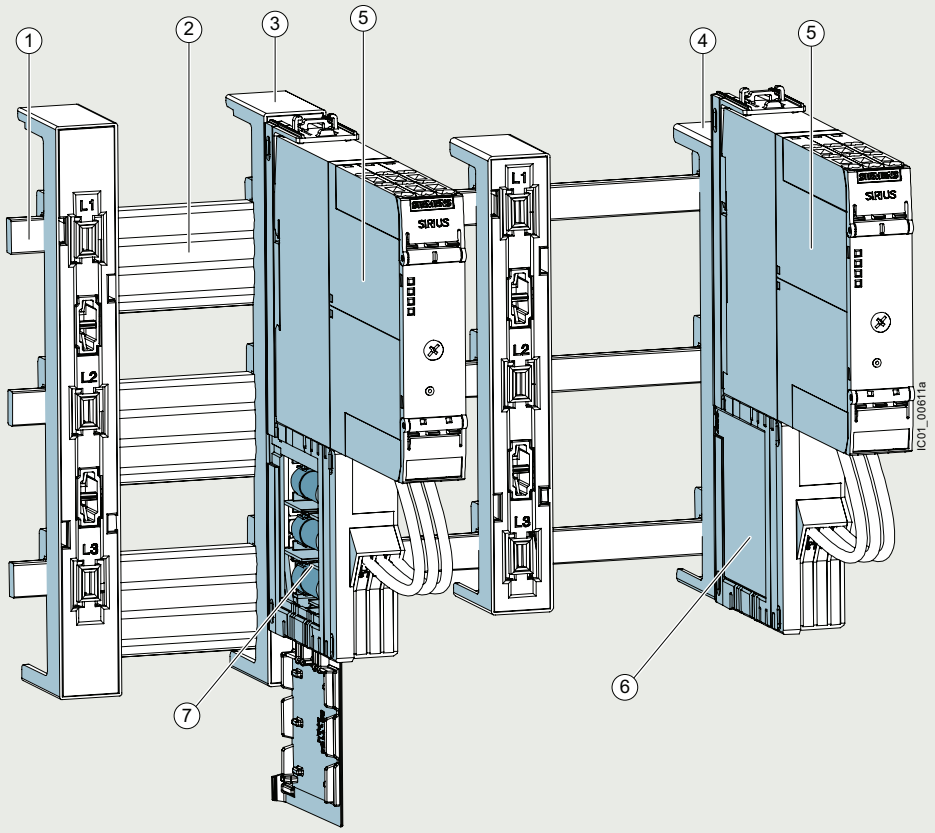
3RM19 infeed system with 3-phase infeed terminal: In the above example, two 3-phase busbars (5-pole busbars) rotated 180° allow up to nine 3RM1 motor starters to be connected. Contact with the unused connection tags in free slots is prevented safely by the covers.

SIRIUS 3RM1 motor starters

Fuse module for the use of 3RM1 motor starters on 8US busbar systems and mounting rails

The fuse module permits the very compact construction of a load feeder with a maximum width of 22.5 mm. The 3RM1 motor starter in combination with the integrated fuses for short-circuit protection can therefore be used on 8US busbar systems. Thanks to the range of different adapters, the fuse module can be used in all 60 mm busbar systems and also in compact busbar systems and on mounting rails. The interface to the adapter also permits a simple and secure replacement of the load feeder.

The fuse module can be combined with all 3RM1 motor starters. The easily replaceable fuses protect the motor starter, the connected motor and the cables.

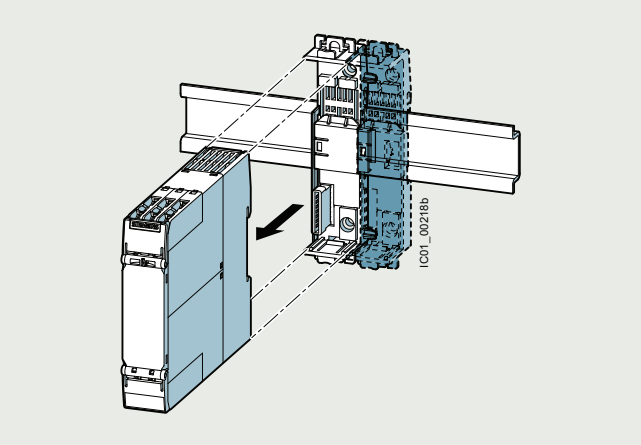


1 Busbar system
2 Cover profiles for busbars
3 Busbar adapter
4 Compact busbar adapter
5 3RM1 motor starter
6 3RM19 fuse module
7 3RM19 fuse module with open flap (Flap cannot be opened when fuse module is inserted. The fuse module must be removed to change the fuses.)

By means of the fuse module, 3RM1 motor starters can be used in busbar systems and 8US compact busbar systems, as well as on mounting rails

Device connectors for the control circuit

The device connectors for 3RM1 motor starters (24 V DC control supply voltage only) reduce the outlay for cabling by looping through the control supply voltage. The device connectors can be snapped onto a DIN rail or fixed to a level mounting panel using screws.



Device connector with 3RM1 motor starter

Using the device connectors exclusively for feeding in the control supply voltage

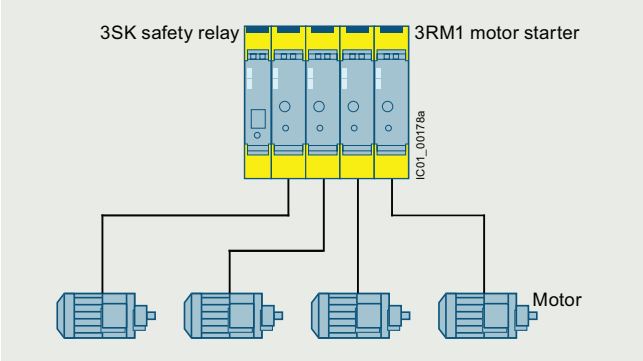
By using device connectors, a maximum of five motor starters can be supplied with 24 V DC control supply voltage. This requires the control supply voltage to be applied to the A1 and A2 terminals of only one motor starter.

Device daisy chain connectors can be used for gaps between two motor starters. Device termination connectors terminate a group.

Using the device connectors for safe group shutdown

In combination with the 3RM11 and 3RM13 fail-safe motor starters, the device connector can also be used for safety-related shutdown. For this application, groups of no more than five fail-safe motor starters can be connected using a device connector, and the group must be terminated with a termination connector. Removing the control voltage supply from the first motor starter will safely shut down the whole group.

Safe group shutdown can be implemented particularly easily in conjunction with 3SK safety relays. In this case, up to five motor starters can be directly connected to 3SK safety relays via the device connector and then safely shut down (see page 11/13 onwards).



Ideal connection: Combination of four SIRIUS 3RM1 Failsafe motor starters with SIRIUS 3SK safety relays

Electromechanical switching devices in series with hybrid motor starters

Switching an inductive load - in particular of motors < 1 kW with high inductance – with an electromechanical switching device (e.g. contactor) can cause high and steep voltage edges.

The resulting faults/damage can be prevented by first disconnecting with the hybrid motor starter or by using EMC suppression modules:

- 3RT2916-1P.. EMC suppression modules for direct mounting on the contactor, see page 3/113
- For motor suppression modules that are fitted in the main circuit, see page 8/126

Note:

For more information, see https://support.industry.siemens.com/cs/ww/en/view/109758696.

Selection and ordering data

More information

SiePortal, see www.siemens.com/product_catalog_siep?3RM1

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

Multi-unit packaging, see page 16/7.

Operating power for three-phase motor at 400 V[1]	Adjustable current response value of the inverse-time delayed overload release	Control supply voltage at DC	Control supply voltage at 50/60 Hz AC	Screw terminals for main circuit and control circuit — Article No.	Screw terminals — Price per PU	Spring-loaded terminals (push-in) for main circuit and control circuit — Article No.	Spring-loaded terminals — Price per PU
kW	A	V	V				
Direct-on-line starters							
0 … 0.12	0.1 … 0.5	24	--	**3RM1001-1AA04**		**3RM1001-2AA04**	
0.09 … 0.75	0.4 … 2	24	--	**3RM1002-1AA04**		**3RM1002-2AA04**	
0.55 … 3	1.6 … 7	24	--	**3RM1007-1AA04**		**3RM1007-2AA04**	
0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1001-1AA14**		**3RM1001-2AA14**	
0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1002-1AA14**		**3RM1002-2AA14**	
0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1007-1AA14**		**3RM1007-2AA14**	
Reversing starters							
0 … 0.12	0.1 … 0.5	24	--	**3RM1201-1AA04**		**3RM1201-2AA04**	
0.09 … 0.75	0.4 … 2	24	--	**3RM1202-1AA04**		**3RM1202-2AA04**	
0.55 … 3	1.6 … 7	24	--	**3RM1207-1AA04**		**3RM1207-2AA04**	
0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1201-1AA14**		**3RM1201-2AA14**	
0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1202-1AA14**		**3RM1202-2AA14**	
0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1207-1AA14**		**3RM1207-2AA14**	
Failsafe direct-on-line starters							
0 … 0.12	0.1 … 0.5	24	--	**3RM1101-1AA04**		**3RM1101-2AA04**	
0.09 … 0.75	0.4 … 2	24	--	**3RM1102-1AA04**		**3RM1102-2AA04**	
0.55 … 3	1.6 … 7	24	--	**3RM1107-1AA04**		**3RM1107-2AA04**	
0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1101-1AA14**		**3RM1101-2AA14**	
0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1102-1AA14**		**3RM1102-2AA14**	
0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1107-1AA14**		**3RM1107-2AA14**	
Failsafe reversing starters							
0 … 0.12	0.1 … 0.5	24	--	**3RM1301-1AA04**		**3RM1301-2AA04**	
0.09 … 0.75	0.4 … 2	24	--	**3RM1302-1AA04**		**3RM1302-2AA04**	
0.55 … 3	1.6 … 7	24	--	**3RM1307-1AA04**		**3RM1307-2AA04**	
0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1301-1AA14**		**3RM1301-2AA14**	
0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1302-1AA14**		**3RM1302-2AA14**	
0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1307-1AA14**		**3RM1307-2AA14**	


3RM1001-1AA04


3RM1201-1AA04


3RM1101-1AA04


3RM1301-1AA04

[1] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

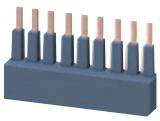
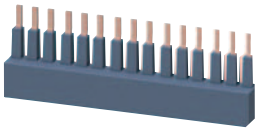
* You can order this quantity or a multiple thereof.
Illustrations are approximate

Multi-unit packaging, see page 16/7.

	Operating power for three-phase motor at 400 V[1]	Adjustable current response value of the inverse-time delayed overload release	Control supply voltage at DC	Control supply voltage at 50/60 Hz AC	Screw terminals for main circuit, spring-loaded terminals (push-in) for control circuit — Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	kW	A	V	V					
Direct-on-line starters									
 3RM1001-3AA04	0 … 0.12	0.1 … 0.5	24	--	**3RM1001-3AA04**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	24	--	**3RM1002-3AA04**		1	1 unit	41D
	0.55 … 3	1.6 … 7	24	--	**3RM1007-3AA04**		1	1 unit	41D
	0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1001-3AA14**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1002-3AA14**		1	1 unit	41D
	0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1007-3AA14**		1	1 unit	41D
Reversing starters									
 3RM1201-3AA04	0 … 0.12	0.1 … 0.5	24	--	**3RM1201-3AA04**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	24	--	**3RM1202-3AA04**		1	1 unit	41D
	0.55 … 3	1.6 … 7	24	--	**3RM1207-3AA04**		1	1 unit	41D
	0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1201-3AA14**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1202-3AA14**		1	1 unit	41D
	0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1207-3AA14**		1	1 unit	41D
Failsafe direct-on-line starters									
 3RM1101-3AA04	0 … 0.12	0.1 … 0.5	24	--	**3RM1101-3AA04**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	24	--	**3RM1102-3AA04**		1	1 unit	41D
	0.55 … 3	1.6 … 7	24	--	**3RM1107-3AA04**		1	1 unit	41D
	0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1101-3AA14**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1102-3AA14**		1	1 unit	41D
	0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1107-3AA14**		1	1 unit	41D
Failsafe reversing starters									
 3RM1301-3AA04	0 … 0.12	0.1 … 0.5	24	--	**3RM1301-3AA04**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	24	--	**3RM1302-3AA04**		1	1 unit	41D
	0.55 … 3	1.6 … 7	24	--	**3RM1307-3AA04**		1	1 unit	41D
	0 … 0.12	0.1 … 0.5	110	110 ... 230	**3RM1301-3AA14**		1	1 unit	41D
	0.09 … 0.75	0.4 … 2	110	110 ... 230	**3RM1302-3AA14**		1	1 unit	41D
	0.55 … 3	1.6 … 7	110	110 ... 230	**3RM1307-3AA14**		1	1 unit	41D

[1] The actual starting and rated data of the motor to be protected must be considered when selecting the units.

SIRIUS 3RM1 motor starters

	Product designation	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3-phase infeed systems for 3RM1 with screw terminals						
 3RM1920-1AA	**3-phase infeed terminal** • For 3-phase busbars	**3RM1920-1AA**		1	1 unit	41D
	3-phase busbars					
 3RM1910-1AA	• For two motor starters	**3RM1910-1AA**		1	1 unit	41D
 3RM1910-1BA	• For three motor starters	**3RM1910-1BA**		1	1 unit	41D
 3RM1910-1DA	• For five motor starters	**3RM1910-1DA**		1	1 unit	41D
 3RM1910-6AA	**Covers** For three connection tags of the 3-phase busbars	**3RM1910-6AA**		1	10 units	41D
Fuse modules for 3RM1 for use on busbars or mounting rails						
 3RM1932-1AB	**Fuse module with 3NW6007-1 fuse**	**3RM1932-1AB**		1	1 unit	41D
	Fuse module without fuse[1)]	**3RM1930-1AA**		1	1 unit	41D
Adapters						
 8US1216-0AS00	**Adapter for 60 mm busbar systems** 22.5 mm x 200 mm x 41.5 mm Note: The adapter can be used on busbars with a width of 12 mm, 15 mm, 20 mm, 25 mm or 30 mm and a thickness of 5 mm or 10 mm.	**8US1216-0AS00**		1	1 unit	53W
 8US1616-0AK02	**Adapter for 60 mm compact busbar systems** 22.5 mm x 160 mm x 41.5 mm Note: The adapter can be used on busbars with a width of 12 mm and a thickness of 5 mm or 10 mm.	**8US1616-0AK02**		1	1 unit	53W

[1)] For details of alternative fuses, see Equipment Manual.

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

	Product designation	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Adapters						
 8US1716-0RK00	**Adapter for 35 mm DIN mounting rails** 22.5 mm x 185 mm x 23.5 mm	**8US1716-0RK00**		1	1 unit	53W
Cover profiles[1)2)]						
	Cover profiles for busbars					
 8US1922-2CA00	12 mm x 5 mm x 1 000 mm 40 or 60 mm busbar center-to-center spacing depending on busbar system	**8US1922-2CA00**		1	10 units	53W
 8US1922-2AA00	15 mm x 5 mm x 1 000 mm 20 mm x 5 mm x 1 000 mm 25 mm x 5 mm x 1 000 mm 30 mm x 5 mm x 1 000 mm 40 or 60 mm busbar center-to-center spacing depending on busbar system	**8US1922-2AA00**		1	10 units	53W
 8US1922-2BA00	12 mm x 10 mm x 1 000 mm 15 mm x 10 mm x 1 000 mm 20 mm x 10 mm x 1 000 mm 25 mm x 10 mm x 1 000 mm 30 mm x 10 mm x 1 000 mm 60 mm busbar center-to-center spacing	**8US1922-2BA00**		1	10 units	53W
Device connectors						
 3ZY1212-2EA00	**Device connector** For 3RM1 motor starters, 24 V DC, 22.5 mm	**3ZY1212-2EA00**		1	1 unit	41L
 3ZY1212-2AB00	**Device daisy chain connector** For 3RM1 motor starters 24 V DC, 22.5 mm For gaps without motor starters in assemblies	**3ZY1212-2AB00**		1	1 unit	41L
 3ZY1212-2FA00	**Device termination connector** For 3RM1 motor starters, 24 V DC, 22.5 mm	**3ZY1212-2FA00**		1	1 unit	41L

1) The cover profiles for busbars can be used for maintaining minimum spacing between the load feeders.

2) For further accessories for the configuration of a busbar system, see Catalog LV 10.

SIRIUS 3RM1 motor starters

	Product designation	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Removable terminals						
 3ZY1122-1BA00	**Terminals for main circuit, 2-pole, without labeling**					
		Screw terminals				
	• Version with screw terminals, up to max. 1 x 4 mm² or 2 x 2.5 mm²	**3ZY1122-1BA00**		1	6 units	41L
		Spring-loaded terminals (push-in)				
	• Version with spring-loaded terminals (push-in), up to max.1 x 4 mm² or 2 x 1.5 mm² (both in one end sleeve)	**3ZY1122-2BA00**		1	6 units	41L
 3ZY1131-1BA00	**Terminals for control circuit, 3-pole, without labeling**					
		Screw terminals				
	• Version with screw terminals, up to max. 2 x 1.5 mm² or 1 x 2.5 mm²	**3ZY1131-1BA00**		1	6 units	41L
		Spring-loaded terminals (push-in)				
	• Version with spring-loaded terminals (push-in), up to max. 2 x 1.5 mm²	**3ZY1131-2BA00**		1	6 units	41L
Further accessories						
 3ZY1311-0AA00	**Push-in lugs for wall mounting** (2 lugs per device are required)	**3ZY1311-0AA00**		1	10 units	41L
 3ZY1321-2AA00	**Sealable covers, 22.5 mm** For simple protection against unauthorized access	**3ZY1321-2AA00**		1	5 units	41L
 3ZY1440-1AA00	**Coding pins for removable terminals** For mechanical coding of the terminals	**3ZY1440-1AA00**		1	12 units	41L
 3ZY1450 -1AB00 3ZY1450 -1BB00	**Hinged covers** Replacement covers, without terminal labeling, 22.5 mm wide					
	• Titanium gray	**3ZY1450-1AB00**		1	5 units	41L
	• Yellow	**3ZY1450-1BB00**		1	5 units	41L
 3RK1911-6EA00	**Motor suppression modules**					
	• Square	**3RK1911-6EA00**		1	1 unit	42D
	• Round	**3RK1911-6EB00**		1	1 unit	42D
 3RA2908-1A	**Screwdriver** For all SIRIUS devices with spring-loaded terminals	**Spring-loaded terminals**				
	Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	**3RA2908-1A**		1	1 unit	41B

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