Load Feeder

Configuring SIRIUS Innovations
Selection data for Fuseless and Fused Load Feeders

Configuration Manual · 04/2010

Industrial Controls

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Industrial switchgear

Load feeders
Configuring SIRIUS Innovations

Configuration Manual

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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

CAUTION

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

NOTICE

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation for the specific task, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

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⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be adhered to. The information in the relevant documentation must be observed.

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Introduction

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SIRIUS – the modular system family for switching, protecting and starting motors

The innovations in the SIRIUS modular system family represent a totally new switchgear generation up to 18.5 kW. They are based on the existing SIRIUS modular system family, which has been systematically optimized and extended with many new functions. The individual switching devices, each of which is available with screw or spring-loaded terminals, can be easily assembled to form complete load feeders, either using link modules or by mounting directly.

			Size	
	Function	**Components**	**S00**	**S0**
Main circuit	**Switching and starting**	Contactors		
		Semiconductor switching devices		
		Soft starters		
	Protecting	Motor starter protectors		
		Overload relays		
	Monitoring	Current monitoring relays		
	Feeders	Feeders		

			Size	
	Function	**Components**	**S00**	**S0**
		Compact starters		
Control circuit		Function modules for mounting on contactors		
		Function modules for connection to the automation level	AS-Interface IO-Link	

Highlights		
	• Load feeders:	Completely new series up to 18.5 kW / 400 V • Comprehensive variety of starter technologies: electromechanical, semiconductors, soft starters • Short-circuit breaking capacity up to 150 kA
	• Modular design:	Coordiated components ensure combinability
	• Variants and sizes:	Economical and flexible with 2 sizes and a broader performance range
	• Accessories:	Optimum variance with uniform accessories
	• Type of construction:	Space-saving design with small device width and butt-mounting type of construction up to 60°C
	• Setup:	Fast startup, short setting-up times, and simple wiring
	• Communication:	Optional connection to AS-Interface or IO-Link with function modules
	• Maintenance:	Extremely durable, low maintenance, and reliable
	• Approvals:	Global approvals and certifications, such as UL, CSA, CCC, shipbuilding ...
	• Mounting:	Permanently secure mounting, screw or snap fitting
	• Spring-loaded connection technology:	Quick and secure connection, vibration-proof, and maintenance-free
	• Environment:	Environment friendly production and materials, recycling capability, low power loss
	• Design:	Clear-cut, ergonomic design (winner of the iF Product Design Award)

General information

2

General criteria for the selection of devices

The motor starter protectors, contactors, solid-state switching devices, soft starters and overload relays in the following tables are all specified in their basic versions with screw terminals, i.e. (in particular) without accessories. Where available, of course, versions with spring-loaded terminals or ring cable lug connections as well as accessories such as auxiliary switches, auxiliary trip units etc. can be used.

The contactors listed have a rated control supply voltage U_s of 230 V AC, 50 Hz. Versions with other voltages can also be used.

The 3RU21 thermal overload relay and the 3RB30 / 3RB31 solid-state overload relays can be directly mounted onto the contactor. The 3RB22 / 3RB23 solid-state overload relay and the SIMOCODE pro 3UF7 motor protection and control device are essentially used for stand-alone installation. In their basic version, these devices are specified with a rated control supply voltage of 230 V AC.

Mounting the combinations

When mounting the devices, specific arcing spaces must be maintained so that short-circuits can be cleared safely and reliably. The appropriate installation guidelines can be found in Section Installation guidelines (Page 91).

The technical data of the individual devices must be taken into account when selecting a device.

400 V AC / 500 V

The tables below are primarily structured for the 400 V and 500 V line voltages for grounded networks (at 50 and 60 Hz) generally found in IEC regions. The coordination tables for 690 V will follow.

Tests are carried out with a test voltage which lies 10% above these values (further details can be found in the test reports). Thus, the specified combinations can also be used for other networks as long as their maximum voltage does not exceed the test voltage. This means, for instance, the combinations for 400 V can also be used for 415 V networks that have a line supply tolerance of +5%.

Ambient conditions

A maximum ambient temperature of 60°C applies to all electromechanical controlgear, and 40°C to soft starters and solid-state contactors. Higher temperatures are possible with derating. For details, refer to the System Manual or contact Technical Assistance.

A maximum installation height of 2000 m applies to electromechanical controlgear, and 1000 m to soft starters and solid-state contactors.

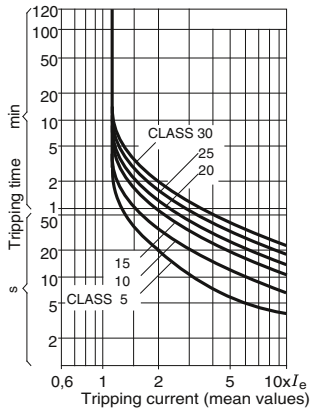
Higher installation altitudes are also possible with derating. For details refer to the appropriate manuals.

Trip classes
CLASS 5, CLASS 10, CLASS 20, CLASS 30 and CLASS 40

Trip classes, according to IEC 60947-4-1, define the time intervals within which the protection equipment (overload release of a motor starter protector or overload relay) must trip from the cold state, for a symmetrical, three-phase load with a 7.2-fold set current I_e.

The tripping times are as follows:

- CLASS 5 and CLASS 10 between 2 s and 10 s,
- CLASS 20 between 4 s and 20 s,
- CLASS 30 between 9 s and 30 s,
- CLASS 40 between 30 s and 40 s.



In practice, devices with trip CLASS 5 and CLASS 10 are generally used. These devices are designed for standard applications. CLASS 5 and CLASS 10 are often referred to as normal starting.

Combinations for CLASS 20, CLASS 30 and CLASS 40 are available for applications where a higher starting current is required for a prolonged period. In this case, using standard devices of CLASS 5 and CLASS 10 would result in unwanted tripping. CLASS 20, CLASS 30 and CLASS 40 are also known as heavy starting devices. Large fan motors are an example of this type of application.

As well as the overload protection devices, the contactors and short-circuit protection devices must also be designed for these long starting times. This is why combinations acc. to CLASS 5 and CLASS 10 are generally more cost-effective. CLASS 20, CLASS 30 and CLASS 40 are only generally used if genuinely necessitated by the application.

Type of coordination 1 or 2

When selecting the combinations, in many cases, either coordination type 1 or 2 can be selected. According to IEC 60947-4-1, the coordination type defines the permissible degree of damage for a device following a short-circuit.

- **Type of coordination 1:**

  After a short-circuit, it is permissible for the starter to be inoperative, in particular, damage to the contactor, solid-state switching devices and overload relay is permissible.

- **Type of coordination 2:**

  The starter is still operative. There must be no signs of damage to the devices, with the exception of slightly welded contactor contacts if these can be easily separated again without any noticeable deformation.

In both cases, the short-circuit is reliably and safely cleared. Combinations of coordination type 2 are therefore of a higher quality and are rapidly available for reuse after a short-circuit. In the case of solid-state switching devices, the same applies as for type of coordination 2, that the short-circuit is cleared without any damage to the power semiconductors. Combinations of coordination type 1 are generally the more favorably priced solution. Combinations of coordination type 2 automatically fulfill the requirements of coordination type 1.

Tests

All of the specified combinations are tested in compliance with IEC 60947-4-1.

With or without overload relay

In addition to the combinations comprising a motor starter protector (for motor protection) and contactor, combinations are also available with motor starter protector (for starter protection), contactor and overload relay.

In the first case, the motor starter protector assumes the dual function of overload protection and short-circuit protection, while in the second case, the motor starter protector assumes only the short-circuit protection function and the overload relay the overload protection function. The tripping behavior of both solutions under overload and short-circuit conditions is technically comparable.

For fuseless load feeders with solid-state overload relay, and for higher trip classes, CLASS 20, CLASS 30 and CLASS 40 in particular, a motor starter protector is often used instead of an MSP for starter combinations. This is due to the following: from the point of view of thermal destruction limits, MSPs for starter combinations are generally designed for CLASS 10 motor starts. The current measurement of solid-state overload relays usually moves into saturation upwards of a 10-fold rated current, so that the intrinsic protection of the motor starter protector is no longer guaranteed for higher trip classes. In order to ensure thermal intrinsic protection, it is advisable to use a motor starter protector/circuit breaker that protects itself over the overload release. The motor starter protector/circuit breaker is selected so that the point at which the characteristic curve of the overload relay intersects with the a-tripping characteristic of the motor starter protector/circuit breaker is more than 10 x the set current. This ensures that, in the case of motor faults, such as overload or blocking, the overload relay always trips and not the motor starter protector.

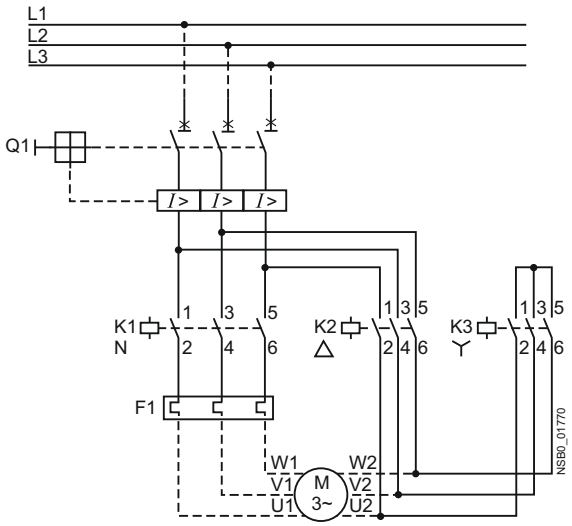
In this situation, combinations with motor starter protector and contactor offer the most cost-effective solution. However, combinations with overload relays offer distinct advantages for certain applications:

- 3RB30 / 3RB31 and 3RB22 / 3RB23 solid-state overload relays or SIMOCODE pro 3UF7 can be used to achieve not only trip CLASS 5 and CLASS 10 but also solutions for heavy starting, such as CLASS 20, CLASS 30, and CLASS 40.
- Using solid-state overload relays offers a wide setting range of 1:4 or 1:10. This offers advantages during configuration (e.g. if the exact motor current is not known) and enables us to reduce the number of variants required.
- Overload and short-circuit protection are carried out separately and can also be signaled separately. Alternatively, the 3RV2921-1M signaling block can be used for the 3RV motor starter protector instead of the overload relay. This also supports the separate signaling of overloads and short-circuits.
- Setting of the overload relay to "Automatic Reset" can also save a walk to the control cabinet in the case of overload tripping, as a manual reset in the control cabinet is not required. Alternatively, this function can also be implemented with the "3RV21 motor starter protector with overload relay function". These devices can be used in the motor starter protector + contactor tables instead of the 3RV20 motor starter protector.

Star(wye)(Y)-delta function(Δ) starting

In order to keep the current peaks in the line supply as low as possible, contactor assembly are frequently used as star(wye)-delta starters to start three-phase motors. However, to make worthwhile use of YΔ starting, a low load torque is required during starting. Only then can the motor approximately reach its rated speed in the Y stage before switching to Δ operation.

An overload relay should be used for motor overload protection. Normally, this is located directly in the motor feeder cable U1, V1, W1, as shown in the circuit diagram. Using this arrangement, the overload protection is effective in both the Y and Δ circuit. The overload relay should be set for 58% of the rated motor current.



Circuit diagram main circuit for YΔ circuit

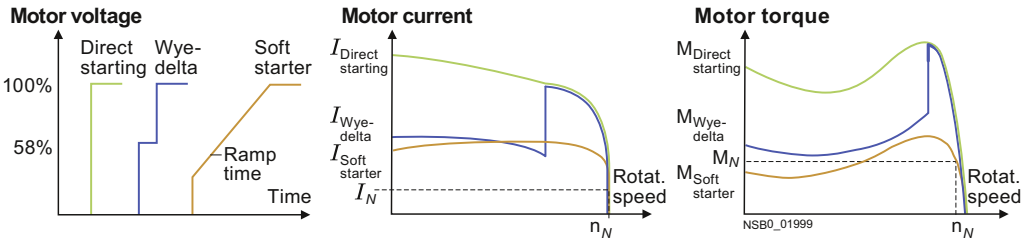
The control current wiring and switching from Y to Δ are implemented with plug-on function modules for the SIRIUS innovations. The switching time can be set between 1 and 100 s. The function modules thus perform the function of the timing relay.

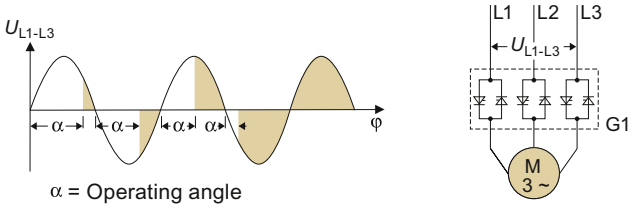
In the tables, circuit breakers are used for starter combinations (without overload releases). However, 3RV20 motor starter protectors for motor protection with the same rated current can also be used instead. In this case, the rated motor current of the motor starter protector must be set to the maximum value. This prevents a simultaneous tripping of the motor starter protector and overload relay.

Soft starting with soft starters

What is the basic principle of a soft starter?

Soft starters limit the starting current and starting torque. This reliably prevents mechanical stress and mains voltage dips. The motor voltage is reduced using phase control and is increased from an adjustable starting voltage up to the mains voltage within a specific ramp time. Soft starting and stopping reduces the stress on connected equipment, thus ensuring prolonged smooth and trouble-free production.





Principle of the operating angle of the mains voltage for solid-state elements in soft starters

- 3RW30 soft starters for the soft starting of three-phase asynchronous motors for simple applications
  - performance range: up to 55 kW at 400 V (75 hp at 460 V)
- 3RW40 soft starters with integrated functions; solid-state motor overload and intrinsic device protection and adjustable current limiting
  - performance range: up to 250 kW at 400 V (300 hp at 460 V)
- The 3RW44 solid-state soft starters offer the following:
  - soft starting and stopping
  - solid-state motor overload and intrinsic device protection
  - adjustable current limiting
  - numerous functions for higher-level requirements
  - performance range:

    up to 710 kW at 400 V in standard circuit

    up to 1200 kW at 400 V (1700 hp at 460 V) in the inside-delta circuit

Further information can be found in the Internet at: http://www.siemens.de/sanftstarter (http://www.siemens.de/sanftstarter).

For optimum configurations, we recommend using the selection and simulation program "Win-Soft Starter". You can order or download under:
http://www.siemens.de/lowvoltage/demosoftware
(http://www.siemens.de/lowvoltage/demosoftware)
(Order Number: E20001-D1020-P302-V2-7400)

Load feeders with soft starters

Soft starters can also be used to prevent current peaks in the line supply instead of the star(wye)-delta starting combinations. Three versions of these soft starters are available:

- 3RW30
- 3RW40
- 3RW44

The 3RW4 soft starters come as standard with an integrated solid-state overload relay. This means that, in fuseless combinations, a motor starter protector is only required for short-circuit protection. In the case of 3RW30 soft starters, the motor starter protector must also cover the overload protection.

3RB22 / 23 overload relays and SIMOCODE pro

The modular, solid-state overload relays with external power supply type 3RB22 / 23 for high-feature applications up to 630 A have been designed for inverse-time delayed protection of loads with normal and heavy starting against excessive temperature rises due to overload, phase unbalance or phase failure.

SIMOCODE pro is a flexible, modular motor management system for motors with constant speeds in the low-voltage performance range. It provides the intelligent, communication-capable interface between the higher-level automation system and the motor feeder.

A configuration with 3RB22 / 23 overload relays and with SIMOCODE pro requires in each case a basic unit, a connection cable and a current measuring module. The MLFBs of the current measuring modules are listed in the tables. Details of the basic units and connection cables are given in the following:

3RB22 / 23

- Basic unit (= evaluation module)
  - Monostable, screw: 3RB2283-4AA1
  - Bistable, screw: 3RB2383-4AA1
  - Monostable, spring-loaded: 3RB2283-4AC1
  - Bistable, spring-loaded: 3RB2383-4AC1
- Connection cable
  - 0.1 m (S00-S3): 3RB2987-2B
  - 0.5 m (S00-S12): 3RB2987-2D
- For other accessories for 3RB22 / 23 overload relays see Catalog LV 1 Chapter 5.

SIMOCODE pro

- SIMOCODE pro C, Basic Unit 1

  PROFIBUS DP interface, 12 Mbit/s, RS485 4I / 3O freely assignable, input for thermistor connection, monostable relay outputs

  – 24 V DC: 3UF7000-1AB00-0
  – 110 ... 240 V AC / DC: 3UF7000-1AU00-0

- SIMOCODE pro V, Basic Unit 2

  PROFIBUS DP interface, 12 Mbit/s, RS485 4I / 3O freely assignable, input for thermistor connection, monostable relay outputs, can be expanded by expansion modules

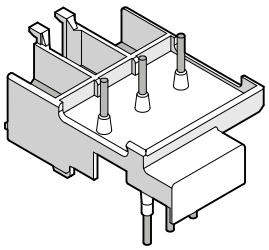
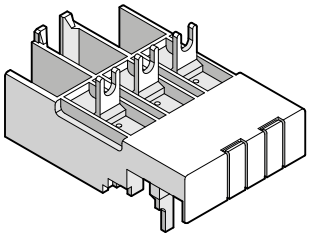
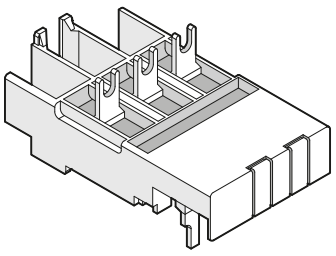
  – 24 V DC: 3UF7010-1AB00-0
  – 110 ... 240 V AC / DC: 3UF7010-1AU00-0

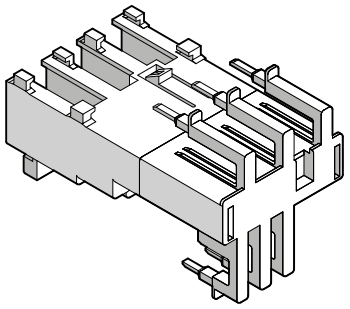
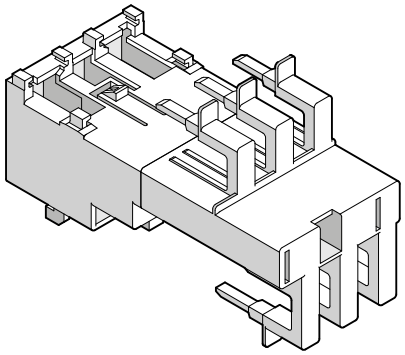
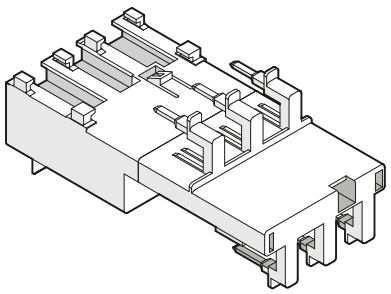
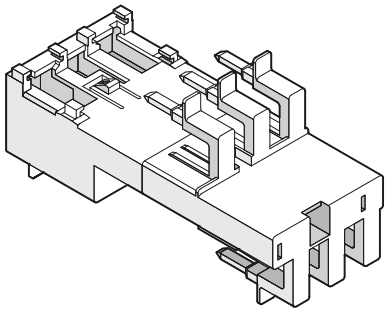
- Connection cable
  – 0.1 m, flat: 3UF7931-0AA00-0
  – 0.3 m, flat: 3UF7935-0AA00-0
  – 0.5 m, flat: 3UF7932-0AA00-0
  – 0.5 m, round: 3UF7932-0BA00-0
  – 1.0 m, round: 3UF7937-0BA00-0
  – 2.5 m, round: 3UF7933-0BA00-0

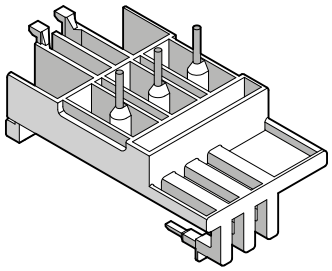
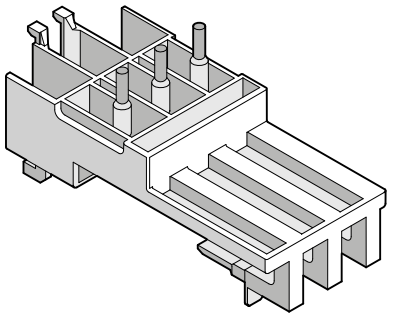
- For other accessories and software for SIMOCODE pro see Catalog LV 1 Chapter 7.

Link modules

Table 2- 1 Link module versions

Connection system	Link module version		Order number
Screw-type connection system	Motor starter protector – contactor in size S00		3RA1921-1D
	Motor starter protector – contactor in size S0 AC		3RA2921-1A
	Motor starter protector – contactor in size S0 DC Motor starter protector – soft starter in size S00 Motor starter protector – soft starter in size S0 Motor starter protector – solid-state contactor		3RA2921-1B

Connection system	Link module version		Order number
Spring-loaded connection system	Motor starter protector – contactor in size S00		3RA2911-2A
	Motor starter protector – contactor in size S0		3RA2921-2A
	Motor starter protector – soft starter in size S00		3RA2911-2G
	Motor starter protector – soft starter in size S0		3RA2921-2G

Connection system	Link module version		Order number
Hybrid connection system[1)]	Motor starter protector – contactor in size S00		3RA2911-2F
	Motor starter protector – contactor in size S0		3RA2921-2F

1) The motor starter protector has a screw connection and the contactor has a spring-loaded connection.

Selection tables 400 V AC

3

3.1 Motor starter protector + contactor

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 150 kA

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
0,04	0,16	0,11 ... 0,16	3RV2011-0AA10	3RT2015-1AP01	S00/S00
0,06	0,2	0,14 ... 0,20	3RV2011-0BA10	3RT2015-1AP01	S00/S00
0,06	0,2	0,18 ... 0,25	3RV2011-0CA10	3RT2015-1AP01	S00/S00
0,09	0,3	0,22 ... 0,32	3RV2011-0DA10	3RT2015-1AP01	S00/S00
0,09	0,3	0,28 ... 0,40	3RV2011-0EA10	3RT2015-1AP01	S00/S00
0,12	0,4	0,35 ... 0,50	3RV2011-0FA10	3RT2015-1AP01	S00/S00
0,18	0,6	0,45 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00
0,18	0,6	0,55 ... 0,80	3RV2011-0HA10	3RT2015-1AP01	S00/S00
0,25	0,85	0,70 ... 1,00	3RV2011-0JA10	3RT2015-1AP01	S00/S00
0,37	1,1	0,90 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00
0,55	1,5	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,9	1,4 ... 2,0	3RV2011-1BA10	3RT2015-1AP01	S00/S00
0,75	1,9	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00
1,1	2,7	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00
1,5	3,6	2,8 ... 4,0	3RV2011-1EA10	3RT2015-1AP01	S00/S00
1,5	3,6	3,5 ... 5,0	3RV2011-1FA10	3RT2015-1AP01	S00/S00
2,2	5	4,5 ... 6,3	3RV2011-1GA10	3RT2015-1AP01	S00/S00
3	6,5	5,5 ... 8,0	3RV2011-1HA10	3RT2015-1AP01	S00/S00
4	8,5	7,0 ... 10,0	3RV2011-1JA10	3RT2016-1AP01	S00/S00
5,5	11,5	9,0 ... 12,5	3RV2011-1KA10	3RT2017-1AP01	S00/S00
7,5	15,5	11 ... 16	3RV2011-4AA10	3RT2018-1AP01	S00/S00
7,5	15,5	14 ... 20	3RV2021-4BA10	3RT2025-1AP00	S0/S0
11	22	20 ... 25	3RV2021-4DA10	3RT2026-1AP00	S0/S0

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
15	29	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0
Short-circuit breaking capacity I_q = 55 kA					
18,5 [3]	35	30 ... 36	3RV2021-4PA10	3RT2028-1AP00	S0/S0
18,5 [3]	35	34 ... 40	3RV2021-4FA10	3RT2028-1AP00	S0/S0

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

CLASS 10, type of coordination 2, short-circuit breaking capacity I_q = 150 kA

AC 400 V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current (guide value) I				
kW	A	A	Order No.	Order No.	
0,04	0,16	0,11 ... 0,16	3RV2011-0AA10	3RT2015-1AP01	S00/S00
0,06	0,2	0,14 ... 0,20	3RV2011-0BA10	3RT2015-1AP01	S00/S00
0,06	0,2	0,18 ... 0,25	3RV2011-0CA10	3RT2015-1AP01	S00/S00
0,09	0,3	0,22 ... 0,32	3RV2011-0DA10	3RT2015-1AP01	S00/S00
0,09	0,3	0,28 ... 0,40	3RV2011-0EA10	3RT2015-1AP01	S00/S00
0,12	0,4	0,35 ... 0,50	3RV2011-0FA10	3RT2015-1AP01	S00/S00
0,18	0,6	0,45 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00
0,18	0,6	0,55 ... 0,80	3RV2011-0HA10	3RT2015-1AP01	S00/S00
0,25	0,85	0,70 ... 1,00	3RV2011-0JA10	3RT2015-1AP01	S00/S00
0,37	1,1	0,90 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00
0,55	1,5	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,9	1,4 ... 2,0	3RV2011-1BA10	3RT2015-1AP01	S00/S00
0,75	1,9	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00
1,1	2,7	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00
1,5	3,6	2,8 ... 4,0	3RV2011-1EA10	3RT2015-1AP01	S00/S00
1,5	3,6	3,5 ... 5,0	3RV2011-1FA10	3RT2024-1AP00	S00/S0
2,2	5	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0
3	6,5	5,5 ... 8,0	3RV2011-1HA10	3RT2024-1AP00	S00/S0
4	8,5	7,0 ... 10,0	3RV2011-1JA10	3RT2024-1AP00	S00/S0
5,5	11,5	9,0 ... 12,5	3RV2011-1KA10	3RT2024-1AP00	S00/S0
7,5	15,5	11 ... 16	3RV2011-4AA10	3RT2026-1AP00	S00/S0
7,5	15,5	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0
11	22	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0
15	29	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current (guide value) I				
kW	A	A	Order No.	Order No.	
Short-circuit breaking capacity I_q = 55 kA					
18,5 [3]	35	30 ... 36	3RV2021-4PA10	3RT1035-1AP00	S0/S2
18,5 [3]	35	34 ... 40	3RV2021-4FA10	3RT1035-1AP00	S0/S2

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

3.2 Circuit breaker + contactor + thermal overload relay

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 150 kA

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
0,06	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0BB0	0,14 ... 0,20
0,06	0,2	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0CB0	0,18 ... 0,25
0,09	0,3	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0DB0	0,22 ... 0,32
0,09	0,3	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0EB0	0,28 ... 0,40
0,12	0,4	3RV2311-0FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0FB0	0,35 ... 0,50
0,18	0,6	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0GB0	0,45 ... 0,63
0,18	0,6	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0HB0	0,55 ... 0,80
0,25	0,85	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0JB0	0,70 ... 1,00
0,37	1,1	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0KB0	0,90 ... 1,25
0,55	1,5	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,9	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1BB0	1,4 ... 2,0
0,75	1,9	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1CB0	1,8 ... 2,5
1,1	2,7	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1DB0	2,2 ... 3,2
1,5	3,6	3RV2311-1EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1EB0	2,8 ... 4,0
1,5	3,6	3RV2311-1FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1FB0	3,5 ... 5,0
2,2	5	3RV2311-1GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1GB0	4,5 ... 6,3
3	6,5	3RV2311-1HC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1HB0	5,5 ... 8,0
4	8,5	3RV2311-1JC10	3RT2016-1AP01	S00/S00/S00	3RU2116-1JB0	7,0 ... 10,0
5,5	11,5	3RV2311-1KC10	3RT2017-1AP01	S00/S00/S00	3RU2116-1KB0	9,0 ... 12,5
7,5	15,5	3RV2311-4AC10	3RT2018-1AP01	S00/S00/S00	3RU2116-4AB0	11 ... 16
7,5	15,5	3RV2321-4AC10	3RT2025-1AP00	S0/S0/S0	3RU2126-4AB0	11 ... 16
7,5	15,5	3RV2321-4BC10	3RT2025-1AP00	S0/S0/S0	3RU2126-4BB0	14 ... 20
11	22	3RV2321-4DC10	3RT2026-1AP00	S0/S0/S0	3RU2126-4DB0	20 ... 25
15	29	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4EB0	27 ... 32

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
Short-circuit breaking capacity I_q = 55 kA						
18,5 [3]	35	3RV2321-4PC10	3RT2028-1AP00	S0/S0/S0	3RU2126-4PB0	30 ... 36
18,5 [3]	35	3RV2321-4FC10	3RT2028-1AP00	S0/S0/S0	3RU2126-4FB0	34 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

CLASS 10, type of coordination 2, short-circuit breaking capacity I_q = 150 kA

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
0,06	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0BB0	0,14 ... 0,20
0,06	0,2	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0CB0	0,18 ... 0,25
0,09	0,3	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0DB0	0,22 ... 0,32
0,09	0,3	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0EB0	0,28 ... 0,40
0,12	0,4	3RV2311-0FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0FB0	0,35 ... 0,50
0,18	0,6	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0GB0	0,45 ... 0,63
0,18	0,6	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0HB0	0,55 ... 0,80
0,25	0,85	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0JB0	0,70 ... 1,00
0,37	1,1	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0KB0	0,90 ... 1,25
0,55	1,5	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,9	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1BB0	1,4 ... 2,0
0,75	1,9	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1CB0	1,8 ... 2,5
1,1	2,7	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1DB0	2,2 ... 3,2
1,5	3,6	3RV2311-1EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1EB0	2,8 ... 4,0
1,5	3,6	3RV2311-1FC10	3RT2024-1AP00	S00/S0/S00	3RU2116-1FB0	3,5 ... 5,0
2,2	5	3RV2311-1GC10	3RT2024-1AP00	S00/S0/S0	3RU2126-1GB0[3]	4,5 ... 6,3
3	6,5	3RV2311-1HC10	3RT2024-1AP00	S00/S0/S0	3RU2126-1HB0[3]	5,5 ... 8,0
4	8,5	3RV2311-1JC10	3RT2024-1AP00	S00/S0/S0	3RU2126-1JB0[3]	7,0 ... 10,0
5,5	11,5	3RV2311-1KC10	3RT2024-1AP00	S00/S0/S0	3RU2126-1KB0[3]	9,0 ... 12,5
7,5	15,5	3RV2311-4AC10	3RT2026-1AP00	S00/S0/S0	3RU2126-4AB0[3]	11 ... 16
7,5	15,5	3RV2321-4BC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0	14 ... 20
11	22	3RV2321-4DC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4DB0	20 ... 25
15	29	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4EB0	27 ... 32

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
Short-circuit breaking capacity I_q = 55 kA						
18,5	35	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S0	3RU2126-4PB0	30 ... 36
18,5	35	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S2	3RU1136-4FB0	28 ... 40
18,5 [4]	35	3RV2321-4FC10	3RT1035-1AP00	S0/S2/S0	3RU2126-4FB0	34 ... 40
18,5 [4]	35	3RV2321-4FC10	3RT1035-1AP00	S0/S2/S2	3RU1136-4FB0	28 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Can also be used in size S00 (3RU2116).

4) Discrete mounting only, without a link module.

3.3 Circuit breaker + contactor + 3RB3 solid-state overload relay

Type of coordination 1, short-circuit breaking capacity I_q = 150 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 10							
0,06	0,2	None	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,4
0,09	0,3	None	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,4
0,12	0,4	None	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,18	0,6	None	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,25	0,85	None	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,37	1,1	None	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
0,55	1,5	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
0,75	1,9	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
1,1	2,7	None	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
1,5	3,5	None	3RV2311-1EC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1SB0	3 ... 12
2,2	5	None	3RV2311-1GC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1SB0	3 ... 12
3	6,5	None	3RV2311-1HC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1SB0	3 ... 12
4	8,5	None	3RV2311-1JC10	3RT2016-1AP01	S00/S00/S00	3RB3016-1TB0	4 ... 16
5,5	11,5	None	3RV2311-4AC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1QB0	6 ... 25
7,5	15,5	None	3RV2321-4BC10	3RT2025-1AP00	S0/S0/S0	3RB3026-1QB0	6 ... 25
11	22	None	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1VE0	10 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

Type of coordination 2, short-circuit breaking capacity I_q = 150 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 10							
0,06	0,2	None	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,4
0,09	0,3	None	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,4
0,12	0,4	None	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,18	0,6	None	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,25	0,85	None	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,32 ... 1,25
0,37	1,1	None	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
0,55	1,5	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
0,75	1,9	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
1,1	2,7	None	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1 ... 4
1,5	3,5	None	3RV2311-1EC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1SB0	3 ... 12
2,2	5	None	3RV2311-1GC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1SB0	3 ... 12
3	6,5	None	3RV2311-1HC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1SB0	3 ... 12
4	8,5	None	3RV2311-1JC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1QB0	6 ... 25
5,5	11,5	None	3RV2311-4AC10	3RT2026-1AP00	S00/S0/S0	3RB3026-1QB0	6 ... 25
7,5	15,5	None	3RV2321-4BC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6 ... 25
11	22	None	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40
CLASS 20							
0,06	0,2	0,35 ... 0,5	3RV2011-0FA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,4
0,09	0,3	0,55 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,4
0,12	0,4	0,7 ... 1	3RV2011-0JA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,32 ... 1,25
0,18	0,6	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,32 ... 1,25
0,25	0,85	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,32 ... 1,25
0,37	1,1	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1 ... 4
0,55	1,5	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1 ... 4
0,75	1,9	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2PB0	1 ... 4
1,1	2,7	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2PB0	1 ... 4

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
1,5	3,5	5,5 ... 8	3RV2011-1HA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2PB0	1 ... 4
2,2	5	7 ... 10	3RV2011-1JA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2SB0	3 ... 12
3	6,5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0/S0	3RB3026-2QB0	6 ... 25
4	8,5	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6 ... 25
5,5	11,5	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6 ... 25
CLASS 30							
0,06	0,2	0,55 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,4
0,09	0,3	0,7 ... 1	3RV2011-0JA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,4
0,12	0,4	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,32 ... 1,25
0,18	0,6	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,32 ... 1,25
0,25	0,85	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,32 ... 1,25
0,37	1,1	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4PB0	1 ... 4
0,55	1,5	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1 ... 4
0,75	1,9	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1 ... 4
1,1	2,7	5,5 ... 8	3RV2011-1HA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1 ... 4
1,5	3,5	7 ... 10	3RV2011-1JA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4SB0	3 ... 12
2,2	5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0/S0	3RB3123-4SB0	3 ... 12
3	6,5	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0/S0	3RB3123-4QB0	6 ... 25
4	8,5	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0/S0	3RB3123-4QB0	6 ... 25
5,5	11,5	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0/S0	3RB3123-4QB0	6 ... 25

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The motor starter protector is to be set to maximum current value.

3.4 Circuit breaker + contactor + 3RB22 or 3RB23 solid-state overload relay, and 3UF7

Type of coordination 1, short-circuit breaking capacity I_q = 150 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 10							
0,09	0,3	None	3RV2311-0DC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,12	0,4	None	3RV2311-0FC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,18	0,6	None	3RV2311-0HC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,25	0,85	None	3RV2311-0JC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,37	1,1	None	3RV2311-0KC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,55	1,5	None	3RV2311-1AC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,75	1,9	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	None	3RV2311-1DC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
1,5	3,5	None	3RV2311-1EC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
2,2	5	None	3RV2311-1GC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
3	6,5	None	3RV2311-1HC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
4	8,5	None	3RV2311-1JC10	3RT2016-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
5,5	11,5	None	3RV2311-4AC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	15,5	None	3RV2321-4CC10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	22	None	3RV2321-4EC10	3RT2027-1AP00	S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The necessary current measuring modules are specified. The corresponding basic units 3RB22 / 3RB23 and 3UF7 are additionally required.

Type of coordination 2, short-circuit breaking capacity I_q = 150 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[4]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 10							
0,09	0,3	None	3RV2311-0DC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,12	0,4	None	3RV2311-0FC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,18	0,6	None	3RV2311-0HC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,25	0,85	None	3RV2311-0JC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,37	1,1	None	3RV2311-0KC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,55	1,5	None	3RV2311-1AC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,75	1,9	None	3RV2311-1BC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	None	3RV2311-1DC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
1,5	3,5	None	3RV2311-1EC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
2,2	5	None	3RV2311-1GC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
3	6,5	None	3RV2311-1HC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
4	8,5	None	3RV2311-1JC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
5,5	11,5	None	3RV2311-4AC10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	15,5	None	3RV2321-4CC10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	22	None	3RV2321-4EC10	3RT2027-1AP00	S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[4]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 20							
0,09	0,3	0,55 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,12	0,4	0,7 ... 1	3RV2011-0JA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,18	0,6	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,25	0,85	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,37	1,1	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,55	1,5	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,75	1,9	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	None	3RV2311-1GC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
1,5	3,5	None	3RV2311-1HC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
2,2	5	None	3RV2311-1JC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
3	6,5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
4	8,5	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
5,5	11,5	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[4]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 30							
0,09	0,3	0,7 ... 1	3RV2011-0JA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,12	0,4	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,18	0,6	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,25	0,85	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,37	1,1	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,55	1,5	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
0,75	1,9	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	5,5 ... 8	3RV2011-1HA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3
1,1	2,7	None	3RV2311-1HC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
1,5	3,5	7 ... 10	3RV2011-1JA10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
2,2	5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
3	6,5	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
4	8,5	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
5,5	11,5	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state) or current measuring module[4]	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A	Order No.	Order No.	Order No.		Order No.	A
CLASS 40							
0,09	0,3	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0	0,3 ... 3
0,12	0,4	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0	0,3 ... 3
0,18	0,6	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0	0,3 ... 3
0,25	0,85	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0	0,3 ... 3
0,37	1,1	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0	0,3 ... 3
0,55	1,5	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0	0,3 ... 3
0,75	1,9	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0	0,3 ... 3
1,1	2,7	7 ... 10	3RV2011-1JA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0	0,3 ... 3
1,1	2,7	7 ... 10	3RV2011-1JA10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0	2,4 ... 25
1,5	3,5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0	2,4 ... 25
2,2	5	11 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0	2,4 ... 25
3	6,5	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0	2,4 ... 25
4	8,5	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0	2,4 ... 25

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

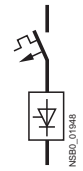
2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The motor starter protector is to be set to maximum current value.

4) The necessary current measuring modules are specified. The corresponding basic units 3RB22 / 3RB23 and 3UF7 are additionally required.

3.5 Motor starter protector + solid-state contactor

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q ≥ 5 kA / 50 kA



AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector	Size	Solid-state contactor[2]	
Stan-dard output P	Motor current (guide value) I				Mounting with lateral clearance of 20 mm	Butt-mounting[3]
kW	A	A	Order No.		Order No.	Order No.
Short-circuit breaking capacity I_q = 50 kA						
0,06	0,2	0,14 ... 0,20	3RV2011-0BA10	S00	3RF3405-1BB04	3RF3405-1BB04
0,06	0,2	0,18 ... 0,25	3RV2011-0CA10	S00		
0,09	0,3	0,22 ... 0,32	3RV2011-0DA10	S00		
0,09	0,3	0,28 ... 0,40	3RV2011-0EA10	S00		
0,12	0,4	0,35 ... 0,50	3RV2011-0FA10	S00		
0,18	0,6	0,45 ... 0,63	3RV2011-0GA10	S00		
0,25	0,85	0,55 ... 0,80	3RV2011-0HA10	S00		
0,25	0,85	0,70 ... 1,00	3RV2011-0JA10	S00		
0,37	1,1	0,90 ... 1,25	3RV2011-0KA10	S00		
0,55	1,5	1,10 ... 1,60	3RV2011-1AA10	S00		
0,75	1,9	1,40 ... 2,00	3RV2011-1BA10	S00		
0,75	1,9	1,80 ... 2,50	3RV2011-1CA10	S00		
1,1	2,7	2,20 ... 3,20	3RV2011-1DA10	S00		
1,5	3,6	2,80 ... 4,00	3RV2011-1EA10	S00		
1,5	3,6	3,50 ... 5,00	3RV2011-1FA10	S00		
2,2	5	4,50 ... 6,30	3RV2011-1GA10	S00		

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector	Size	Solid-state contactor[2]	
Stan-dard output P	Motor current (guide value) I				Mounting with lateral clearance of 20 mm	Butt-mounting[3]
kW	A	A	Order No.		Order No.	Order No.
Short-circuit breaking capacity I_q = 20 kA						
2,2	5	4,50 ... 6,30	3RV2011-1GA10	S00	3RF3405-1BB04	3RF3410-1BB04
3	6,5	5,50 ... 8,00	3RV2011-1HA10	S00	3RF3410-1BB04	3RF3410-1BB04
4	8,5	7,00 ... 10,0	3RV2011-1JA10	S00		
Short-circuit breaking capacity I_q = 5 kA						
5,5	11,5	9,00 ... 12,5	3RV2011-1KA10	S00	3RF3412-1BB04	3RF3412-1BB04
7,5	15,5	11,0 ... 16,0	3RV2021-4AA10	S0	3RF3416-1BB04	3RF3416-1BB04
7,5	15,5	14,0 ... 20,0	3RV2021-4BA10	S0		

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

3) The rated currents must be reduced if the solid-state contactor is butt mounted. Detailed characteristic curves can be found in Chapter 3 of the SIRIUS Innovations System Manual.

See also

Industrial Controls System Manual - SIRIUS Innovations
(http://support.automation.siemens.com/WW/view/en/39740306)

3.6 Motor starter protector + solid-state reversing contactor

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 10 kA / 50 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector	Size	Solid-state reversing contactor[2]	
Standard output P	Motor current (guide value) I				Mounting with lateral clearance of 20 mm	Butt-mounting[3]
kW	A	A	Order No.		Order No.	Order No.
Short-circuit breaking capacity I_q = 50 kA						
0,06	0,2	0,14 ... 0,20	3RV2011-0BA10	S00	3RF3403-1BD04	3RF3403-1BD04
0,06	0,2	0,18 ... 0,25	3RV2011-0CA10	S00		
0,09	0,3	0,22 ... 0,32	3RV2011-0DA10	S00		
0,09	0,3	0,28 ... 0,40	3RV2011-0EA10	S00		
0,12	0,4	0,35 ... 0,50	3RV2011-0FA10	S00		
0,18	0,6	0,45 ... 0,63	3RV2011-0GA10	S00		
0,25	0,85	0,55 ... 0,80	3RV2011-0HA10	S00		
0,25	0,85	0,70 ... 1,00	3RV2011-0JA10	S00		
0,37	1,1	0,90 ... 1,25	3RV2011-0KA10	S00		
0,55	1,5	1,10 ... 1,60	3RV2011-1AA10	S00		
0,75	1,9	1,40 ... 2,00	3RV2011-1BA10	S00		
0,75	1,9	1,80 ... 2,50	3RV2011-1CA10	S00		
1,1	2,7	2,20 ... 3,20	3RV2011-1DA10	S00		
1,5	3,6	2,80 ... 4,00	3RV2011-1EA10	S00		3RF3405-1BD04
1,5	3,6	3,50 ... 5,00	3RV2011-1FA10	S00		
2,2	5	4,50 ... 6,30	3RV2011-1GA10	S00	3RF3405-1BD04	—

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector	Size	Solid-state reversing contactor[2]	
Standard output P	Motor current (guide value) I				Mounting with lateral clearance of 20 mm	Butt-mounting[3]
kW	A	A	Order No.		Order No.	Order No.
Short-circuit breaking capacity I_q = 10 kA						
2,2	5	4,50 ... 6,30	3RV2011-1GA10	S00	3RF3405-1BD04	3RF3410-1BD04
3	6,5	5,50 ... 8,00	3RV2011-1HA10	S00	3RF3410-1BD04	

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

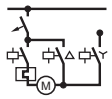
3) The rated currents must be reduced if the solid-state contactor is butt mounted. Detailed characteristic curves can be found in Chapter 3 of the SIRIUS Innovations System Manual.

See also

Industrial Controls System Manual - SIRIUS Innovations
(http://support.automation.siemens.com/WW/view/en/39740306)

3.7 Motor starter protector + star (wye)-delta starting + 3RU21 thermal overload relay

CLASS 10, types of coordination 1 and 2, short-circuit breaking capacity I_q = 150 kA



AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (thermal)	Setting range Overload release Overload relay
Standard output P	Motor current I		Line contactor + delta contactor	Star contactor			
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 1							
5,5	11,5	3RV2311-1KC10	3RT2015-1AP01	3RT2015-1AP01	S00/S00/S00	3RU2116-1HB0	5,5 ... 8,0
7,5	15,5	3RV2311-4AC10	3RT2016-1AP01	3RT2015-1AP01	S00/S00/S00	3RU2116-1JB0	7,0 ... 10,0
7,5	15,5	3RV2321-4AC10	3RT2016-1AP01	3RT2015-1AP01	S0/S00/S00	3RU2116-1JB0	7,0 ... 10,0
7,5	15,5	3RV2321-4AC10	3RT2024-1AP00	3RT2024-1AP00	S0/S0/S0	3RU2126-1JB0	7,0 ... 10,0
11	22	3RV2321-4DC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3RU2126-4AB0	11,0 ... 16,0
15	29	3RV2321-4EC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 ... 20,0
Type of coordination 2							
5,5	11,5	3RV2321-4AC10	3RT2026-1AP00	3RT2015-1AP01	S0/S0/S00	3RU2126-1HB0	5,5 ... 8,0
7,5	15,5	3RV2321-4AC10	3RT2026-1AP00	3RT2015-1AP01	S0/S0/S00	3RU2126-1JB0	7,0 ... 10,0
11	22	3RV2321-4DC10	3RT2027-1AP00	3RT2024-1AP00	S0/S0/S0	3RU2126-4AB0	11,0 ... 16,0
15	29	3RV2321-4EC10	3RT2027-1AP00	3RT2024-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 ... 20,0

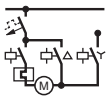
Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

3.8 Motor starter protector + contactor assembly for star-delta start + 3RB22 / 23 / 3 solid-state overload relay, or 3UF7

CLASS 10, types of coordination 1 and 2, short-circuit breaking capacity I_q = 150 kA



AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release Overload relay
Stan-dard output P	Motor current I		Line contactor + delta contactor	Star contactor			
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 1							
5,5	11,5	3RV2311-4AC10	3RT2016-1AP01	3RT2015-1AP01	S00/S00/S00	3RB3026-1QB0	6 ... 25
5,5	11,5	3RV2321-4AC10	3RT2016-1AP01	3RT2015-1AP01	S0/S00/S00	3RB3026-1QB0	6 ... 25
5,5	11,5	3RV2321-4AC10	3RT2024-1AP00	3RT2024-1AP00	S0/S0/S0	3RB3026-1QB0	6 ... 25
7,5	15,5	3RV2321-4BC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3RB3026-1QB0	6 ... 25
11	22	3RV2321-4EC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40
Type of coordination 1 with 3UF7 / 3RB3							
5,5	11,5	3RV2311-4AC10	3RT2016-1AP01	3RT2015-1AP01	S00/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
5,5	11,5	3RV2321-4AC10	3RT2016-1AP01	3RT2015-1AP01	S0/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
5,5	11,5	3RV2321-4AC10	3RT2024-1AP00	3RT2024-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	15,5	3RV2321-4CC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	22	3RV2321-4EC10	3RT2025-1AP00	3RT2024-1AP00	S0/S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release
Standard output P	Motor current I		Line contactor + delta contactor	Star contactor			Overload relay
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 2							
5,5	11,5	3RV2321-4AC10	3RT2026-1AP00	3RT2015-1AP00	S0/S0/S00	3RB3026-1QB0	6 ... 25
7,5	15,5	3RV2321-4BC10	3RT2027-1AP00	3RT2015-1AP00	S0/S0/S00	3RB3026-1QB0	6 ... 25
11	22	3RV2321-4EC10	3RT2027-1AP00	3RT2024-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40
Type of coordination 2 with 3UF7 / 3RB3							
5,5	11,5	3RV2321-4AC10	3RT2026-1AP00	3RT2015-1AP00	S0/S0/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	15,5	3RV2321-4CC10	3RT2027-1AP00	3RT2015-1AP00	S0/S0/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	22	3RV2321-4EC10	3RT2027-1AP00	3RT2024-1AP00	S0/S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

3) The necessary current measuring modules are specified. The corresponding basic unit 3RB22 / 3RB23 or 3UF7 is additionally required.

3.9 Motor starter protector + 3RW30 soft starter

CLASS 10, type of coordination 1,

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection[2]	Soft starter	Size MSP / 3RW30
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
Short-circuit breaking capacity I_q = 50 kA					
1,5	3,6	2,8 ... 4,0	3RV2011-1EA10	3RW3003-1CB54	S00/- (22.5 mm)
Short-circuit breaking capacity I_q = 5 kA					
1,5	3,6	3,5 ... 5,0	3RV2011-1FA10	3RW3013-1BB14	S00/S00
3	6,5	5,5 ... 8,0	3RV2011-1HA10	3RW3014-1BB14	S00/S00
4	8,5	7,0 ... 10,0	3RV2011-1JA10	3RW3016-1BB14	S00/S00
5,5	11,5	9,0 ... 12,5	3RV2011-1KA10	3RW3017-1BB14	S00/S00
7,5	15,5	14 ... 20	3RV2021-4BA10	3RW3018-1BB14	S0/S00
Short-circuit breaking capacity I_q = 55 kA					
11	22	20 ... 25	3RV2021-4DA10	3RW3026-1BB14	S0/S0
15	29	27 ... 32	3RV2021-4EA10	3RW3027-1BB14	S0/S0
18,5 [3]	35	34 ... 40	3RV2021-4FA10	3RW3028-1BB14	S0/S0

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

3) Discrete mounting only, without a link module.

3.10 Motor starter protector + 3RW40 soft starter

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 55 kA

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection[2]	Soft starter	Size MSP / 3RW40
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
Short-circuit breaking capacity I_q = 55 kA					
7,5	15,5	11 ... 16	3RV2011-4AA10	3RW4024-1BB14	S00/S0
11	22	20 ... 25	3RV2021-4DA10	3RW4026-1BB14	S0/S0
15	29	27 ... 32	3RV2021-4EA10	3RW4027-1BB14	S0/S0
18,5 [3]	35	34 ... 40	3RV2021-4FA10	3RW4028-1BB14	S0/S0

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible.

3) Discrete mounting only, without a link module.

3.11 Motor starter protector + 3RW44 soft starter

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 55 kA

AC 400V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection[2]	Soft starter	Size MSP / 3RW44
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
Short-circuit breaking capacity I_q = 55 kA					
15	29	27 ... 32	3RV2021-4EA10	3RW4422-1BC44	S0/BG2
18,5 [3]	36	34 ... 40	3RV2021-4FA10	3RW4423-1BC44	S0/BG2

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz. Other control voltages are also possible. Screw terminals or spring-loaded terminals can be selected.

3) Discrete mounting only, without a link module.

Selection tables 500 V AC

4

4.1 Motor starter protector + contactor

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 100 kA

AC 500V

Standard three-phase motor 4-pole at 500 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
0,04	0,11	0,11 ... 0,16	3RV2011-0AA10	3RT2015-1AP01	S00/S00
0,06	0,16	0,14 ... 0,20	3RV2011-0BA10	3RT2015-1AP01	S00/S00
0,09	0,24	0,18 ... 0,25	3RV2011-0CA10	3RT2015-1AP01	S00/S00
0,09	0,24	0,22 ... 0,32	3RV2011-0DA10	3RT2015-1AP01	S00/S00
0,12	0,32	0,28 ... 0,40	3RV2011-0EA10	3RT2015-1AP01	S00/S00
0,18	0,48	0,35 ... 0,50	3RV2011-0FA10	3RT2015-1AP01	S00/S00
0,18	0,48	0,45 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00
0,25	0,68	0,55 ... 0,80	3RV2011-0HA10	3RT2015-1AP01	S00/S00
0,37	0,88	0,70 ... 1,00	3RV2011-0JA10	3RT2015-1AP01	S00/S00
0,55	1,2	0,90 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00
0,55	1,2	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,5	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,5	1,4 ... 2,0	3RV2011-1BA10	3RT2015-1AP01	S00/S00
1,1	2,2	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00
1,5	2,9	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00
2,2	3,9	2,8 ... 4,0	3RV2011-1EA10	3RT2015-1AP01	S00/S00
2,2	3,9	3,5 ... 5,0	3RV2011-1FA10	3RT2015-1AP01	S00/S00
3	5,2	4,5 ... 6,3	3RV2011-1GA10	3RT2015-1AP01	S00/S00
4	6,8	5,5 ... 8,0	3RV2011-1HA10	3RT2016-1AP06	S00/S00
5,5	9,2	7,0 ... 10,0	3RV2011-1JA10	3RT2017-1AP01	S00/S00
7,5	12,4	9,0 ... 12,5	3RV2011-1KA10	3RT2018-1AP01	S00/S00
7,5	12,4	11 ... 16	3RV2011-4AA10	3RT2018-1AP01	S00/S00
11	17,6	14 ... 20	3RV2021-4BA10	3RT2026-1AP00	S0/S0

Standard three-phase motor 4-pole at 500 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
11	17,6	17 ... 22	3RV2021-4CA10	3RT2026-1AP00	S0/S0
15	23	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0
18,5	28	23 ... 28	3RV2021-4NA10	3RT2027-1AP00	S0/S0
18,5	28	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0
Short-circuit breaking capacity I_q = 36 kA					
22 [3]	33	30 ... 36	3RV2021-4PA10	3RT1035-1AP00	S0/S2

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other possible.

3) Discrete mounting only, without a link module.

CLASS 10, type of coordination 2, short-circuit breaking capacity I_q = 100 kA

AC500 V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current (guide value) I				
kW	A	A	Order No.	Order No.	
0,04	0,11	0,11 ... 0,16	3RV2011-0AA10	3RT2015-1AP01	S00/S00
0,06	0,16	0,14 ... 0,20	3RV2011-0BA10	3RT2015-1AP01	S00/S00
0,09	0,24	0,18 ... 0,25	3RV2011-0CA10	3RT2015-1AP01	S00/S00
0,09	0,24	0,22 ... 0,32	3RV2011-0DA10	3RT2015-1AP01	S00/S00
0,12	0,32	0,28 ... 0,40	3RV2011-0EA10	3RT2015-1AP01	S00/S00
0,18	0,48	0,35 ... 0,50	3RV2011-0FA10	3RT2015-1AP01	S00/S00
0,18	0,48	0,45 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00
0,25	0,68	0,55 ... 0,80	3RV2011-0HA10	3RT2015-1AP01	S00/S00
0,37	0,88	0,70 ... 1,00	3RV2011-0JA10	3RT2015-1AP01	S00/S00
0,55	1,2	0,90 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00
0,55	1,2	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,5	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00
0,75	1,5	1,4 ... 2,0	3RV2011-1BA10	3RT2015-1AP01	S00/S00
1,1	2,2	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00
1,5	2,9	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00
2,2	3,9	2,8 ... 4,0	3RV2011-1EA10	3RT2024-1AP00	S00/S0
2,2	3,9	3,5 ... 5,0	3RV2011-1FA10	3RT2024-1AP00	S00/S0
3	5,2	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0
4	6,8	5,5 ... 8,0	3RV2011-1HA10	3RT2026-1AP00	S00/S0
5,5	9,2	7,0 ... 10,0	3RV2011-1JA10	3RT2026-1AP00	S00/S0
7,5	12,4	9,0 ... 12,5	3RV2011-1KA10	3RT2026-1AP00	S00/S0
7,5	12,4	11 ... 16	3RV2011-4AA10	3RT2026-1AP00	S00/S0
11	17,6	14 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0
11	17,6	17 ... 22	3RV2021-4CA10	3RT2027-1AP00	S0/S0
15	23	20 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0
18,5	28	23 ... 28	3RV2021-4NA10	3RT2027-1AP00	S0/S0
18,5	28	27 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection	Contactor[2]	Size
Standard output P	Motor current (guide value) I				
kW	A	A	Order No.	Order No.	
Short-circuit breaking capacity I_q = 36 kA					
22 [3]	33	30 ... 36	3RV2021-4PA10	3RT1035-1AP00	S0/S2

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

4.2 Motor starter protector + contactor + thermal overload relay

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 100 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
0,04	0,11	3RV2311-0AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0AB0	0,11 ... 0,16
0,06	0,16	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0BB0	0,14 ... 0,20
0,09	0,24	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0CB0	0,18 ... 0,25
0,09	0,24	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0DB0	0,22 ... 0,32
0,12	0,32	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0EB0	0,28 ... 0,40
0,18	0,48	3RV2311-0FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0FB0	0,35 ... 0,50
0,18	0,48	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0GB0	0,45 ... 0,63
0,25	0,68	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0HB0	0,55 ... 0,80
0,37	0,88	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0JB0	0,70 ... 1,00
0,55	1,2	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0KB0	0,90 ... 1,25
0,55	1,2	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,5	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,5	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1BB0	1,4 ... 2,0
1,1	2,2	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1CB0	1,8 ... 2,5
1,5	2,9	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1DB0	2,2 ... 3,2
2,2	3,9	3RV2311-1EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1EB0	2,8 ... 4,0
2,2	3,9	3RV2311-1FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1FB0	3,5 ... 5,0
3	5,2	3RV2311-1GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1GB0	4,5 ... 6,3
4	6,8	3RV2311-1HC10	3RT2016-1AP06	S00/S00/S00	3RU2116-1HB0	5,5 ... 8,0
5,5	9,2	3RV2311-1JC10	3RT2017-1AP01	S00/S00/S00	3RU2116-1JB0	7,0 ... 10,0
7,5	12,4	3RV2311-1KC10	3RT2018-1AP01	S00/S00/S00	3RU2116-1KB0	9,0 ... 12,5
7,5	12,4	3RV2311-4AC10	3RT2018-1AP01	S00/S00/S00	3RU2116-4AB0	11 ... 16
11	17,6	3RV2321-4BC10	3RT2026-1AP00	S0/S0/S0	3RU2126-4BB0	14 ... 20
11	17,6	3RV2321-4CC10	3RT2026-1AP00	S0/S0/S0	3RU2126-4CB0	17 ... 22
15	23	3RV2321-4DC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4DB0	20 ... 25

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Standard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
18,5	28	3RV2321-4NC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4NB0	23 ... 28
18,5	28	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4EB0	27 ... 32
Short-circuit breaking capacity I_q = 36 kA						
22 [3]	33	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S0	3RU2126-4PB0	30 ... 36
22 [3]	33	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S2	3RU1136-4FB0	28 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

CLASS 10, type of coordination 2, short-circuit breaking capacity I_q = 100 kA


AC500V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Stan-dard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
0,04	0,11	3RV2311-0AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0AB0	0,11 ... 0,16
0,06	0,16	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0BB0	0,14 ... 0,20
0,09	0,24	3RV2311-0CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0CB0	0,18 ... 0,25
0,09	0,24	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0DB0	0,22 ... 0,32
0,12	0,32	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0EB0	0,28 ... 0,40
0,18	0,48	3RV2311-0FC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0FB0	0,35 ... 0,50
0,18	0,48	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0GB0	0,45 ... 0,63
0,25	0,68	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0HB0	0,55 ... 0,80
0,37	0,88	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0JB0	0,70 ... 1,00
0,55	1,2	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RU2116-0KB0	0,90 ... 1,25
0,55	1,2	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,5	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1AB0	1,1 ... 1,6
0,75	1,5	3RV2311-1BC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1BB0	1,4 ... 2,0
1,1	2,2	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1CB0	1,8 ... 2,5
1,5	2,9	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RU2116-1DB0	2,2 ... 3,2
2,2	3,9	3RV2311-1EC10	3RT2024-1AP00	S00/S0/S00	3RU2116-1EB0	2,8 ... 4,0
2,2	3,9	3RV2311-1FC10	3RT2024-1AP00	S00/S0/S00	3RU2116-1FB0	3,5 ... 5,0
3	5,2	3RV2311-1GC10	3RT2024-1AP00	S00/S0/S00	3RU2116-1GB0	4,5 ... 6,3
4	6,8	3RV2311-1HC10	3RT2026-1AP00	S00/S0/S00	3RU2116-1HB0	5,5 ... 8,0
5,5	9,2	3RV2311-1JC10	3RT2026-1AP00	S00/S0/S00	3RU2116-1JB0	7,0 ... 10,0
7,5	12,4	3RV2311-1KC10	3RT2026-1AP00	S00/S0/S00	3RU2116-1KB0	9,0 ... 12,5
7,5	12,4	3RV2311-4AC10	3RT2026-1AP00	S00/S0/S00	3RU2116-4AB0	11 ... 16
11	17,6	3RV2321-4BC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0[3]	14 ... 20
11	17,6	3RV2321-4CC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4CB0[3]	17 ... 22
15	23	3RV2321-4DC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4DB0[3]	20 ... 25
18,5	28	3RV2321-4NC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4NB0	23 ... 28
18,5	28	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RU2126-4EB0	27 ... 32

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector Starter protection	Contactor[2]	Size	Thermal overload relay	Setting range Overload release Overload relay
Stan-dard output P	Motor current I					
kW	A	Order No.	Order No.		Order No.	A
Short-circuit breaking capacity I_q = 36 kA						
22 [4]	33	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S0	3RU2126-4PB0	30 ... 36
22 [4]	33	3RV2321-4PC10	3RT1035-1AP00	S0/S2/S2	3RU1136-4FB0	28 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Can also be used in size S00 (3RU2116).

4) Discrete mounting only, without a link module.

4.3 Motor starter protector + contactor + 3RB3 solid-state overload relay

Type of coordination 1, short-circuit breaking capacity I_q = 100 kA


AC500V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Stan-dard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
CLASS 10							
0,04	0,11	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,06	0,16	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,09	0,24	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,12	0,32	0,4	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,18	0,48	0,63	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,25	0,68	0,8	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,37	0,88	1	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,55	1,20	1,25	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
0,75	1,50	1,6	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
1,1	2,20	2,5	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
1,5	2,90	3,2	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
2,2	3,90	5	3RV2311-1FC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
2,2	3,90	5	3RV2311-1FC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
3	5,20	8	3RV2311-1HC10	3RT2016-1AP01	S00/S00/S00	3RB3016-1SB0	3,0 ... 12,00
4	6,80	8	3RV2311-1HC10	3RT2016-1AP01	S00/S00/S00	3RB3016-1SB0	3,0 ... 12,00
5,5	9,20	10	3RV2311-1JC10	3RT2017-1AP01	S00/S00/S00	3RB3016-1SB0	3,0 ... 12,00
7,5	12,40	16	3RV2321-4AC10	3RT2026-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25,00
11	17,60	22	3RV2321-4CC10	3RT2026-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25,00
15	23,00	32	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10,0 ... 40,00

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
CLASS 20							
0,04	0,11	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,06	0,16	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,09	0,24	0,5 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,12	0,32	0,6 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,18	0,48	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,25	0,68	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,37	0,88	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,55	1,20	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
0,75	1,50	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
1,1	2,20	3,5 ... 5	3RV2011-1FA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
1,5	2,90	4,5 ... 6,3	3RV2011-1GA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
2,2	3,90	7,0 ... 10	3RV2011-1JA10	3RT2017-1AP01	S00/S00/S00	3RB3016-2SB0	3,0 ... 12,00
3	5,20	9,0 ... 12,5	3RV2011-1KA10	3RT2018-1AP01	S00/S00/S00	3RB3016-2SB0	3,0 ... 12,00
4	6,80	11,0 ... 16	3RV2011-4AA10	3RT2018-1AP01	S00/S00/S00	3RB3016-2SB0	3,0 ... 12,00
5,5	9,20	14,0 ... 20	3RV2021-4BA10	3RT2026-1AP00	S0/S0/S0	3RB3026-2QB0	6,0 ... 25,00
7,5	12,40	20,0 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6,0 ... 25,00
CLASS 30							
0,04	0,11	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,06	0,16	0,4 ... 0,5	3RV2011-0FA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,09	0,24	0,6 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,12	0,32	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,18	0,48	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,25	0,68	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,37	0,88	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,55	1,20	2,8 ... 4	3RV2011-1EA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4PB0	1,0 ... 4,00
0,75	1,50	3,5 ... 5	3RV2011-1FA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4PB0	1,0 ... 4,00
1,1	2,20	4,5 ... 6,3	3RV2011-1GA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4PB0	1,0 ... 4,00
1,5	2,90	7,0 ... 10	3RV2011-1JA10	3RT2017-1AP01	S00/S00/S00	3RB3113-4PB0	1,0 ... 4,00
2,2	3,90	9,0 ... 12,5	3RV2011-1KA10	3RT2018-1AP01	S00/S00/S00	3RB3113-4RB0	3,0 ... 12,00

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible. 3RA2921-1BA00 link module can only be used with screw terminals.

3) The motor starter protector is to be set to maximum current value.

Type of coordination 2, short-circuit breaking capacity I_q = 100 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
CLASS 10							
0,2	0,2	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,2	0,2	0,2	3RV2311-0BC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,32	0,32	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1RB0	0,1 ... 0,40
0,4	0,4	0,4	3RV2311-0EC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,63	0,63	0,63	3RV2311-0GC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
0,8	0,8	0,8	3RV2311-0HC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
1	1	1	3RV2311-0JC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1NB0	0,3 ... 1,25
1,25	1,25	1,25	3RV2311-0KC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
1,6	1,6	1,6	3RV2311-1AC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
2,5	2,5	2,5	3RV2311-1CC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
3,2	3,2	3,2	3RV2311-1DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-1PB0	1,0 ... 4,00
5	5	5	3RV2311-1FC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12,00
5	5	5	3RV2311-1FC10	3RT2024-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12,00
8	8	8	3RV2311-1HC10	3RT2026-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12,00
8	8	8	3RV2311-1HC10	3RT2026-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12,00
16	16	16	3RV2321-4AC10	3RT2026-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25,00
10	10	10	3RV2311-1JC10	3RT2026-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12,00
22	22	22	3RV2321-4CC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25,00
0,2	0,2	0,2	3RV2321-4EC10	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10,0 ... 40,00
CLASS 20							
0,04	0,11	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,06	0,16	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,09	0,24	0,5 ... 0,63	3RV2011-0GA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2RB0	0,1 ... 0,40
0,12	0,32	0,6 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,18	0,48	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,25	0,68	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
0,37	0,88	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2NB0	0,3 ... 1,25
0,55	1,20	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
0,75	1,50	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00/S00	3RB3016-2PB0	1,0 ... 4,00
1,1	2,20	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2PB0	1,0 ... 4,00
1,5	2,90	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0/S0	3RB3026-2PB0	1,0 ... 4,00
2,2	3,90	7,0 ... 10	3RV2011-1JA10	3RT2026-1AP00	S00/S0/S0	3RB3026-2SB0	3,0 ... 12,00
2,2	3,90	7,0 ... 10	3RV2011-1JA10	3RT2026-1AP00	S00/S0/S0	3RB3026-2SB0	3,0 ... 12,00
3	5,20	11,0 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0/S0	3RB3026-2SB0	3,0 ... 12,00
4	6,80	14,0 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6,0 ... 25,00
5,5	9,20	20,0 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6,0 ... 25,00
7,5	12,40	27,0 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0/S0	3RB3026-2QB0	6,0 ... 25,00
CLASS 30							
0,04	0,11	0,32	3RV2311-0DC10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,06	0,16	0,4 ... 0,5	3RV2011-0FA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,09	0,24	0,6 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4RB0	0,1 ... 0,40
0,12	0,32	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,18	0,48	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,25	0,68	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,37	0,88	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00/S00	3RB3113-4NB0	0,3 ... 1,25
0,55	1,20	2,8 ... 4	3RV2011-1EA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1,0 ... 4,00
0,75	1,50	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1,0 ... 4,00
1,1	2,20	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0/S0	3RB3123-4PB0	1,0 ... 4,00
1,5	2,90	7,0 ... 10	3RV2011-1JA10	3RT2026-1AP00	S00/S0/S0	3RB3123-4PB0	1,0 ... 4,00
2,2	3,90	9,0 ... 12,5	3RV2011-1KA10	3RT2026-1AP00	S00/S0/S0	3RB3123-4SB0	3,0 ... 12,00

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The motor starter protector is to be set to maximum current value.

4.4 Motor starter protector + contactor + 3RB22, 3RB23 solid-state overload relay, or 3UF7

Type of coordination 2, short-circuit breaking capacity I_q = 100 kA

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Standard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
CLASS 10							
0,12	0,32	0,4	3RV2311-0EC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,18	0,48	0,63	3RV2311-0GC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,25	0,68	0,8	3RV2311-0HC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,37	0,88	1	3RV2311-0JC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,55	1,20	1,25	3RV2311-0KC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,75	1,50	1,6	3RV2311-1AC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,1	2,20	2,5	3RV2311-1CC10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,5	2,90	3,2	3RV2311-1DC10	3RT2015-1AP01	S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
2,2	3,90	5	3RV2311-1FC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
2,2	3,90	5	3RV2311-1FC10	3RT2024-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
3	5,20	8	3RV2311-1HC10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
4	6,80	8	3RV2311-1HC10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Stan-dard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
7,5	12,40	20	3RV2321-4BC10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	10,0 ... 100,00
5,5	9,20	10	3RV2311-1JC10	3RT2026-1AP00	S00/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	2,4 ... 25,00
11	17,60	22	3RV2321-4CC10	3RT2027-1AP00	S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10,0 ... 100,00
15	23,00	32	3RV2321-4EC10	3RT2027-1AP00	S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10,0 ... 100,00
Short-circuit breaking capacity I_q = 36 kA							
18,5	28,00	36	3RV2321-4PC10	3RT1035-1AP00	S0/S2	3UF7102-1AA00-0/ 3RB2906-2JG1	10,0 ... 100,00
CLASS 20							
0,12	0,32	0,6 ... 0,8	3RV2011-0HA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,18	0,48	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,25	0,68	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,37	0,88	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,55	1,20	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,75	1,50	2,2 ... 3,2	3RV2011-1DA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,1	2,20	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,5	2,90	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
2,2	3,90	7,0 ... 10	3RV2011-1JA10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
2,2	3,90	10	3RV2311-1JC10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
3	5,20	11,0 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
4	6,80	14,0 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
5,5	9,20	27,0 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
7,5	12,40	27,0 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Starter protection[3]	Contactor[2]	Size	Overload relay (solid-state)	Setting range Overload release Overload relay
Stan-dard output P	Motor current I						
kW	A		Order No.	Order No.		Order No.	A
Short-circuit breaking capacity I_q = 36 kA							
11	17,60	30,0 ... 36	3RV2021-4PA10	3RT1035-1AP00	S0/S2	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
CLASS 30							
0,12	0,32	0,9 ... 1,25	3RV2011-0KA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,18	0,48	1,1 ... 1,6	3RV2011-1AA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,25	0,68	1,4 ... 2	3RV2011-1BA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,37	0,88	1,8 ... 2,5	3RV2011-1CA10	3RT2015-1AP01	S00/S00	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,55	1,20	2,8 ... 4	3RV2011-1EA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
0,75	1,50	3,5 ... 5	3RV2011-1FA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,1	2,20	4,5 ... 6,3	3RV2011-1GA10	3RT2024-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
1,5	2,90	7,0 ... 10	3RV2011-1JA10	3RT2026-1AP00	S00/S0	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,00
2,2	3,90	9,0 ... 12,5	3RV2011-1KA10	3RT2026-1AP00	S00/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
3	5,20	11,0 ... 16	3RV2021-4AA10	3RT2026-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
4	6,80	14,0 ... 20	3RV2021-4BA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
5,5	9,20	20,0 ... 25	3RV2021-4DA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
7,5	12,40	27,0 ... 32	3RV2021-4EA10	3RT2027-1AP00	S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00
Short-circuit breaking capacity I_q = 36 kA							
7,5	12,40	30,0 ... 36	3RV2021-4PA10	3RT1035-1AP00	S0/S2	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25,00

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

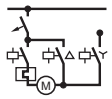
1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The motor starter protector is to be set to maximum current value.

4.5 Motor starter protector + contactor assembly for star-delta start + 3RU21 thermal overload relay

CLASS 5 and CLASS 10, types of coordination 1 and 2, short-circuit breaking capacity I_q = 100 kA



AC 500V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (thermal)	Setting range Overload release Overload relay
Stan-dard output P	Motor current I		Line contactor + delta contactor	Star contactor			
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 1							
5,5	9,2	3RV2311-1JC10	3RT2017-1AP01	3RT2017-1AP01	S00/S00/S00	3RU2116-1GB0	4,5 … 6,3
7,5	12,4	3RV2311-1KC10	3RT2018-1AP01	3RT2017-1AP01	S00/S00/S00	3RU2116-1HB0	5,5 … 8,0
7,5	12,4	3RV2311-1KC10	3RT2024-1AP00	3RT2024-1AP00	S00/S0/S0	3RU2126-1HB0	5,5 … 8,0
11	17,6	3RV2321-4BC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3RU2126-1KB0	9,0 … 12,5
11	17,6	3RV2321-4CC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3RU2126-1KB0	9,0 … 12,5
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4AB0	11,0 … 16,0
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 … 20,0
18,5	28	3RV2321-4EC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 … 20,0
Type of coordination 2							
5,5	9,2	3RV2311-1JC10	3RT2026-1AP00	3RT2026-1AP00	S00/S0/S0	3RU2126-1GB0	4,5 … 6,3
7,5	12,4	3RV2311-1KC10	3RT2026-1AP00	3RT2026-1AP00	S00/S0/S0	3RU2126-1HB0	5,5 … 8,0
11	17,6	3RV2321-4BC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-1KB0	9,0 … 12,5
11	17,6	3RV2321-4CC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-1KB0	9,0 … 12,5
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4AB0	11,0 … 16,0
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 … 20,0
18,5	28	3RV2321-4EC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RU2126-4BB0	14,0 … 20,0

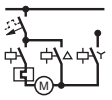
Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

4.6 Motor starter protector + contactor assembly for star-delta start + 3RB22 / 23 / 3 solid-state overload relay, or 3UF7

CLASS 5 and CLASS 10, types of coordination 1 and 2, short-circuit breaking capacity I_q = 100 kA



AC 500V

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release Overload relay
Stan-dard output P	Motor current I		Line contactor + delta contactor	Star contactor			
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 1 with 3RB22, 3RB23 or 3UF7							
5,5	9,2	3RV2311-1JC10	3RT2017-1AP01	3RT2017-1AP01	S00/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	12,4	3RV2311-1KC10	3RT2018-1AP01	3RT2017-1AP01	S00/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	12,4	3RV2311-1KC10	3RT2024-1AP00	3RT2024-1AP00	S00/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	17,6	3RV2321-4BC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	17,6	3RV2321-4CC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100
18,5	28	3RV2321-4EC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100
Type of coordination 1 with 3RB3							
5,5	9,2	3RV2311-1JC10	3RT2017-1AP01	3RT2017-1AP01	S00/S00/S00	3RB3016-1SB0	3,0 ... 12
7,5	12,4	3RV2311-1KC10	3RT2018-1AP01	3RT2017-1AP01	S00/S00/S00	3RB3016-1SB0	3,0 ... 12
7,5	12,4	3RV2311-1KC10	3RT2024-1AP00	3RT2024-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12
11	17,6	3RV2321-4BC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
11	17,6	3RV2321-4CC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40
18,5	28	3RV2321-4EC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40

Standard three-phase motor 4-pole at 400 V AC[1]		Motor starter protector	Contactors[2]		Size	Overload relay (solid-state) or current measuring module[3]	Setting range Overload release Overload relay
Stan-dard output P	Motor current I		Line contactor + delta contactor	Star contactor			
kW	A	Order No.	Order No.	Order No.		Order No.	A
Type of coordination 2 with 3RB22, 3RB23 or 3UF7							
5,5	9,2	3RV2311-1JC10	3RT2017-1AP01	3RT2017-1AP01	S00/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	12,4	3RV2311-1KC10	3RT2018-1AP01	3RT2017-1AP01	S00/S00/S00	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
7,5	12,4	3RV2311-1KC10	3RT2024-1AP00	3RT2024-1AP00	S00/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	17,6	3RV2321-4BC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
11	17,6	3RV2321-4CC10	3RT2026-1AP00	3RT2026-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100
Type of coordination 2 with 3RB3							
5,5	9,2	3RV2311-1JC10	3RT2026-1AP00	3RT2026-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12
7,5	12,4	3RV2311-1KC10	3RT2026-1AP00	3RT2026-1AP00	S00/S0/S0	3RB3026-1SB0	3,0 ... 12
11	17,6	3RV2321-4BC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
11	17,6	3RV2321-4CC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
15	23	3RV2321-4DC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1QB0	6,0 ... 25
18,5	28	3RV2321-4NC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40
18,5	28	3RV2321-4EC10	3RT2027-1AP00	3RT2027-1AP00	S0/S0/S0	3RB3026-1VB0	10 ... 40

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) The necessary current measuring modules are specified. The corresponding basic unit 3RB22 / 3RB23 or 3UF7 is additionally required.

4.7 Motor starter protector + 3RW40 soft starter

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 10 kA

AC 500V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection[2]	Soft starter	Size MSP / 3RW40
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
7,5	15,5	11 ... 16	3RV2011-4AA10	3RW4024-1BB14	S0/S0
11	22	20 ... 25	3RV2021-4DA10	3RW4026-1BB14	S0/S0
15	29	27 ... 32	3RV2021-4EA20	3RW4027-1BB14	S0/S0
18,5 [3]	35	34 ... 40	3RV2021-4FA10	3RW4028-1BB14	S0/S0

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

4.8 Motor starter protector + 3RW44 soft starter

CLASS 10, type of coordination 1, short-circuit breaking capacity I_q = 10 kA

AC 500V

Standard three-phase motor 4-pole at 400 V AC[1]		Setting range Overload release Motor starter protector	Motor starter protector Motor protection[2]	Soft starter	Size MSP / 3RW44
Standard output P	Motor current I				
kW	A	A	Order No.	Order No.	
15	29	27 ... 32	3RV2021-4EA10	3RW4422-1BC44	S0/BG2
18,5 [3]	36	34 ... 40	3RV2021-4FA10	3RW4423-1BC44	S0/BG2

Order numbers for basic versions with screw terminals and spring-loaded terminals also possible. 3RA2921-1BA00 link module can only be used with screw terminals.

1) Guide value for 4-pole standard motors at 500 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Rated currents taken into account at 40 °C ambient temperature. Rated control supply voltage 230 V AC, 50 Hz, other control voltages possible.

3) Discrete mounting only, without a link module.

Fused selection tables up to 690 V

5

5.1 Contactor short-circuit protection

Short-circuit protection up to 100 kA
Type of coordination 1 and 2

Table 5- 1 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Contactor		Fuse links[1]	
MLFB	P [kW]	Type of coordination 1[2]	Type of coordination 2[2]
Size S00			
3RT2015-1..	3	35	20
3RT2016-1..	4	35	20
3RT2017-1..	5,5	35	20
3RT2018-1..	7,5	50	25
Size S0			
3RT2024-1..	5,5	63	25
3RT2025-1..	7,5	63	25
3RT2026-1..	11	100	35
3RT2027-1..	15	125	50
3RT2028-1..	18,5	125	50

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.2 Short-circuit protection: Contactor + 3RU2 thermal overload relay, type of coordination 1 and 2

Short-circuit protection up to 100 kA
Type of coordination 1 and 2

Table 5- 2 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Overload relay thermal		Contactor		Fuse links[1)]	
MLFB	Setting range	MLFB	P [kW]	Type of coordination 1[2)]	Type of coordination 2[2)]
Size S00					
3RU2116-0AB0	0,11 ... 0,16	3RT2015-1..	3	25	0,5
3RU2116-0BB0	0,14 ... 0,20	3RT2015-1..	3	25	1
3RU2116-0CB0	0,18 ... 0,25	3RT2015-1..	3	25	1
3RU2116-0DB0	0,22 ... 0,32	3RT2015-1..	3	25	1,6
3RU2116-0EB0	0,28 ... 0,40	3RT2015-1..	3	25	2
3RU2116-0FB0	0,35 ... 0,50	3RT2015-1..	3	25	2
3RU2116-0GB0	0,45 ... 0,63	3RT2015-1..	3	25	2
3RU2116-0HB0	0,55 ... 0,80	3RT2015-1..	3	25	4
3RU2116-0JB0	0,70 ... 1,0	3RT2015-1..	3	25	4
3RU2116-0KB0	0,90 ... 1,25	3RT2015-1..	3	25	4
3RU2116-1AB0	1,10 ... 1,60	3RT2015-1..	3	35	6
3RU2116-1BB0	1,4 ... 2,0	3RT2015-1..	3	35	6
3RU2116-1CB0	1,8 ... 2,5	3RT2015-1..	3	35	10
3RU2116-1DB0	2,2 -3,2	3RT2015-1..	3	35	10
3RU2116-1EB0	2,8 ... 4,0	3RT2015-1..	3	35	16
3RU2116-1FB0	3,5 ... 5,0	3RT2015-1..	3	35	20
3RU2116-1GB0	4,5 ... 6,3	3RT2015-1..	3	35	20
3RU2116-1HB0	5,5 ... 8,0	3RT2016-1..	4	35	20
3RU2116-1JB0	7,0 ... 10	3RT2016-1..	4	35	20
3RU2116-1KB0	9,0 ... 12,5	3RT2017-1..	5,5	35	20
3RU2116-4AB0	11 ... 16	3RT2018-1..	7,5	50	25

Overload relay thermal		Contactor		Fuse links[1]	
MLFB	Setting range	MLFB	P [kW]	Type of coordination 1[2]	Type of coordination 2[2]
Size S0					
3RU2126-1CB0	1,8 ... 2,5	3RT2024-1..	5,5	63	10
3RU2126-1DB0	2,2 -3,2	3RT2024-1..	5,5	63	10
3RU2126-1EB0	2,8 ... 4,0	3RT2024-1..	5,5	63	16
3RU2126-1FB0	3,5 ... 5,0	3RT2024-1..	5,5	63	20
3RU2126-1GB0	4,5 ... 6,3	3RT2024-1..	5,5	63	20
3RU2126-1HB0	5,5 ... 8,0	3RT2024-1..	5,5	63	25
3RU2126-1JB0	7,0 ... 10	3RT2024-1..	5,5	63	25
3RU2126-1KB0	9,0 ... 12,5	3RT2024-1..	5,5	63	25
3RU2126-4AB0	11 ... 16	3RT2025-1..	7,5	63	25
3RU2126-4BB0	14 ... 20	3RT2026-1..	11	100	35
3RU2126-4CB0	17 ... 22	3RT2026-1..	11	100	35
3RU2126-4DB0	20 ... 25	3RT2026-1..	11	100	35
3RU2126-4NB0	23 ... 28	3RT2027-1..	15	125	50
3RU2126-4EB0	27 ... 32	3RT2027-1..	15	125	50
3RU2126-4PB0	30 ... 36	3RT2028-1..	18,5	125	50
3RU2126-4FB0	34 ... 40	3RT2028-1..	18,5	125	50

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.3 Short-circuit protection: Contactor + 3RB3 solid-state overload relay

Short-circuit protection with fuses for motor feeders with 3RB30 and 3RB31, contactor mounting, and stand-alone assembly

Table 5- 3 Derating values for overload relay and contactor size S00

Overload relay	Overload relay Setting range	Contactor		CLASS								
				5 / 10			20			30		
				AC-3 derating values								
MLFB	A	MLFB	kW	400 V	500 V	690 V	400 V	500 V	690 V	400 V	500 V	690 V
3RB3016-1RB0	0,1 ... 0,4	Stand-alone assembly		0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
		3RT2015	3,0	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
3RB3016-1NB0	0,32 ... 1,25	Stand-alone assembly		1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
		3RT2015	3,0	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25
3RB3016-1PB0	1 ... 4	Stand-alone assembly		4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
		3RT2015	3,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
		3RT2016	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
		3RT2017	5,5	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
3RB3016-1SB0	3 ... 12	Stand-alone assembly		12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
		3RT2016	4,0	9,0	7,7	6,7	9,0	6,5	5,2	9,0	6,5	5,2
		3RT2017	5,5	12,0	9,2	6,7	10,0	9,0	6,3	9,0	9,0	6,3
3RB3016-1TB0	4 ... 16	Stand-alone assembly		16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0	16,0
		3RT2017	5,5	12,0	9,2	6,7	10,0	9,0	6,3	9,0	9,0	6,3
		3RT2018	7,5	16,0	12,4	8,9	12,9	11,6	8,1	11,6	11,6	8,1

Table 5- 4 Derating values for overload relay and contactor size S0

Overload relay	Overload relay Setting range	Contactor		CLASS								
				5 / 10			20			30		
				AC-3 derating values								
MLFB	A	MLFB	kW	400 V	500 V	690 V	400 V	500 V	690 V	400 V	500 V	690 V
3RB3026-1RB0	0,1 ... 0,4	Stand-alone assembly		0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
		3RT2024	5,5	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
3RB3026-1NB0	0,32 ... 1,25	Stand-alone assembly		1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
		3RT2024	5,5	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25	1,25
3RB3026-1PB0	1 ... 4	Stand-alone assembly		4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
		3RT2024	5,5	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
3RB3026-1SB0	3 ... 12	Stand-alone assembly		12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
		3RT2024	5,5	12,0	12,0	9,0	12,0	12,0	9,0	12,0	12,0	9,0
		3RT2025	7,5	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0	12,0
3RB3026-1QB0	6 ... 25	Stand-alone assembly		25,0	25,0	25,0	25,0	25,0	25,0	23,0	23,0	23,0
		3RT2025	7,5	17,0	17,0	13,0	16,0	16,0	13,0	14,0	14,0	13,0
		3RT2026	11,0	25,0	18,0	13,0	16,0	16,0	13,0	14,0	14,0	13,0
		3RT2027	15,0	25,0	25,0	21,0	18,6	18,6	15,1	16,2	16,2	15,1
		3RT2028	18,5	25,0	25,0	21,0	22,4	22,4	18,2	19,6	19,6	18,2
3RB3026-1VB0	10 ... 40	Stand-alone assembly		40,0	40,0	40,0	28,0	28,0	28,0	23,0	23,0	23,0
		3RT2027	15,0	32,0	32,0	21,0	18,6	18,6	15,1	16,2	16,2	15,1
		3RT2028	18,5	38,0	32,0	21,0	22,4	22,4	18,2	19,6	19,6	18,2

Fuse links according to IEC 60947 and UL 508

Short-circuit protection up to 690 V / 100 kA
Type of coordination 1 and 2

Table 5- 5 Fuse links for overload relay and contactor size S00

Overload relay	Overload relay Setting range	Contactor		Fuse links[1]			
				Acc. to IEC 60947[3]		Acc. to UL 508[4] (600 V)	
				Type of coordination[2]			
Type	A	Type	kW	1	2[]	Standard short-circuit rating	High short-circuit rating
3RB3016-1RB0	0,1 ... 0,4	Stand-alone assembly		35	4	3	3
		3RT2015	3,0	35	4	—	—
3RB3016-1NB0	0,32 ... 1,25	Stand-alone assembly		35	6	6	6
		3RT2015	3,0	35	6	—	—
3RB3016-1PB0	1 ... 4	Stand-alone assembly		35	20	15	15
		3RT2015	3,0	35	20	—	—
		3RT2016	4,0	35	20	—	—
		3RT2017	5,5	35	20	—	—
3RB3016-1SB0	3 ... 12	Stand-alone assembly		50	50	45	45
		3RT2016	4,0	35	20	—	—
		3RT2017	5,5	50	25	—	—
3RB3016-1TB0	4 ... 16	Stand-alone assembly		50	50	60	60
		3RT2017	5,5	50	25	—	—
		3RT2018	7,5	50	25	—	—

1) Take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

3) NH type 3NA, DIAZED type 5SB, NEOZED type 5SE

4) RK1, RK5, J, CC

Table 5- 6 Fuse links for overload relay and contactor size S0

Overload relay	Overload relay Setting range	Contactor		Fuse links[1]			
				Acc. to IEC 60947[3] Type of coordination[2]		Acc. to UL 508[4] (600 V)	
Type	A	Type	kW	1	2	Standard short-circuit rating	High short-circuit rating
3RB3026-1RB0	0,1 ... 0,4	Stand-alone assembly		35	4	3	3
		3RT2024	5,5	35	4	—	—
3RB3026-1NB0	0,32 ... 1,25	Stand-alone assembly		35	6	6	6
		3RT2024	5,5	35	6	—	—
3RB3026-1PB0	1 ...4	Stand-alone assembly		63	20	15	15
		3RT2024	5,5	63	20	—	—
3RB3026-1SB0	3 ... 12	Stand-alone assembly		63	50	45	45
		3RT2024	5,5	63	25	—	—
		3RT2025	7,5	63	25	—	—
3RB3026-1QB0	6 ... 25	Stand-alone assembly		125	63	100	100
		3RT2025	7,5	63	25	—	—
		3RT2026	11,0	100	35	—	—
		3RT2027	15,0	125	50	—	—
		3RT2028	18,5	125	50	—	—
3RB3026-1VB0	10 ... 40	Stand-alone assembly		125	80	100	100
		3RT2027	15,0	125	50	—	—
		3RT2028	18,5	125	50	—	—

1) Take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

3) NH type 3NA, DIAZED type 5SB, NEOZED type 5SE

4) RK1, RK5, J, CC

5.4 Short-circuit protection: Contactor + 3UF7 + 3RB22 / 23 solid-state overload relay

Short-circuit protection with fuses for motor feeders with 3UF7 and 3RB22/23, contactor mounting, and stand-alone installation

Table 5- 7 Derating values CLASS 5 / 10, 15 and 20

Overload relay	Overload relay Setting range	Contactor		CLASS								
				5 / 10			15 (3UF7 only)			20		
				AC-3 derating values								
MLFB	A	MLFB	kW	400 V	500 V	690 V	400 V	500 V	690 V	400 V	500 V	690 V
Size S00												
3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,0	Stand-alone assembly		3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2015	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2016	4,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2017	5,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2018	7,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	3RT2015	3,0	7,0	6,0	4,9	7,0	6,0	4,9	7,0	6,0	4,9
		3RT2016	4,0	9,0	7,7	6,7	9,0	7,7	6,7	9,0	7,7	6,7
		3RT2017	5,5	12,0	9,2	6,7	10,7	9,2	6,7	10,0	9,2	6,7
		3RT2018	7,5	16,0	12,4	8,9	13,0	12,4	8,9	11,5	11,5	8,9
Size S0												
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	Stand-alone assembly		25	25	25	25	25	25	25	25	25
		3RT2024	5,5	12,0	12,0	9,0	12,0	12,0	9,0	12,0	12,0	9,0
		3RT2025	7,5	17,0	17,0	13,0	17,0	17,0	13,0	16,0	16,0	13,0
		3RT2026	11,0	25,0	18,0	13,0	18,0	18,0	13,0	16,0	16,0	13,0
		3RT2027	15,0	25,0	25,0	21,0	23,0	20,0	20,0	20,0	20,0	17,0
		3RT2028	18,5	25,0	25,0	21,0	23,0	20,0	20,0	20,0	20,0	17,0
3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100	Stand-alone assembly		100	100	100	100	100	100	100	100	100
		3RT2024	5,5	12,0	12,0		12,0	12,0		12,0	12,0	
		3RT2025	7,5	17,0	17,0	13,0	17,0	17,0	13,0	16,0	16,0	13,0
		3RT2026	11,0	25,0	18,0	13,0	18,0	18,0	13,0	16,0	16,0	13,0
		3RT2027	15,0	32,0	32,0	21,0	23,0	20,0	20,0	20,0	20,0	17,0
		3RT2028	18,5	38,0	32,0	21,0	23,0	20,0	20,0	20,0	20,0	17,0

Table 5- 8 Derating values CLASS 25, 30 and 35

Overload relay	Overload relay Setting range	Contactor		CLASS								
				25 (3UF7 only)			30			35 (3UF7 only)		
				AC-3 derating values								
MLFB	A	MLFB	kW	400 V	500 V	690 V	400 V	500 V	690 V	400 V	500 V	690 V
Size S00												
3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,0	Stand-alone assembly		3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2015	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2016	4,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2017	5,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
		3RT2018	7,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	3RT2015	3,0	7,0	6,0	4,9	7,0	6,0	4,9	7,0	6,0	4,9
		3RT2016	4,0	9,0	7,7	6,7	9,0	7,7	6,7	8,5	7,7	6,7
		3RT2017	5,5	9,5	9,2	6,7	9,0	9,0	6,7	8,5	8,5	6,7
		3RT2018	7,5	10,3	10,3	8,9	9,5	9,5	8,9	8,8	8,8	8,8
Size S0												
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	Stand-alone assembly		25	25	25	25	25	25	25	25	25
		3RT2024	5,5	12,0	12,0	9,0	12,0	12,0	9,0	12,0	12,0	9,0
		3RT2025	7,5	14,8	14,8	13,0	14,0	14,0	13,0	13,4	13,4	13,0
		3RT2026	11,0	14,8	14,8	13,0	14,0	14,0	13,0	13,4	13,4	13,0
		3RT2027	15,0	18,0	18,0	15,0	17,0	17,0	15,0	16,0	16,0	15,0
		3RT2028	18,5	18,0	18,0	15,0	17,0	17,0	15,0	16,0	16,0	15,0
3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100	Stand-alone assembly		100	100	100	100	100	100	100	100	100
		3RT2024	5,5	12,0	12,0	—	12,0	12,0	—	12,0	12,0	—
		3RT2025	7,5	14,8	14,8	13,0	14,0	14,0	13,0	13,4	13,4	13,0
		3RT2026	11,0	14,8	14,8	13,0	14,0	14,0	13,0	13,4	13,4	13,0
		3RT2027	15,0	18,0	18,0	15,0	17,0	17,0	15,0	16,0	16,0	15,0
		3RT2028	18,5	18,0	18,0	15,0	17,0	17,0	15,0	16,0	16,0	15,0

Table 5- 9 Derating values CLASS 40

Overload relay	Overload relay Setting range	Contactor		CLASS		
				40 (3UF7 only)		
				AC-3 derating values		
MLFB	A	MLFB	kW	400 V	500 V	690 V
Size S00						
3UF7100-1AA00-0	0,3 ... 3,0	Stand-alone assembly		3,0	3,0	3,0
		3RT2015	3,0	3,0	3,0	3,0
		3RT2016	4,0	3,0	3,0	3,0
		3RT2017	5,5	3,0	3,0	3,0
		3RT2018	7,5	3,0	3,0	3,0
3UF7101-1AA00-0	2,4 ... 25	3RT2015	3,0	7,0	6,0	4,9
		3RT2016	4,0	8,0	7,7	6,7
		3RT2017	5,5	8,0	8,0	6,7
		3RT2018	7,5	8,3	8,3	8,3
Size S0						
3UF7101-1AA00-0	2,4 ... 25	Stand-alone assembly		25	25	25
		3RT2024	5,5	12,0	12,0	9,0
		3RT2025	7,5	13,0	13,0	13,0
		3RT2026	11,0	13,0	13,0	13,0
		3RT2027	15,0	15,0	15,0	15,0
		3RT2028	18,5	15,0	15,0	15,0
3UF7102-1AA00-0	10 ... 100	Stand-alone assembly		100	100	100
		3RT2024	5,5	12,0	12,0	—
		3RT2025	7,5	13,0	13,0	13,0
		3RT2026	11,0	13,0	13,0	13,0
		3RT2027	15,0	15,0	15,0	15,0
		3RT2028	18,5	15,0	15,0	15,0

Fuse links according to IEC 60947 and UL 508
Short-circuit protection up to 690 V / 100 kA, type of coordination 1 and 2

Table 5- 10 Fuse links for overload relay and contactor size S00 and S0

Overload relay	Overload relay Setting range	Contactor		Fuse links[1]			
				Acc. to IEC 60947[3]		Acc. to UL 508[4] (600 V)	
				Type of coordination[2]		Standard short-circuit rating	High short-circuit rating
MLFB	A	MLFB	kW	1	2		
Size S00							
3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3,0	Stand-alone assembly		50	25	10	10
		3RT2015	3,0	35	20		
		3RT2016	4,0	35	20		
		3RT2017	5,5	50	25		
		3RT2018	7,5	50	25		
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	3RT2015	3,0	35	20		
		3RT2016	4,0	35	20		
		3RT2017	5,5	50	25		
		3RT2018	7,5	50	25		
Size S0							
3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	Stand-alone assembly		125	50	100	100
		3RT2024	5,5	63	25		
		3RT2025	7,5	63	25		
		3RT2026	11,0	100	35		
		3RT2027	15,0	125	50		
		3RT2028	18,5	125	50		
3UF7102-1AA00-0/ 3RB2906-2JG1	10 ... 100	Stand-alone assembly		315	315	400	400
		3RT2024	5,5	63	25		
		3RT2025	7,5	63	25		
		3RT2026	11,0	100	35		
		3RT2027	15,0	125	50		
		3RT2028	18,5	125	50		

1) Take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

3) NH type 3NA, DIAZED type 5SB, NEOZED type 5SE, operating class gG

4) RK1, RK5, J, CC

5.5 Short-circuit protection: Contactor + 3RR2 monitoring relay, type of coordination 1 and 2

Short-circuit protection with fuses for motor feeders with 3RR2, contactor mounting, and stand-alone assembly

Fuse links according to IEC 60947 and UL 508
Short-circuit protection up to 690 V / 100 kA, type of coordination 1 and 2

Table 5- 11 Fuse links for monitoring relay and contactor size S00 and S0

Monitoring relay	Overload relay Setting range	Contactor		Fuse links[1]			
				Acc. to IEC 60947[3]		Acc. to UL 508[4] (600 V)	
				Type of coordination[2]		Standard short-circuit rating	High short-circuit rating
MLFB	A	MLFB	kW	1	2		
Size S00							
3RR2.41	1,6 ... 16	Stand-alone assembly		50	50	60	60
		3RT2015	35	35	20	—	—
		3RT2016	35	35	20		
		3RT2017	50	50	25		
		3RT2018	50	50	25		
Size S0							
3RR2.42	4 ... 40	Stand-alone assembly		125	80	100	100
		3RT2024	5,5	63	25	—	—
		3RT2025	7,5	63	25		
		3RT2026	11,0	100	35		
		3RT2027	15,0	125	50		
		3RT2028	18,5	125	50		

1) Take account of the operating voltage
2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1
3) NH type 3NA, DIAZED type 5SB, NEOZED type 5SE, operating class gG
4) RK1, RK5, J, CC

5.6 Short-circuit protection: Star-delta (wye-delta) contactor

Short-circuit protection with fuses for motor feeders with 3RU21 up to 690 V / 100 kA, type of coordination 1 and 2

Table 5- 12 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Overload relay		Contactor			Fuse links[1]	
		Line and delta	Star		Type of coordination[2]	
MLFB	Setting range	MLFB	MLFB	P [kW]	1	2
Size S00						
3RU2116-0AB0	0,11 ... 0,16	3RT2015-1AP01	3RT2015-1AP01	3	25	0,5
3RU2116-0BB0	0,14 ... 0,20	3RT2015-1AP01	3RT2015-1AP01	3	25	1
3RU2116-0CB0	0,18 ... 0,25	3RT2015-1AP01	3RT2015-1AP01	3	25	1
3RU2116-0DB0	0,22 ... 0,32	3RT2015-1AP01	3RT2015-1AP01	3	25	1,6
3RU2116-0EB0	0,28 ... 0,40	3RT2015-1AP01	3RT2015-1AP01	3	25	2
3RU2116-0FB0	0,35 ... 0,50	3RT2015-1AP01	3RT2015-1AP01	3	25	2
3RU2116-0GB0	0,45 ... 0,63	3RT2015-1AP01	3RT2015-1AP01	3	25	2
3RU2116-0HB0	0,55 ... 0,80	3RT2015-1AP01	3RT2015-1AP01	3	25	4
3RU2116-0JB0	0,70 ... 1,0	3RT2015-1AP01	3RT2015-1AP01	3	25	4
3RU2116-0KB0	0,90 ... 1,25	3RT2015-1AP01	3RT2015-1AP01	3	35	4
3RU2116-1AB0	1,10 ... 1,60	3RT2015-1AP01	3RT2015-1AP01	3	35	6
3RU2116-1BB0	1,4 ... 2,0	3RT2015-1AP01	3RT2015-1AP01	3	35	6
3RU2116-1CB0	1,8 ... 2,5	3RT2015-1AP01	3RT2015-1AP01	3	35	10
3RU2116-1DB0	2,2 ... 3,2	3RT2015-1AP01	3RT2015-1AP01	3	35	10
3RU2116-1EB0	2,8 ... 4,0	3RT2015-1AP01	3RT2015-1AP01	3	35	16
3RU2116-1FB0	3,5 ... 5,0	3RT2015-1AP01	3RT2015-1AP01	3	35	20
3RU2116-1GB0	4,5 ... 6,3	3RT2015-1AP01	3RT2015-1AP01	3	35	20
3RU2116-1HB0	5,5 ... 8,0	3RT2015-1AP01	3RT2015-1AP01	4	35	20
3RU2116-1JB0	7,0 ... 10	3RT2015-1AP01	3RT2015-1AP01	4	35	20
3RU2116-1KB0	9,0 ... 12,5	3RT2015-1AP01	3RT2015-1AP01	5,5	35	20
3RU2116-4AB0	11 ... 16	3RT2017-1AP01	3RT2017-1AP01	7,5	50	25

Overload relay		Contactor			Fuse links[1]	
		Line and delta	Star		Type of coordination[2]	
MLFB	Setting range	MLFB	MLFB	P [kW]	1	2
Size S0						
3RU2126-1CB0	1,8 ... 2,5	3RT2024-1AP01	3RT2024-1AP01	5,5	63	10
3RU2126-1DB0	2,2 ... 3,2	3RT2024-1AP01	3RT2024-1AP01	5,5	63	10
3RU2126-1EB0	2,8 ... 4,0	3RT2024-1AP01	3RT2024-1AP01	5,5	63	16
3RU2126-1FB0	3,5 ... 5,0	3RT2024-1AP01	3RT2024-1AP01	5,5	63	20
3RU2126-1GB0	4,5 ... 6,3	3RT2024-1AP01	3RT2024-1AP01	5,5	63	20
3RU2126-1HB0	5,5 ... 8,0	3RT2024-1AP01	3RT2024-1AP01	5,5	63	25
3RU2126-1JB0	7,0 ... 10	3RT2024-1AP01	3RT2024-1AP01	5,5	63	25
3RU2126-1KB0	9,0 ... 12,5	3RT2024-1AP01	3RT2024-1AP01	5,5	63	25
3RU2126-4AB0	11 ... 16	3RT2024-1AP01	3RT2024-1AP01	7,5	63	25
3RU2126-4BB0	14 ... 20	3RT2024-1AP01	3RT2024-1AP01	11	100	35
3RU2126-4CB0	17 ... 22	3RT2024-1AP01	3RT2024-1AP01	11	100	35
3RU2126-4DB0	20 ... 25	3RT2024-1AP01	3RT2024-1AP01	11	100	35
3RU2126-4NB0	23 ... 28	3RT2026-1AP01	3RT2024-1AP01	15	125	50
3RU2126-4EB0	27 ... 32	3RT2026-1AP01	3RT2024-1AP01	15	125	50
3RU2126-4PB0	30 ... 36	3RT2026-1AP01	3RT2024-1AP01	18,5	125	50
3RU2126-4FB0	34 ... 40	3RT2026-1AP01	3RT2024-1AP01	18,5	125	50

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.7 Short-circuit protection: Soft starter + 3RU2 thermal overload relay

Short-circuit protection with fuses for motor feeders with 3RW30 soft starter and 3RU21 thermal overload relay up to 400 V / 65 kA, type of coordination 1 and 2

Table 5- 13 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Overload relay		Contactor		Soft starter		Fuse links[1]	
						Type of coordination[2]	
MLFB	Setting range	MLFB	kW	MLFB	kW	1	2
Size S00							
3RU2116-1CB0	1,8 ... 2,5	3RT2015-1..	3	3RW3013	1,5	10	16
3RU2116-1DB0	2,2 ... 3,2	3RT2015-1..	3	3RW3013	1,5	10	16
3RU2116-1EB0	2,8 ... 4,0	3RT2015-1..	3	3RW3013	1,5	10	16
3RU2116-1FB0	3,5 ... 5,0	3RT2015-1..	3	3RW3014	3	16	16
3RU2116-1GB0	4,5 ... 6,3	3RT2015-1..	3	3RW3014	3	16	16
3RU2116-1HB0	5,5 ... 8,0	3RT2016-1..	4	3RW3016	4	20	16
3RU2116-1JB0	7,0 ... 10	3RT2016-1..	4	3RW3016	4	20	16
3RU2116-1KB0	9,0 ... 12,5	3RT2017-1..	5,5	3RW3017	5,5	25	16
3RU2116-4AB0	11 ... 16	3RT2018-1..	7,5	3RW3018	7,5	35	20
Size S0							
3RU2126-4BB0	14 ... 20	3RT2026-1..	11	3RW3026	11	63	35
3RU2126-4CB0	17 ... 22	3RT2026-1..	11	3RW3026	11	63	35
3RU2126-4DB0	20 ... 25	3RT2026-1..	11	3RW3026	11	63	35
3RU2126-4NB0	23 ... 28	3RT2027-1..	15	3RW3027	15	80	80
3RU2126-4EB0	27 ... 32	3RT2027-1..	15	3RW3027	15	80	80
3RU2126-4PB0	30 ... 36	3RT2028-1..	18,5	3RW3028	18,5	80	80
3RU2126-4FB0	34 ... 40	3RT2028-1..	18,5	3RW3028	18,5	80	80

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.8 Short-circuit protection: Solid-state contactor, type of coordination 1 and 2

Short-circuit protection with fuses for 3RF34 solid-state contactor

Fuse links according to IEC 60947 and UL 508
Short-circuit protection up to 600 V / 50 kA, type of coordination 1 and 2

Table 5- 14 Fuse links for monitoring relay and contactor size S00 and S0

Solid-state contactor			Fuse links[2]				
			Acc. to IEC 60947[4]		Acc. to UL 508[5]		
MLFB	I_e @ 40 °C [A]	P @ 400 V [kW] [1]	500 V 3NW / 600 V 3NA 50 kA		600 V Standard short-circuit rating	480 V High short-circuit rating	600 V High short-circuit rating
			Type of coordination[3]				
			1	2	5 kA	65 kA	65 kA
3RF3405-1BB54	5,2	2,2	25	On request	10	25	45
3RF3410-1BB54	9,2	4	40		20	45	45
3RF3412-1BB54	12,5	5,5	40		30	45	50
3RF3416-1BB54	16	7,5	40		30	50	50
Reversing contactors							
3RF3403-1BD54	3,8	1,5	25	On request	10	45	—
3RF3405-1BD54	5,4	2,2	40		10	45	
3RF3410-1BD54	7,4	3	40		20	45	

1) Guide value for 4-pole standard motors at 400 V AC, 50 Hz. Selection depends on the concrete startup and rated data of the protected motor.

2) Take account of the operating voltage

3) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

4) NH type 3NA, DIAZED type 5SB, NEOZED type 5SE, operating class gG

5) Class K5, RK5, RK1, J

5.9 Short-circuit protection: Motor feeders with 3RW3 + 3RT + 3RB30/3RB31

Short-circuit protection with fuses for motor feeders with 3RW30 soft starter and 3RB30 / 3RB31 solid-state overload relay up to 480 V / 65 kA, type of coordination 1 and 2

Table 5- 15 Fuse links according to IEC 60947 operating class gG, (SITOR; type 3NA, 3NE)

Overload relay		Contactor		Soft starter		Current carrying capacity			Fuse links[1]	
						I_e at 400 V and			Type of coordination[2]	
MLFB	Setting range	MLFB	kW	MLFB	kW	40 °C	50 °C	60 °C	1	2
Size S00										
3RB3016-1PB0	1 ... 4	3RT2015	3,0	3RW3013	1,5	3,6	3,3	3,0	10	16
		3RT2016	4,0	3RW3013	1,5	3,6	3,3	3,0	10	16
3RB3016-1SB0	3 ... 12	3RT2015	3,0	3RW3014	3,0	6,5	6,0	5,5	16	16
		3RT2016	4,0	3RW3014	3,0	6,5	6,0	5,5	16	16
		3RT2017	5,5	3RW3016	4,0	9,0	8,0	7,0	20	16
3RB3016-1TB0	4 ... 16	3RT2017	5,5	3RW3017	5,5	12,5	12,0	11,0	25	16
		3RT2018	7,5	3RW3018	7,5	16,0	16,0	14,0	35	20
Size S0										
3RB3026-1QB0	6 ... 25	3RT2025	7,5	3RW3026	11,0	17,0	17,0	17,0	63	35
		3RT2026	11,0	3RW3026	11,0	25,0	23,0	21,0	63	35
		3RT2027	15,0	3RW3027	15,0	25,0	25,0	25,0	80	80
3RB3026-1VB0	10 ... 40	3RT2025	7,5	3RW3026	11,0	17,0	17,0	17,0	63	35
		3RT2026	11,0	3RW3026	11,0	25,0	23,0	21,0	63	35
		3RT2027	15,0	3RW3027	15,0	32,0	29,0	26,0	80	80
		3RT2028	18,5	3RW3028	18,5	38,0	34,0	31,0	80	80

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.10 Contactor assemblies for star-delta (wye-delta) start + 3RB30/31 solid-state overload relay and 3RT20 contactor

Short-circuit protection with fuses for contactor assemblies for star-delta (wye-delta) start with 3RB30/31 solid-state overload relay and 3RT20 contactor up to 400 V / 65 kA, CLASS 10, type of coordination 1 and 2

Table 5- 16 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Standard three-phase motor 4-pole at 400 V AC[2]		Overload relay		Line contactor / delta contactor	Star contactor	Fuse links[1]	
Standard output kW	Motor current A	MLFB	Setting range A	MLFB	MLFB	Type of coordination[2]	
						1	2
Size S00							
0,75	1,9	3RB3016-1PB0	1 ... 4	3RT2015-1AP01	3RT2015-1AP01	35	20
1,1	2,7		1 ... 4	3RT2015-1AP01	3RT2015-1AP01	35	20
1,5	3,5		1 ... 4	3RT2015-1AP01	3RT2015-1AP01	35	20
2,2	5		1 ... 4	3RT2015-1AP01	3RT2015-1AP01	35	20
3	6,5		1 ... 4	3RT2015-1AP01	3RT2015-1AP01	35	20
4	8,5	3RB3016-1SB0	3 ... 12	3RT2015-1AP01	3RT2015-1AP01	35	20
5,5	11,5		3 ... 12	3RT2015-1AP01	3RT2015-1AP01	35	20
7,5	15,5		3 ... 12	3RT2017-1AP01	3RT2015-1AP01	50	25
11	22	3RB3016-1TB0	4 ... 16	3RT2018-1AP01	3RT2016-1AP01	50	25
Size S0							
7,5	15,5	3RB3016-1SB0	3 ... 12	3RT2024-1AP01	3RT2024-1AP01	63	25
11	22	3RB3026-1QB0	6 ... 25	3RT2024-1AP01	3RT2024-1AP01	63	25
15	29		6 ... 25	3RT2026-1AP01	3RT2024-1AP01	100	35
18,5	35		6 ... 25	3RT2026-1AP01	3RT2024-1AP01	100	35
22	41		6 ... 25	3RT2027-1AP01	3RT2026-1AP01	125	50

[1] Please take account of the operating voltage

[2] Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

5.11 Contactor assemblies for star-delta (wye-delta) start + 3UF7 solid-state overload relay and 3RT20 contactor

Short-circuit protection with fuses for contactor assemblies for star-delta (wye-delta) start with 3UF7 solid-state overload relay and 3RT20 contactor up to 400 V / 65 kA, CLASS 10, type of coordination 1 and 2

Table 5- 17 Fuse links according to IEC 60947 operating class gG, (NH DIAZED, NEOZED; type 3NA, 5SB, 5SE)

Standard three-phase motor 4-pole at 400 V AC[2]		Overload relay		Line contactor / delta contactor	Star contactor	Fuse links[1]	
Standard output kW	Motor current A	MLFB	Setting range A	MLFB	MLFB	Type of coordination[2]	
						1	2
Size S00							
0,75	1,9	3UF7100-1AA00-0/ 3RB2906-2BG1	0,3 ... 3	3RT2015-1AP01	3RT2015-1AP01	35	20
1,1	2,7		0,3 ... 3	3RT2015-1AP01	3RT2015-1AP01	35	20
1,5	3,5		0,3 ... 3	3RT2015-1AP01	3RT2015-1AP01	35	20
2,2	5	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	3RT2015-1AP01	3RT2015-1AP01	35	20
3	6,5		2,4 ... 25	3RT2015-1AP01	3RT2015-1AP01	35	20
4	8,5		2,4 ... 25	3RT2015-1AP01	3RT2015-1AP01	35	20
5,5	11,5		2,4 ... 25	3RT2015-1AP01	3RT2015-1AP01	35	20
7,5	15,5		2,4 ... 25	3RT2017-1AP01	3RT2015-1AP01	50	25
11	22		2,4 ... 25	3RT2018-1AP01	3RT2016-1AP01	50	25
Size S0							
7,5	15,5	3UF7101-1AA00-0/ 3RB2906-2DG1	2,4 ... 25	3RT2024-1AP01	3RT2024-1AP01	63	25
11	22		2,4 ... 25	3RT2024-1AP01	3RT2024-1AP01	63	25
15	29		2,4 ... 25	3RT2026-1AP01	3RT2024-1AP01	100	35
18,5	35		2,4 ... 25	3RT2026-1AP01	3RT2024-1AP01	100	35
22	41		2,4 ... 25	3RT2027-1AP01	3RT2026-1AP01	125	50

1) Please take account of the operating voltage

2) Assignment and short-circuit protective devices acc. to DIN EN 60947-4-1

Note

The specified maximum fuse only provides short-circuit protection in the case of fuse values where line overload protection can only be achieved with a larger conductor cross-section than can be connected to the device. When this fuse is used, the line overload protection in accordance with VDE 0100 must be ensured at another point e.g. by means of an overload relay.

Installation guidelines

6

The table below provides an overview of the installation guidelines for fuseless load feeders (sizes S00 and S0).

Table 6- 1 Installation guidelines – fuseless load feeders (sizes S00 and S0)

Combination					
	Output				
		Distance between feeders			
			Permissible installation: h = horizontal, v = vertical		
				Max. ambient temperature	
					Vibration and shock[1]
Motor starter protector and contactor	A	mm	h, v	°C	
3RA21 direct starter, screw terminal, DIN rail or wall					
S00	≤ 14	0	h, v	60	Unlimited
	14 … 16	10	h	60	
		0	h, v	40	
S0	≤ 29	0	h, v	60	DIN rail adapter required
	29 … 32	10	h	60	
		0	h, v	40	
3RA21 direct starter, screw terminal, busbar					
S00	≤ 14	0	h	40	Vibration and shock kit 8US1998-1CA10 required
		10	h	60	
		10	v	40	
	14 … 16	10	h	60	
		10	v	40	
S0	≤ 29	0	h	40	Vibration and shock kit 8US1998-1CA10 required
		10	h	60	
		10	v	40	
	29 … 32	10	h	60	
		10	v	40	
3RA22 reversing starter, screw terminal, DIN rail or wall					
S00	≤ 14	0	h, v	60	DIN rail adapter required
	14 … 16	10	h	60	
		0	h, v	40	
S0	≤ 29	0	h, v	60	DIN rail adapter required (already included with 3RA22)
	29 … 32	10	h	60	
		0	h, v	40	

Combination					
	Output				
		Distance between feeders			
			Permissible installation: h = horizontal, v = vertical		
				Max. ambient temperature	
					Vibration and shock[1]
Motor starter protector and contactor	A	mm	h, v	°C	
3RA22 reversing starter, screw terminal, busbar					
S00	≤ 14	0	h	60	Vibration and shock kit 8US1998-1CA10 required
		0	v	40	
	14 … 16	10	h	60	
		10	v	40	
S0	≤ 29	0	h	60	Vibration and shock kit 8US1998-1CA10 required
		0	v	40	
	29 … 32	10	h	60	
		10	v	40	
3RA21 direct starter, spring-loaded terminal, DIN rail or wall					
S00	≤ 14	0	h, v	60	Unlimited
	14 … 16	10	h	60	
		0	h, v	40	
S0	≤ 29	0	h, v	60	DIN rail adapter required
	29 … 32	10	h	60	
		0	h, v	40	
3RA21 direct starter, spring-loaded terminal, busbar					
S00	≤ 14	0	h	40	Vibration and shock kit 8US1998-1CA10 required
		10	h	60	
		10	v	40	
	14 … 16	10	h	60	
		10	v	40	
S0	≤ 29	0	h	40	Vibration and shock kit 8US1998-1CA10 required
		10	h	60	
		10	v	40	
	29 … 32	10	h	60	
		10	v	40	
3RA22 reversing starter, spring-loaded terminal, DIN rail or wall					
S00	≤ 14	0	h, v	60	DIN rail adapter required
	14 … 16	10	h	60	
		0	h, v	40	
S0	≤ 29	0	h, v	60	DIN rail adapter required (already included with 3RA22)
	29 … 32	10	h	60	
		0	h, v	40	

Combination					
	Output				
		Distance between feeders			
			Permissible installation: h = horizontal, v = vertical		
				Max. ambient temperature	
					Vibration and shock[1]
Motor starter protector and contactor	**A**	**mm**	**h, v**	**°C**	
3RA22 reversing starter, spring-loaded terminal, busbar					
S00	≤ 14	0	h	60	Vibration and shock kit 8US1998-1CA10 required
		0	v	40	
	14 … 16	10	h	60	
		10	v	40	
S0	≤ 29	0	h	60	Vibration and shock kit 8US1998-1CA10 required
		0	v	40	
	29 … 32	10	h	60	
		10	v	40	
Motor starter protector and soft starter, screw terminal, DIN rail or wall					
S00	16	[2]		[2]	The feeder must be screwed tight to the top of the motor starter protector with two screws and fastened to the bottom of the soft starter with a self-locking screw. Not approved for railways, power plants, or shipbuilding.
S0	32	[2]		[2]	The feeder must be screwed tight to the top of the motor starter protector with two screws and fastened to the bottom of the soft starter with a self-locking screw. Not approved for railways, power plants, or shipbuilding.
Motor starter protector and soft starter, spring-loaded terminal, DIN rail or wall					
S00	16	[2]		[2]	The feeder must be screwed tight to the top of the motor starter protector with two screws and fastened to the bottom of the soft starter with a self-locking screw. Not approved for railways, power plants, or shipbuilding.
S0	32	[2]		[2]	The feeder must be screwed tight to the top of the motor starter protector with two screws and fastened to the bottom of the soft starter with a self-locking screw. Not approved for railways, power plants, or shipbuilding.
Motor starter protector and solid-state contactor, screw terminal, DIN rail or wall					
Direct starter		[2]		[2]	Unlimited Not approved for railways, power plants, or shipbuilding.
Reversing starter		[2]		[2]	Unlimited Not approved for railways, power plants, or shipbuilding.

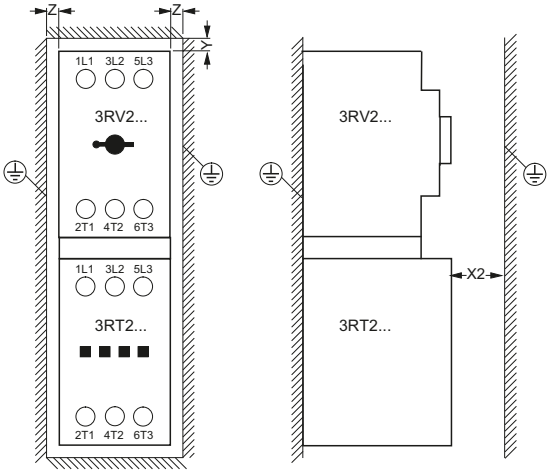
[1] Vibration and shock tests are carried out in accordance with SN 31205 as well as with the relevant standards for railways, shipbuilding, and power plants.

[2] Please consult Technical Assistance (www.siemens.com/industrial-controls/technical-assistance).

Maintain the following distances when mounting the combinations:

Table 6- 2 Installation instructions for 400 V / 500 V AC

Distance from grounded or live parts as well as from cable ducts made of insulating material in accordance with IEC 60947-4				
Motor starter protector	Contactor	Y mm	X2[1] mm	Z mm
Rated operating voltage 400 V				
3RV2.1	3RT201	20	10	9
3RV2.2	3RT201	30	10	9
	3RT2.2	30	10	9
Rated operating voltage 500 V				
3RV2.1	3RT201	20	10	9
3RV2.2	3RT202	30	10	20
3RV2.2 + limiter	3RT202	30	10	9



[1] Minimum clearance from contactor at the front. In the case of motor starter protectors, no minimum distance is required at the front.

Note

Installation instructions for S0 motor starter protectors from 36 A

Minimum cable length between motor starter protector and contactor 150 mm

Minimum clearance between motor starter protector and contactor 100 mm

Service and support

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Catalogs and information

The Siemens Information and Download Center contains all the current catalogs, customer magazines, brochures, demonstration software and promotion packages ready for you to download. Alternatively, you can order them if you prefer (Information (www.siemens.com/industrial-controls/catalogs)).

Newsletter

Our regular newsletter gives you the latest information on industrial controls and low-voltage power distribution.

You can register at Newsletter (www.siemens.com/industrial-controls/newsletter).

Ordering (e-business)

24/7 access to a comprehensive information and ordering platform for products and systems of the low-voltage controls and distribution portfolio? Comprehensive information on our complete portfolio? Product selection, order tracking, service, support and training information?

You can find everything you need to know in the A&D Mall (www.siemens.com/industrial-controls/mall).

Configurators

You can find everything on this topic under Configurators (www.siemens.com/industrial-controls/configurators).

Online support

More detailed technical information on our low-voltage switchgear and controlgear products and systems, as well as product support, and the service and support we can offer on the basis of helpful support tools is available at Support (www.siemens.com/industrial-controls/support).

Service (Technical Assistance)

Are you looking for the right product to suit your application? Do you have technical questions, require spare parts or need a regional expert on site? We'll help you! Our experienced team of engineers and technicians will be happy to help:

- Speak to them in person from Monday to Friday between 8 a.m. and 5 p.m. (CET) by phone: +49(911) 895-5900
- By e-mail: mail to: technical-assistance@siemens.com)
- Send them a fax: +49(911) 895-5907

At Technical Assistance (www.siemens.com/industrial-controls/technical-assistance) you can also access the Siemens Automation and Drives Service & Support Internet platform. This facility offers an FAQ database where you can look for information and solutions for your application around the clock. Alternatively, you can send your question direct to a specialist support adviser via the Support Request feature.

Training

Our training centers at numerous sites worldwide offer individual training programs covering all fields of automation and individual solutions. Our online courses and various teach-yourself software packages can help you acquire new knowledge in a time and cost-effective manner. You can find everything you need to know about our comprehensive SITRAIN training program online at SITRAIN (www.siemens.com/industrial-controls/training).

Service & Support

Download catalogs and information material:
www.siemens.com/industrial-controls/catalogs

Newsletter – always up to date:
www.siemens.com/industrial-controls/newsletter

E-business in the Industry Mall:
www.siemens.com/industrial-controls/mall

Online-Support:
www.siemens.com/industrial-controls/support

Contact for all technical information:
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