



3RW55/55F



3RW52



3RW50



3RW30

3RW40

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Introduction

Overview

More information

Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW
 TIA Selection Tool Cloud (TST Cloud), see
<https://www.siemens.com/tstcloud/?node=Sirius3rwFolder>

Industry Online Support (SIOS) topic page, see
<https://support.industry.siemens.com/cs/ww/en/view/109747404>
 Simulation Tool for Soft Starters (STS), see page 6/8 or
<https://support.industry.siemens.com/cs/ww/en/view/101494917>



3RW55



3RW55 Failsafe



3RW52



3RW50



3RW40



3RW30

Page

3RW soft starters

High Performance soft starters

3RW55 soft starters

- TIA integration optional
- Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- Removable HMI module with color display, local interface and slot for a micro SD memory card
- Extended protection functions
- Up to 1000HP @ 480V (600V and 690V ratings also available)
- Automatic parameterization for simple commissioning and reliability even under changing load conditions
- Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control
- Pump stop for reduced mechanical loading and optimum pump stop control
- ATEX/IECEx certification

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3RW55 Failsafe soft starters

- TIA integration optional
- Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- Removable HMI module with color display, local interface and slot for a micro SD memory card
- Extended protection functions
- Up to 400HP @ 480V
- SIL 1 - PL c / STO without additional components
- SIL 3 - PL e / STO with additional contactor and safety relay
- Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control
- Pump stop for reduced mechanical loading and optimum pump stop control
- ATEX/IECEx certification

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General Performance soft starters

3RW52 soft starters

- TIA integration optional
- Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- HMI modules optional
- Soft starting and stopping
- Current limiting
- Motor overload protection (optionally with thermistor motor protection)
- Analog output (optional)
- Up to 400HP @ 480V (600V ratings also available)
- Hybrid switching devices for minimum power loss and three-phase motor control for optimum/symmetrical motor control
- Soft Torque for reduced mechanical loading and optimum pump stop
- Parameterization using potentiometers

7/53

Introduction



3RW55



3RW55 Failsafe



3RW52



3RW50



3RW40



3RW30

Page

3RW soft starters

Basic Performance soft starters**3RW50 soft starters**

- TIA integration optional
- Communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- HMI modules optional
- Soft starting and stopping
- Current limiting
- Motor overload protection (optionally with thermistor motor protection)
- Analog output (optional)
- Up to 400HP @ 480V (600V ratings also available)
- Hybrid switching devices for minimum power loss and two-phase motor control
- Soft Torque for reduced mechanical loading and optimum pump stop
- Parameterization using potentiometers
- ATEX/IECEx certification

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3RW40 soft starters

- Soft starting and stopping
- Current limiting
- Motor overload protection (optionally with thermistor motor protection)
- Up to 75HP @ 480V 600V ratings also available)
- Hybrid switching devices for minimum power loss and two-phase motor control
- ATEX certification

7/83

3RW30 soft starters

- Soft starting with voltage ramp
- Up to 75HP @ 480V

7/94

For enclosed applications**Enclosures in NEMA 1, 3, 4, & 12 types UL/CSA listed**

- Complete starter includes 3RW40 or 3RW44 and CPT
- Performance Range of up to 600 Hp (at 460 V)
- Combination options include circuit breaker or fusible disconnect
- Application areas:
 - Compressors
 - Pumps
 - Stamping presses
 - Cooling towers
 - Molding and extruding
 - Chippers and debarkers
 - Lumber processing
 - Pulp & paper processing
 - Conveyors
 - Textiles
 - HVAC

7/111

Use of soft starters in conjunction with IE3/IE4 motorsNote:

For the use of SIRIUS 3RW soft starters in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring, [see Application Manual](#).

SIRIUS 3RW Soft Starters

General data

Overview

More information

Homepage, see www.usa.siemens.com/soft-starter

Industry Mall, see www.siemens.com/product?3RW

TIA Selection Tool Cloud (TST Cloud), see

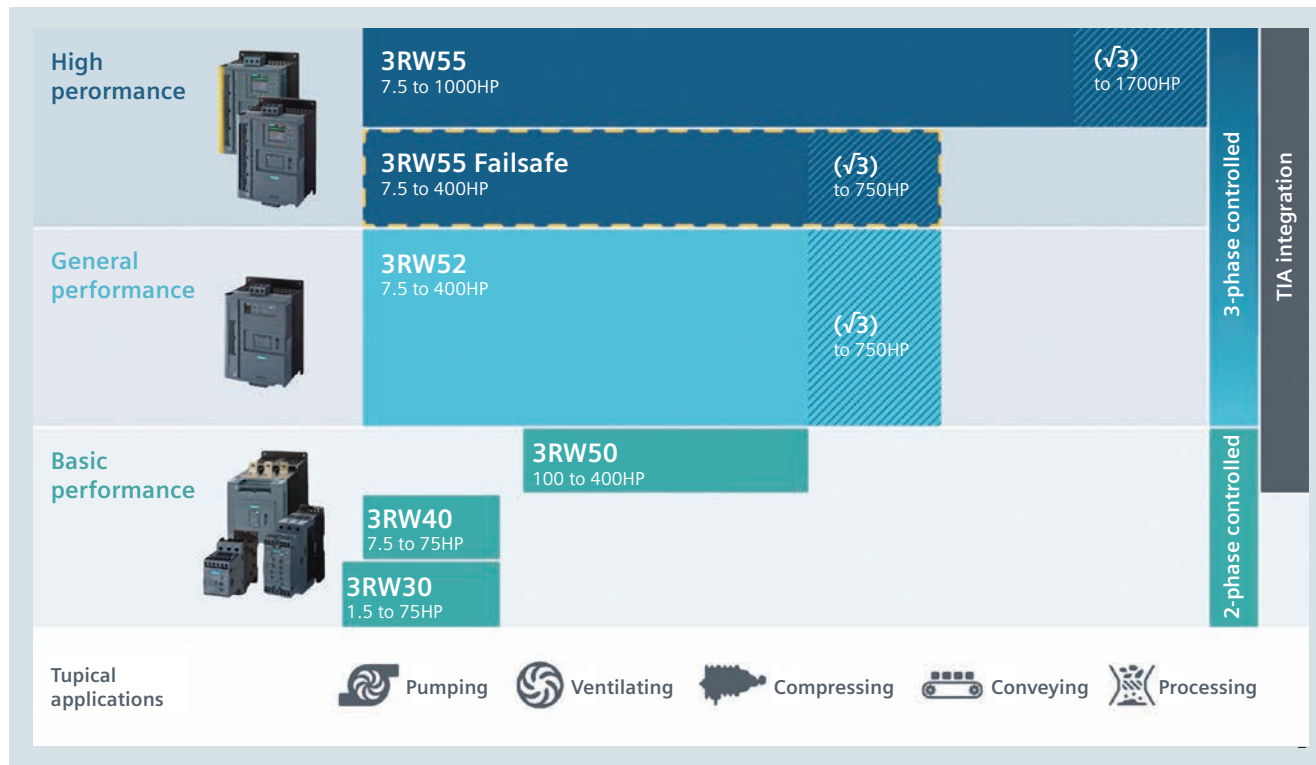
<https://www.siemens.com/tstcloud/?node=Sirius3rwFolder>

Industry Online Support (SIOS) topic page, see

<https://support.industry.siemens.com/cs/ww/en/view/109747404>

Simulation Tool for Soft Starters (STS), see page 7/7 or

<https://support.industry.siemens.com/cs/ww/en/view/101494917>

SIRIUS 3RW soft starters – as versatile as your application



Applications

High Performance

General
Performance

Basic Performance

SIRIUS soft starters

3RW55/3RW55-F

3RW52

3RW50

3RW40

3RW30

Selection aid for soft starters

Normal starting (CLASS 10)

Pumps	●	●	●	●	●
Pumps with special pump stop (to prevent water hammer)	●	○	○		
Heat pumps	●	●	●	●	●
Hydraulic pumps	●	●	●	●	○
Presses	●	●	●	●	○
Conveyor belts	●	●	●	●	○
Roller conveyors	●	●	●	●	○
Screw conveyors	●	●	●	●	○
Escalators	●	●	●	●	
Piston compressors	●	●	●	●	
Screw compressors	●	●	●	●	
Small fans ¹⁾	●	●	●	●	
Centrifugal blowers	●	●	●	●	
Bow thrusters	●	●	●	●	

Heavy starting (CLASS 20)

Stirrers	●	○	○	○	
Extruders	●	○	○	○	
Lathes	●	○	○	○	
Milling machines	●	○	○	○	

Heavy starting (CLASS 30)

Large fans ²⁾	●				
Circular saws/bandsaws	●				
Centrifuges	●				
Mills	●				
Crushers	●				

● Recommended soft starter

○ Possible soft starter

¹⁾ The mass inertia of the fan is <10 times the mass inertia of the motor.²⁾ The mass inertia of the fan is ≥10 times the mass inertia of the motor.



Applications		High Performance		General Performance	Basic Performance		
SIRIUS soft starters		3RW55	3RW55-F	3RW52	3RW50	3RW40	3RW30
General technical specifications							
Operational current at 40 °C	A	13 ... 2 217	13 ... 987	13 ... 987	143 ... 570	12.5 ... 106	3 ... 106
Operational voltage	V	200 ... 690 ¹⁾	200 ... 480	200 ... 600	200 ... 600	200 ... 600	200 ... 480
Operating power for three-phase motors							
• At 400 V, at 40 °C	- Inline circuit	kW	5.5 ... 710	5.5 ... 315	5.5 ... 315	5.5 ... 55	1.5 ... 55
	- Inside-delta circuit	kW	11 ... 1 200	11 ... 560	11 ... 560	--	--
• At 460/480 V at 50 °C	- Inline circuit	hp	7.5 ... 1 000	7.5 ... 400	7.5 ... 400	7.5 ... 75	1.5 ... 75
	- Inside-delta circuit	hp	10 ... 1 700	10 ... 750	10 ... 750	--	--
Ambient temperature ²⁾	°C	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60	-25 ... +60
Soft starting/ramp-down		✓	✓	✓	✓	✓	✓ ³⁾
Voltage ramp		✓	✓	✓	✓	✓	✓
Starting voltage	%	20 ... 100	20 ... 100	30 ... 100	30 ... 100	40 ... 100	40 ... 100
Ramp-up and ramp-down time	s	0 ... 360	0 ... 360	0 ... 20	0 ... 20	0 ... 20	0 ... 20 ³⁾
Pump stop (torque control) ⁴⁾		✓	✓	--	--	--	--
• Starting torque	%	10 ... 100	10 ... 100	--	--	--	--
• Torque limit	%	20 ... 200	20 ... 200	--	--	--	--
Soft Torque (torque limit)		--	--	✓	✓	--	--
Integral bypass contact system		✓	✓	✓	✓	✓	✓
Intrinsic device protection		✓	✓	✓	✓	✓	--
Motor overload protection		✓ ⁵⁾	✓ ⁵⁾	✓	✓ ⁵⁾	✓ ⁵⁾	--
Thermistor motor protection evaluation		✓	✓	✓ ⁶⁾	✓ ⁶⁾	✓ ⁶⁾	--
Analog output		✓	✓	✓ ⁶⁾	✓ ⁶⁾	--	--
Remote RESET		✓	✓	✓	✓	✓	--
Adjustable current limiting		✓	✓	✓	✓	✓	--
Inside-delta circuit ¹⁾		✓	✓	✓	--	--	--
Breakaway pulse		✓	✓	--	--	--	--
Automatic parameterization		✓	✓	--	--	--	--
Pump cleaning		✓	✓	--	--	--	--
Condition monitoring		✓	✓	--	--	--	--
User account administration ⁸⁾		✓	✓	--	--	--	--
Creep speed in both directions of rotation		✓	--	--	--	--	--
Reversing duty		✓	✓	--	--	--	--
Reversing DC braking ⁴⁾⁷⁾		✓	--	--	--	--	--
DC braking ⁴⁾⁷⁾		✓	--	--	--	--	--
Dynamic DC braking ⁴⁾⁷⁾		✓	--	--	--	--	--
Motor heating		✓	--	--	--	--	--
Communication function ⁹⁾		✓	✓	✓	✓	--	--
HMI module installable in the cabinet door		✓	✓	✓ ⁹⁾	✓ ⁹⁾	--	--
Operating measured value display		✓	✓	✓ ⁹⁾	✓ ⁹⁾	--	--
Logbooks		✓	✓	✓ ⁹⁾	✓ ⁹⁾	--	--
Statistical data and slave pointer function		✓	✓	✓ ⁹⁾	✓ ⁹⁾	--	--
Trace function ⁸⁾		✓	✓	--	--	--	--
Programmable control inputs and outputs		✓	✓	--	--	--	--
Number of parameter sets		3	3	1	1	1	1
Parameterizable via software ⁸⁾		✓	✓	--	--	--	--
Number of controlled phases		3	3	3	2	2	2
Heavy starting CLASS 30 ⁴⁾		✓	✓	--	--	--	--

✓ Function available
-- Function not available

¹⁾ Inside-delta circuit only up to operational voltage 600 V.

²⁾ Note derating above 40 °C.

³⁾ Only soft starting available for 3RW30.

⁴⁾ Calculate soft starter and motor with size allowance where required.

⁵⁾ When using the motor overload protection according to ATEX/IECEx, an upstream contactor may be required, [see page 7/10](#).

⁶⁾ Special device versions only.

⁷⁾ Not possible in inside-delta circuit.

⁸⁾ With software Soft Starter ES (TIA Portal).

⁹⁾ Only in conjunction with special accessories.

SIRIUS 3RW Soft Starters

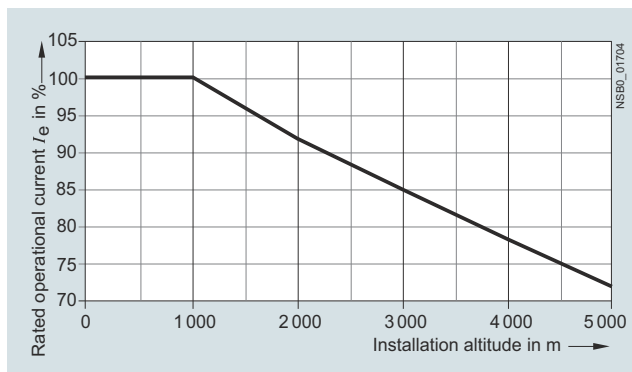
General data

Constraints

The 3RW soft starters should always be designed on the basis of the required rated operational current of the motor. The motor ratings listed in the selection and ordering data are rough guide values and designed for basic starting conditions (CLASS 10). For other starting conditions we recommend the Simulation Tool for Soft Starters (STS).

Motor rating data in kW and hp is based on IEC 60947-4-1.

At an installation altitude above 2 000 m, max. permissible operational voltage is reduced to 480 V.



Installation altitude for SIRIUS 3RW soft starters

The selection and ordering data were determined for the following constraints (stand-alone installation without auxiliary fan)



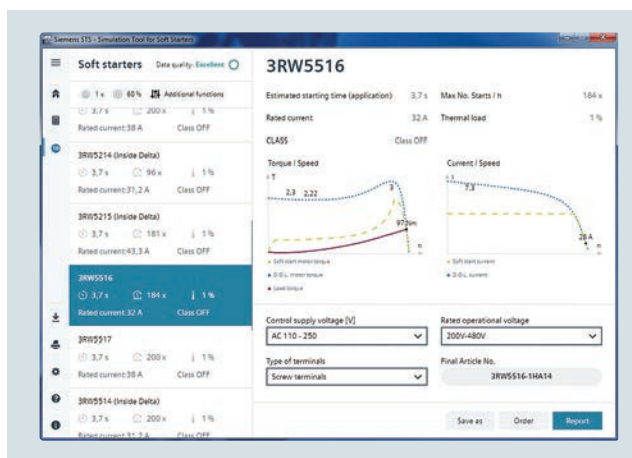
Applications		High Performance	General Performance	Basic Performance		
SIRIUS soft starters		3RW55/3RW55-F	3RW52	3RW50	3RW40	3RW30
Constraints						
Maximum starting time	s	20	10			3
Maximum starting current in % of motor current	I_e	300				
Maximum number of starts per hour	1/h	5				20

Simulation Tool for Soft Starters (STS)

The Simulation Tool for Soft Starters (STS) provides a convenient means of designing soft starters using a simple, quick and easy-to-use interface. Entering the motor and load data will simulate the application and prompt suggestions for suitable soft starters.

Link to the free download of the [Simulation Tool for Soft Starters \(STS\)](#).

- Simple, quick and user-friendly interface
- Detailed and up-to-date Siemens motor database, including IE3/IE4 motors.
- Simulation of heavy starting up to CLASS 30
- Update-capable (e.g. motors, load types, functions)
- Fast simulations with minimum input data
- Immediate, graphical curve charts of start operations with limit values
- Table view of suitable soft starters for the application



Everything at a glance: Simulation and results list

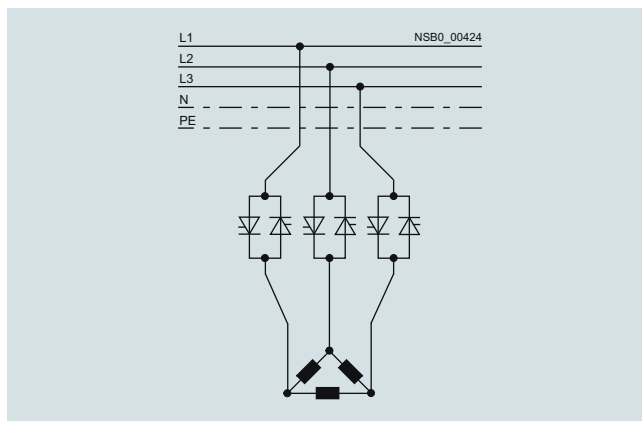
SIRIUS 3RW Soft Starters

General data

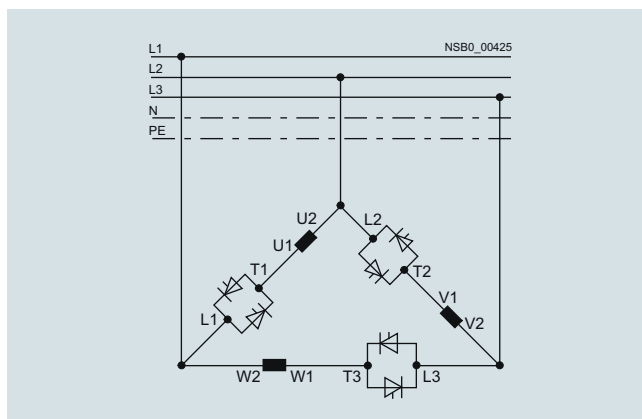
Circuit concept

Three-phase controlled SIRIUS 3RW soft starters can be operated in two different types of circuit:

- **Inline circuit**
The controls for isolating and protecting the motor are simply connected in series with the soft starter. The motor is connected to the soft starter with three leads.
- **Inside-delta circuit**
The wiring is similar to that of wye-delta starters. The phases of the soft starter are connected in series with the individual motor windings. The soft starter then only has to carry the phase current, amounting to about 58% of the rated motor current (conductor current).

Comparison of the types of circuit

Inline circuit: Rated current I_e corresponds to the rated motor current I_n , three cables to the motor



Inside-delta circuit: Rated current I_e corresponds to approx. 58% of the rated motor current I_n , six cables to the motor (as for wye-delta starters)

Which circuit?

Using the inline circuit involves the lowest wiring outlay. If the soft starter to motor connections are long, this circuit is preferable.

The wiring complexity is twice as high when using the inside-delta circuit, but a smaller device can be used with the same rating. Thanks to the choice of operating mode between the inline circuit and inside-delta circuit, it is always possible to select the most favorable solution.

The braking function is possible only in the inline circuit. The inside-delta circuit cannot be used in 690 V line supplies.

Configuration

The solid-state 3RW soft starters are designed for normal starting. In case of heavy starting or increased starting frequency, a larger unit must be selected. The 3RW52 soft starters may be used in isolated supply networks (IT systems) up to 600 V AC and the 3RW55 soft starters even up to 690 V.

For long starting times it is recommended to have a PTC sensor or temperature switch in the motor. This also applies for the ramp-down modes torque control, pump stop and DC braking, because during the ramp-down time in these modes, an additional current loading applies in contrast to free ramp-down.

No capacitive elements are permitted in the motor feeder between the SIRIUS 3RW soft starter and the motor (e.g. no reactive-power compensation equipment). In addition, neither static systems for reactive-power compensation nor dynamic PFC (Power Factor Correction) must be operated in parallel during starting and ramp-down of the soft starter. This is important to prevent faults arising on the compensation equipment and/or the soft starter.

All elements of the main circuit (such as fuses and controls) should be dimensioned for direct-on-line starting, following the local short-circuit conditions. Fuses and switching devices must be ordered separately. The harmonic component load for starting currents must be taken into consideration for the selection of motor starter protectors (selection of release). Please observe the maximum switching frequencies specified in the technical specifications.

Notes:

When three-phase motors are switched on, voltage drops occur as a rule on starters of all types (direct-on-line starters, wye-delta starters, soft starters). The infeed transformer must always be dimensioned such that the voltage dip when starting the motor remains within the permissible tolerance. If the infeed transformer is dimensioned with only a small margin, it is best for the control voltage to be supplied from a separate circuit (independently of the main voltage) in order to avoid the potential switching off of the soft starter.

For dimensioning soft starters, we recommend our Simulation Tool for Soft Starters (STS), [see page 7/7](#) or our Technical Support: <https://support.industry.siemens.com/My/ww/en/requests>.

Recommended parameters for the initial commissioning of our SIRIUS 3RW soft starters are listed in every report of our Simulation Tool for Soft Starters (STS). In addition, our High Performance soft starters provide support by means of their commissioning wizards.

Motor feeders with soft starters

The type of coordination according to which the motor feeder with soft starter is mounted depends on the application-specific requirements. Normally, fuseless mounting (combination of motor starter protector and soft starter) is sufficient.

If type of coordination "2" is to be fulfilled, then semiconductor fuses must be fitted in the motor feeder.

ToC 1

Type of coordination "1" according to IEC 60947-4-1: After a short-circuit incident, the unit is defective and therefore unsuitable for further use (protection of persons and system guaranteed).

ToC 2

Type of coordination "2" according to IEC 60947-4-1: After a short-circuit incident the unit is suitable for further use (protection of persons and system guaranteed).

The type of coordination refers to soft starters in combination with the stipulated protective device (motor starter protector/fuse), not to any additional components in the feeder.

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

Feeder tests and events

To keep the scope of feeder tests with SIRIUS 3RW soft starters within economically reasonable limits, tests were conducted with feeder components (motor starter protectors/circuit breakers, fuses) that cover the greatest number of use cases (different soft starter versions depending on, for example, line voltage, type of circuit, or necessary overdimensioning). For the combined tests that were conducted, the values for the short-circuit breaking capacity I_q in kA were determined and documented.

If the short-circuit breaking capacity is the same, of course, smaller circuit breakers or fuses can also be used for the selected soft starter provided the dimensioning of the short-circuit components is suitable for the connected three-phase motor and the line protection for the cables used. For type of coordination "2" (with semiconductor protection), it is also necessary to compare the characteristics because the protection function would no longer be completely ensured if too small a fuse were selected. If the soft starter does not have a motor protection function, the motor protection must also be dimensioned appropriately.

Setting the motor current

If circuit breakers with an overload release are used (e.g. SIRIUS 3RV20 motor starter protector), we recommend activating the motor protection function of the SIRIUS 3RW soft starter to protect the motor and setting the soft starter to the rated operational current I_e of the motor. We recommend setting the circuit breaker in such a way that it provides line protection but does not usually trip before the soft starter when a motor overload occurs.

Line protection and motor protection

Line protection and motor protection are not ensured in all operating cases, depending on:

- How the motor feeder is constructed (e.g. with fuses or motor starter protectors)
- Whether the SIRIUS 3RW soft starters are operated within the specification relevant for the tests (IEC 60947-4-2)
- Or whether the documented constraints (see page 7/7) have been observed.

There are operating states of the thyristors (caused, for example, by high starting frequencies or heavy starting) that do not permit an overload to be disconnected by the SIRIUS 3RW soft starter. These cases are very rare but can not be ruled out in all cases.

In accordance with IEC 60947-4-2, the SIRIUS 3RW soft starters are dimensioned and checked for operation with up to 8 times the rated operational current I_e . For currents larger than this, reliable disconnection of an overcurrent by the SIRIUS 3RW soft starter is not ensured. Such large overcurrents have to be disconnected by a switching device at a higher level (e.g. by a circuit breaker or a fuse in conjunction with an optional line contactor).

Motor protection by the SIRIUS 3RW soft starter is ensured for currents up to 8 times the rated operational current I_e in any case. Line protection is covered by the line-side motor starter protector/circuit breaker or fuse. These motor feeder components must be dimensioned accordingly and the cable cross-sections must be chosen to match.

Line protection

Line protection in motor feeders with soft starters is always covered by a fuse or a circuit breaker both in case of an overload and in case of a short circuit. The circuit breaker must have an overload release. That is the case for motor starter protectors (e.g. SIRIUS 3RV20).

Circuit breakers without an overload release (e.g. SIRIUS 3RV23 motor starter protectors) must not be used because they do not provide overload protection. The feeder tests for these were therefore not performed. If the motor feeder with SIRIUS 3RW soft starters is configured without a fuse, motor starter protectors must be used that ensure tripping on an overload.

Motor protection

If fuses are used to provide protection against overload and short circuit of the cables, the motor is protected by the SIRIUS 3RW soft starter. If the constraints (simple starting conditions CLASS 10, listed maximum values for starting current, starting time and number of starts per hour) of page 7/7 are observed, the motor feeders can be configured according to IEC as described in the section about soft starters (an optional line contactor is not required). If these preconditions are met, the SIRIUS 3RW soft starters are able to trip on overloads to protect the motor in any case.

In other starting conditions and on heavy starting, the following must be considered:

Trip classes

Tested fuseless switchgear assemblies comprising SIRIUS 3RW soft starters and motor starter protectors only comply with CLASS 10.

To configure tested motor feeders, for example, for CLASS 20 or CLASS 30, fuses must be used together with SIRIUS 3RW soft starters.

Line contactor

In applications with high starting frequencies or heavy starting as of CLASS 20, we recommend combining fuses with the use of a line contactor on the line side so that a motor overload is disconnected by the fault signaling contact of the soft starter in any case (that is, even in rare cases in which disconnection by the SIRIUS 3RW soft starter is no longer possible due to the operating state of the thyristors).

SIRIUS 3RW Soft Starters

General data

ATEX/IECEx-certified motor overload protectionAmbient temperature during operation

The SIRIUS 3RW soft starters are approved for operation in a temperature range of -25 to +60 °C.

Please take into account derating of the rated operational current for ambient temperatures above 40 °C.

For more information, see [Equipment Manual and the technical data sheet of the selected soft starter](#).

Trip class (electronic overload protection)

The motor and cables must be dimensioned for the selected trip class.

The rated data of the soft starters refers to normal starting (CLASS 10). For heavy starting (> CLASS 10), the soft starter may need to be oversized as only a rated motor current that is lower than the soft starter rated current can be set.

Short-circuit protection

The SIRIUS 3RW soft starter does not have short-circuit protection. Short-circuit protection must be ensured.

Line protection

Avoid impermissibly high cable surface temperatures by correctly dimensioning the cross-sections.

The cable cross-section must be adequately dimensioned.

Line contactor or additional undervoltage release on the motor starter protector

In many ATEX/IECEx applications no additional measures (e.g. the use of a line contactor) are necessary with regard to the motor feeder configuration.

The operation of the selected soft starter may, depending on the amplitude of the line voltage and the type of motor connection (inline circuit or inside-delta circuit), result in the loss of the certified motor overload protection according to ATEX/IECEx if one of the two remedial measures listed below is not implemented.

Remedial measures

- An additional line contactor in the main circuit
- An additional undervoltage release for a motor feeder configuration with a motor starter protector

The line contactor or the undervoltage release are connected to error outputs 95, 96 and 98 of the selected soft starter

Note:

For ATEX/IECEx applications, the accompanying information on parameterization and commissioning must be observed in the ATEX/IECEx chapters of the [Equipment Manual](#) for the selected soft starter.

Article No. scheme

Product versions		Article number					
Device type	High Performance soft starters	3RW55	☐	☐	-	☐	☐
	General Performance soft starters	3RW52	☐	☐	-	☐	☐
	Basic Performance soft starters	3RW50	☐	☐	-	☐	☐
		3RW40	☐	☐	-	☐	☐
		3RW30	☐	☐	-	☐	☐
Size/rated operational current I_o	e.g. 15 = 25 A in size S1		☐	☐			
Connection type	e.g. 1 = screw terminal					☐	
Soft starter functionality	e.g. AC = with bypass and analog output, three-phase controlled					☐	☐
Rated control supply voltage U_s	e.g. 0 = 24 V AC/DC						☐
Rated operational voltage U_o	e.g. 4 = 200 ... 480 V AC						☐
Example		3RW52	1	5	-	1	A C 0 4

Note:

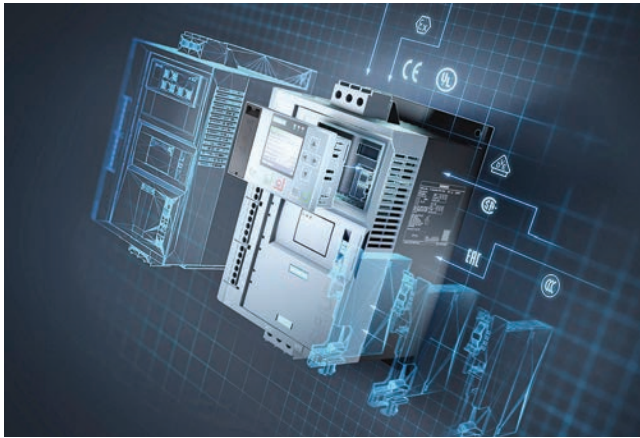
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

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

Benefits

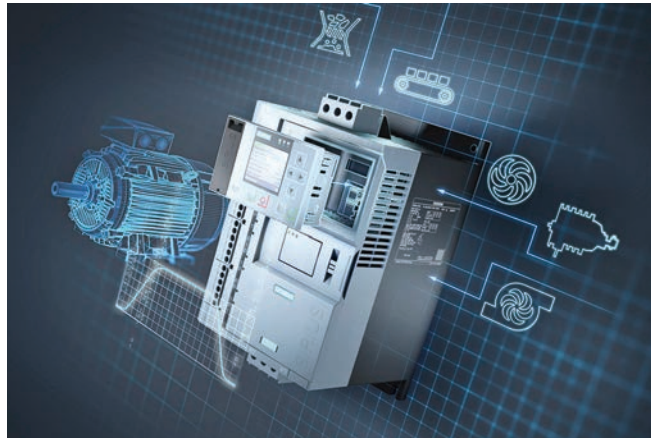
Can be flexibly deployed in many applications

Strong portfolio:
comprehensive, coordinated soft starter portfolio



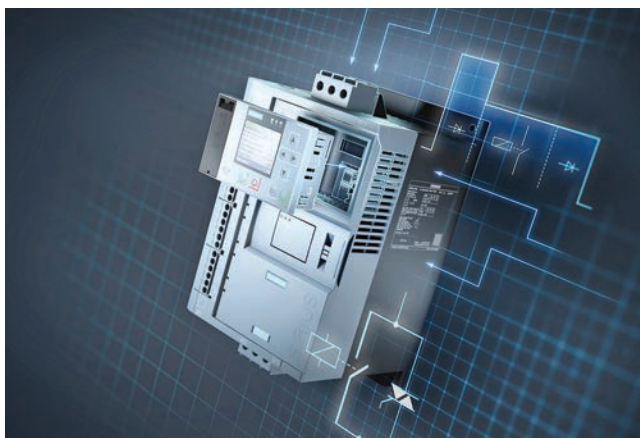
- The right hardware for all requirements, soft starters for tasks ranging from simple to demanding starting in Basic, General and High Performance versions
- Extensive portfolio for individual expansion: Optional HMI for installation in the device or mounting on the control cabinet door
- Communication via PROFINET, PROFIBUS, EtherNet/IP and Modbus
- Design enclosure with removable terminals, space-saving thanks to compact design and rugged thanks to coated printed circuit boards
- Can be used worldwide thanks to numerous certificates and approvals: IEC, UL, CSA, CCC, ATEX/IECEx, shipbuilding

Intelligent operation:
concentrated, application-specific functionality



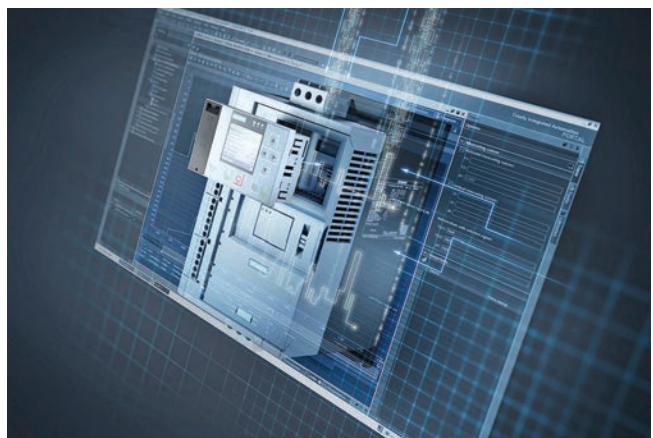
- Can be used in a wide variety of applications: Pumping, ventilating, compressing, moving and processing
- Integrated, self-learning automatic parameterization depending on motor starting conditions
- Application-specific functionality such as pump cleaning and pump stop
- Condition monitoring: Current and power monitoring with warning and alarm limits, starting time monitoring

Efficient switching:
hybrid switching technology on board



- Energy-efficient switching and mechanical protection of the drive train thanks to soft starters with hybrid switching technology
- Low-wear switching extends the service life of the devices
- Soft starting prevents current peaks, thereby increasing the network stability
- Protection against disturbances in the application. Mechanical protection for the drive train

Ready for a digital future:
data available whenever and wherever needed



- Support from tools and data during engineering
- Simulation Tool for Soft Starters for support during product selection
- Very simple, standardized commissioning and configuration via Soft Starter ES in TIA Portal
- Integration in the automation system via communication interfaces
- Data availability and analysis: large volumes of data at any time and anywhere, even into MindSphere

High Performance Soft Starters

3RW55 soft starters > General data

Overview

More information

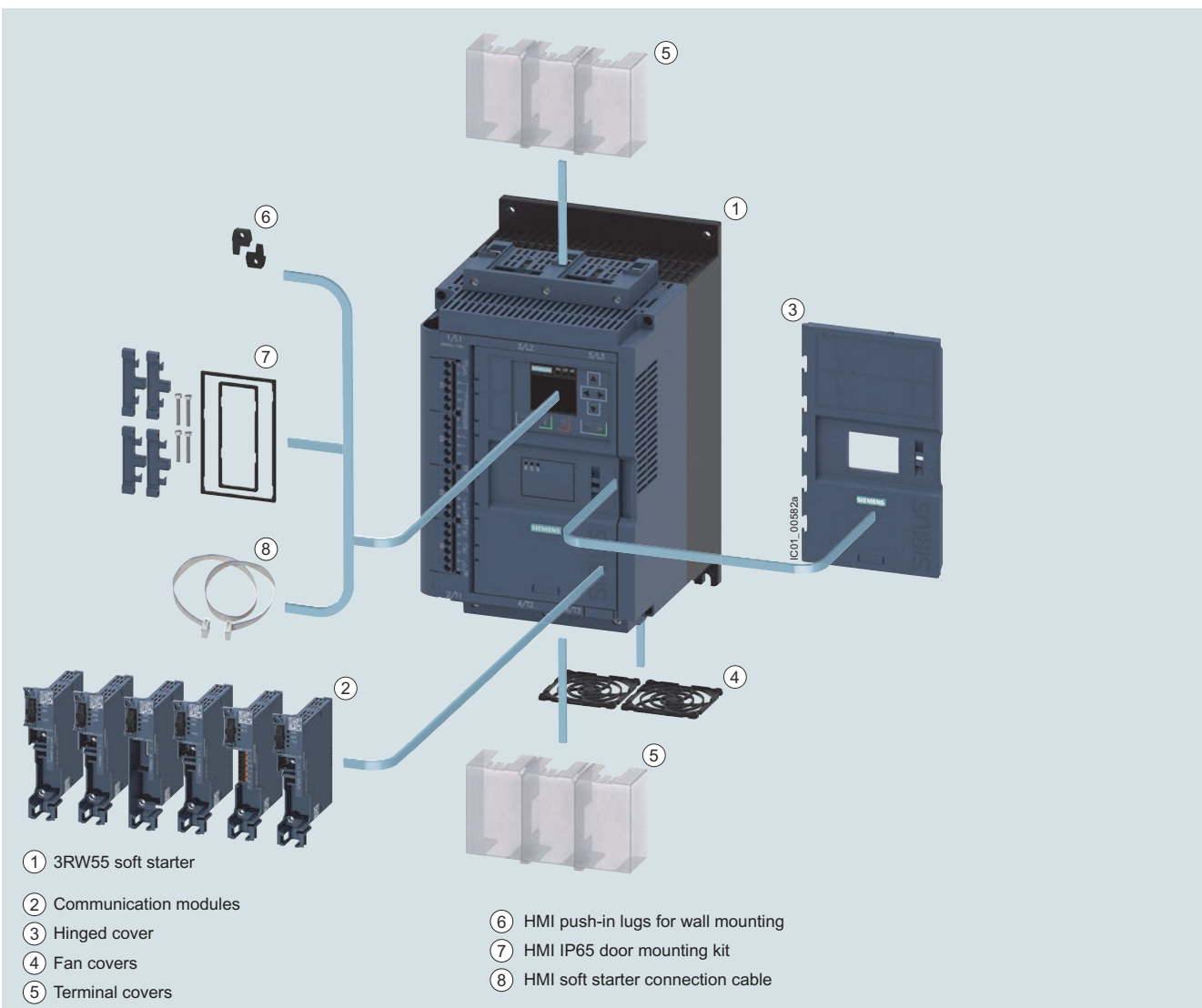
Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW
 TIA Selection Tool Cloud (TST Cloud), see
<https://www.siemens.com/tstcloud/?node=Sirius3rwFolder>

Industry Online Support (SIOS) topic page, see
<https://support.industry.siemens.com/cs/ww/en/view/109747404>
 Simulation Tool for Soft Starters (STS), see page 7/7 or
<https://support.industry.siemens.com/cs/ww/en/view/101494917>
 SIRIUS Soft Starter ES (TIA Portal), see page 14/2



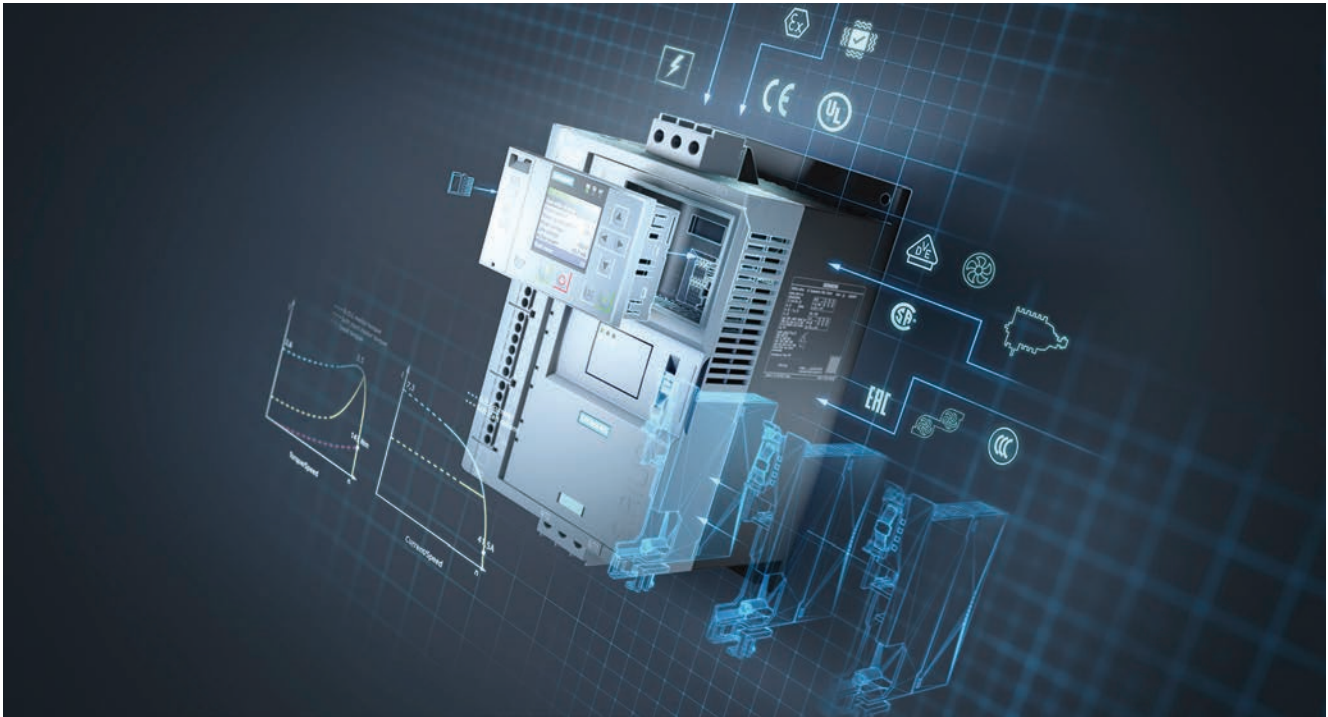
Equipped with the utmost functionality, the SIRIUS 3RW55 High Performance soft starters confidently handle even difficult starting and stopping operations. Thanks to innovative torque control, the device can be used for drives with an output of between 7.5 to 1000HP @ 480V.

The functions have been specially designed to offer maximum user friendliness. The HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW55 soft starters offer efficient switching for long-term, energy-saving use.



3RW55 High Performance soft starters with accessories, see page 7/35.

Benefits



Product characteristics / function	Performance features / benefits
Automatic parameterization	Extremely easy commissioning and reliability even under changing load conditions
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
Integration into TIA Portal – communication modules optional	Efficient configuration and maximum flexibility in automation engineering
Removable HMI with color display, local interface, slot for micro SD memory card	Maximum flexibility with regard to user interface and intuitive menu guidance
Pump stop and torque control	Reduced mechanical loading and optimum pump stop control
Certified according to ATEX/IECEx directive	Suitable for the starting of explosion-proof motors

High Performance Soft Starters

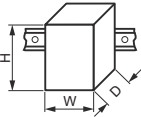
3RW55 soft starters > General data

Technical specifications

More information

Technical specifications, see <https://support.industry.siemens.com/cs/ww/en/ps/25099/td>
Equipment Manual "SIRIUS 3RW55 Soft Starter", see <https://support.industry.siemens.com/cs/ww/en/view/109753752>

FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/25099/faq>
Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>

Type		3RW551.-.HA.4 3RW551.-.HA.5	3RW552.-.HA.6 3RW553.-.HA.6	3RW552.-.HA.4 3RW553.-.HA.4	3RW554.-.HA.4	3RW554.-.HA.6	3RW555.-.HA.4	3RW555.-.HA.6
Installation/fixing/ dimensions								
Width x height x depth	mm	170 × 275 × 152	185 × 306 × 203		210 × 393 × 203		478 x 764 x 241	
								
Type of mounting	Screw fixing							
Mounting position	Vertical (can be rotated +/- 90° and tilted +/- 22.5° forward or backward)							
Distance to be maintained with side-by-side mounting								
• Above	mm	100						
• At the side	mm	5						
• Below	mm	75						
Maximum installation altitude above sea level ¹⁾	m	5 000	2 000	5 000		2 000	5 000	2 000
Degree of protection	IP00							
Ambient conditions								
Ambient temperature								
• During operation ²⁾	°C	-25 ... +60						
• During storage and transport	°C	-40 ... +80						
Environmental category according to IEC 60721								
• During operation	3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6							
• During storage	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4							
• During transport	2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)							

¹⁾ Derating from 1 000 m, see [characteristic curve on page 7/7](#).

²⁾ Note derating above 40 °C.

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW55...-HA0.	3RW55...-HA1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit¹⁾		Fuse 4 A gG ($I_{cu} = 1 \text{ kA}$), fuse 6 A quick-response ($I_{cu} = 1 \text{ kA}$), MCB C1 ($I_{cu} = 600 \text{ A}$), MCB C6 ($I_{cu} = 300 \text{ A}$)	

¹⁾ Not included in scope of supply

Type		3RW55...-HA.4	3RW55...-HA.5	3RW55...-HA.6
Power electronics				
Operational voltage, rated value				
• Relative negative tolerance/relative positive tolerance	V	200 ... 480	200 ... 600	200 ... 690
	%	-15/10		
Operational voltage for inside-delta circuit, rated value				
• Relative negative tolerance/relative positive tolerance	V	200 ... 480	200 ... 600	
	%	-15/10		
Operating frequency, rated value				
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60		
	%	-10/10		
Minimum load [% of I_M]¹⁾	%	10		
Maximum cable length between soft starter and motor	m	800		

¹⁾ Relative to set I_{θ} .

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW5513	3RW5514	3RW5515	3RW5516	3RW5517
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M - Start-up time 5 s - Start-up time 10 s	1/h	43	43	43	43	43
	1/h	18	18	18	18	18
• 350% I_M - Start-up time 5 s - Start-up time 10 s	1/h	28	28	28	28	28
	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M - Start-up time 5 s - Start-up time 10 s	1/h	21	21	21	21	21
	1/h	8	8	8	8	8
• 350% I_M - Start-up time 5 s - Start-up time 10 s	1/h	13	13	13	13	13
	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M - Start-up time 20 s - Start-up time 40 s	1/h	10	10	10	10	10
	1/h	4	4	4	4	4
• 350% I_M - Start-up time 20 s - Start-up time 40 s	1/h	7	7	7	7	7
	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	26/23.6/21.2	29/26/23
• 300% I_M - Start-up time 20 s - Start-up time 40 s	1/h	7	7	7	7	7
	1/h	3	3	3	3	3
• 350% I_M - Start-up time 20 s - Start-up time 40 s	1/h	4	4	4	4	4
	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	2.5/13	3.5/18	5/25	6.5/32	7.5/38
• Minimum/maximum in inside-delta circuits	A	4.3/22.5	6.1/31.1	8.7/43.3	11.3/55.4	13/65.8

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW5521	3RW5524	3RW5525	3RW5526	3RW5527
Rated operational current I_e	A	25	47	63	77	93
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 5 s	1/h	21	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 5 s	1/h	13	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	25/22.3/19.6	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	25/22.3/19.6	43.4/38/34.4	53/48/43	68/62/56	82.5/75.5/65
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	5/25	10/47	13/63	16/77	19/93
• Minimum/maximum in inside-delta circuits	A	8.7/43.3	17.3/81.4	22.5/109	27.7/133	32.9/161

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW5534	3RW5535	3RW5536
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	43
- Start-up time 10 s	1/h	18	18	18
• 350% I_M				
- Start-up time 5 s	1/h	28	28	28
- Start-up time 10 s	1/h	10	10	10
Normal starting (CLASS 10E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	21	21	21
- Start-up time 10 s	1/h	8	8	8
• 350% I_M				
- Start-up time 5 s	1/h	13	13	13
- Start-up time 10 s	1/h	4	4	4
Heavy starting (CLASS 20E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	109/97/85	128/113/103	141/129/117
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5
Heavy starting (CLASS 30E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	89/81/74	108/98/88	117/105/93
• 300% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	3	3	3
• 350% I_M				
- Start-up time 20 s	1/h	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8
Adjustable rated motor current I_M				
• Minimum/maximum	A	23/113	29/143	34/171
• Minimum/maximum in inside-delta circuits	A	39.8/195	50.2/247	58.9/296

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW5543	3RW5544	3RW5545	3RW5546	3RW5547	3RW5548
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	43	43	40	20
- Start-up time 10 s	1/h	18	18	18	18	17	6
• 350% I_M							
- Start-up time 5 s	1/h	28	28	28	28	26	9
- Start-up time 10 s	1/h	10	10	10	10	10	1
Normal starting (CLASS 10E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	551/490/445
• 300% I_M							
- Start-up time 5 s	1/h	21	21	21	21	17	8
- Start-up time 10 s	1/h	8	8	8	8	6	1
• 350% I_M							
- Start-up time 5 s	1/h	13	13	13	13	10	2
- Start-up time 10 s	1/h	4	4	4	4	2	--
Heavy starting (CLASS 20E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	231/207/183	258/230/202	272/254/236	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	138/122/106	160/140/120	183/159/135	202/174/160	210/190/170	220/200/180
• 300% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3	3
• 350% I_M							
- Start-up time 20 s	1/h	4	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M							
• Minimum/maximum	A	42/210	50/250	63/315	74/370	94/470	114/570
• Minimum/maximum in inside-delta circuits	A	72.7/363	86.6/433	109.1/545	128.2/640	162.8/814	197.5/987

High Performance Soft Starters

3RW55 soft starters > General data

Type		3RW5552	3RW5553	3RW5554	3RW5556	3RW5558
Rated operational current I_e	A	630	720	840	1 100	1 280
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M , $T_u = 40/50/60$ °C	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
ON period = 70%; motor protection activated						
• 300% I_M						
- Start-up time 5 s	1/h	43	43	42	43	32
- Start-up time 10 s	1/h	18	18	18	18	12
• 350% I_M						
- Start-up time 5 s	1/h	28	28	25	27	17
- Start-up time 10 s	1/h	10	10	10	9	4
Normal starting (CLASS 10E)						
Rated motor current I_M , $T_u = 40/50/60$ °C	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 225/1 130/1 030
ON period = 70%; motor protection activated						
• 300% I_M						
- Start-up time 5 s	1/h	21	21	19	18	15
- Start-up time 10 s	1/h	8	8	7	7	5
• 350% I_M						
- Start-up time 5 s	1/h	13	13	10	9	1
- Start-up time 10 s	1/h	4	4	2	2	1
Heavy starting (CLASS 20E)						
Rated motor current I_M , $T_u = 40/50/60$ °C	A	500/450/400	520/470/420	570/520/470	920/840/760	980/900/810
ON period = 70%; motor protection activated						
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M , $T_u = 40/50/60$ °C	A	380/340/300	400/360/320	420/380/340	740/670/600	790/720/650
ON period = 70%; motor protection activated						
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	114/630	144/720	168/840	220/1 100	258/1 280
• Minimum/maximum in inside-delta circuits	A	197.5/987	249.4/1 247	291/1 454	381.1/1 905	446.9/2 217

High Performance Soft Starters

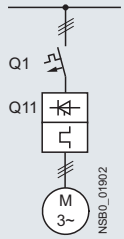
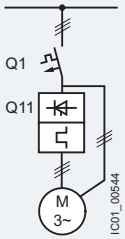
3RW55 soft starters > General data

Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).

									
Soft starters		Motor starter protectors				Motor starter protectors			
		for 400 V systems		for 500 V systems		for 400 V systems		for 500 V systems	
Q11		Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q
Type		Type	kA	Type	kA	Type	kA	Type	kA
Type of coordination "1"	ToC 1	Inline circuit				Inside-delta circuit			
3RW5513		3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5514		3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5515		3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5516		3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5517		3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5521		--	--	--	--	--	--	--	--
3RW5524		3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5525		3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5526		3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5527		3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5534		3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5535		3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5536		3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5543		3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5544		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5545		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5546		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5547		3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5548		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5552		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5553		3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5554		3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65
3RW5556		3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65	--	--	--	--
3RW5558		3VA2716-7AB05-0AA0	65	3VA2716-7AB05-0AA0	65	--	--	--	--

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In 690 V systems, in motor feeder tests with soft starters demonstrable short-circuit breaking capacities can only be achieved with the use of fuses ($I_q > 5$ to 10 kA).

High Performance Soft Starters

3RW55 soft starters > General data

Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

Soft starters	gG class fuse		Line contactor (optional)		gG class fuse		Line contactor (optional)	
	for systems up to 690 V		for systems up to 480 V for systems up to 690 V		for systems up to 600 V		for systems up to 480 V in the supply cable for systems up to 600 V in the supply cable	
Q11	F1		Q21	Q21	F1		Q21	Q21
Type	Type		Type	Type	Type		Type	Type
Type of coordination "1"	Inline circuit				Inside-delta circuit			
3RW5513	3NA3820-6		3RT2025	3RT2025	3NA3820-6	3RT2027	3RT2035	3RT2025
3RW5514	3NA3820-6		3RT2026	3RT2027	3NA3820-6	3RT2027	3RT2037	3RT2027
3RW5515	3NA3822-6		3RT2027	3RT2037	3NA3822-6	3RT2036	3RT2037	3RT2037
3RW5516	3NA3824-6		3RT2035	3RT2037	3NA3824-6	3RT2037	3RT2038	3RT2037
3RW5517	3NA3824-6		3RT2035	3RT2037	3NA3824-6	3RT2038	3RT2046	3RT2037
3RW5521	3NA3824-6		3RT2027	3RT2037	3NA3824-6	3RT2036	3RT2037	3RT2037
3RW5524	3NA3824-6		3RT2036	3RT2037	3NA3824-6	3RT2046	3RT2047	3RT2037
3RW5525	3NA3830-6		3RT2037	3RT2046	3NA3830-6	3RT2047	3RT1054	3RT2046
3RW5526	3NA3132-6		3RT2038	3RT2046	3NA3132-6	3RT1055	3RT1055	3RT2038
3RW5527	3NA3136-6		3RT2046	3RT2047	3NA3136-6	3RT1056	3RT1056	3RT2046
3RW5534	3NA3244-6		3RT1054	3RT1054	3NA3244-6	3RT1064	3RT1064	3RT1054
3RW5535	3NA3244-6		3RT1055	3RT1055	3NA3244-6	3RT1065	3RT1065	3RT1055
3RW5536	3NA3365-6		3RT1056	3RT1064	3NA3365-6	3RT1066	3RT1075	3RT1064
3RW5543	2 x 3NA3354-6		3RT1064	3RT1064	2 x 3NA3354-6	3RT1075	3RT1075	3RT1064
3RW5544	2 x 3NA3354-6		3RT1065	3RT1065	2 x 3NA3354-6	3RT1076	3RT1076	3RT1065
3RW5545	2 x 3NA3365-6		3RT1075	3RT1075	2 x 3NA3365-6	3TF68	3TF68	3RT1075
3RW5546	2 x 3NA3365-6		3RT1075	3RT1075	2 x 3NA3365-6	3TF69	3TF69	3RT1075
3RW5547	2 x 3NA3365-6		3RT1076	3RT1276	2 x 3NA3365-6	3TF69	3TF69	3RT1076
3RW5548	2 x 3NA3365-6		3TF68	3TF68	2 x 3NA3365-6	--	--	3TF68
3RW5552	2 x 3NA3365-6		3TF68	3TF69	--	--	--	3TF68
3RW5553	2 x 3NA3365-6		3TF69	3TF69	--	--	--	3TF69
3RW5554	2 x 3NA3365-6		--	--	--	--	--	--
3RW5556	3 x 3NA3365-6		--	--	--	--	--	--
3RW5558	3 x 3NA3365-6		--	--	--	--	--	--

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, motor feeders with soft starters can only be operated in systems with up to 600 V.

High Performance Soft Starters

3RW55 soft starters > General data

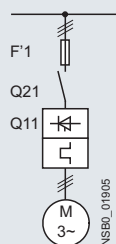
Motor feeders according to IEC with 3NE1/3NB3 SITOP fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse		Line contactor (optional)	
	for systems up to 690 V		for systems up to 480 V	for systems up to 690 V
Q11	F'1		Q21	Q21
Type	Type		Type	Type
Type of coordination "2"	Inline circuit			
3RW5513	3NE1815-0	3RT2025	3RT2025	
3RW5514	3NE1802-0	3RT2026	3RT2027	
3RW5515	3NE1817-0	3RT2027	3RT2037	
3RW5516	3NE1818-0	3RT2035	3RT2037	
3RW5517	3NE1820-0	3RT2035	3RT2037	
3RW5521	3NE1817-0	3RT2027	3RT2037	
3RW5524	3NE1021-2	3RT2036	3RT2037	
3RW5525	3NE1022-0	3RT2037	3RT2046	
3RW5526	3NE1224-0	3RT2038	3RT2046	
3RW5527	3NE1224-0	3RT2046	3RT2047	
3RW5534	3NE1225-0	3RT1054	3RT1054	
3RW5535	3NE1227-0	3RT1055	3RT1055	
3RW5536	3NE1230-0	3RT1056	3RT1064	
3RW5543	3NE1230-2 ¹⁾	3RT1064	3RT1064	
3RW5544	3NE1331-0	3RT1065	3RT1065	
3RW5545	3NE1334-2	3RT1075	3RT1075	
3RW5546	3NE1334-2	3RT1075	3RT1075	
3RW5547	3NE1436-2	3RT1076	3RT1276	
3RW5548	3NE1437-2	3TF68	3TF68	
3RW5552	3NB3350-1KK26	3TF68	3TF69	
3RW5553	3NB3351-1KK26	3TF69	3TF69	
3RW5554	3NB3351-1KK26	--	--	
3RW5556	3NB3354-1KK26	--	--	
3RW5558	3NB3357-1KK26	--	--	

¹⁾ For systems up to 500 V.

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination "2" ([see page 7/24](#)).

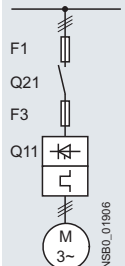
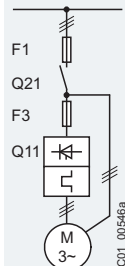
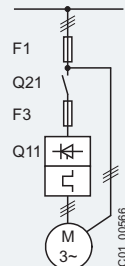
High Performance Soft Starters

3RW55 soft starters > General data

Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity $I_{q1} = 65 \text{ kA}$ Note:For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

										
Soft starters	gG class fuse	aR class fuse	Line contactor (optional)		gG class fuse	aR class fuse	Line contactor (optional)			
	for systems up to 690 V	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	F3	Q21	Q21	F1	F3	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2"	Inline circuit				Inside-delta circuit					
3RW5513	3NA3820-6	3NE8017-1	3RT2025	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2035	3RT2025	3RT2025
3RW5514	3NA3820-6	3NE8020-1	3RT2026	3RT2027	3NA3820-6	3NE8020-1	3RT2027	3RT2037	3RT2026	3RT2027
3RW5515	3NA3822-6	3NE8021-1	3RT2027	3RT2037	3NA3822-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5516	3NA3824-6	3NE8022-1	3RT2035	3RT2037	3NA3824-6	3NE8022-1	3RT2037	3RT2038	3RT2035	3RT2037
3RW5517	3NA3824-6	3NE8024-1	3RT2035	3RT2037	3NA3824-6	3NE8024-1	3RT2038	3RT2046	3RT2035	3RT2037
3RW5521	3NA3824-6	3NE8021-1	3RT2027	3RT2037	3NA3824-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5524	3NA3824-6	3NE8024-1	3RT2036	3RT2037	3NA3824-6	3NE8024-1	3RT2046	3RT2047	3RT2036	3RT2037
3RW5525	3NA3830-6	3NE3227	3RT2037	3RT2046	3NA3830-6	3NE3227	3RT2047	3RT1054	3RT2037	3RT2046
3RW5526	3NA3132-6	3NE3227	3RT2038	3RT2046	3NA3132-6	3NE3227	3RT1055	3RT1055	3RT2038	3RT2046
3RW5527	3NA3136-6	3NE3227	3RT2046	3RT2047	3NA3136-6	3NE3227	3RT1056	3RT1056	3RT2046	3RT2047
3RW5534	3NA3244-6	3NE3231	3RT1054	3RT1054	3NA3244-6	3NE3231	3RT1064	3RT1064	3RT1054	3RT1054
3RW5535	3NA3244-6	3NE3233	3RT1055	3RT1055	3NA3244-6	3NE3233	3RT1065	3RT1065	3RT1055	3RT1055
3RW5536	3NA3365-6	3NE3334-OB	3RT1056	3RT1064	3NA3365-6	3NE3334-OB	3RT1066	3RT1075	3RT1056	3RT1064
3RW5543	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1075	3RT1064	3RT1064
3RW5544	2 x 3NA3354-6	3NE3335	3RT1065	3RT1065	2 x 3NA3354-6	3NE3335	3RT1076	3RT1076	3RT1065	3RT1065
3RW5545	2 x 3NA3365-6	--	3RT1075	3RT1075	2 x 3NA3365-6	--	3TF68	3TF68	3RT1075	3RT1075
3RW5546	2 x 3NA3365-6	--	3RT1075	3RT1075	2 x 3NA3365-6	--	3TF69	3TF69	3RT1075	3RT1075
3RW5547	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1276	2 x 3NA3365-6	3NE3340-8	3TF69	3TF69	3RT1076	3RT1276
3RW5548	2 x 3NA3365-6	3NC3342-1U	3TF68	3TF68	2 x 3NA3365-6	3NC3342-1U	--	--	3TF68	3TF68
3RW5552	2 x 3NA3365-6	3NC3343-1U	3TF68	3TF69	--	3NC3343-1U	--	--	3TF68	3TF69
3RW5553	2 x 3NA3365-6	3NC3343-1U	3TF69	3TF69	--	3NC3343-1U	--	--	3TF69	3TF69
3RW5554	2 x 3NA3365-6	3NC3343-1U	--	--	--	3NC3343-1U	--	--	--	--
3RW5556	3 x 3NA3365-6	3 x 3NE3340-8	--	--	--	3 x 3NE3340-8	--	--	--	--
3RW5558	3 x 3NA3365-6	3 x 3NE3340-8	--	--	--	3 x 3NE3340-8	--	--	--	--

Note:

The specified short-circuit breaking capacities I_{q1} in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/21](#)). In these cases, optional line contactors can be dispensed with.

In inside-delta circuits, motor feeders with soft starters can only be operated in systems up to 600 V.

High Performance Soft Starters

3RW55 soft starters > General data

Reversing operation with reversing contactorsNote:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

(For an example circuit, see [3RW55 Equipment Manual, Appendix A.3](#))

Soft starters	Reversing contactor assembly		For reversing contactor	
	for systems up to 480 V	for systems up to 690 V	for systems up to 480 V	for systems up to 690 V
Q11	Q21 / Q22	Q21 / Q22	Q21 / Q22	Q21 / Q22
Type	Type	Type	Type	Type
3RW5513	3RA2325	3RA2325	3RT2025	3RT2025
3RW5514	3RA2326	3RA2327	3RT2026	3RT2027
3RW5515	3RA2327	3RA2337	3RT2027	3RT2037
3RW5516	3RA2335	3RA2337	3RT2035	3RT2037
3RW5517	3RA2335	3RA2337	3RT2035	3RT2037
3RW5521	3RA2327	3RA2337	3RT2027	3RT2037
3RW5524	3RA2336	3RA2337	3RT2036	3RT2037
3RW5525	3RA2337	3RA2346	3RT2037	3RT2046
3RW5526	3RA2338	3RA2346	3RT2038	3RT2046
3RW5527	3RA2346	3RA2347	3RT2046	3RT2047
3RW5534	--	--	3RT1054	3RT1054
3RW5535	--	--	3RT1055	3RT1055
3RW5536	--	--	3RT1056	3RT1064
3RW5543	--	--	3RT1064	3RT1064
3RW5544	--	--	3RT1065	3RT1065
3RW5545	--	--	3RT1075	3RT1075
3RW5546	--	--	3RT1075	3RT1075
3RW5547	--	--	3RT1076	3RT1276
3RW5548	--	--	3TF68	3TF68
3RW5552	--	--	3TF68	3TF69
3RW5553	--	--	3TF69	3TF69
3RW5554	--	--	--	--
3RW5556	--	--	--	--
3RW5558	--	--	--	--

DC braking with braking contactorsNote:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

(For an example circuit, see [3RW55 Equipment Manual, Appendix A.3](#))

Soft starters	DC braking contactor	DC braking contactor assembly			
	for systems up to 400 V	for systems up to 480 V		for systems up to 690 V	
Q11	with 2 NC contacts + 2 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel	with 3 NO contacts parallel
Type	Q93	Q91	Q92	Q91	Q92
Type	Type	Type	Type	Type	Type
3RW5513	3RT2517	3RT2015	3RT2016	3RT2015	3RT2016
3RW5514	3RT2518	3RT2015	3RT2017	3RT2015	3RT2023
3RW5515	3RT2526	3RT2015	3RT2025	3RT2015	3RT2025
3RW5516	3RT2526	3RT2015	3RT2025	3RT2015	3RT2027
3RW5517	3RT2535	3RT2015	3RT2027	3RT2015	3RT2027
3RW5521	3RT2526	3RT2015	3RT2025	3RT2015	3RT2025
3RW5524	3RT2535	3RT2016	3RT2027	3RT2016	3RT2035
3RW5525	--	3RT2024	3RT2027	3RT2024	3RT2037
3RW5526	--	3RT2025	3RT2035	3RT2025	3RT2037
3RW5527	--	3RT2027	3RT2036	3RT2027	3RT2037
3RW5534	--	3RT2035	3RT2037	3RT2035	3RT2038
3RW5535	--	3RT2036	3RT2038	3RT2036	3RT2046
3RW5536	--	3RT2037	3RT2046	3RT2037	3RT2047
3RW5543	--	3RT2045	3RT2047	3RT2045	3RT1054
3RW5544	--	3RT2045	3RT1055	3RT2045	3RT1055
3RW5545	--	3RT2446	3RT1056	3RT2446	3RT1056
3RW5546	--	3RT1055	3RT1056	3RT1055	3RT1064
3RW5547	--	3RT1456	3RT1065	3RT1456	3RT1065
3RW5548	--	3RT1456	3RT1066	3RT1456	3RT1075
3RW5552	--	3RT1065	3RT1075	3RT1065	3RT1075
3RW5553	--	3RT1065	3RT1075	3RT1065	3RT1075
3RW5554	--	3RT1466	3RT1076	3RT1466	3RT1076
3RW5556	--	3RT1476	3TF68	3RT1476	3TF68
3RW5558	--	3RT1476	3TF69	3RT1476	3TF69

High Performance Soft Starters

3RW55 soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.



3RW552.

At 40 °C					At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V														
13	3	5.5	--	--	11.5	2	3	7.5	--	5	3RW5513-□HA□4		1	1 unit
18	4	7.5	--	--	15.9	3	5	10	--	5	3RW5514-□HA□4		1	1 unit
25	5.5	11	--	--	22.3	5	7.5	15	--	5	3RW5515-□HA□4		1	1 unit
32	7.5	15	--	--	28.4	7.5	10	20	--	5	3RW5516-□HA□4		1	1 unit
38	11	18.5	--	--	33.5	10	10	20	--	5	3RW5517-□HA□4		1	1 unit
47	11	22	--	--	41.6	10	10	30	--	5	3RW5524-□HA□4		1	1 unit
63	18.5	30	--	--	55.5	15	20	40	--	5	3RW5525-□HA□4		1	1 unit
77	22	37	--	--	68	20	25	50	--	5	3RW5526-□HA□4		1	1 unit
93	22	45	--	--	82.5	25	30	60	--	5	3RW5527-□HA□4		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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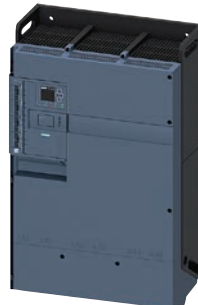
High Performance Soft Starters

3RW55 soft starters > Inline circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW553.



3RW554.



3RW555.

At 40 °C					At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
	A	kW	kW	kW		kW	A	hp	hp					
Operational voltage 200 ... 480 V														
113	30	55	--	--	101	30	30	75	--	5	3RW5534-□HA□4		1	1 unit
143	37	75	--	--	128	40	40	100	--	5	3RW5535-□HA□4		1	1 unit
171	45	90	--	--	153	50	50	100	--	5	3RW5536-□HA□4		1	1 unit
210	55	110	--	--	186	50	60	150	--	5	3RW5543-□HA□4		1	1 unit
250	75	132	--	--	220	60	75	150	--	5	3RW5544-□HA□4		1	1 unit
315	90	160	--	--	279	75	100	200	--	5	3RW5545-□HA□4		1	1 unit
370	110	200	--	--	328	100	125	250	--	5	3RW5546-□HA□4		1	1 unit
470	132	250	--	--	416	150	150	350	--	5	3RW5547-□HA□4		1	1 unit
570	160	315	--	--	504	150	200	400	--	5	3RW5548-□HA□4		1	1 unit
630	200	355	--	--	561	200	200	450	--	15	3RW5552-□HA□4		1	1 unit
720	200	400	--	--	641	200	250	500	--	15	3RW5553-□HA□4		1	1 unit
840	250	450	--	--	748	250	300	600	--	15	3RW5554-□HA□4		1	1 unit
1 100	315	560	--	--	979	350	400	850	--	15	3RW5556-□HA□4		1	1 unit
1 280	400	710	--	--	1 139	400	450	1 000	--	15	3RW5558-□HA□4		1	1 unit

Type of electrical connection for the control circuitSpring-loaded terminals
Screw terminals**Control supply voltage**24 V AC/DC
110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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High Performance Soft Starters

3RW55 soft starters > Inline circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW551.



3RW552.

At 40 °C					At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V														
13	3	5.5	7.5	--	11.5	2	3	7.5	10	5	3RW5513-□HA□5		1	1 unit
18	4	7.5	11	--	15.9	3	5	10	10	5	3RW5514-□HA□5		1	1 unit
25	5.5	11	15	--	22.3	5	7.5	15	20	5	3RW5515-□HA□5		1	1 unit
32	7.5	15	18.5	--	28.4	7.5	10	20	25	5	3RW5516-□HA□5		1	1 unit
38	11	18.5	22	--	33.5	10	10	20	30	5	3RW5517-□HA□5		1	1 unit
Operational voltage 200 ... 690 V														
25	5.5	11	15	22	22.3	5	7.5	15	20	5	3RW5521-□HA□6		1	1 unit
47	11	22	30	45	41.6	10	10	30	40	5	3RW5524-□HA□6		1	1 unit
63	18.5	30	37	55	55.5	15	20	40	50	5	3RW5525-□HA□6		1	1 unit
77	22	37	45	75	68	20	25	50	60	5	3RW5526-□HA□6		1	1 unit
93	22	45	55	90	82.5	25	30	60	75	5	3RW5527-□HA□6		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 690 V:
Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7](#).

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High Performance Soft Starters

3RW55 soft starters > Inline circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW553.



3RW554.



3RW555.

At 40 °C					At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors				Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V	At 690 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 690 V														
113	30	55	75	110	101	30	30	75	100	5	3RW5534-□HA□6		1	1 unit
143	37	75	90	132	128	40	40	100	125	5	3RW5535-□HA□6		1	1 unit
171	45	90	110	160	153	50	50	100	150	5	3RW5536-□HA□6		1	1 unit
210	55	110	132	200	186	60	60	150	150	5	3RW5543-□HA□6		1	1 unit
250	75	132	160	250	220	60	75	150	200	5	3RW5544-□HA□6		1	1 unit
315	90	160	200	315	279	75	100	200	250	5	3RW5545-□HA□6		1	1 unit
370	110	200	250	355	328	100	125	250	300	5	3RW5546-□HA□6		1	1 unit
470	132	250	315	400	416	150	150	350	450	5	3RW5547-□HA□6		1	1 unit
570	160	315	355	560	504	150	200	400	500	5	3RW5548-□HA□6		1	1 unit
630	200	355	400	630	561	200	200	450	600	15	3RW5552-□HA□6		1	1 unit
720	200	400	500	710	641	200	250	500	700	15	3RW5553-□HA□6		1	1 unit
840	250	450	560	800	748	250	300	600	800	15	3RW5554-□HA□6		1	1 unit
1 100	215	560	710	1 000	979	350	400	850	1 100	15	3RW5556-□HA□6		1	1 unit
1 280	400	710	900	1 200	1 139	400	450	1 000	1 250	15	3RW5558-□HA□6		1	1 unit

Type of electrical connection for the control circuitSpring-loaded terminals
Screw terminals**Control supply voltage**24 V AC/DC
110 ... 250 V AC

- ¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 690 V:
- Sizes 3 and 4: Standard delivery time SD = 2 days (d).
 - Size 5: Standard delivery time SD = 5 days (d).

Note:

For the constraints for the motor outputs specified here, see page 7/7.

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High Performance Soft Starters

3RW55 soft starters > Inside-delta circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.



3RW552.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 480 V														
22.5	5.5	11	--	19.9	5	5	10	--	5	3RW5513-□HA□4		1	1 unit	
31.5	7.5	15	--	28	7.5	7.5	20	--	5	3RW5514-□HA□4		1	1 unit	
43.3	11	18.5	--	39	10	10	25	--	5	3RW5515-□HA□4		1	1 unit	
55.4	15	22	--	49	15	15	30	--	5	3RW5516-□HA□4		1	1 unit	
65.8	18.5	30	--	58	15	20	40	--	5	3RW5517-□HA□4		1	1 unit	
81.4	22	45	--	72	20	25	50	--	5	3RW5524-□HA□4		1	1 unit	
109	30	55	--	96	30	30	75	--	5	3RW5525-□HA□4		1	1 unit	
133	37	75	--	118	30	40	75	--	5	3RW5526-□HA□4		1	1 unit	
161	45	90	--	143	40	50	100	--	5	3RW5527-□HA□4		1	1 unit	

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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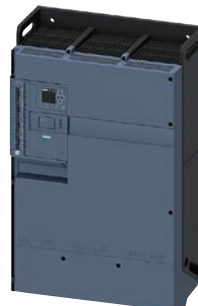
High Performance Soft Starters

3RW55 soft starters > Inside-delta circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW553.



3RW554.



3RW555.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit						SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 480 V														
196	55	110	--	175	50	60	125	--	5	3RW5534-□HA□4		1	1 unit	
248	75	132	--	222	75	75	150	--	5	3RW5535-□HA□4		1	1 unit	
296	90	160	--	265	75	100	200	--	5	3RW5536-□HA□4		1	1 unit	
364	110	200	--	322	100	125	250	--	5	3RW5543-□HA□4		1	1 unit	
433	132	250	--	381	125	150	300	--	5	3RW5544-□HA□4		1	1 unit	
546	160	315	--	483	150	200	400	--	5	3RW5545-□HA□4		1	1 unit	
641	200	355	--	568	200	200	450	--	5	3RW5546-□HA□4		1	1 unit	
814	250	400	--	721	250	250	600	--	5	3RW5547-□HA□4		1	1 unit	
987	315	560	--	873	300	350	750	--	5	3RW5548-□HA□4		1	1 unit	
1 091	355	630	--	972	350	400	850	--	15	3RW5552-□HA□4		1	1 unit	
1 247	400	710	--	1 110	400	450	950	--	15	3RW5553-□HA□4		1	1 unit	
1 454	450	800	--	1 295	450	550	1 150	--	15	3RW5554-□HA□4		1	1 unit	
1 905	560	1 000	--	1 695	600	700	1 500	--	15	3RW5556-□HA□4		1	1 unit	
2 217	710	1 200	--	1 973	700	850	1 700	--	15	3RW5558-□HA□4		1	1 unit	

Type of electrical connection for the control circuitSpring-loaded terminals
Screw terminals**Control supply voltage**24 V AC/DC
110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7](#).

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High Performance Soft Starters

3RW55 soft starters > Inside-delta circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW551.



3RW552.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit						SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 600 V														
22.5	5.5	11	15	19.9	5	5	10	15	5	3RW5513-□HA□5		1	1 unit	
31.5	7.5	15	18.5	28	7.5	7.5	20	25	5	3RW5514-□HA□5		1	1 unit	
43.3	11	18.5	22	39	10	10	25	30	5	3RW5515-□HA□5		1	1 unit	
55.4	15	22	30	49	15	15	30	40	5	3RW5516-□HA□5		1	1 unit	
65.8	18.5	30	37	58	15	20	40	50	5	3RW5517-□HA□5		1	1 unit	
43.3	11	18.5	22	39	10	10	25	30	5	3RW5521-□HA□6		1	1 unit	
81.4	22	45	45	72	20	25	50	60	5	3RW5524-□HA□6		1	1 unit	
109	30	55	55	96	30	30	75	75	5	3RW5525-□HA□6		1	1 unit	
133	37	75	90	118	30	40	75	100	5	3RW5526-□HA□6		1	1 unit	
161	45	90	110	143	40	50	100	125	5	3RW5527-□HA□6		1	1 unit	

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7](#).

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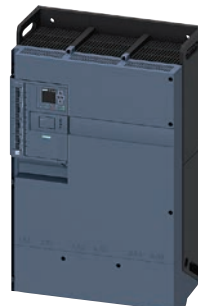
High Performance Soft Starters

3RW55 soft starters > Inside-delta circuit **IE3/IE4 ready****For normal starting (CLASS 10E)**

3RW553.



3RW554.



3RW555.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit						SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors										
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V							
A	kW	kW	kW	A	hp	hp	hp	hp	d						
Operational voltage 200 ... 600 V															
196	55	110	132	175	50	60	125	150	5	3RW5534-□HA□6		1	1 unit		
248	75	132	160	222	75	75	150	200	5	3RW5535-□HA□6		1	1 unit		
296	90	160	200	265	75	100	200	250	5	3RW5536-□HA□6		1	1 unit		
364	110	200	250	322	100	125	250	300	5	3RW5543-□HA□6		1	1 unit		
433	132	250	315	381	125	150	300	350	5	3RW5544-□HA□6		1	1 unit		
546	160	315	355	483	150	200	400	500	5	3RW5545-□HA□6		1	1 unit		
641	200	355	450	568	200	200	450	600	5	3RW5546-□HA□6		1	1 unit		
814	250	400	500	721	250	250	600	800	5	3RW5547-□HA□6		1	1 unit		
987	315	560	630	873	300	350	750	950	5	3RW5548-□HA□6		1	1 unit		
1 091	355	630	710	972	350	400	850	1 050	15	3RW5552-□HA□6		1	1 unit		
1 247	400	710	800	1 110	400	450	950	1 250	15	3RW5553-□HA□6		1	1 unit		
1 454	450	800	900	1 295	450	550	1 150	1 450	15	3RW5554-□HA□6		1	1 unit		
1 905	560	1 000	1 200	1 695	600	700	1 500	1 900	15	3RW5556-□HA□6		1	1 unit		
2 217	710	1 200	1 500	1 973	700	850	1 700	2 200	15	3RW5558-□HA□6		1	1 unit		

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 600 V:

- Sizes 3 and 4: Standard delivery time SD = 2 days (d).
- Size 5: Standard delivery time SD = 5 days (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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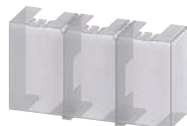
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SOFT STARTERS

High Performance Soft Starters

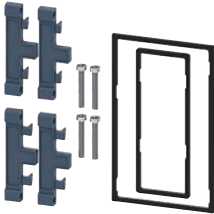
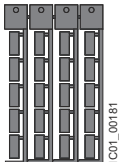
3RW55 soft starters > Accessories

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
d									
Fan covers									
 3RW5983-0FC00	Fan cover	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	--	▶	3RW5983-0FC00		1	1 unit
		3RW554 (1x)	--	--	▶	3RW5984-0FC00		1	1 unit
		3RW555 (3x)	--	--	▶	3RW5985-0FC00		1	1 unit
Terminal covers									
 3RW5983-0TC20	Terminal cover	3RW552 (2x), 3RW553 (2x)	--	--	▶	3RW5983-0TC20		1	1 unit
 3RW5984-0TC20		3RW554 (2x)	--	--	▶	3RW5984-0TC20		1	1 unit
Enclosure components									
 3RW5950-0GL20	Hinged cover	3RW55	Without cutout	--	▶	3RW5950-0GL20		1	1 unit
Communication modules									
 3RW5980-0CS00	Communication module	3RW55	PROFINET High Feature with integral switch	--	▶	3RW5950-0CH00		1	1 unit
			PROFINET Standard	--	▶	3RW5980-0CS00		1	1 unit
			PROFIBUS	--	▶	3RW5980-0CP00		1	1 unit
 3RW5980-0CE00			EtherNet/IP	--	▶	3RW5980-0CE00		1	1 unit
 3RW5980-0CR00			Modbus RTU	--	▶	3RW5980-0CR00		1	1 unit
			Modbus TCP	--	▶	3RW5980-0CT00		1	1 unit

High Performance Soft Starters

3RW55 soft starters > Accessories

Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules								
	IP65 door mounting kit for HMI modules	3RW55	IP65	For HMI modules	▶ 3RW5980-0HD00		1	1 unit
Connecting cables								
	HMI connection cable	3RW55	5 m, round	For door mounting	▶ 3RW5980-0HC60		1	1 unit
			2.5 m, round		▶ 3UF7933-0BA00-0		1	1 unit
			1.0 m, round		▶ 3UF7937-0BA00-0		1	1 unit
			0.5 m, round		▶ 3UF7932-0BA00-0		1	1 unit
Further accessories								
	Push-in lugs for wall mounting	--	Two lugs are required per device	For HMI modules and communication modules	2 3ZY1311-0AA00		1	10 units
Blank labels								
	Unit labeling plates ¹⁾		20 mm x 7 mm, titanium gray	For SIRIUS devices	20 3RT2900-1SB20		100	340 units
3RW55 starter kit								
	SIRIUS 3RW55 starter kit	--	Including 3RW55 soft starter 13 A, 200 ... 480 V, 24 V AC/DC Soft Starter ES V15.1, 24 V power supply unit, connecting cable and RJ45 network cable	5	3RW5951-1ES04		1	1 unit

¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Overview

More information

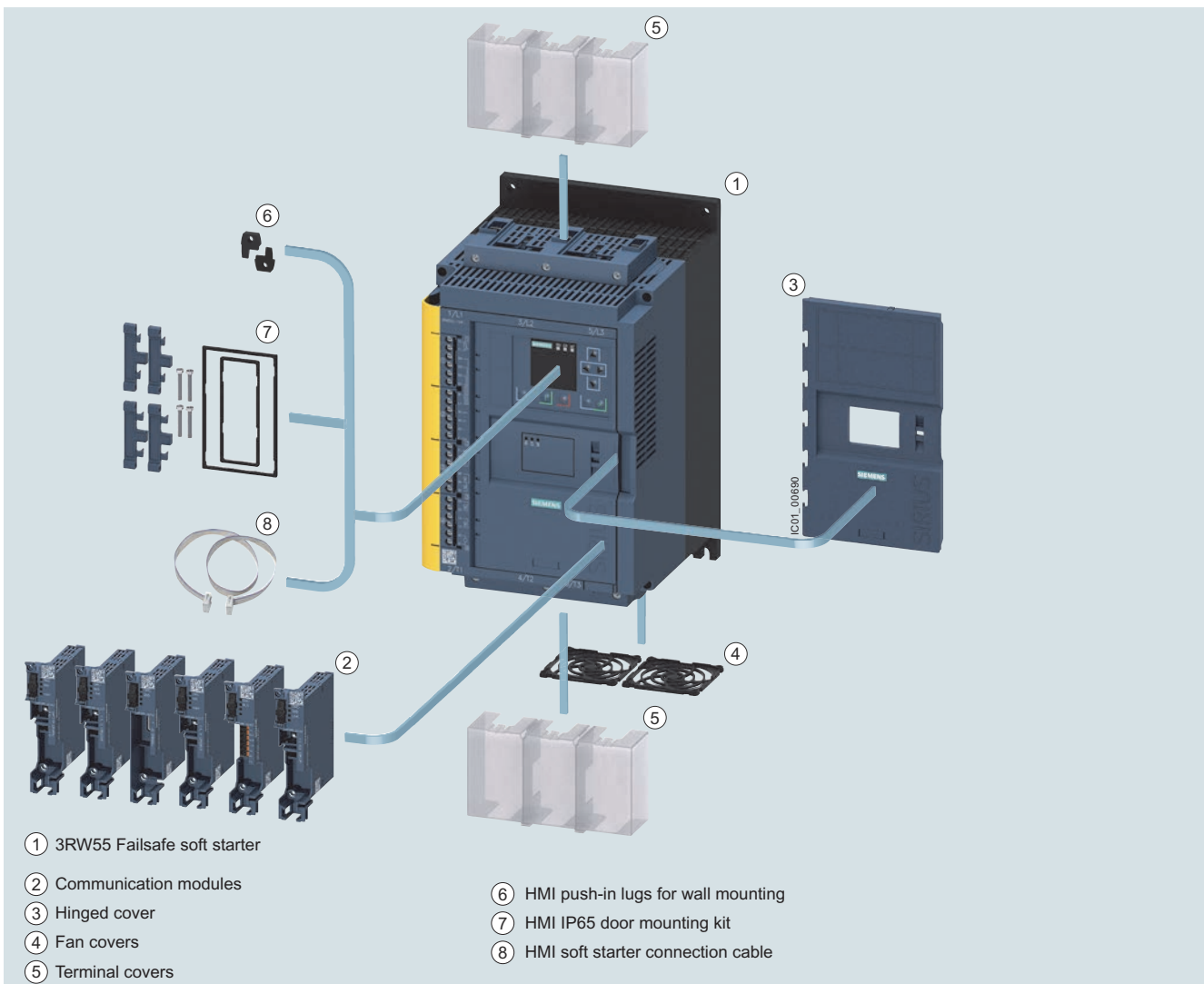
Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW
 Industry Online Support (SIOS) topic page, see <https://support.industry.siemens.com/cs/ww/en/view/109747404>

Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>
 SIRIUS Soft Starter ES (TIA Portal), see page 14/2



Equipped with the utmost functionality, the SIRIUS 3RW55 Failsafe High Performance soft starters confidently handle even difficult starting and stopping operations. Thanks to innovative torque control, the device can be used for drives with an output of between 7.5 to 400HP @ 480V.

The innovative 3RW55 Failsafe soft starter features an integrated fail-safe digital input for directly connecting the EMERGENCY STOP, and thus covers SIL 1 STO applications. The HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With their modern hybrid switching technology, the 3RW55 Failsafe soft starters offer efficient switching for long-term, energy-saving use.



3RW55 Failsafe High Performance soft starters with accessories, see page 7/51.

Benefits



Product characteristics / function	Performance features / benefits
Automatic parameterization	Extremely easy commissioning and reliability even under changing load conditions
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
Integration into TIA Portal – communication modules optional	Efficient configuration and maximum flexibility in automation engineering
Removable HMI with color display, local interface, slot for micro SD memory card	Maximum flexibility with regard to user interface and intuitive menu guidance
Pump stop and torque control	Reduced mechanical loading and optimum pump stop control
Certified according to ATEX/IECEx directive	Suitable for the starting of explosion-proof motors
Fail-safe disconnection up to SIL 3 - PL e / STO	Reduced costs and space requirements thanks to direct wiring of the EMERGENCY STOP mushroom pushbutton to the soft starter for SIL 1

High Performance Soft Starters

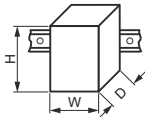
3RW55 Failsafe soft starters > General data

Technical specifications

More information

Technical specifications, see <https://support.industry.siemens.com/cs/ww/en/ps/25776/td>
 Equipment Manual "SIRIUS 3RW55 Soft Starter", see <https://support.industry.siemens.com/cs/ww/en/view/109753752>

FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/25776/faq>
 Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>

Type	3RW551.-.HF.4		3RW552.-.HF.4 3RW553.-.HF.4	3RW554.-.HF.4
Installation/fixing/dimensions				
Width x height x depth		mm	170 × 275 × 152	185 × 306 × 203
Type of mounting			Screw fixing	
Mounting position			Vertical (can be rotated +/- 90° and tilted +/- 22.5° forward or backward)	
Distance to be maintained with side-by-side mounting				
• Above	mm	100		
• At the side	mm	5		
• Below	mm	75		
Maximum installation altitude above sea level ¹⁾			m	2 000
Degree of protection			IP00	
Ambient conditions				
Ambient temperature				
• During operation ²⁾	°C	-25 ... +60		
• During storage and transport	°C	-40 ... +80		
Environmental category according to IEC 60721				
• During operation	3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6			
• During storage	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4			
• During transport	2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)			

¹⁾ Derating from 1 000 m, see [characteristic curve on page 7/7](#).

²⁾ Note derating above 40 °C.

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Type		3RW55...-HF0.	3RW55...-HF1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit¹⁾		Fuse 4 A gG ($I_{CU} = 1 \text{ kA}$), fuse 6 A quick-response ($I_{CU} = 1 \text{ kA}$), MCB C1 ($I_{CU} = 600 \text{ A}$), MCB C6 ($I_{CU} = 300 \text{ A}$)	

¹⁾ Not included in scope of supply

Type		3RW55...-HF4
Power electronics		
Operational voltage, rated value		
• Relative negative tolerance/relative positive tolerance	V	200 ... 480
	%	-15/10
Operational voltage for inside-delta circuit, rated value		
• Relative negative tolerance/relative positive tolerance	V	200 ... 480
	%	-15/10
Operating frequency, rated value		
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60
	%	-10/10
Minimum load [% of I_M]¹⁾	%	10
Maximum cable length between soft starter and motor	m	800

¹⁾ Relative to set I_E .

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Type		3RW5513	3RW5514	3RW5515	3RW5516	3RW5517
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	25/22.3/19.6	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	21	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 5 s	1/h	13	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	26/23.6/21.2	29/26/23
• 300% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3
• 350% I_M						
- Start-up time 20 s	1/h	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M						
• Minimum/maximum	A	2.5/13	3.5/18	5/25	6.5/32	7.5/38
• Minimum/maximum in inside-delta circuits	A	4.3/22.5	6.1/31.1	8.7/43.3	11.3/55.4	13/65.8

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Type		3RW5524	3RW5525	3RW5526	3RW5527
Rated operational current I_e	A	47	63	77	93
Power electronics					
Load rating with rated operational current I_e					
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h					
Normal starting (CLASS 10A)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18
• 350% I_M					
- Start-up time 5 s	1/h	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10
Normal starting (CLASS 10E)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	21	21	21	21
- Start-up time 10 s	1/h	8	8	8	8
• 350% I_M					
- Start-up time 5 s	1/h	13	13	13	13
- Start-up time 10 s	1/h	4	4	4	4
Heavy starting (CLASS 20E)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4
• 350% I_M					
- Start-up time 20 s	1/h	7	7	7	7
- Start-up time 40 s	1/h	2.5	0	0	0
Heavy starting (CLASS 30E)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	43.4/38/34.4	53/48/43	68/62/56	82.5/75.5/65
• 300% I_M					
- Start-up time 20 s	1/h	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3
• 350% I_M					
- Start-up time 20 s	1/h	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M					
• Minimum/maximum	A	10/47	13/63	16/77	19/93
• Minimum/maximum in inside-delta circuits	A	17.3/81.4	22.5/109	27.7/133	32.9/161

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Type		3RW5534	3RW5535	3RW5536
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	35
- Start-up time 10 s	1/h	18	18	13
• 350% I_M				
- Start-up time 5 s	1/h	28	17	10
- Start-up time 10 s	1/h	10	4	0
Normal starting (CLASS 10E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	21	21	14
- Start-up time 10 s	1/h	8	7	4
• 350% I_M				
- Start-up time 5 s	1/h	13	4	0
- Start-up time 10 s	1/h	4	0	0
Heavy starting (CLASS 20E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	109/97/85	128/113/103	141/129/117
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	6	6
- Start-up time 40 s	1/h	0	0	0
Heavy starting (CLASS 30E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	89/81/74	108/98/88	117/105/93
• 300% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	3	3	3
• 350% I_M				
- Start-up time 20 s	1/h	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8
Adjustable rated motor current I_M				
• Minimum/maximum	A	23/113	29/143	34/171
• Minimum/maximum in inside-delta circuits	A	39.8/195	50.2/247	58.9/296

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Type		3RW5543	3RW5544	3RW5545	3RW5546	3RW5547	3RW5548
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M							
- Start-up time 5 s	1/h	43	43	38	43	32	13
- Start-up time 10 s	1/h	13	18	14	18	13	3
• 350% I_M							
- Start-up time 5 s	1/h	14	28	19	28	19	4
- Start-up time 10 s	1/h	0	10	5	10	6	0.4
Normal starting (CLASS 10E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	551/490/445
• 300% I_M							
- Start-up time 5 s	1/h	13	21	14	20	13	5
- Start-up time 10 s	1/h	2	8	4	8	3	--
• 350% I_M							
- Start-up time 5 s	1/h	0	13	5	12	6	1
- Start-up time 10 s	1/h	0	4	0	3	0.4	--
Heavy starting (CLASS 20E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	162/146/130	200/180/160	231/207/183	258/230/202	272/254/236	284/262/240
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2	2.5	2.5	2.5	2.5	2.5
Heavy starting (CLASS 30E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	138/122/106	160/140/120	183/159/135	202/174/160	210/190/170	220/200/180
• 300% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	3	3	3	3	3	3
• 350% I_M							
- Start-up time 20 s	1/h	4	4	4	4	4	4
- Start-up time 40 s	1/h	1.8	1.8	1.8	1.8	1.8	1.8
Adjustable rated motor current I_M							
• Minimum/maximum	A	42/210	50/250	63/315	74/370	94/470	114/570
• Minimum/maximum in inside-delta circuits	A	72.7/363	86.6/433	109.1/545	128.2/640	162.8/814	197.5/987

High Performance Soft Starters

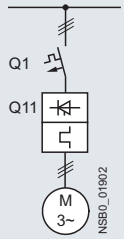
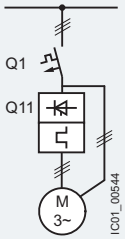
3RW55 Failsafe soft starters > General data

Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).

									
Soft starters		Motor starter protectors				Motor starter protectors			
		for 400 V systems		for 480 V systems		for 400 V systems		for 480 V systems	
Q11	Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q	I_q
Type	Type	kA	Type	kA	Type	kA	Type	kA	kA
Type of coordination "1"	ToC 1	Inline circuit				Inside-delta circuit			
3RW5513		3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5514		3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5515		3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5516		3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5517		3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5524		3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5525		3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5526		3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5527		3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5534		3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5535		3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5536		3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5543		3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5544		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5545		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5546		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5547		3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5548		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

Soft starters	gG class fuse	Line contactor (optional)	gG class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V in the supply cable	for systems up to 480 V in the delta
Q11	F1	Q21	F1	Q21	Q21
Type	Type	Type	Type	Type	Type
Type of coordination "1"	Inline circuit		Inside-delta circuit		
3RW5513	3NA3820-6	3RT2025	3NA3820-6	3RT2027	3RT2025
3RW5514	3NA3820-6	3RT2026	3NA3820-6	3RT2027	3RT2026
3RW5515	3NA3822-6	3RT2027	3NA3822-6	3RT2036	3RT2027
3RW5516	3NA3824-6	3RT2035	3NA3824-6	3RT2037	3RT2035
3RW5517	3NA3824-6	3RT2035	3NA3824-6	3RT2038	3RT2035
3RW5524	3NA3824-6	3RT2036	3NA3824-6	3RT2046	3RT2036
3RW5525	3NA3830-6	3RT2037	3NA3830-6	3RT2047	3RT2037
3RW5526	3NA3132-6	3RT2038	3NA3132-6	3RT1055	3RT2038
3RW5527	3NA3136-6	3RT2046	3NA3136-6	3RT1056	3RT2046
3RW5534	3NA3244-6	3RT1054	3NA3244-6	3RT1064	3RT1054
3RW5535	3NA3244-6	3RT1055	3NA3244-6	3RT1065	3RT1055
3RW5536	3NA3365-6	3RT1056	3NA3365-6	3RT1066	3RT1056
3RW5543	2 x 3NA3354-6	3RT1064	2 x 3NA3354-6	3RT1075	3RT1064
3RW5544	2 x 3NA3354-6	3RT1065	2 x 3NA3354-6	3RT1076	3RT1065
3RW5545	2 x 3NA3365-6	3RT1075	2 x 3NA3365-6	3TF68	3RT1075
3RW5546	2 x 3NA3365-6	3RT1075	2 x 3NA3365-6	3TF69	3RT1075
3RW5547	2 x 3NA3365-6	3RT1076	2 x 3NA3365-6	3TF69	3RT1076
3RW5548	2 x 3NA3365-6	3TF68	2 x 3NA3365-6	--	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

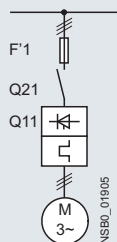
Motor feeders according to IEC with 3NE1 SITOP fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	Line contactor (optional)
Q11	for systems up to 480 V	for systems up to 480 V
Type	F'1	Q21
Type	Type	Type
Type of coordination "2"	Inline circuit	
3RW5513	3NE1815-0	3RT2025
3RW5514	3NE1802-0	3RT2026
3RW5515	3NE1817-0	3RT2027
3RW5516	3NE1818-0	3RT2035
3RW5517	3NE1820-0	3RT2035
3RW5524	3NE1021-2	3RT2036
3RW5525	3NE1022-0	3RT2037
3RW5526	3NE1224-0	3RT2038
3RW5527	3NE1224-0	3RT2046
3RW5534	3NE1225-0	3RT1054
3RW5535	3NE1227-0	3RT1055
3RW5536	3NE1230-0	3RT1056
3RW5543	3NE1230-2	3RT1064
3RW5544	3NE1331-0	3RT1065
3RW5545	3NE1334-2	3RT1075
3RW5546	3NE1334-2	3RT1075
3RW5547	3NE1436-2	3RT1076
3RW5548	3NE1437-2	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination "2" ([see page 7/47](#)).

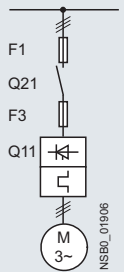
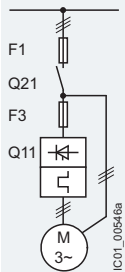
High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$ Note:For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

							
Soft starters	gG class fuse	aR class fuse	Line contactor (optional)	gG class fuse	aR class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V in the supply cable	for systems up to 480 V in the delta
Q11 Type	F1 Type	F3 Type	Q21 Type	F1 Type	F3 Type	Q21 Type	Q21 Type
Type of coordination "2"	Inline circuit			Inside-delta circuit			
3RW5513	3NA3820-6	3NE8017-1	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2025
3RW5514	3NA3820-6	3NE8020-1	3RT2026	3NA3820-6	3NE8020-1	3RT2027	3RT2026
3RW5515	3NA3822-6	3NE8021-1	3RT2027	3NA3822-6	3NE8021-1	3RT2036	3RT2027
3RW5516	3NA3824-6	3NE8022-1	3RT2035	3NA3824-6	3NE8022-1	3RT2037	3RT2035
3RW5517	3NA3824-6	3NE8024-1	3RT2035	3NA3824-6	3NE8024-1	3RT2038	3RT2035
3RW5524	3NA3824-6	3NE8024-1	3RT2036	3NA3824-6	3NE8024-1	3RT2046	3RT2036
3RW5525	3NA3830-6	3NE3227	3RT2037	3NA3830-6	3NE3227	3RT2047	3RT2037
3RW5526	3NA3132-6	3NE3227	3RT2038	3NA3132-6	3NE3227	3RT1055	3RT2038
3RW5527	3NA3136-6	3NE3227	3RT2046	3NA3136-6	3NE3227	3RT1056	3RT2046
3RW5534	3NA3244-6	3NE3231	3RT1054	3NA3244-6	3NE3231	3RT1064	3RT1054
3RW5535	3NA3244-6	3NE3233	3RT1055	3NA3244-6	3NE3233	3RT1065	3RT1055
3RW5536	3NA3365-6	3NE3334-0B	3RT1056	3NA3365-6	3NE3334-0B	3RT1066	3RT1056
3RW5543	2 x 3NA3354-6	3NE3333	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1064
3RW5544	2 x 3NA3354-6	3NE3335	3RT1065	2 x 3NA3354-6	3NE3335	3RT1076	3RT1065
3RW5545	2 x 3NA3365-6	--	3RT1075	2 x 3NA3365-6	--	3TF68	3RT1075
3RW5546	2 x 3NA3365-6	--	3RT1075	2 x 3NA3365-6	--	3TF69	3RT1075
3RW5547	2 x 3NA3365-6	3NE3340-8	3RT1076	2 x 3NA3365-6	3NE3340-8	3TF69	3RT1076
3RW5548	2 x 3NA3365-6	3NC3342-1U	3TF68	2 x 3NA3365-6	3NC3342-1U	--	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/44](#)). In these cases, optional line contactors can be dispensed with.

High Performance Soft Starters

3RW55 Failsafe soft starters > General data

Reversing operation with reversing contactorsNote:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

(For an example circuit, [see 3RW55 Equipment Manual, Appendix A.3](#))

Soft starters	Reversing contactor assembly for systems up to 480 V Q21 / Q22	For reversing contactor for systems up to 480 V Q21 / Q22
Type	Type	Type
3RW5513	3RA2325	3RT2025
3RW5514	3RA2326	3RT2026
3RW5515	3RA2327	3RT2027
3RW5516	3RA2335	3RT2035
3RW5517	3RA2335	3RT2035
3RW5524	3RA2336	3RT2036
3RW5525	3RA2337	3RT2037
3RW5526	3RA2338	3RT2038
3RW5527	3RA2346	3RT2046
3RW5534	--	3RT1054
3RW5535	--	3RT1055
3RW5536	--	3RT1056
3RW5543	--	3RT1064
3RW5544	--	3RT1065
3RW5545	--	3RT1075
3RW5546	--	3RT1075
3RW5547	--	3RT1076
3RW5548	--	3TF68

High Performance Soft Starters

3RW55 Failsafe soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.



3RW552.



3RW553.



3RW554.

At 40 °C			At 50 °C				SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors		Operational current	Rating [hp] for three-phase motors							
	At 230 V	At 400 V		At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
13	3	5.5	11.5	2	3	7.5	5	3RW5513-□HF□4		1	1 unit
18	4	7.5	15.9	3	5	10	5	3RW5514-□HF□4		1	1 unit
25	5.5	11	22.3	5	7.5	15	5	3RW5515-□HF□4		1	1 unit
32	7.5	15	28.4	7.5	10	20	5	3RW5516-□HF□4		1	1 unit
38	11	18.5	33.5	10	10	20	5	3RW5517-□HF□4		1	1 unit
47	11	22	41.6	10	10	30	5	3RW5524-□HF□4		1	1 unit
63	18.5	30	55.5	15	20	40	5	3RW5525-□HF□4		1	1 unit
77	22	37	68	20	25	50	5	3RW5526-□HF□4		1	1 unit
93	22	45	82.5	25	30	60	5	3RW5527-□HF□4		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

1
3

0
1

- ¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

At 40 °C			At 50 °C				SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors		Operational current	Rating [hp] for three-phase motors							
	At 230 V	At 400 V		At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
113	30	55	101	30	30	75	5	3RW5534-□HF□4		1	1 unit
143	37	75	128	40	40	100	5	3RW5535-□HF□4		1	1 unit
171	45	90	153	50	50	100	5	3RW5536-□HF□4		1	1 unit
210	55	110	186	50	60	150	5	3RW5543-□HF□4		1	1 unit
250	75	132	220	60	75	150	5	3RW5544-□HF□4		1	1 unit
315	90	160	279	75	100	200	5	3RW5545-□HF□4		1	1 unit
370	110	200	328	100	125	250	5	3RW5546-□HF□4		1	1 unit
470	132	250	416	150	150	350	5	3RW5547-□HF□4		1	1 unit
570	160	315	504	150	200	400	5	3RW5548-□HF□4		1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

2
6

0
1

- ¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

High Performance Soft Starters

3RW55 Failsafe soft starters > Inside-delta circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10E)

3RW551.



3RW552.



3RW553.



3RW554.

At 40 °C for inside-delta circuit			At 50 °C for inside-delta circuit				SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors		Operational current	Rating [hp] for three-phase motors							
	At 230 V	At 400 V		At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
22.5	5.5	11	19.9	5	5	10	5	3RW5513-□HF□4		1	1 unit
31.5	7.5	15	28	7.5	7.5	20	5	3RW5514-□HF□4		1	1 unit
43.3	11	18.5	39	10	10	25	5	3RW5515-□HF□4		1	1 unit
55.4	15	22	49	15	15	30	5	3RW5516-□HF□4		1	1 unit
65.8	18.5	30	58	15	20	40	5	3RW5517-□HF□4		1	1 unit
81.4	22	45	72	20	25	50	5	3RW5524-□HF□4		1	1 unit
109	30	55	96	30	30	75	5	3RW5525-□HF□4		1	1 unit
133	37	75	118	30	40	75	5	3RW5526-□HF□4		1	1 unit
161	45	90	143	40	50	100	5	3RW5527-□HF□4		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

1
30
1

At 40 °C for inside-delta circuit			At 50 °C for inside-delta circuit				SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors		Operational current	Rating [hp] for three-phase motors							
	At 230 V	At 400 V		At 200/208 V	At 220/230 V	At 460/480 V					
A	kW	kW	A	hp	hp	hp	d				
Operational voltage 200 ... 480 V											
196	55	110	175	50	60	125	5	3RW5534-□HF□4		1	1 unit
248	75	132	222	75	75	150	5	3RW5535-□HF□4		1	1 unit
296	90	160	265	75	100	200	5	3RW5536-□HF□4		1	1 unit
364	110	200	322	100	125	250	5	3RW5543-□HF□4		1	1 unit
433	132	250	381	125	150	300	5	3RW5544-□HF□4		1	1 unit
546	160	315	483	150	200	400	5	3RW5545-□HF□4		1	1 unit
641	200	355	568	200	200	450	5	3RW5546-□HF□4		1	1 unit
814	250	400	721	250	250	600	5	3RW5547-□HF□4		1	1 unit
987	315	560	873	300	350	750	5	3RW5548-□HF□4		1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW55 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

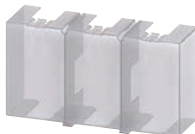
For the constraints for the motor outputs specified here,
[see page 7/7.](#)

2
60
1

High Performance Soft Starters

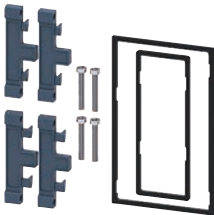
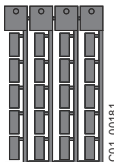
3RW55 Failsafe soft starters > Accessories

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
						d			
Fan covers									
	Fan cover	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	--	▶	3RW5983-0FC00		1	1 unit
		3RW554 (1x)	--	--	▶	3RW5984-0FC00		1	1 unit
Terminal covers									
	Terminal cover	3RW552 (2x), 3RW553 (2x)	--	--	▶	3RW5983-0TC20		1	1 unit
		3RW554 (2x)	--	--	▶	3RW5984-0TC20		1	1 unit
Enclosure components									
	Hinged cover	3RW55	Without cutout	--	▶	3RW5950-0GL20		1	1 unit
Communication modules									
	Communication module	3RW55	PROFINET High Feature with integral switch	--	▶	3RW5950-0CH00		1	1 unit
			PROFINET Standard	--	▶	3RW5980-0CS00		1	1 unit
			PROFIBUS	--	▶	3RW5980-0CP00		1	1 unit
			EtherNet/IP	--	▶	3RW5980-0CE00		1	1 unit
			Modbus RTU	--	▶	3RW5980-0CR00		1	1 unit
			Modbus TCP	--	▶	3RW5980-0CT00		1	1 unit

High Performance Soft Starters

3RW55 Failsafe soft starters > Accessories

Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
d								
HMI modules								
	IP65 door mounting kit for HMI modules	3RW55	IP65	For HMI modules	▶	3RW5980-0HD00	1	1 unit
3RW5980-0HD00								
Connecting cables								
	HMI connection cable	3RW55	5 m, round	For door mounting	▶	3RW5980-0HC60	1	1 unit
			2.5 m, round		▶	3UF7933-0BA00-0	1	1 unit
			1.0 m, round		▶	3UF7937-0BA00-0	1	1 unit
			0.5 m, round		▶	3UF7932-0BA00-0	1	1 unit
3UF793.-0BA00-0								
Further accessories								
	Push-in lugs for wall mounting	--	Two lugs are required per device	For HMI modules and communication modules	2	3ZY1311-0AA00	1	10 units
3ZY1311-0AA00								
Blank labels								
	Unit labeling plates ¹⁾	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	3RT2900-1SB20	100	340 units
3RT2900-1SB20								

¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH ([see page 16/15](#)).

General Performance Soft Starters

3RW52 soft starters > General data

Overview

More information

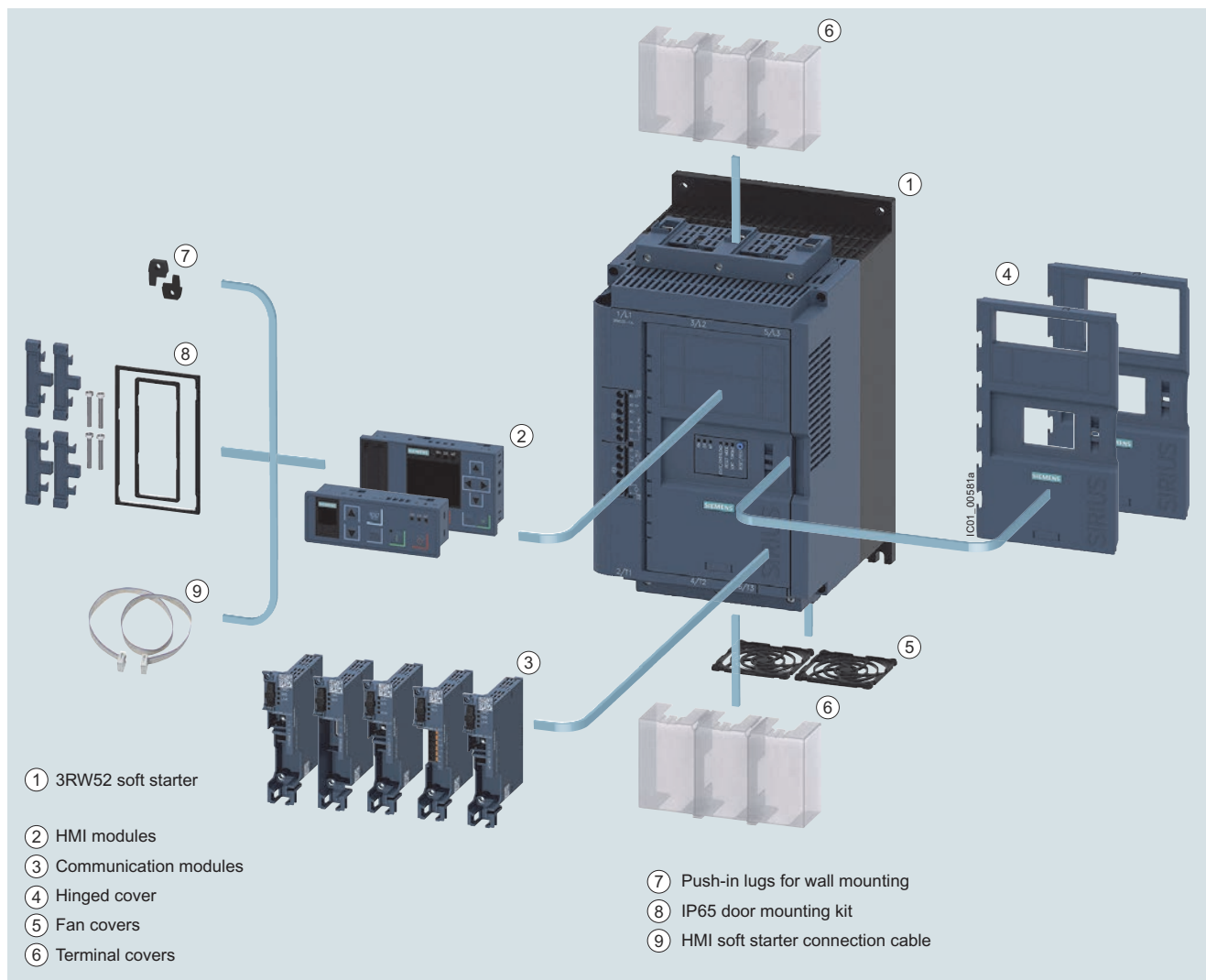
Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW52
 TIA Selection Tool Cloud (TST Cloud), see
<https://www.siemens.com/tstcloud/?node=3rw52>

Industry Online Support (SIOS) topic page, see
<https://support.industry.siemens.com/cs/ww/en/view/109747404>
 Simulation Tool for Soft Starters (STS), see page 7/7 or
<https://support.industry.siemens.com/cs/ww/en/view/101494917>
 SIRIUS Soft Starter ES (TIA Portal), see page 14/5



SIRIUS 3RW52 General Performance soft starters are the ideal solution for standard applications. With ideal three-phase motor control, they cover the performance range from 7.5 to 400HP @ 480V.

Optional HMI modules, plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output or thermistor motor protection ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW52 soft starters offer efficient switching for long-term, energy-saving use.

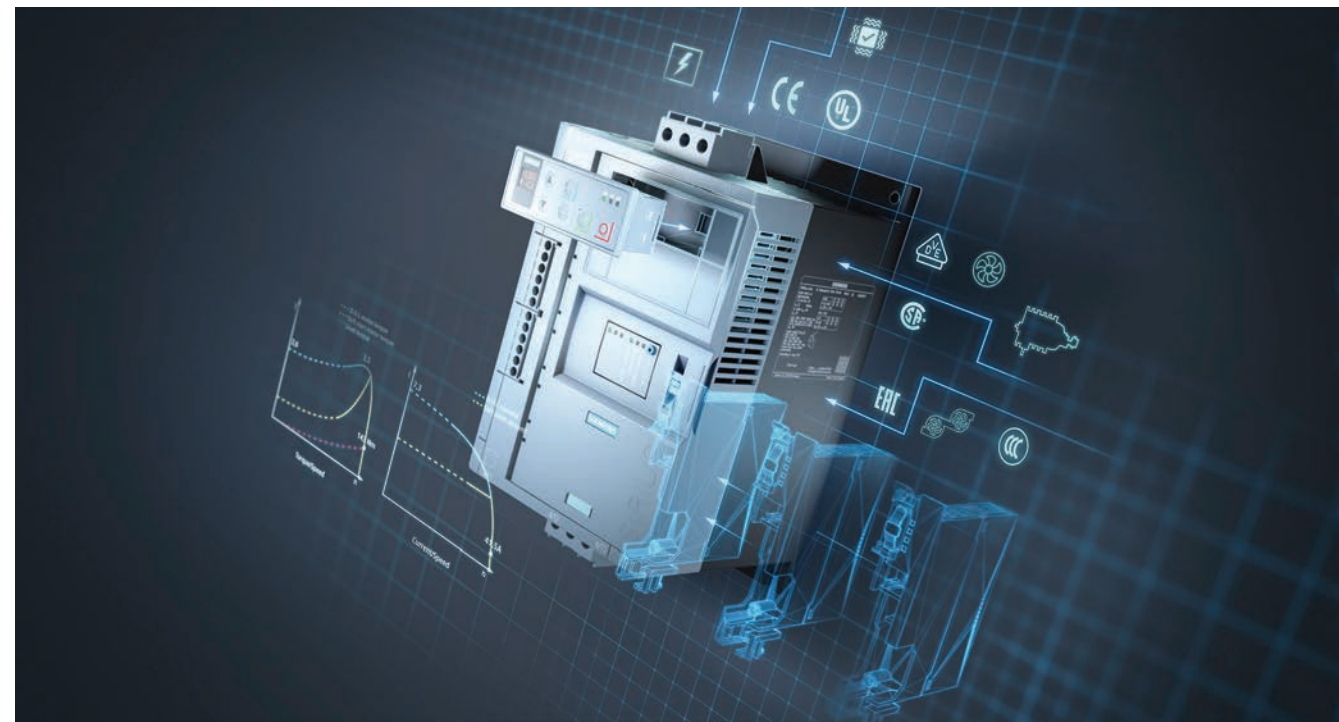


3RW52 General Performance soft starters with accessories (see page 7/69), for expansion with HMI module or communication module

General Performance Soft Starters

3RW52 soft starters > General data

Benefits



Product characteristics / function	Performance features / benefits
Hybrid switching devices and three-phase motor control	Minimum power loss and optimum/symmetrical motor control
TIA-Integration – communication modules and HMI modules optional	Efficient configuration and maximum flexibility in automation engineering
Soft Torque	Reduced mechanical loading and optimum pump stop
Parameterization using potentiometers	Simple and fast commissioning
Wide range for control supply and main voltage	Low variance, high system availability even with weak supply networks

General Performance Soft Starters

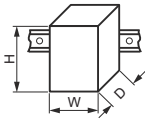
3RW52 soft starters > General data

Technical specifications

More information

Technical specifications, see <https://support.industry.siemens.com/cs/ww/en/ps/25100/td>
 Equipment Manual "SIRIUS 3RW52 Soft Starter", see <https://support.industry.siemens.com/cs/ww/en/view/109753751>

FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/25100/faq>
 Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>

Type	3RW5213 3RW5214 3RW5215		3RW5216 3RW5217	3RW5224 3RW5225	3RW5226 3RW5227 3RW5234 3RW5235 3RW5236	3RW5243 3RW5244 3RW5245 3RW5246 3RW5247 3RW5248
Installation/fixing/dimensions						
Width x height x depth		mm	170 × 275 × 152		185 × 306 × 203	
					210 × 393 × 203	
Type of mounting			Screw fixing			
Mounting position			For vertical mounting surface can be rotated +/- 10° and tilted forward or backward			
			For vertical mounting surface can be rotated +/- 90°, for vertical mounting surface can be tilted +/- 22.5° forward or backward		For vertical mounting surface can be rotated +/- 10° and tilted forward or backward	
			For vertical mounting surface can be rotated +/- 90°, for vertical mounting surface can be tilted +/- 22.5° forward or backward			
Distance to be maintained with side-by-side mounting						
• Above	mm	100				
• At the side	mm	5				
• Below	mm	75				
Maximum installation altitude above sea level ¹⁾			m 5 000			
Degree of protection			IP00			
Ambient conditions						
Ambient temperature						
• During operation ²⁾	°C	-25 ... +60				
• During storage and transport	°C	-40 ... +80				
Environmental category according to IEC 60721						
• During operation			3K6 (no ice formation, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6			
• During storage			1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4			
• During transport			2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)			

¹⁾ Derating from 1 000 m, see characteristic curve on page 7/7.

²⁾ Note derating above 40 °C.

General Performance Soft Starters

3RW52 soft starters > General data

Type		3RW52...-..C0.	3RW52...-..C1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit¹⁾		Fuse 4 A gG ($I_{cu} = 1 \text{ kA}$), fuse 6 A quick-response ($I_{cu} = 1 \text{ kA}$), MCB C1 ($I_{cu} = 600 \text{ A}$), MCB C6 ($I_{cu} = 300 \text{ A}$)	

¹⁾ Not included in scope of supply

Type		3RW52...-..C.4	3RW52...-..C.5
Power electronics			
Operational voltage, rated value			
• Relative negative tolerance/relative positive tolerance	V	200 ... 480	200 ... 600
	%	-15/10	
Operational voltage for inside-delta circuit, rated value			
• Relative negative tolerance/relative positive tolerance	V	200 ... 480	200 ... 600
	%	-15/10	
Operating frequency, rated value			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Minimum load [% of I_M]¹⁾		15	
Maximum cable length between soft starter and motor		m	
		800	

¹⁾ Relative to the smallest adjustable I_e .

General Performance Soft Starters

3RW52 soft starters > General data

Type		3RW5213	3RW5214	3RW5215	3RW5216	3RW5217
Rated operational current I_e	A	13	18	25	32	38
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 5 s	1/h	43	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18	18
• 350% I_M						
- Start-up time 5 s	1/h	28	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10	10
Normal starting (CLASS 10E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	32/28.4/26	38/33.5/30.5
• 300% I_M						
- Start-up time 20 s	1/h	21	21	21	21	21
- Start-up time 40 s	1/h	8	8	8	8	8
• 350% I_M						
- Start-up time 20 s	1/h	13	13	13	13	13
- Start-up time 40 s	1/h	4	4	4	4	4
Heavy starting (CLASS 20E)						
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	13/11.5/10.5	18/15.9/13.8	25/22.3/19.6	29.6/27.2/23.6	33.5/30.5/27.5
• 300% I_M						
- Start-up time 20 s	1/h	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4
• 350% I_M						
- Start-up time 20 s	1/h	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M						
• Minimum/maximum	A	5.5/13	7.5/18	11.5/25	14/32	15.5/38
• Minimum/maximum in inside-delta circuits	A	9.5/22.5	13/31.2	19.9/43.3	24.2/55.4	26.8/65.8

General Performance Soft Starters

3RW52 soft starters > General data

Type		3RW5224	3RW5225	3RW5226	3RW5227
Rated operational current I_e	A	47	63	77	93
Power electronics					
Load rating with rated operational current I_e					
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
Permissible rated motor current and starts/h					
Normal starting (CLASS 10A)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 5 s	1/h	43	43	43	43
- Start-up time 10 s	1/h	18	18	18	18
• 350% I_M					
- Start-up time 5 s	1/h	28	28	28	28
- Start-up time 10 s	1/h	10	10	10	10
Normal starting (CLASS 10E)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	77/68/62	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	21	21	21	21
- Start-up time 40 s	1/h	8	8	8	8
• 350% I_M					
- Start-up time 20 s	1/h	13	13	13	13
- Start-up time 40 s	1/h	4	4	4	4
Heavy starting (CLASS 20E)					
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	47/41.6/36.2	63/55.5/50.5	65/59/53	93/82.5/75.5
• 300% I_M					
- Start-up time 20 s	1/h	10	10	10	10
- Start-up time 40 s	1/h	4	3	4	4
• 350% I_M					
- Start-up time 20 s	1/h	7	4	7	7
- Start-up time 40 s	1/h	2	0	2.5	2.5
Adjustable rated motor current I_M					
• Minimum/maximum	A	20/47	25.5/63	32/77	40.5/93
• Minimum/maximum in inside-delta circuits	A	34.6/81.4	44.2/109	55.4/133	70.1/161

General Performance Soft Starters

3RW52 soft starters > General data

Type		3RW5234	3RW5235	3RW5236
Rated operational current I_e	A	113	143	171
Power electronics				
Load rating with rated operational current I_e				
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	113/101/89	143/128/118	171/153/141
Permissible rated motor current and starts/h				
Normal starting (CLASS 10A)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	143/128/118	171/153/141
• 300% I_M				
- Start-up time 5 s	1/h	43	43	43
- Start-up time 10 s	1/h	18	18	18
• 350% I_M				
- Start-up time 5 s	1/h	28	27	20
- Start-up time 10 s	1/h	10	8	4
Normal starting (CLASS 10E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	113/101/89	139/127/116	158/146/129
• 300% I_M				
- Start-up time 20 s	1/h	21	21	21
- Start-up time 40 s	1/h	8	8	8
• 350% I_M				
- Start-up time 20 s	1/h	13	12	12
- Start-up time 40 s	1/h	4	1	1
Heavy starting (CLASS 20E)				
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated	A	109/97/85	113/103/93	129/117/105
• 300% I_M				
- Start-up time 20 s	1/h	10	10	10
- Start-up time 40 s	1/h	4	4	4
• 350% I_M				
- Start-up time 20 s	1/h	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5
Adjustable rated motor current I_M				
• Minimum/maximum	A	53/113	68/143	81/171
• Minimum/maximum in inside-delta circuits	A	91.8/196	118/248	140/296

General Performance Soft Starters

3RW52 soft starters > General data

Type		3RW5243	3RW5244	3RW5245	3RW5246	3RW5247	3RW5248
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a		210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
• 300% I_M - Start-up time 5 s - Start-up time 10 s	1/h	43	43	43	43	30	20
	1/h	18	18	14	18	11	6
• 350% I_M - Start-up time 5 s - Start-up time 10 s	1/h	28	28	16	28	17	9
	1/h	5	10	4	10	5	1
Normal starting (CLASS 10E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		197/184/170	250/220/200	279/255/231	370/328/300	398/362/326	460/416/372
• 300% I_M - Start-up time 20 s - Start-up time 40 s	1/h	21	21	21	21	21	18
	1/h	8	8	8	8	8	7
• 350% I_M - Start-up time 20 s - Start-up time 40 s	1/h	12	13	12	13	13	11
	1/h	1	4	3	4	4	2
Heavy starting (CLASS 20E)							
Rated motor current I_M , $T_u = 40/50/60$ °C ON period = 70%; motor protection activated		162/146/130	200/180/160	195/171/147	258/230/202	272/236/218	284/262/240
• 300% I_M - Start-up time 20 s - Start-up time 40 s	1/h	10	10	10	10	10	10
	1/h	4	4	4	4	4	4
• 350% I_M - Start-up time 20 s - Start-up time 40 s	1/h	7	7	7	7	7	7
	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M							
• Minimum/maximum	A	90/210	100/250	135/315	160/370	200/470	240/570
• Minimum/maximum in inside-delta circuits	A	156/364	173/433	234/546	277/641	346/814	416/987

General Performance Soft Starters

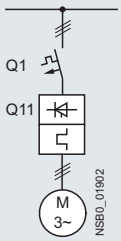
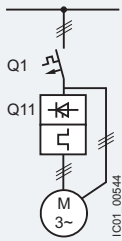
3RW52 soft starters > General data

Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).

									
Soft starters		Motor starter protectors				Motor starter protectors			
		for 400 V systems		for 500 V systems		for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q	Q1	I_q	Q1	I_q	I_q
Type	Type	kA	Type	kA	Type	kA	Type	kA	kA
Type of coordination "1"	ToC 1	Inline circuit				Inside-delta circuit			
3RW5213		3RV2032-4TA10	65	3RV2032-4TA10	18	3RV2032-4DA10	65	3RV2032-4DA10	18
3RW5214		3RV2032-4DA10	65	3RV2032-4DA10	15	3RV2032-4EA10	65	3RV2032-4EA10	15
3RW5215		3RV2032-4EA10	65	3RV2032-4EA10	15	3RV2032-4VA10	65	3RV2032-4VA10	15
3RW5216		3RV2032-4VA10	65	3RV2032-4VA10	10	3RV2032-4JA10	65	3RV2032-4JA10	10
3RW5217		3RV2032-4WA10	65	3RV2032-4WA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5224		3RV2032-4JA10	65	3RV2032-4JA10	10	3RV2032-4RA10	65	3RV2032-4RA10	10
3RW5225		3VA2163-7MN32-0AA0	65	3VA2163-7MN32-0AA0	20	3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20
3RW5226		3VA2110-7MN32-0AA0	65	3VA2110-7MN32-0AA0	20	3VA2216-7MN32-0AA0	65	3VA2216-7MN32-0AA0	20
3RW5227		3VA2216-7MN32-0AA0	15	3VA2216-7MN32-0AA0	10	3VA2220-7MN32-0AA0	15	3VA2220-7MN32-0AA0	10
3RW5234		3VA2216-7MN32-0AA0	65	--	--	3VA2220-7MN32-0AA0	65	--	--
3RW5235		3VA2220-7MN32-0AA0	65	--	--	3VA2325-7MN32-0AA0	65	--	--
3RW5236		3VA2325-7MN32-0AA0	30	3VA2325-7MN32-0AA0	10	3VA2440-7MN32-0AA0	30	3VA2440-7MN32-0AA0	10
3RW5243		3VA2325-7MN32-0AA0	65	3VA2325-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5244		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65
3RW5245		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5246		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5247		3VA2450-7MN32-0AA0	65	3VA2450-7MN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65
3RW5248		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65	3VA2510-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

General Performance Soft Starters

3RW52 soft starters > General data

Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

Soft starters	gG class fuse			Line contactor (optional)			gG class fuse		
	for systems up to 600 V			for systems up to 480 V			for systems up to 600 V		
Q11	F1			Q21	Q21		F1		
Type	Type			Type	Type		Type		
Type of coordination "1"	Inline circuit				Inside-delta circuit				
3RW5213	3NA3820-6	3RT2025	3RT2025		3NA3820-6	3RT2027	3RT2035	3RT2025	3RT2025
3RW5214	3NA3820-6	3RT2026	3RT2027		3NA3820-6	3RT2027	3RT2037	3RT2026	3RT2027
3RW5215	3NA3822-6	3RT2027	3RT2037		3NA3822-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5216	3NA3824-6	3RT2035	3RT2037		3NA3824-6	3RT2037	3RT2038	3RT2035	3RT2037
3RW5217	3NA3824-6	3RT2035	3RT2037		3NA3824-6	3RT2038	3RT2046	3RT2035	3RT2037
3RW5224	3NA3824-6	3RT2036	3RT2037		3NA3824-6	3RT2046	3RT2047	3RT2036	3RT2037
3RW5225	3NA3830-6	3RT2037	3RT2046		3NA3830-6	3RT2047	3RT2054	3RT2037	3RT2046
3RW5226	3NA3132-6	3RT2038	3RT2046		3NA3132-6	3RT1055	3RT1055	3RT2038	3RT2046
3RW5227	3NA3136-6	3RT2046	3RT2047		3NA3136-6	3RT1056	3RT1056	3RT2046	3RT2047
3RW5234	3NA3244-6	3RT1054	3RT1054		3NA3244-6	3RT1064	3RT1064	3RT1054	3RT1054
3RW5235	3NA3244-6	3RT1055	3RT1055		3NA3244-6	3RT1065	3RT1065	3RT1055	3RT1055
3RW5236	3NA3365-6	3RT1056	3RT1064		3NA3365-6	3RT1066	3RT1075	3RT1056	3RT1064
3RW5243	2 x 3NA3354-6	3RT1064	3RT1064		2 x 3NA3354-6	3RT1075	3RT1075	3RT1064	3RT1064
3RW5244	2 x 3NA3354-6	3RT1065	3RT1065		2 x 3NA3354-6	3RT1076	3RT1076	3RT1065	3RT1065
3RW5245	2 x 3NA3365-6	3RT1075	3RT1075		2 x 3NA3365-6	3TF68	3TF68	3RT1075	3RT1075
3RW5246	2 x 3NA3365-6	3RT1075	3RT1075		2 x 3NA3365-6	3TF69	3TF69	3RT1075	3RT1075
3RW5247	2 x 3NA3365-6	3RT1076	3RT1276		2 x 3NA3365-6	3TF69	3TF69	3RT1076	3RT1276
3RW5248	2 x 3NA3365-6	3TF68	3TF68		2 x 3NA3365-6	--	--	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

General Performance Soft Starters

3RW52 soft starters > General data

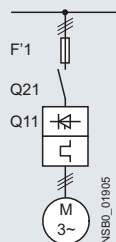
Motor feeders according to IEC with 3NE1 SITOP fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2"	TCC 2 Inline circuit		
3RW5213	3NE1815-0	3RT2025	3RT2025
3RW5214	3NE1802-0	3RT2026	3RT2027
3RW5215	3NE1817-0	3RT2027	3RT2037
3RW5216	3NE1818-0	3RT2035	3RT2037
3RW5217	3NE1820-0	3RT2035	3RT2037
3RW5224	3NE1021-2	3RT2036	3RT2037
3RW5225	3NE1022-0	3RT2037	3RT2046
3RW5226	3NE1224-0	3RT2038	3RT2046
3RW5227	3NE1224-0	3RT2046	3RT2047
3RW5234	3NE1225-0	3RT1054	3RT1054
3RW5235	3NE1227-0	3RT1055	3RT1055
3RW5236	3NE1230-0	3RT1056	3RT1064
3RW5243	3NE1230-2 ¹⁾	3RT1064	3RT1064
3RW5244	3NE1331-0	3RT1065	3RT1065
3RW5245	3NE1334-2	3RT1075	3RT1075
3RW5246	3NE1334-2	3RT1075	3RT1075
3RW5247	3NE1436-2	3RT1076	3RT1276
3RW5248	3NE1437-2	3TF68	3TF68

¹⁾ For systems up to 500 V.

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

In inside-delta circuits, a gR class full-range fuse could not provide the semiconductor protection of the delta-connected soft starter with a short-circuit breaking capacity that is adequate for practical use. In this case, we recommend using aR class partial-range fuses for semiconductor protection for type of coordination "2" ([see page 7/64](#)).

General Performance Soft Starters

3RW52 soft starters > General data

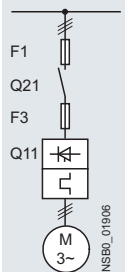
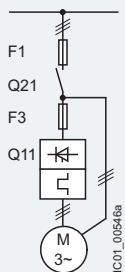
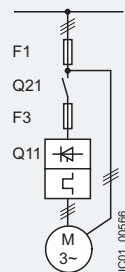
Motor feeders according to IEC with fuses 3NE8 / 3NE4 / 3NE3

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

										
Soft starters	gG class fuse	aR class fuse	Line contactor (optional)		gG class fuse	aR class fuse	Line contactor (optional)			
	for systems up to 600 V	for systems up to 500 V	for systems up to 480 V	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V in the supply cable	for systems up to 600 V in the supply cable	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	F3	Q21	Q21	F1	F3	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2"	Inline circuit				Inside-delta circuit					
3RW5213	3NA3820-6	3NE8017-1	3RT2025	3RT2025	3NA3820-6	3NE8017-1	3RT2027	3RT2035	3RT2025	3RT2025
3RW5214	3NA3820-6	3NE8020-1	3RT2026	3RT2027	3NA3820-6	3NE8020-1	3RT2027	3RT2037	3RT2026	3RT2027
3RW5215	3NA3822-6	3NE8021-1	3RT2027	3RT2037	3NA3822-6	3NE8021-1	3RT2036	3RT2037	3RT2027	3RT2037
3RW5216	3NA3824-6	3NE8022-1	3RT2035	3RT2037	3NA3824-6	3NE8022-1	3RT2037	3RT2038	3RT2035	3RT2037
3RW5217	3NA3824-6	3NE8024-1	3RT2035	3RT2037	3NA3824-6	3NE8024-1	3RT2038	3RT2046	3RT2035	3RT2037
3RW5224	3NA3824-6	3NE8024-1	3RT2036	3RT2037	3NA3824-6	3NE8024-1	3RT2046	3RT2047	3RT2036	3RT2037
3RW5225	3NA3830-6	3NE8024-1	3RT2037	3RT2046	3NA3830-6	3NE8024-1	3RT2047	3RT1054	3RT2037	3RT2046
3RW5226	3NA3132-6	3NE8024-1	3RT2038	3RT2046	3NA3132-6	3NE8024-1	3RT1055	3RT1055	3RT2038	3RT2046
3RW5227	3NA3136-6	3NE4124	3RT2046	3RT2047	3NA3136-6	3NE4124	3RT1056	3RT1056	3RT2046	3RT2047
3RW5234	3NA3244-6	3NE3332-0B	3RT1054	3RT1054	3NA3244-6	3NE3332-0B	3RT1064	3RT1064	3RT1054	3RT1054
3RW5235	3NA3244-6	3NE3334-0B	3RT1055	3RT1055	3NA3244-6	3NE3334-0B	3RT1065	3RT1065	3RT1055	3RT1055
3RW5236	3NA3365-6	3NE3335	3RT1056	3RT1064	3NA3365-6	3NE3335	3RT1066	3RT1075	3RT1056	3RT1064
3RW5243	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064	2 x 3NA3354-6	3NE3333	3RT1075	3RT1075	3RT1064	3RT1064
3RW5244	2 x 3NA3354-6	3NE3336	3RT1065	3RT1065	2 x 3NA3354-6	3NE3336	3RT1076	3RT1076	3RT1065	3RT1065
3RW5245	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075	2 x 3NA3365-6	3NE3336	3TF68	3TF68	3RT1075	3RT1075
3RW5246	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075	2 x 3NA3365-6	3NE3336	3TF69	3TF69	3RT1075	3RT1075
3RW5247	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1276	2 x 3NA3365-6	3NE3340-8	3TF69	3TF69	3RT1076	3RT1276
3RW5248	2 x 3NA3365-6	3NE3340-8	3TF68	3TF68	2 x 3NA3365-6	3NE3340-8	--	--	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2/3VA motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/61](#)). In these cases, optional line contactors can be dispensed with.

General Performance Soft Starters

3RW52 soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10A)

3RW521.



3RW522.



3RW523.



3RW524.

At 40 °C				At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
13	3	5.5	--	11.5	2	3	7.5	--	5	3RW5213-□□C□4		1	1 unit
18	4	7.5	--	15.9	3	5	10	--	5	3RW5214-□□C□4		1	1 unit
25	5.5	11	--	22.3	5	7.5	15	--	5	3RW5215-□□C□4		1	1 unit
32	7.5	15	--	28.4	7.5	10	20	--	5	3RW5216-□□C□4		1	1 unit
38	11	18.5	--	33.5	10	10	20	--	5	3RW5217-□□C□4		1	1 unit
47	11	22	--	41.6	10	10	30	--	5	3RW5224-□□C□4		1	1 unit
63	18.5	30	--	55.5	15	20	40	--	5	3RW5225-□□C□4		1	1 unit
77	22	37	--	68	20	25	50	--	5	3RW5226-□□C□4		1	1 unit
93	22	45	--	82.5	25	30	60	--	5	3RW5227-□□C□4		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 7/7.

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At 40 °C				At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
113	30	55	--	101	30	30	75	--	5	3RW5234-□□□□4		1	1 unit
143	37	75	--	128	40	40	100	--	5	3RW5235-□□□□4		1	1 unit
171	45	90	--	153	50	50	100	--	5	3RW5236-□□□□4		1	1 unit
210	55	110	--	186	60	60	150	--	5	3RW5243-□□□□4		1	1 unit
250	75	132	--	220	60	75	150	--	5	3RW5244-□□□□4		1	1 unit
315	90	160	--	279	75	100	200	--	5	3RW5245-□□□□4		1	1 unit
370	110	200	--	328	100	125	250	--	5	3RW5246-□□□□4		1	1 unit
470	132	250	--	416	150	150	350	--	5	3RW5247-□□□□4		1	1 unit
570	160	315	--	504	150	200	400	--	5	3RW5248-□□□□4		1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 7/7.

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General Performance Soft Starters

3RW52 soft starters > Inline circuit **IE3/IE4 ready****For normal starting (CLASS 10A)**

3RW521.



3RW522.



3RW523.



3RW524.

At 40 °C				At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
13	3	5.5	7.5	11.5	2	3	7.5	10	5	3RW5213-□□C□5		1	1 unit
18	4	7.5	11	15.9	3	5	10	10	5	3RW5214-□□C□5		1	1 unit
25	5.5	11	15	22.3	5	7.5	15	20	5	3RW5215-□□C□5		1	1 unit
32	7.5	15	18.5	28.4	7.5	10	20	25	5	3RW5216-□□C□5		1	1 unit
38	11	18.5	22	33.5	10	10	20	30	5	3RW5217-□□C□5		1	1 unit
47	11	22	30	41.6	10	10	30	40	5	3RW5224-□□C□5		1	1 unit
63	18.5	30	37	55.5	15	20	40	50	5	3RW5225-□□C□5		1	1 unit
77	22	37	45	68	20	25	50	60	5	3RW5226-□□C□5		1	1 unit
93	22	45	55	82.5	25	30	60	75	5	3RW5227-□□C□5		1	1 unit

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

Note:

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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At 40 °C				At 50 °C					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
113	30	55	75	101	30	30	75	100	5	3RW5234-□□C□5		1	1 unit
143	37	75	90	128	40	40	100	125	5	3RW5235-□□C□5		1	1 unit
171	45	90	110	153	50	50	100	150	5	3RW5236-□□C□5		1	1 unit
210	55	110	132	186	60	60	150	150	5	3RW5243-□□C□5		1	1 unit
250	75	132	160	220	60	75	150	200	5	3RW5244-□□C□5		1	1 unit
315	90	160	200	279	75	100	200	250	5	3RW5245-□□C□5		1	1 unit
370	110	200	250	328	100	125	250	300	5	3RW5246-□□C□5		1	1 unit
470	132	250	315	416	150	150	350	450	5	3RW5247-□□C□5		1	1 unit
570	160	315	355	504	150	200	400	500	5	3RW5248-□□C□5		1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

Note:

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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General Performance Soft Starters

3RW52 soft starters > Inside-delta circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10A)

3RW521.



3RW522.



3RW523.



3RW524.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 480 V														
22.5	5.5	11	--	19.9	5	5	10	--	5	3RW5213-□□C□4		1	1 unit	
31.5	7.5	15	--	28	7.5	7.5	20	--	5	3RW5214-□□C□4		1	1 unit	
43.3	11	18.5	--	39	10	10	25	--	5	3RW5215-□□C□4		1	1 unit	
55.4	15	22	--	49	15	15	30	--	5	3RW5216-□□C□4		1	1 unit	
65.8	18.5	30	--	58	15	20	40	--	5	3RW5217-□□C□4		1	1 unit	
81.4	22	45	--	72	20	25	50	--	5	3RW5224-□□C□4		1	1 unit	
109	30	55	--	96	30	30	75	--	5	3RW5225-□□C□4		1	1 unit	
133	37	75	--	118	30	40	75	--	5	3RW5226-□□C□4		1	1 unit	
161	45	90	--	143	40	50	100	--	5	3RW5227-□□C□4		1	1 unit	

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 7/7.



At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 480 V														
196	55	110	--	175	50	60	125	--	5	3RW5234-□□C□4		1	1 unit	
248	75	132	--	222	75	75	150	--	5	3RW5235-□□C□4		1	1 unit	
296	90	160	--	265	75	100	200	--	5	3RW5236-□□C□4		1	1 unit	
364	110	200	--	322	100	125	250	--	5	3RW5243-□□C□4		1	1 unit	
433	132	250	--	381	125	150	300	--	5	3RW5244-□□C□4		1	1 unit	
546	160	315	--	483	150	200	400	--	5	3RW5245-□□C□4		1	1 unit	
641	200	355	--	568	200	200	450	--	5	3RW5246-□□C□4		1	1 unit	
814	250	400	--	721	250	250	600	--	5	3RW5247-□□C□4		1	1 unit	
987	315	560	--	873	300	350	750	--	5	3RW5248-□□C□4		1	1 unit	

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note:

For the constraints for the motor outputs specified here,
see page 7/7.



General Performance Soft Starters

3RW52 soft starters > Inside-delta circuit **IE3/IE4 ready**

For normal starting (CLASS 10A)



3RW521.



3RW522.



3RW523.



3RW524.

At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit					SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 600 V														
22.5	5.5	11	15	19.9	5	5	10	15	5	3RW5213-□□C□5		1	1 unit	
31.5	7.5	15	18.5	28	7.5	7.5	20	25	5	3RW5214-□□C□5		1	1 unit	
43.3	11	18.5	22	39	10	10	25	30	5	3RW5215-□□C□5		1	1 unit	
55.4	15	22	30	49	15	15	30	40	5	3RW5216-□□C□5		1	1 unit	
65.8	18.5	30	37	58	15	20	40	50	5	3RW5217-□□C□5		1	1 unit	
81.4	22	45	45	72	20	25	50	60	5	3RW5224-□□C□5		1	1 unit	
109	30	55	55	96	30	30	75	75	5	3RW5225-□□C□5		1	1 unit	
133	37	75	90	118	30	40	75	100	5	3RW5226-□□C□5		1	1 unit	
161	45	90	110	143	40	50	100	125	5	3RW5227-□□C□5		1	1 unit	

Type of electrical connection for the control circuit

Screw terminals

Spring-loaded terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

Note:

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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At 40 °C for inside-delta circuit				At 50 °C for inside-delta circuit						SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors									
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Operational voltage 200 ... 600 V														
196	55	110	132	175	50	60	125	150	5	3RW5234-□□C□5		1	1 unit	
248	75	132	160	222	75	75	150	200	5	3RW5235-□□C□5		1	1 unit	
296	90	160	200	265	75	100	200	250	5	3RW5236-□□C□5		1	1 unit	
364	110	200	250	322	100	125	250	300	5	3RW5243-□□C□5		1	1 unit	
433	132	250	315	381	125	150	300	350	5	3RW5244-□□C□5		1	1 unit	
546	160	315	355	483	150	200	400	500	5	3RW5245-□□C□5		1	1 unit	
641	200	355	450	568	200	200	450	600	5	3RW5246-□□C□5		1	1 unit	
814	250	400	500	721	250	250	600	800	5	3RW5247-□□C□5		1	1 unit	
987	315	560	630	873	300	350	750	950	5	3RW5248-□□C□5		1	1 unit	

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

- ¹⁾ 3RW52 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

Note:

For the constraints for the motor outputs specified here,
[see page 7/7.](#)

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General Performance Soft Starters

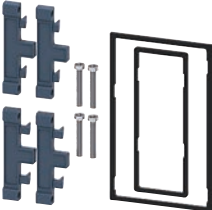
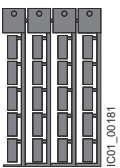
3RW52 soft starters > Accessories

Selection and ordering data

Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fan covers								
 3RW5983-0FC00	Fan cover	3RW5216/17 (1x), 3RW5226/27 (2x), 3RW523 (2x)	--	--	▶	3RW5983-0FC00	1	1 unit
		3RW524 (1x)	--	--	▶	3RW5984-0FC00	1	1 unit
Terminal covers								
 3RW5983-0TC20	Terminal cover	3RW522 (2x), 3RW523 (2x)	--	--	▶	3RW5983-0TC20	1	1 unit
		3RW524 (2x)	--	--	▶	3RW5984-0TC20	1	1 unit
 3RW5984-0TC20								
Enclosure components								
 3RW5950-0GL30	Hinged cover	3RW52	With cutout for High Feature HMI module	--	▶	3RW5950-0GL30	1	1 unit
			With cutout for Standard HMI module	--	▶	3RW5950-0GL40	1	1 unit
 3RW5950-0GL40								
Communication modules								
 3RW5980-0CS00	Communication module	3RW52	PROFINET Standard	--	▶	3RW5980-0CS00	1	1 unit
			PROFIBUS	--	▶	3RW5980-0CP00	1	1 unit
			EtherNet/IP	--	▶	3RW5980-0CE00	1	1 unit
 3RW5980-0CR00			Modbus RTU	--	▶	3RW5980-0CR00	1	1 unit
			Modbus TCP	--	▶	3RW5980-0CT00	1	1 unit

General Performance Soft Starters

3RW52 soft starters > Accessories

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules									
 3RW5980-0HF00	HMI module	3RW52	High Feature	--	▶	3RW5980-0HF00		1	1 unit
			Standard	--	▶	3RW5980-0HS00		1	1 unit
	IP65 door mounting kit for HMI modules	3RW52	IP65	For HMI modules	▶	3RW5980-0HD00		1	1 unit
 3RW5980-0HD00									
Connecting cables									
 3UF793-0BA00-0	HMI connection cable	3RW52	5 m, round	For door mounting	▶	3RW5980-0HC60		1	1 unit
			2.5 m, round		▶	3UF7933-0BA00-0		1	1 unit
			1.0 m, round		▶	3UF7937-0BA00-0		1	1 unit
			0.5 m, round		▶	3UF7932-0BA00-0		1	1 unit
 3UF7931-0AA00-0			0.1 m, flat	for mounting in the device	▶	3UF7931-0AA00-0		1	1 unit
Further accessories									
 3ZY1311-0AA00	Push-in lugs for wall mounting	--	Two lugs are required per device	For HMI modules and communication modules	2	3ZY1311-0AA00		1	10 units
Blank labels									
 3RT2900-1SB20	Unit labeling plates¹⁾	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	3RT2900-1SB20		100	340 units

¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Basic Performance Soft Starters

3RW50 soft starters > General data

Overview

More information

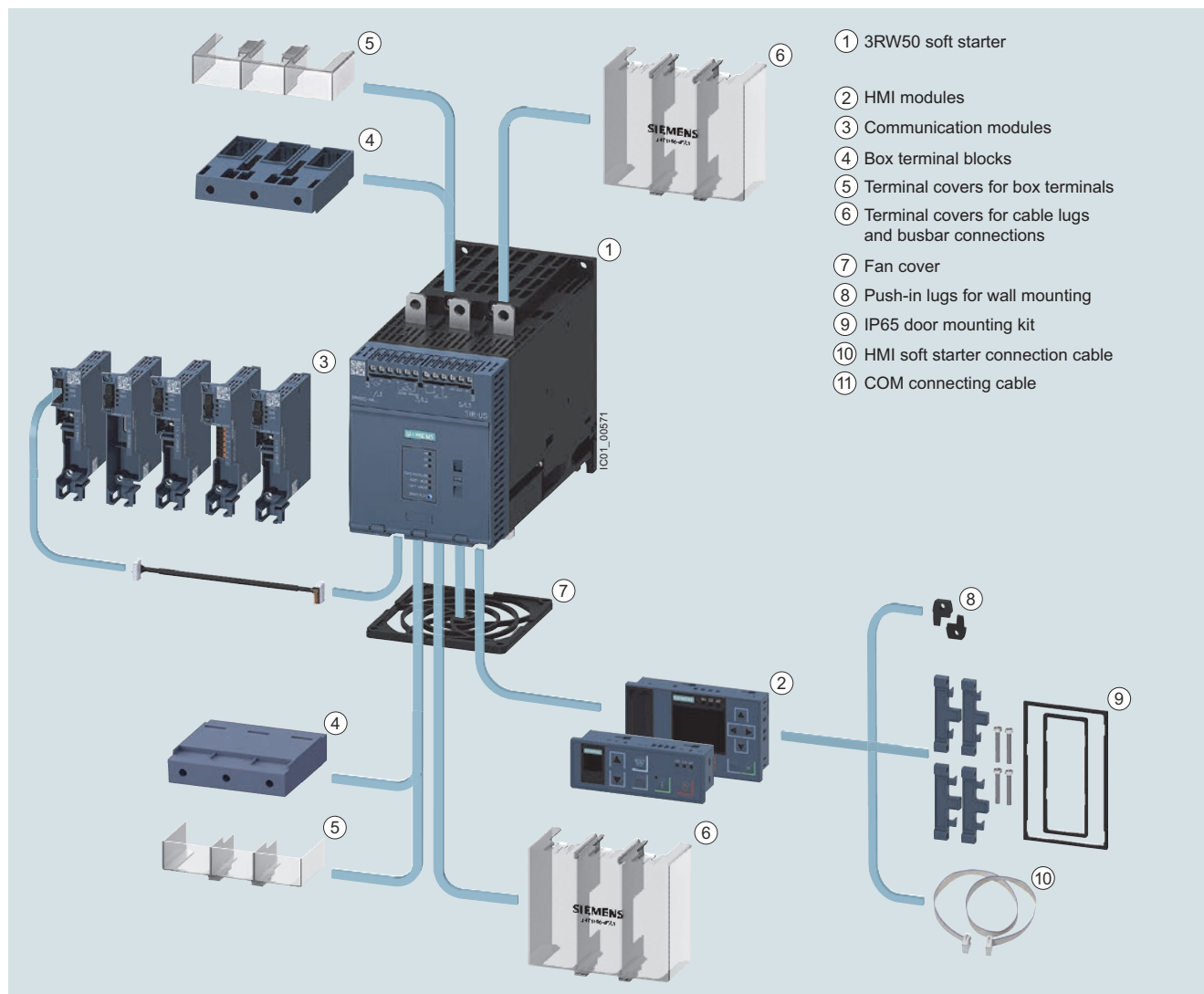
Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW50
 TIA Selection Tool Cloud (TST Cloud), see
<https://support.industry.siemens.com/cs/ww/en/view/109747404>

Simulation Tool for Soft Starters (STS), see page 7/7 or
<https://support.industry.siemens.com/cs/ww/en/view/101494917>
 SIRIUS Soft Starter ES (TIA Portal), see page 14/5



SIRIUS 3RW50 Basic Performance soft starters are the compact solution for standard applications. With two-phase motor control, they cover the performance range from 75 to 300HP @ 480V.

Optional HMI modules for installation in the control cabinet door, laterally mountable communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output or thermistor motor protection ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW50 soft starters offer efficient switching for long-term, energy-saving use.

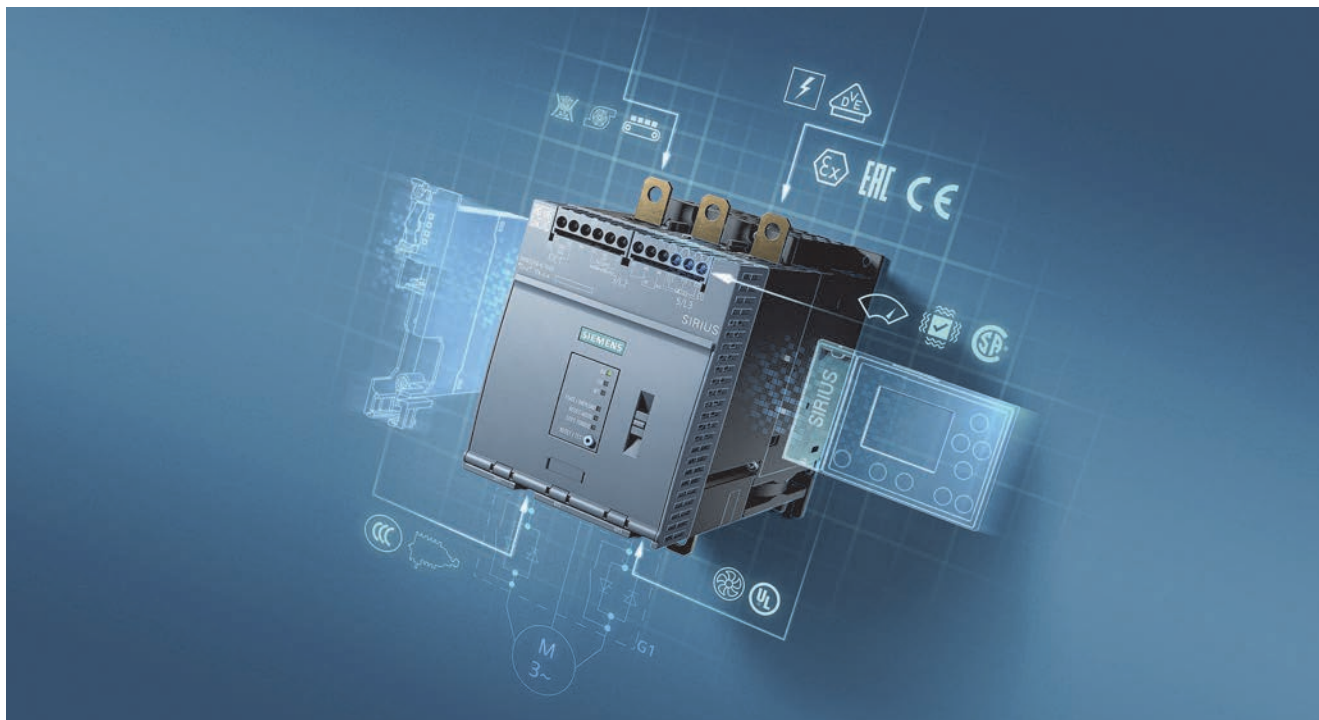


3RW50 Basic Performance soft starters with accessories (see page 7/81), for expansion with HMI module or communication module

Basic Performance Soft Starters

3RW50 soft starters > General data

Benefits



Product characteristics / function	Performance features / benefits
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components
Small and compact design	Space-saving, clearly arranged control panel layout
TIA-Integration – communication modules and HMI modules optional	Efficient configuration and maximum flexibility in automation engineering
Motor overload and intrinsic device protection without additional wiring	Adjustable trip classes, integrated diagnostics functions
Soft Torque	Reduced mechanical loading and optimum pump stop
Parameterization using potentiometers	Simple and fast commissioning
Wide range for control supply and main voltage	Low variance, high system availability even with weak supply networks
Certified according to ATEX/IECEX directive	Suitable for the starting of explosion-proof motors with "increased safety" type of protection

Basic Performance Soft Starters

3RW50 soft starters > General data

Technical specifications

More information

Technical specifications, see <https://support.industry.siemens.com/cs/ww/en/ps/25252/td>
 Equipment Manual "SIRIUS 3RW50 Soft Starter", see <https://support.industry.siemens.com/cs/ww/en/view/109753750>

FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/25252/faq>
 Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>

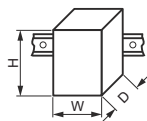
Type

3RW5055
3RW5056

3RW5072
3RW5073
3RW5074
3RW5075
3RW5076
3RW5077

Installation/fixing/dimensions

Width x height x depth



mm

120 × 198 × 249

160 × 230 × 282

Type of mounting

Screw fixing

Mounting position

For vertical mounting surface can be rotated $\pm 90^\circ$,
 for vertical mounting surface can be tilted $\pm 22.5^\circ$ forward or backward

Distance to be maintained with side-by-side mounting

- Above mm 100
- At the side mm 5
- Below mm 75

Maximum installation altitude above sea level¹⁾

m 5 000

Degree of protection

IP00

Ambient conditions

Ambient temperature

- During operation²⁾ °C -25 ... +60
- During storage and transport °C -40 ... +80

Environmental category according to IEC 60721

- During operation 3K6 (no ice formation, only occasional condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
- During storage 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not enter the devices), 1M4
- During transport 2K2, 2C1, 2S1, 2M2 (max. height of fall 0.3 m)

¹⁾ Derating from 1 000 m, see characteristic curve on page 7/7.

²⁾ Note derating above 40 °C.

Basic Performance Soft Starters

3RW50 soft starters > General data

Type		3RW50...-B0.	3RW50...-B1.
Control circuit/control			
Control supply voltage			
• At AC/DC, rated value	V	24/24	--/--
• At AC	V	--	110 ... 250
• Relative negative tolerance/relative positive tolerance with AC	%	-20/20	-15/10
• Relative negative tolerance/relative positive tolerance with DC	%	-20/20	--/--
Frequency of the control supply voltage			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit¹⁾		Fuse 4 A gG ($I_{cu} = 1 \text{ kA}$), fuse 6 A quick-response ($I_{cu} = 1 \text{ kA}$), MCB C1 ($I_{cu} = 600 \text{ A}$), MCB C6 ($I_{cu} = 300 \text{ A}$)	

¹⁾ Not included in scope of supply

Type		3RW50...-B.4	3RW50...-B.5
Power electronics			
Operational voltage, rated value			
• Relative negative tolerance/relative positive tolerance	V	200 ... 480	200 ... 600
	%	-15/10	
Operating frequency, rated value			
• Relative negative tolerance/relative positive tolerance	Hz	50 ... 60	
	%	-10/10	
Minimum load [% of I_M]¹⁾		15	
Maximum cable length between soft starter and motor		m	
		800	

¹⁾ Relative to the smallest adjustable I_G .

Basic Performance Soft Starters

3RW50 soft starters > General data

Type		3RW5055	3RW5056				
Rated operational current I_e	A	143	171				
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a	A	143/128/118	171/153/141				
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M , T_u = 40/50/60 °C	A	143/128/118	171/153/141				
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 5 s	1/h	43	43				
- Start-up time 10 s	1/h	18	18				
• 350% I_M							
- Start-up time 5 s	1/h	28	28				
- Start-up time 10 s	1/h	10	9				
Normal starting (CLASS 10E)							
Rated motor current I_M , T_u = 40/50/60 °C	A	143/128/118	171/153/141				
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 20 s	1/h	21	21				
- Start-up time 40 s	1/h	8	8				
• 350% I_M							
- Start-up time 20 s	1/h	12	9				
- Start-up time 40 s	1/h	4	--				
Heavy starting (CLASS 20E)							
Rated motor current I_M , T_u = 40/50/60 °C	A	108/98/88	135/123/111				
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 20 s	1/h	10	10				
- Start-up time 40 s	1/h	4	4				
• 350% I_M							
- Start-up time 20 s	1/h	7	7				
- Start-up time 40 s	1/h	2.5	2.5				
Adjustable rated motor current I_M							
• Minimum/maximum	A	68/143	81/117				

Type		3RW5072	3RW5073	3RW5074	3RW5075	3RW5076	3RW5077
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, A AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
Permissible rated motor current and starts/h							
Normal starting (CLASS 10A)							
Rated motor current I_M , T_u = 40/50/60 °C	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 5 s	1/h	43	43	43	43	43	28
- Start-up time 10 s	1/h	18	18	18	18	18	11
• 350% I_M							
- Start-up time 5 s	1/h	28	28	28	28	28	16
- Start-up time 10 s	1/h	8	10	10	10	10	4
Normal starting (CLASS 10E)							
Rated motor current I_M , T_u = 40/50/60 °C	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	570/504/460
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 20 s	1/h	21	21	21	21	20	21
- Start-up time 40 s	1/h	8	8	8	8	7	8
• 350% I_M							
- Start-up time 20 s	1/h	8	13	12	13	12	13
- Start-up time 40 s	1/h	--	4	4	4	2	4
Heavy starting (CLASS 20E)							
Rated motor current I_M , T_u = 40/50/60 °C	A	162/146/130	200/180/160	219/195/171	258/230/202	272/254/218	284/262/240
ON period = 70%; motor protection activated							
• 300% I_M							
- Start-up time 20 s	1/h	10	10	10	10	10	10
- Start-up time 40 s	1/h	4	4	4	4	4	4
• 350% I_M							
- Start-up time 20 s	1/h	7	7	7	7	7	7
- Start-up time 40 s	1/h	2.5	2.5	2.5	2.5	2.5	2.5
Adjustable rated motor current I_M							
• Minimum/maximum	A	90/210	100/250	135/315	160/370	200/470	240/570

Basic Performance Soft Starters

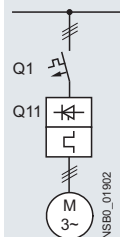
3RW50 soft starters > General data

Motor feeders according to IEC with 3VA motor starter protectors/circuit breakers (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).



Soft starters		Motor starter protectors			
Q11		for 400 V systems		for 500 V systems	
Type		Q1	I_q kA	Q1	I_q kA
Type		Type		Type	
Type of coordination "1"	TOC 1	Inline circuit			
3RW5055		3VA2220-7MN32-0AA0	20	3VA2220-7MN32-0AA0	20
3RW5056		3VA2220-7MN32-0AA0	20	3VA2220-7MN32-0AA0	20
3RW5072		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5073		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5074		3VA2440-7MN32-0AA0	65	3VA2440-7MN32-0AA0	65
3RW5075		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5076		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65
3RW5077		3VA2580-6HN32-0AA0	65	3VA2580-6HN32-0AA0	65

Note:

The service factor or measurement inaccuracies have been taken into account, for example, for the selection of the specified motor starter protectors/circuit breakers; the specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW50 soft starters > General data

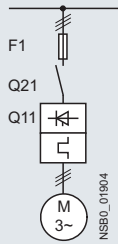
Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

			
Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	Q21	Q21
Type	Type	Type	Type
Type of coordination "1"	Inline circuit		
			
3RW5055	3NA3244-6	3RT1055	3RT1055
3RW5056	3NA3244-6	3RT1056	3RT1064
3RW5072	2 x 3NA3354-6	3RT1064	3RT1064
3RW5073	2 x 3NA3354-6	3RT1065	3RT1065
3RW5074	2 x 3NA3365-6	3RT1075	3RT1075
3RW5075	2 x 3NA3365-6	3RT1075	3RT1075
3RW5076	2 x 3NA3365-6	3RT1076	3RT1076
3RW5077	2 x 3NA3365-6	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW50 soft starters > General data

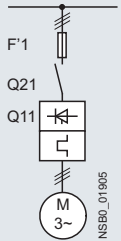
Motor feeders according to IEC with 3NE1 SITOP fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

			
Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2"	Inline circuit		
3RW5055	3NE1227-0	3RT1055	3RT1055
3RW5056	3NE1230-0	3RT1056	3RT1064
3RW5072	3NE1230-2	3RT1064	3RT1064
3RW5073	3NE1331-0	3RT1065	3RT1065
3RW5074	3NE1333-2	3RT1075	3RT1075
3RW5075	3NE1334-2	3RT1075	3RT1075
3RW5076	3NE1436-2	3RT1076	3RT1076
3RW5077	3NE1437-2	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW50 soft starters > General data

Motor feeders according to IEC with 3NE3 fuses

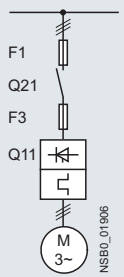
aR class partial-range fuses for semiconductor protection

Type of coordination "2",

short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

				
Soft starters	gG class fuse	aR class fuse	Line contactor (optional)	
	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	F3	Q21	Q21
Type	Type	Type	Type	Type
Type of coordination "2"	ToC 2 Inline circuit			
3RW5055	3NA3244-6	3NE3334-0B	3RT1055	3RT1055
3RW5056	3NA3244-6	3NE3335	3RT1056	3RT1064
3RW5072	2 x 3NA3354-6	3NE3333	3RT1064	3RT1064
3RW5073	2 x 3NA3354-6	3NE3335	3RT1065	3RT1065
3RW5074	2 x 3NA3365-6	3NE3335	3RT1075	3RT1075
3RW5075	2 x 3NA3365-6	3NE3336	3RT1075	3RT1075
3RW5076	2 x 3NA3365-6	3NE3340-8	3RT1076	3RT1076
3RW5077	2 x 3NA3365-6	3NE3340-8	3TF68	3TF68

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3VA circuit breakers can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/76](#)). In these cases optional line contactors can be dispensed with.

Basic Performance Soft Starters

3RW50 soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10E)

3RW5055



3RW5075

At 40 °C				At 50 °C				Size	SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 480 V													
143	37	75	90	128	30	30	100	--	S6	5	3RW5055-□□B□4	1	1 unit
171	45	90	110	153	30	40	100	--	S6	5	3RW5056-□□B□4	1	1 unit
210	55	110	132	186	40	50	150	--	S12	5	3RW5072-□□B□4	1	1 unit
250	75	132	160	220	50	60	150	--	S12	5	3RW5073-□□B□4	1	1 unit
315	90	160	200	279	60	75	200	--	S12	5	3RW5074-□□B□4	1	1 unit
370	110	200	250	328	75	100	250	--	S12	5	3RW5075-□□B□4	1	1 unit
470	132	250	315	416	100	125	350	--	S12	5	3RW5076-□□B□4	1	1 unit
570	160	315	355	504	125	150	400	--	S12	5	3RW5077-□□B□4	1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

2
6
A
T
0
1

- ¹⁾ 3RW50 soft starter with screw terminals for operational voltage up to 480 V:
Standard delivery time SD = 1 day (d).

Note: For the constraints for the motor outputs specified here, see page 7/7.

At 40 °C				At 50 °C				Size	SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current	Operating power for three-phase motors			Operational current	Rating [hp] for three-phase motors								
	At 230 V	At 400 V	At 500 V		At 200/208 V	At 220/230 V	At 460/480 V	At 575/600 V					
A	kW	kW	kW	A	hp	hp	hp	hp	d				
Operational voltage 200 ... 600 V													
143	37	75	90	128	30	30	100	75	S6	5	3RW5055-□□B□5	1	1 unit
171	45	90	110	153	30	40	100	100	S6	5	3RW5056-□□B□5	1	1 unit
210	55	110	132	186	40	50	150	125	S12	5	3RW5072-□□B□5	1	1 unit
250	75	132	160	220	50	60	150	150	S12	5	3RW5073-□□B□5	1	1 unit
315	90	160	200	279	60	75	200	200	S12	5	3RW5074-□□B□5	1	1 unit
370	110	200	250	328	75	100	250	250	S12	5	3RW5075-□□B□5	1	1 unit
470	132	250	315	416	100	125	350	300	S12	5	3RW5076-□□B□5	1	1 unit
570	160	315	355	504	125	150	400	400	S12	5	3RW5077-□□B□5	1	1 unit

Type of electrical connection for the control circuit

Spring-loaded terminals

Screw terminals

Product function

Analog output

Thermistor motor protection

Control supply voltage

24 V AC/DC

110 ... 250 V AC

2
6
A
T
0
1

- ¹⁾ 3RW50 soft starter with screw terminals for operational voltage up to 600 V:
Standard delivery time SD = 2 days (d).

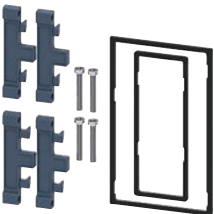
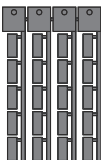
Note: For the constraints for the motor outputs specified here, see page 7/7.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Fan covers										
	Fan cover	3RW50 (1x)	--	--	▶	3RW5985-0FC00		1	1 unit	42S
3RW5985-0FC00										
Box terminal block										
	Box terminal block for round and ribbon cables	3RW505 (2x)	Up to 70 mm ²	--	▶	3RT1955-4G		1	1 unit	41B
			Up to 120 mm ²	--	▶	3RT1956-4G		1	1 unit	41B
		3RW507 (2x)	Up to 240 mm ² (with auxiliary conductor connection)	--	▶	3RT1966-4G		1	1 unit	41B
3RT1956-4G										
Terminal covers										
	Covers for box terminals	3RW505 (2x)	--	--	▶	3RT1956-4EA2		1	1 unit	41B
		3RW507 (2x)	--	--	2	3RT1966-4EA2		1	1 unit	41B
3RT1956-4EA2										
	Covers for cable lugs and busbar connections	3RW505 (2x)	--	--	▶	3RT1956-4EA1		1	1 unit	41B
		3RW507 (2x)	--	--	2	3RT1966-4EA1		1	1 unit	41B
3RT1956-4EA1										
Communication modules										
	Communication module	3RW50	PROFINET Standard	--	▶	3RW5980-0CS00		1	1 unit	42S
			PROFIBUS	--	▶	3RW5980-0CP00		1	1 unit	42S
			EtherNet/IP	--	▶	3RW5980-0CE00		1	1 unit	42S
			Modbus RTU	--	▶	3RW5980-0CR00		1	1 unit	42S
			Modbus TCP	--	▶	3RW5980-0CT00		1	1 unit	42S
3RW5980-0CS00										
	COM connection cable	3RW50	0.3 m	--	▶	3RW5900-0CC00		1	1 unit	42S
3RW5900-0CC00										
	For mounting laterally on the device									

Basic Performance Soft Starters

3RW50 soft starters > Accessories

Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
HMI modules									
 3RW5980-0HF00	HMI module	3RW50	High Feature	--	▶	3RW5980-0HF00	1	1 unit	42S
			Standard	--	▶	3RW5980-0HS00	1	1 unit	42S
 3RW5980-0HS00	IP65 door mounting kit for HMI modules	3RW50	IP65	For HMI modules	▶	3RW5980-0HD00	1	1 unit	42S
 3RW5980-0HD00									
Connecting cables									
 3UF793-0BA00-0	HMI connection cable	3RW50	5 m, round	For door mounting	▶	3RW5980-0HC60	1	1 unit	42S
			2.5 m, round		▶	3UF7933-0BA00-0	1	1 unit	42J
			1.0 m, round		▶	3UF7937-0BA00-0	1	1 unit	42J
			0.5 m, round		▶	3UF7932-0BA00-0	1	1 unit	42J
Further accessories									
 3ZY1311-0AA00	Push-in lugs for wall mounting	--	Two lugs are required per device	For HMI modules and communication modules	2	3ZY1311-0AA00	1	10 units	41L
Blank labels									
 3RT2900-1SB20	Unit labeling plates ¹⁾	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	3RT2900-1SB20	100	340 units	41B

¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Basic Performance Soft Starters

3RW40 soft starters > General data

Overview

More information

Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW40

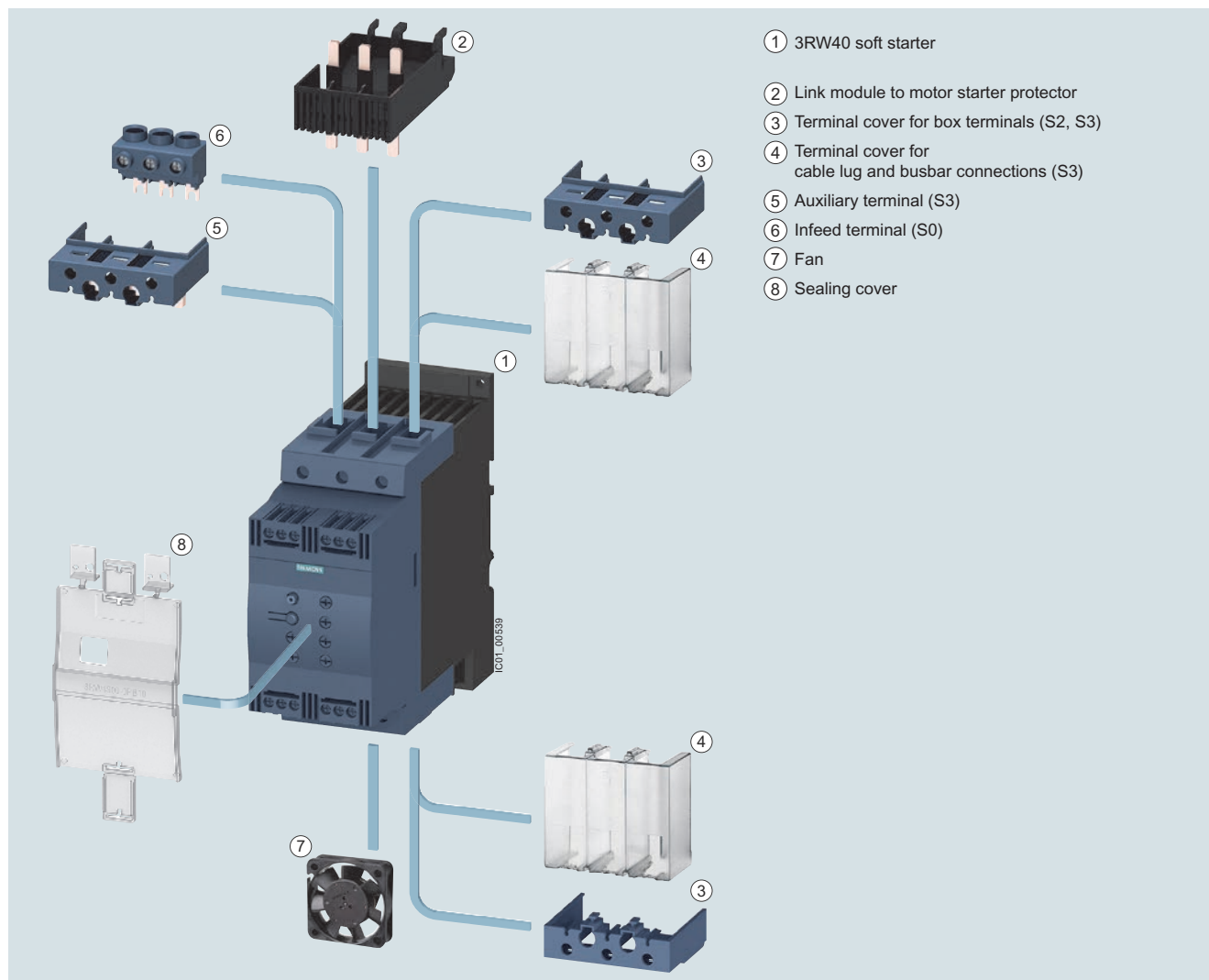
TIA Selection Tool Cloud (TST Cloud), see <https://www.siemens.com/tstcloud/?node=3rw40>
 Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>



The SIRIUS 3RW40 Basic Performance soft starters are suitable for soft starting and stopping of three-phase asynchronous motors.

Thanks to two-phase control, not only is the current kept at minimum values in all three phases throughout the entire starting time, but disturbing direct current components are also eliminated. This not only enables the two-phase starting of motors from 7.5 to 75HP @ 480V but also avoids the current and torque peaks which occur e.g. with wye-delta starters.

The SIRIUS 3RW40 soft starters are suitable for the starting of explosion-proof motors with "increased safety" type of protection EEx e according to ATEX Directive 94/9/EC.



3RW40 Basic Performance soft starters with accessories (see page 7/92)

Basic Performance Soft Starters

3RW40 soft starters > General data

Benefits



Product characteristics / function	Performance features / benefits
Small and compact design	Space-saving, clearly arranged control panel layout
Motor overload and intrinsic device protection without additional wiring	Adjustable trip classes, integrated diagnostics functions
Integrated in the SIRIUS modular system	Link modules to motor starter protectors
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components
Certified according to ATEX Directive 94/9/EC	Suitable for the starting of explosion-proof motors with "increased safety" type of protection EEx e.
Optional thermistor motor protection	Full motor protection

Basic Performance Soft Starters

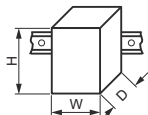
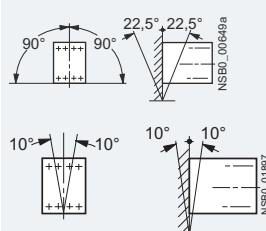
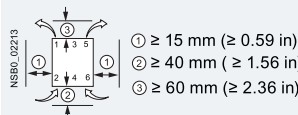
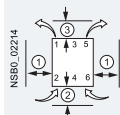
3RW40 soft starters > General data

Technical specifications

More information

Technical specifications, see <https://support.industry.siemens.com/cs/ww/en/ps/25252/td>
 Equipment Manual "SIRIUS 3RW30/3RW40 Soft Starter", see <https://support.industry.siemens.com/cs/ww/en/view/38752095>

FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/25251/faq>
 Simulation Tool for Soft Starters (STS), see page 7/7 or <https://support.industry.siemens.com/cs/ww/en/view/101494917>

Type		3RW402.	3RW403.	3RW404.		
Mechanics and environment						
Mounting dimensions (W x H x D) - Screw terminals - Spring-loaded terminals			mm mm	45 x 125 x 154 45 x 150 x 154	55 x 144 x 170 55 x 144 x 170	70 x 160 x 188 70 x 160 x 188
Permissible ambient temperature						
During operation		°C	-25 ... +60; (derating from +40)			
During storage		°C	-40 ... +80			
Weight		kg	0.77	1.35	1.9	
Permissible mounting position ¹⁾						
Installation type ¹⁾		Stand-alone installation	 ① ≥ 15 mm (≥ 0.59 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)			 ① ≥ 30 mm (≥ 1.18 in) ② ≥ 40 mm (≥ 1.56 in) ③ ≥ 60 mm (≥ 2.36 in)
Permissible installation altitude		m	5 000 (Derating from 1 000, see characteristic curve on page 7/7)			
Degree of protection		IP00				

¹⁾ In the case of deviations, please observe derating, see Equipment Manual in the chapter "Configuring".

Type	Terminal		3RW402., 3RW403., 3RW404.	
Control electronics				
Rated values				
Rated control supply voltage	A1/A2	V	24 AC/DC	110 ... 230 AC/DC
• Tolerance		%	± 20	-15/+10
Rated frequency		Hz	50/60	
• Tolerance		%	± 10	
Type			3RW402.-..B.4, 3RW403.-..B.4, 3RW404.-..B.4	3RW402.-..B.5, 3RW403.-..B.5, 3RW404.-..B.5
Power electronics				
Rated operational voltage			V AC	200 ... 480
Tolerance			%	-15/+10
Maximum blocking voltage (thyristor)			V AC	1 600
Rated frequency			Hz	50/60
Tolerance			%	± 10
Uninterrupted duty at 40 °C (% of I_{e})			%	115
Minimum load (% of smallest adjustable rated motor current I_{M})			%	20 (at least 2 A)
Maximum cable length between soft starter and motor			m	300

Basic Performance Soft Starters

3RW40 soft starters > General data

Type		3RW4024	3RW4026	3RW4027	3RW4028
Power electronics					
Load rating with rated operational current I_e					
• According to IEC and UL/CSA ¹⁾ , individual mounting at 40/50/60 °C, AC-53a	A	12.5/11/10	25.3/23/21	32.2/29/26	38/34/31
Smallest adjustable rated motor current I_M					
For the motor overload protection	A	5	10	17	23
Power loss					
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	2	8	13	19
• During starting with current limiting set to 300% I_M (40 °C)	W	68	188	220	256
Permissible rated motor current and starts per hour					
• For normal starting (CLASS 10) at 40/50 °C					
- Rated motor current $I_M^{(2)}$, start-up time 3 s	A	12.5/11	25/23	32/29	38/34
- Starts per hour ³⁾	1/h	50/50	23/23	23/23	19/19
- Rated motor current $I_M^{(2)}$, start-up time 4 s	A	12.5/11	25/23	32/29	38/34
- Starts per hour ³⁾	1/h	36/36	15/15	16/16	12/12
• For heavy starting (CLASS 20) at 40/50 °C					
- Rated motor current $I_M^{(2)}$, start-up time 6 s	A	10/9	21/19	27/24	31/28
- Starts per hour ³⁾	1/h	47/47	21/21	20/20	18/18
- Rated motor current $I_M^{(2)}$, start-up time 8 s	A	10/9	21/19	27/24	31/28
- Starts per hour ³⁾	1/h	34/34	15/15	14/14	13/13

¹⁾ Measurement at 60 °C according to UL/CSA not required.

²⁾ Current limiting on soft starter set to 300% I_M , $T_U = 40/50$ °C. Maximum adjustable rated motor current I_M dependent on CLASS setting.

³⁾ For intermittent duty S4 with ON period = 30%, $T_U = 40/50$ °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency in other mounting position, direct mounting, side-by-side mounting, and implementation of optional auxiliary fan, see Equipment Manual in the chapter "Configuring".

Type		3RW4036	3RW4037	3RW4038	3RW4046	3RW4047
Power electronics						
Load rating with rated operational current I_e						
• According to IEC and UL/CSA ¹⁾ , individual mounting at 40/50/60 °C, AC-53a	A	45/42/39	63/58/53	72/62.1/60	80/73/66	106/98/90
Smallest adjustable rated motor current I_M						
For the motor overload protection	A	23	26	35	43	46
Power loss						
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	6	12	15	12	21
• During starting with current limiting set to 300% I_M (40 °C)	W	316	444	500	576	768
Permissible rated motor current and starts per hour						
• For normal starting (CLASS 10) at 40/50 °C						
- Rated motor current $I_M^{(2)}$, start-up time 3 s	A	45/42	63/58	72/62	80/73	106/98
- Starts per hour ³⁾	1/h	38/38	23/23	22/22	22/22	15/15
- Rated motor current $I_M^{(2)}$, start-up time 4 s	A	45/42	63/58	72/62	80/73	106/98
- Starts per hour ³⁾	1/h	26/26	15/15	15/15	15/15	10/10
• For heavy starting (CLASS 20) at 40/50 °C						
- Rated motor current $I_M^{(2)}$, start-up time 6 s	A	38/34	46/42	50/46	64/58	77/70
- Starts per hour ³⁾	1/h	30/30	31/31	34/34	23/23	23/23
- Rated motor current $I_M^{(2)}$, start-up time 8 s	A	38/34	46/42	50/46	64/58	77/70
- Starts per hour ³⁾	1/h	21/21	22/22	24/24	16/16	16/16

¹⁾ Measurement at 60 °C according to UL/CSA not required.

²⁾ Current limiting on soft starter set to 300% I_M , $T_U = 40/50$ °C. Maximum adjustable rated motor current I_M dependent on CLASS setting.

³⁾ For intermittent duty S4 with ON period = 30%, $T_U = 40/50$ °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency in other mounting position, direct mounting, side-by-side mounting, and implementation of optional auxiliary fan, see Equipment Manual in the chapter "Configuring".

Basic Performance Soft Starters

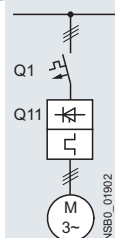
3RW40 soft starters > General data

Motor feeders according to IEC with 3RV2 motor starter protectors (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).



Soft starters		Motor starter protectors		
Q11		for 400 V systems		
Type		Q1	for 500 V systems	
		I_q	Type	I_q
		kA		kA
Type of coordination "1"	ToC 1	Inline circuit		
3RW4024	3RV2021-4AA10	55	3RV2021-4AA10	10
3RW4026	3RV2021-4DA10	55	3RV2021-4DA10	10
3RW4027	3RV2021-4EA10	55	3RV2021-4EA10	10
3RW4028	3RV2021-4FA10	55	3RV2021-4FA10	10
3RW4036	3RV2031-4WA10	10	3RV2031-4WA10	10
3RW4037	3RV2031-4JA10	10	3RV2031-4JA10	5
3RW4038	3RV2031-4KA10	10	3RV2031-4KA10	5
3RW4046	3RV2041-4RA10	11	3RV2041-4YA10	5
3RW4047	3RV2041-4MA10	11	3RV2041-4MA10	5

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW40 soft starters > General data

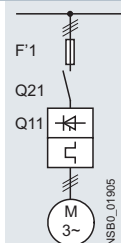
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	Line contactor (optional)		
	for systems up to 600 V	for systems up to 400 V	for systems up to 480 V	for systems up to 600 V
Q11	F'1	Q21	Q21	Q21
Type	Type	Type	Type	Type
Type of coordination "2"	Inline circuit			
3RW4024	3NE1814-0	3RT2025	3RT2025/ 3RT2018 (in size S00)	3RT2025
3RW4026	3NE1803-0	3RT2026	3RT2027	3RT2037
3RW4027	3NE1020-2	3RT2027	3RT2028	3RT2037
3RW4028	3NE1020-2	3RT2028	3RT2035	3RT2037
3RW4036	3NE1020-2	3RT2036	3RT2036	3RT2038
3RW4037	3NE1820-0	3RT2037	3RT2037	3RT2046
3RW4038	3NE1820-0	3RT2038	3RT2038	3RT2046
3RW4046	3NE1021-0	3RT2045	3RT2045	3RT2047
3RW4047	3NE1022-0	3RT2047	3RT2047	3RT1054

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW40 soft starters > General data

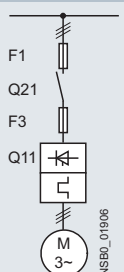
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity $I_{q1} = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).

								
Soft starters	gG class fuse	aR class fuse			Cylindrical fuses	Line contactor (optional)		
	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 600 V	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V	for systems up to 600 V
Q11	F1	F3	F3	F3	F3	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2"	Toc 2 Inline circuit							
3RW4024	3NA3820-6	--	3NE4101	3NE8015-1	3NC2240	3RT2025	3RT2025/ 3RT2018 (in size S00)	3RT2025
3RW4026	3NA3822-6	--	3NE4102	3NE8017-1	3NC2263	3RT2026	3RT2027	3RT2037
3RW4027	3NA3824-6	--	3NE4118	3NE8018-1	3NC2280	3RT2027	3RT2028	3RT2037
3RW4028	3NA3824-6	--	3NE4118	3NE8020-1	3NC2280	3RT2028	3RT2035	3RT2037
3RW4036	3NA3130-6	--	3NE4120	3NE8020-1	3NC2280	3RT2036	3RT2036	3RT2038
3RW4037	3NA3132-6	--	3NE4121	3NE8021-1	--	3RT2037	3RT2037	3RT2046
3RW4038	3NA3132-6	3NE3221	--	3NE8022-1	--	3RT2038	3RT2038	3RT2046
3RW4046	3NA3136-6	3NE3222	--	3NE8022-1	--	3RT2045	3RT2045	3RT2047
3RW4047	3NA3136-6	3NE3224	--	3NE8024-1	--	3RT2047	3RT2047	3RT1054

Note:

The specified short-circuit breaking capacities I_{q1} in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2 motor starter protectors can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/87](#)). In these cases, optional line contactors can be dispensed with.

Basic Performance Soft Starters

3RW40 soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For normal starting (CLASS 10)



3RW402.



3RW403.



3RW404.

3RW ambient temperature 40 °C				3RW ambient temperature 50 °C					Size	SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Rated values of three-phase motors				Rated values of three-phase motors											
Operational current I_e	Rating at operational voltage U_e			Operational current I_e	Rating at operational voltage U_e										
	230 V	400 V	500 V		200 V	230 V	460 V	575 V							
A	kW	kW	kW	A	hp	hp	hp	hp		d					
Rated operational voltage U_e 200 ... 480 V															
12.5	3	5.5	--	11	3	3	7.5	--	S0	2	3RW4024-□BB□4		1	1 unit	
25	5.5	11	--	23	5	5	15	--	S0	2	3RW4026-□BB□4		1	1 unit	
32	7.5	15	--	29	7.5	7.5	20	--	S0	2	3RW4027-□BB□4		1	1 unit	
38	11	18.5	--	34	10	10	25	--	S0	2	3RW4028-□BB□4		1	1 unit	
45	11	22	--	42	10	15	30	--	S2	2	3RW4036-□BB□4		1	1 unit	
63	18.5	30	--	58	15	20	40	--	S2	2	3RW4037-□BB□4		1	1 unit	
72	22	37	--	62	20	20	40	--	S2	2	3RW4038-□BB□4		1	1 unit	
80	22	45	--	73	20	25	50	--	S3	2	3RW4046-□BB□4		1	1 unit	
106	30	55	--	98	30	30	75	--	S3	2	3RW4047-□BB□4		1	1 unit	
Rated operational voltage U_e 400 ... 600 V															
12.5	--	5.5	7.5	11	--	--	7.5	10	S0	5	3RW4024-□BB□5		1	1 unit	
25	--	11	15	23	--	--	15	20	S0	5	3RW4026-□BB□5		1	1 unit	
32	--	15	18.5	29	--	--	20	25	S0	5	3RW4027-□BB□5		1	1 unit	
38	--	18.5	22	34	--	--	25	30	S0	5	3RW4028-□BB□5		1	1 unit	
45	--	22	30	42	--	--	30	40	S2	5	3RW4036-□BB□5		1	1 unit	
63	--	30	37	58	--	--	40	50	S2	5	3RW4037-□BB□5		1	1 unit	
72	--	37	45	62	--	--	40	60	S2	5	3RW4038-□BB□5		1	1 unit	
80	--	45	55	73	--	--	50	60	S3	5	3RW4046-□BB□5		1	1 unit	
106	--	55	75	98	--	--	75	75	S3	5	3RW4047-□BB□5		1	1 unit	

Article No. supplement for connection types

- Screw terminals
- Spring-loaded terminals²⁾

Control supply voltage

- 24 V AC/DC
- 110 ... 230 V AC/DC

¹⁾ Soft starter U_e 200 to 480 V with screw terminals:
Standard delivery time SD = 1 day (d).

²⁾ Main connection from size S2: screw terminals.

Note:

For the constraints for the motor outputs specified here, see page 7/7.

Basic Performance Soft Starters

3RW40 soft starters > Inline circuit **IE3/IE4 ready****For normal starting (CLASS 10)**

3RW402.



3RW403.



3RW404.

3RW ambient temperature 40 °C				3RW ambient temperature 50 °C					Size	SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Rated values of three-phase motors				Rated values of three-phase motors										
Operational current I_e	Rating at operational voltage U_e			Operational current I_e	Rating at operational voltage U_e									
	230 V	400 V	500 V		200 V	230 V	460 V	575 V						
A	kW	kW	kW	A	hp	hp	hp	hp	d					
Rated operational voltage U_e 200 ... 480 V, with thermistor motor protection, rated control supply voltage U_s 24 V AC/DC														
12.5	3	5.5	--	11	3	3	7.5	--	S0	5	3RW4024-□TB04		1	1 unit
25	5.5	11	--	23	5	5	15	--	S0	5	3RW4026-□TB04		1	1 unit
32	7.5	15	--	29	7.5	7.5	20	--	S0	5	3RW4027-□TB04		1	1 unit
38	11	18.5	--	34	10	10	25	--	S0	5	3RW4028-□TB04		1	1 unit
45	11	22	--	42	10	15	30	--	S2	5	3RW4036-□TB04		1	1 unit
63	18.5	30	--	58	15	20	40	--	S2	5	3RW4037-□TB04		1	1 unit
72	22	37	--	62	20	20	40	--	S2	5	3RW4038-□TB04		1	1 unit
80	22	45	--	73	20	25	50	--	S3	5	3RW4046-□TB04		1	1 unit
106	30	55	--	98	30	30	75	--	S3	5	3RW4047-□TB04		1	1 unit
Rated operational voltage U_e 400 ... 600 V, with thermistor motor protection, rated control supply voltage U_s 24 V AC/DC														
12.5	--	5.5	7.5	11	--	--	7.5	10	S0	5	3RW4024-□TB05		1	1 unit
25	--	11	15	23	--	--	15	20	S0	5	3RW4026-□TB05		1	1 unit
32	--	15	18.5	29	--	--	20	25	S0	5	3RW4027-□TB05		1	1 unit
38	--	18.5	22	34	--	--	25	30	S0	5	3RW4028-□TB05		1	1 unit
45	--	22	30	42	--	--	30	40	S2	5	3RW4036-□TB05		1	1 unit
63	--	30	37	58	--	--	40	50	S2	5	3RW4037-□TB05		1	1 unit
72	--	37	45	62	--	--	40	60	S2	5	3RW4038-□TB05		1	1 unit
80	--	45	55	73	--	--	50	60	S3	5	3RW4046-□TB05		1	1 unit
106	--	55	75	98	--	--	75	75	S3	5	3RW4047-□TB05		1	1 unit

Article No. supplement for connection types

- Screw terminals
- Spring-loaded terminals²⁾

¹⁾ Soft starter U_e 200 to 480 V with screw terminals:
Standard delivery time SD = 1 day (d).

²⁾ Main connection from size S2: screw terminals.

Note:

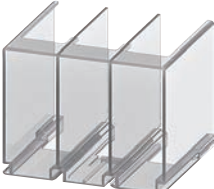
For the constraints for the motor outputs specified here, see page 7/7.

1
2

Basic Performance Soft Starters

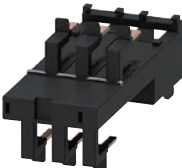
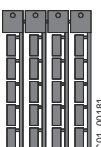
3RW40 soft starters > Accessories

Selection and ordering data

Conductor cross-section		Tightening torque	For soft starters size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Solid or stranded	Finely stranded with end sleeve							
mm²	mm²	AWG	Nm	d				
Three-phase infeed terminals								
	2.5 ... 25	2.5 ... 16	10 ... 4	3 ... 4	S0 (3RW402.) ▶	3RV2925-5AB	1	1 unit
3RV2925-5AB								
For soft starters		Version		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Type	Size			d				
Auxiliary terminals								
	Auxiliary terminals, 3-pole							
3RW404.	S3	For connection of auxiliary and control cables (0.5 ... 2.5 mm²) to the main conductor terminals		5	3RT2946-4F		1	1 unit
3RT2946-4F								
Covers for soft starters								
	Terminal covers for box terminals							
3RW403.	S2	Additional touch protection to be fitted at the box terminals (two units required per device) ▶		▶	3RT2936-4EA2		1	1 unit
3RW404.	S3				3RT2946-4EA2		1	1 unit
3RT2936-4EA2								
	Terminal covers for cable lugs and busbar connections							
3RW404.	S3	For complying with the voltage clearances and as touch protection if box terminal is removed (two units required per device)		5	3RT1946-4EA1		1	1 unit
3RT1946-4EA1								
	Sealing covers							
3RW402. to 3RW404.	S0, S2, S3	--		5	3RW4900-0PB10		1	1 unit
3RW4900-0PB10								

Basic Performance Soft Starters

3RW40 soft starters > Accessories

For motor starter protectors	For soft starters	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Size	Size		d				
Standard mounting rail adapters							
	S2	S2	For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing Single-unit packaging	2	3RA2932-1CA00	1	1 unit
	3RA2932-1CA00						
For soft starters			SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Type	Size		d				
Fans (to increase switching frequency and for device mounting in positions different to the standard position)							
	3RW402.	S0	▶	3RW4928-8VB00		1	1 unit
	3RW403., 3RW404.	S2, S3	▶	3RW4947-8VB00		1	1 unit
3RW49...-8VB00							
For soft starters		Motor starter protectors	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Type	Size	Size	d				
Link modules to motor starter protectors ¹⁾							
	3RW402.	S0	S00/S0	2	Screw terminals 		
	3RW4036	S2	S2	▶	3RA2921-1BA00	1	1 unit
	3RW404.	S3	S3	▶	3RA2931-1AA00	1	1 unit
					3RA1941-1AA00	1	1 unit
	3RW402.	S0	S0	2	Spring-loaded terminals 		
3RA2921-2GA00				3RA2921-2GA00	1	1 unit	
¹⁾ Can be used in size S0 up to 32 A. Can be used in size S2 up to 65 A in combination with 3RA2932-1CA00 standard mounting rail adapter (specially for soft starters). Can be used in size S3 only with mounting plate.							
Version			SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				
Tools for opening spring-loaded terminals in sizes S00 and S0							
	Screwdrivers	For all SIRIUS devices with spring-loaded terminals Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	2	Spring-loaded terminals 			
	3RA2908-1A				3RA2908-1A	1	1 unit
Blank labels							
	Unit labeling plates ¹⁾	For SIRIUS devices 20 mm x 7 mm, titanium gray	20	3RT2900-1SB20		100	340 units
	3RT2900-1SB20						

¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/14).

Basic Performance Soft Starters

3RW30 soft starters > General data

Overview

More information

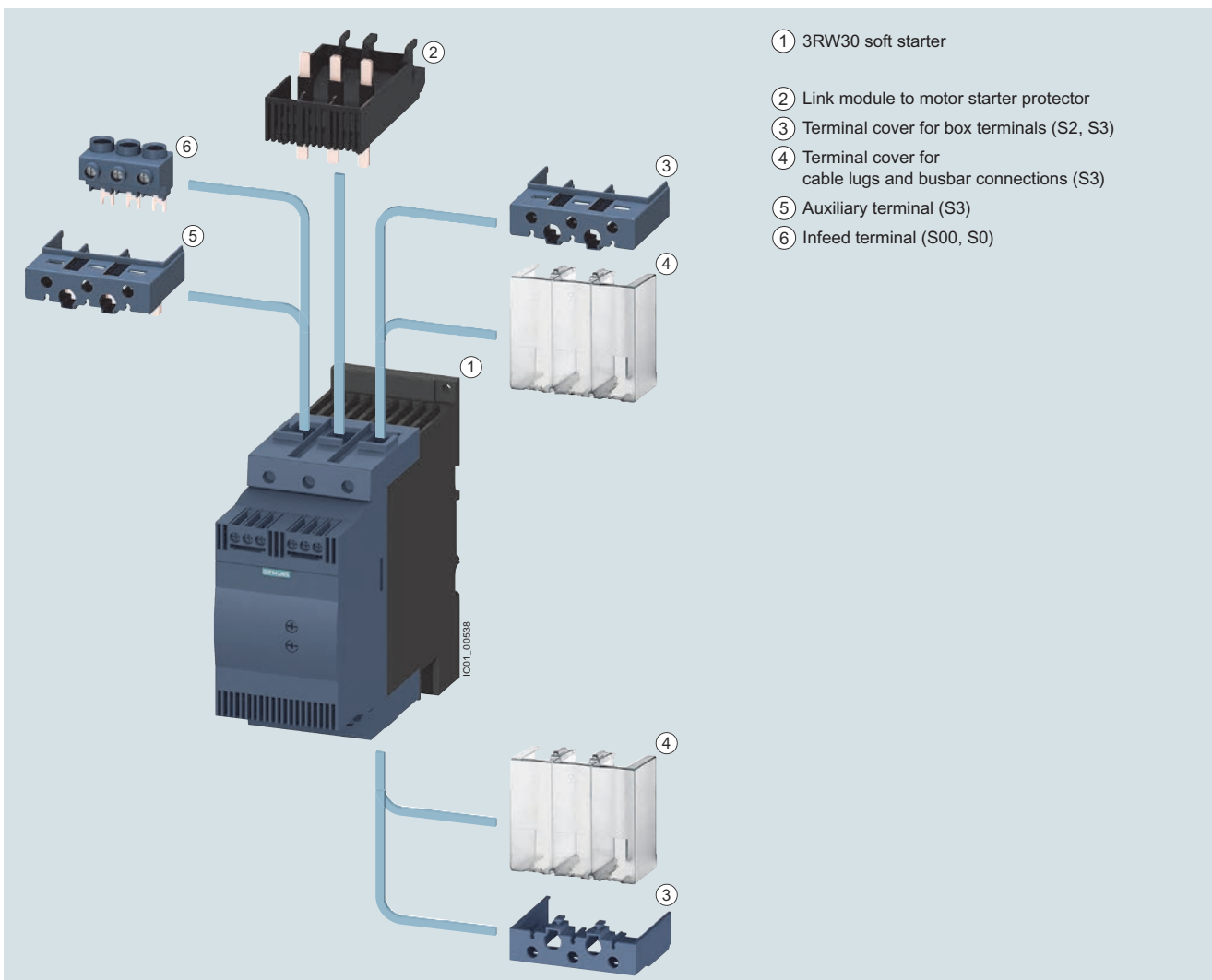
Homepage, see www.usa.siemens.com/soft-starter
 Industry Mall, see www.siemens.com/product?3RW
 TIA Selection Tool Cloud (TST Cloud), see
<https://www.siemens.com/tstcloud/?node=3rw30>

Simulation Tool for Soft Starters (STS), see page 7/7 or
<https://support.industry.siemens.com/cs/ww/en/view/101494917>
 SIRIUS Soft Starter ES (TIA Portal), see page 14/5



The SIRIUS 3RW30 Basic Performance soft starters are suitable for soft starting of three-phase asynchronous motors.

Thanks to two-phase control, not only is the current kept at minimum values in all three phases throughout the entire starting time, but disturbing direct current components are also eliminated. This not only enables the two-phase starting of motors from 1.5 to 75HP @ 480V but also avoids the current and torque peaks which occur e.g. with wye-delta starters.



3RW30 Basic Performance soft starters with accessories (see page 7/103)

Benefits



3RW301.



3RW302.



3RW303.



3RW304.

Product characteristics / function	Performance features / benefits
Small and compact design	Space-saving, clearly arranged control panel layout
Parameterization using potentiometers	Simple and fast commissioning
Integrated in the SIRIUS modular system	Link modules to motor starter protectors
Hybrid switching devices and two-phase motor control	Minimum power loss and optimized motor control by avoiding DC components

Technical specifications

More information

Equipment Manual "SIRIUS 3RW30/3RW40 Soft Starters", see <https://support.industry.siemens.com/cs/ww/en/view/38752095>
 FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16213/faq>

Catalog LV 10, see www.siemens.com/lowvoltage/lv10

Type		3RW301.	3RW302.	3RW303.	3RW304.
Mechanics and environment					
Mounting dimensions (W x H x D)					
- Screw terminals - Spring-loaded terminals					
		mm			
		mm			
		45 x 95 x 151	45 x 125 x 151	55 x 144 x 168	70 x 160 x 186
		45 x 117 x 151	45 x 150 x 151	55 x 144 x 168	70 x 160 x 186
Permissible ambient temperature					
During operation		°C	-25 ... +60; (derating from +40)		
During storage		°C	-40 ... +80		
Weight	kg	0.58	0.69	1.20	1.71
Permissible mounting position¹⁾ (auxiliary fan not possible)					
Installation type¹⁾					
Stand-alone installation					
Permissible installation altitude		m	5 000 (Derating from 1 000, see characteristic curve on page 7/7)		
Degree of protection		IP00			

¹⁾ In the case of deviations, please observe derating, see Equipment Manual in the chapter "Configuring".

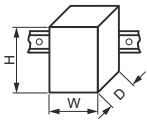
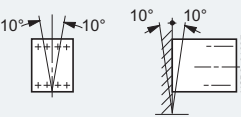
Basic Performance Soft Starters

3RW30 soft starters > General data

Type	Terminal	3RW301., 3RW302.		3RW303., 3RW304.		
Control electronics						
Rated values						
Rated control supply voltage	A1/A2	V	24	110 ... 230	24	110 ... 230
• Tolerance		%	20	-15/+10	20	-15/+10
Rated frequency		Hz	50/60			
• Tolerance		%	± 10			
Type		3RW301.	3RW302.	3RW303.	3RW304.	
Power electronics						
Rated operational voltage		V AC	200 ... 480			
Tolerance		%	-15/+10			
Rated frequency		Hz	50/60			
Tolerance		%	10			
Uninterrupted duty at 40 °C (% of I_e)		%	115			
Minimum load (% of I_e)		%	10 (at least 1 A)			
Maximum cable length between soft starter and motor		m	300			
Type		3RW3013	3RW3014	3RW3016	3RW3017	3RW3018
Power electronics						
Load rating with rated operational current I_e						
• According to IEC and UL/CSA ¹⁾ , individual mounting at 40/50/60 °C, AC-53a	A	3.6/3.3/3	6.5/6/5.5	9/8/7	12.5/12/11	17.6/17/14
Power loss						
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	0.25	0.5	1	2	4
• During starting with 300% I_M (40 °C)	W	24	52	80	80	116
Permissible rated motor current and starts per hour						
• For normal starting (CLASS 10) at 40/50 °C						
- Rated motor current $I_M^{(2)}$, start-up time 3 s	A	3.6/3.3	6.5/6.0	9/8	12.5/12.0	17.6/17.0
- Starts per hour ³⁾	1/h	200/150	87/60	50/50	85/70	62/46
- Rated motor current $I_M^{(2)}$, start-up time 4 s	A	3.6/3.3	6.5/6.0	9/8	12.5/12.0	17.6/17.0
- Starts per hour ³⁾	1/h	150/100	64/46	35/35	62/47	45/32
¹⁾ Measurement at 60 °C according to UL/CSA not required.		³⁾ For intermittent duty S4 with ON period = 30%, T_U = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode.				
²⁾ At 300% I_M , T_U = 40/50 °C.						
Type		3RW3026	3RW3027	3RW3028		
Power electronics						
Load rating with rated operational current I_e						
• According to IEC and UL/CSA ¹⁾ , individual mounting at 40/50/60 °C, AC-53a	A	25.3/23/21	32.2/29/26	38/34/31		
Power loss						
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	8	13	19		
• During starting with 300% I_M (40 °C)	W	188	220	256		
Permissible rated motor current and starts per hour						
• For normal starting (CLASS 10) at 40/50 °C						
- Rated motor current $I_M^{(2)}$, start-up time 3 s	A	25/23	32/29	38/34		
- Starts per hour ³⁾	1/h	23/23	23/23	19/19		
- Rated motor current $I_M^{(2)}$, start-up time 4 s	A	25/23	32/29	38/34		
- Starts per hour ³⁾	1/h	15/15	16/16	12/12		
¹⁾ Measurement at 60 °C according to UL/CSA not required.		³⁾ For intermittent duty S4 with ON period = 30%, T_U = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency with deviating mounting position, direct mounting, side-by-side mounting, see Equipment Manual in the chapter "Configuring".				
²⁾ At 300% I_M , T_U = 40/50 °C.						
Type		3RW3036	3RW3037	3RW3038	3RW3046	3RW3047
Power electronics						
Load rating with rated operational current I_e						
• According to IEC and UL/CSA ¹⁾ , individual mounting at 40/50/60 °C, AC-53a	A	45/42/39	65/58/53	72/62.1/60	80/73/66	106/98/90
Power loss						
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	6	12	15	12	21
• During starting with 300% I_M (40 °C)	W	316	444	500	576	768
Permissible rated motor current and starts per hour						
• For normal starting (CLASS 10) at 40/50 °C						
- Rated motor current $I_M^{(2)}$, start-up time 3 s	A	45/42	63/58	72/62	80/73	106/108
- Starts per hour ³⁾	1/h	38/38	23/23	22/22	22/22	15/15
- Rated motor current $I_M^{(2)}$, start-up time 4 s	A	45/42	63/58	72/62	80/73	106/98
- Starts per hour ³⁾	1/h	26/26	15/15	15/15	15/15	10/10
¹⁾ Measurement at 60 °C according to UL/CSA not required.		³⁾ For intermittent duty S4 with ON period = 30%, T_U = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode.				
²⁾ At 300% I_M , T_U = 40/50 °C.						

Basic Performance Soft Starters

3RW30 soft starters > General data

Type	3RW3003-1CB54		3RW3003-2CB54
Mechanics and environment			
Mounting dimensions (W x H x D) • Screw terminals • Spring-loaded terminals	 mm mm	22.5 x 100 x 120 --	-- 22.5 x 101.6 x 120
Permissible ambient temperature			
During operation	°C	-25 ... +60; (derating from +40)	
During storage	°C	-40 ... +80	
Weight	kg	0.207	0.188
Permissible mounting position			
Permissible installation altitude	m	5 000 (Derating from 1 000, see characteristic curve on page 7/7)	
Degree of protection acc. to IEC 60529	IP00		
Control electronics			
Rated values			
Rated control supply voltage	V	24 ... 230 AC/DC	
• Tolerance	%	± 10	
Rated frequency at AC	Hz	50/60	
• Tolerance	%	± 10	
Power electronics			
Rated operational voltage	V AC	200 ... 400	
Tolerance	%	± 10	
Rated frequency	Hz	50/60	
Tolerance	%	± 10	
Uninterrupted duty (% of I _e)	%	100	
Minimum load ¹⁾ (% of I _e); at 40 °C	%	9	
Maximum conductor length between soft starter and motor	m	100 ²⁾	
Load rating with rated operational current I _e			
• According to IEC and UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	3/2.6/2.2	
• According to IEC and UL/CSA, side-by-side mounting at 40/50/60 °C, AC-53a	A	2.6/2.2/1.8	
Power loss			
• In operation after completed starting with uninterrupted rated operational current (40 °C) approx.	W	6.5	
• With utilization of maximum switching frequency	W	3	
Permissible starts per hour (cannot be increased by using a fan)			
• For intermittent duty S4 T _U = 40 °C, stand-alone installation vertical	1/h	1 500	
• ON period = 70% for 300% I _e	1/s	0.2	
Dead time after uninterrupted duty with I _e before restart	s	0	

¹⁾ The rated motor current (specified on the motor's name plate) should at least amount to the specified percentage of the SIRIUS soft starter unit's rated operational current I_e .

²⁾ If this value is exceeded, problems with line capacities may arise, which can result in false firing.

Basic Performance Soft Starters

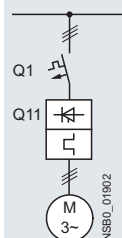
3RW30 soft starters > General data

Motor feeders according to IEC with 3RV2 motor starter protectors (without semiconductor protection)

Type of coordination "1", CLASS 10,
short-circuit breaking capacity I_q in kA, [see table](#)

Note:

For general recommendations for constructing motor feeders
with soft starters, [see page 7/9](#).



Soft starters		Motor starter protectors	
Q11		for 400 V systems	
Type		Q1	I_q kA
Type of coordination "1"	ToC 1	Inline circuit	
3RW3003	3RV2011-1EA10	50	
3RW3013	3RV2011-1FA10	5	
3RW3014	3RV2011-1HA10	5	
3RW3016	3RV2011-1JA10	5	
3RW3017	3RV2011-1KA10	5	
3RW3018	3RV2021-4BA10	5	
3RW3026	3RV2021-4DA10	55	
3RW3027	3RV2021-4EA10	55	
3RW3028	3RV2021-4FA10	55	
3RW3036	3RV2031-4WA10	10	
3RW3037	3RV2031-4JA10	10	
3RW3038	3RV2031-4KA10	10	
3RW3046	3RV2041-4RA10	11	
3RW3047	3RV2041-4MA10	11	

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller motor starter protectors/circuit breakers than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW30 soft starters > General data

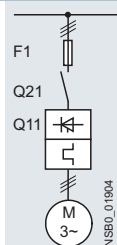
Motor feeders according to IEC with 3NA3 fuses

gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

Type of coordination "1",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	Line contactor (optional)	
	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Q11 Type	F1 Type	Q21 Type	Q21 Type
Type of coordination "1" ToC 1	Inline circuit		
3RW3003 ¹⁾	3NA3805 ²⁾	3RT2015	3RT2015
3RW3013	3NA3803-6	3RT2015	3RT2015
3RW3014	3NA3805-6	3RT2015	3RT2016
3RW3016	3NA3807-6	3RT2016	3RT2017
3RW3017	3NA3810-6	3RT2018	3RT2025
3RW3018	3NA3814-6	3RT2026	3RT2026
3RW3026	3NA3822-6	3RT2026	3RT2027
3RW3027	3NA3824-6	3RT2027	3RT2028
3RW3028	3NA3824-6	3RT2028	3RT2035
3RW3036	3NA3130-6	3RT2036	3RT2036
3RW3037	3NA3132-6	3RT2037	3RT2037
3RW3038	3NA3132-6	3RT2038	3RT2038
3RW3046	3NA3136-6	3RT2045	3RT2045
3RW3047	3NA3136-6	3RT2047	3RT2047

¹⁾ $I_q = 50 \text{ kA}$ at 400 V.

²⁾ 3NA3805-1 (NH00), 5SB261 (DIAZED), 5SE2201-6 (NEOZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW30 soft starters > General data

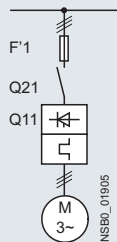
Motor feeders according to IEC with 3NE1 SITOR fuses

gR class full-range fuses for semiconductor protection, cable and line protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	Line contactor (optional)	
Q11	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Type	F'1	Q21	Q21
Type	Type	Type	Type
Type of coordination "2"	Toc 2 Inline circuit		
3RW3003 ¹⁾	3NE1813-0 ²⁾	3RT2015	3RT2015
3RW3013	3NE1813-0	3RT2015	3RT2015
3RW3014	3NE1813-0	3RT2015	3RT2016
3RW3016	3NE1813-0	3RT2016	3RT2017
3RW3017	3NE1813-0	3RT2018	3RT2025
3RW3018	3NE1814-0	3RT2026	3RT2026
3RW3026	3NE1803-0	3RT2026	3RT2027
3RW3027	3NE1020-2	3RT2027	3RT2028
3RW3028	3NE1020-2	3RT2028	3RT2035
3RW3036	3NE1020-2	3RT2036	3RT2036
3RW3037	3NE1820-0	3RT2037	3RT2037
3RW3038	3NE1820-0	3RT2038	3RT2038
3RW3046	3NE1021-0	3RT2045	3RT2045
3RW3047	3NE1022-0	3RT2047	3RT2047

¹⁾ $I_q = 50 \text{ kA}$ at 400 V.

²⁾ No SITOR fuse required!
Alternatively: 3NA3803 (NH00), 5SB221 (DIAZED), 5SE2206 (NEOZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

Basic Performance Soft Starters

3RW30 soft starters > General data

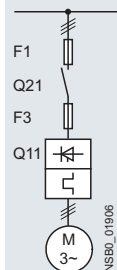
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity $I_q = 65 \text{ kA}$

Note:

For general recommendations for constructing motor feeders with soft starters, [see page 7/9](#).



Soft starters	gG class fuse	aR class fuse			Cylindrical fuses	Line contactor (optional)	
Q11	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 480 V	for systems up to 400 V	for systems up to 480 V
Type	F1	F3	F3	F3	F3	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2"	ToC 2 Inline circuit						
3RW3003 ¹⁾	3NA3805 ²⁾	--	--	3NE8015-1	3NC1010	3RT2015	3RT2015
3RW3013	3NA3803-6	--	3NE4101	3NE8015-1	3NC2220	3RT2015	3RT2015
3RW3014	3NA3805-6	--	3NE4101	3NE8015-1	3NC2220	3RT2015	3RT2016
3RW3016	3NA3807-6	--	3NE4101	3NE8015-1	3NC2220	3RT2016	3RT2017
3RW3017	3NA3810-6	--	3NE4101	3NE8015-1	3NC2250	3RT2018	3RT2025
3RW3018	3NA3814-6	--	3NE4101	3NE8003-1	3NC2263	3RT2026	3RT2026
3RW3026	3NA3822-6	--	3NE4102	3NE8017-1	3NC2263	3RT2026	3RT2027
3RW3027	3NA3824-6	--	3NE4118	3NE8018-1	3NC2280	3RT2027	3RT2028
3RW3028	3NA3824-6	--	3NE4118	3NE8020-1	3NC2280	3RT2028	3RT2035
3RW3036	3NA3130-6	--	3NE4120	3NE8020-1	3NC2280	3RT2036	3RT2036
3RW3037	3NA3132-6	--	3NE4121	3NE8021-1	--	3RT2037	3RT2037
3RW3038	3NA3132-6	3NE3221	--	3NE8022-1	--	3RT2038	3RT2038
3RW3046	3NA3136-6	3NE3222	--	3NE8022-1	--	3RT2045	3RT2045
3RW3047	3NA3136-6	3NE3224	--	3NE8024-1	--	3RT2047	3RT2047

¹⁾ $I_q = 50 \text{ kA}$ at 400 V.

²⁾ 3NA3805-1 (NH00), 5SB261 (DIAZED).

Note:

The specified short-circuit breaking capacities I_q in kA are covered by combination tests. Smaller fuses than those specified can be used at any time as smaller ones trip more quickly in the event of a short circuit (unchanged short-circuit breaking capacity) and thus protect the soft starter in any case. The dimensioning of the short-circuit components must, however, be suitable for the connected three-phase motor and the line protection for the cables used.

For CLASS 10 applications, as an alternative to the gG class full-range fuses for cable and line protection 3NA3 (F1), 3RV2 motor starter protectors/circuit breakers can also be used, possibly with reduced short-circuit breaking capacity ([see page 7/98](#)). In these cases, optional line contactors can be dispensed with.

Basic Performance Soft Starters

3RW30 soft starters > Inline circuit **IE3/IE4 ready**

Selection and ordering data

For simple starting conditions



3RW301.



3RW302.



3RW303.



3RW304.

3RW ambient temperature 40 °C				3RW ambient temperature 50 °C				Size	SD ¹⁾	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
Rated values of three-phase motors				Rated values of three-phase motors										
Operational current <i>I</i> _e	Rating at operational voltage <i>U</i> _e			Operational current <i>I</i> _e	Rating at operational voltage <i>U</i> _e									
	230 V	400 V	500 V		200 V	230 V	460 V							575 V
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Rated operational voltage <i>U</i> _e 200 ... 480 V														
3.6	0.75	1.5	--	3	0.5	0.5	1.5	--	S00	2	3RW3013-□BB□4	1	1 unit	
6.5	1.5	3	--	6	1	1	3	--	S00	2	3RW3014-□BB□4	1	1 unit	
9	2.2	4	--	8	2	2	5	--	S00	2	3RW3016-□BB□4	1	1 unit	
12.5	3	5.5	--	12	3	3	7.5	--	S00	2	3RW3017-□BB□4	1	1 unit	
17.6	4	7.5	--	17	3	3	10	--	S00	2	3RW3018-□BB□4	1	1 unit	
25	5.5	11	--	23	5	5	15	--	S0	2	3RW3026-□BB□4	1	1 unit	
32	7.5	15	--	29	7.5	7.5	20	--	S0	2	3RW3027-□BB□4	1	1 unit	
38	11	18.5	--	34	10	10	25	--	S0	2	3RW3028-□BB□4	1	1 unit	
45	11	22	--	42	10	15	30	--	S2	2	3RW3036-□BB□4	1	1 unit	
63	18.5	30	--	58	15	20	40	--	S2	2	3RW3037-□BB□4	1	1 unit	
72	22	37	--	62	20	20	40	--	S2	2	3RW3038-□BB□4	1	1 unit	
80	22	45	--	73	20	25	50	--	S3	2	3RW3046-□BB□4	1	1 unit	
106	30	55	--	98	30	30	75	--	S3	2	3RW3047-□BB□4	1	1 unit	

Article No. supplement for connection types

- Screw terminals
- Spring-loaded terminals²⁾

Control supply voltage U_s

- 24 V AC/DC
- 110 ... 230 V AC/DC

Soft starters for easy starting conditions and high switching frequency,
rated operational voltage U_e 200 ... 400 V,
rated control supply voltage U_s 24 ... 230 V AC/DC

3	0.55	1.1	--	A	0.5	0.5	--	--	22.5 mm				
• With screw terminals • With spring-loaded terminals										▶	3RW3003-1CB54	1	1 unit
										▶	3RW3003-2CB54	1	1 unit

¹⁾ Soft starter U_e 200 to 480 V with screw terminals:
Standard delivery time SD = 1 day (d).

²⁾ Main connection from size S2: screw terminals.

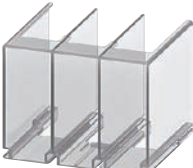
Note:

For the constraints for the motor outputs specified here,
[see page 7/7](#).

Selection and ordering data

More information

Equipment Manual "SIRIUS 3RW30/3RW40 Soft Starters", see
<https://support.industry.siemens.com/cs/ww/en/view/38752095>

Conductor cross-section		Tightening torque	For soft starters size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Solid or stranded	Finely stranded with end sleeve							
mm²	mm²	AWG	Nm		d			
Three-phase infeed terminals								
	2.5 ... 25	2.5 ... 16	10 ... 4	3 ... 4	S00 (3RW301.), S0 (3RW302.) ▶	3RV2925-5AB	1	1 unit
3RV2925-5AB								
For soft starters				SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Type	Size			d				
Auxiliary terminals								
	Auxiliary terminals, 3-pole							
3RT2946-4F	3RW304.	S3		5	3RT2946-4F		1	1 unit
Covers for soft starters								
	Terminal covers for box terminals							
Additional touch protection to be fitted at the box terminals (two units required per device)								
3RT2946-4EA2	3RW303.	S2		▶	3RT2936-4EA2		1	1 unit
	3RW304.	S3		▶	3RT2946-4EA2		1	1 unit
	Terminal covers for cable lugs and busbar connections							
For complying with the voltage clearances and as touch protection if box terminal is removed (two units required per device)								
3RT1946-4EA1	3RW304.	S3		5	3RT1946-4EA1		1	1 unit
For motor starter protectors		For soft starters	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Size	Size			d				
Mounting rails for mounting contactors for the customer assembly of 3RA21 load feeders with busbar adapters for 60 mm systems								
	--	S0	For the discrete configuration of direct-on-line starters, an additional mounting rail is needed for the contactor in addition to the existing mounting rail on the busbar adapter for the motor starter protector.		8US1998-7CB45		1	10 units
8US1998-7CB45			For pushing onto the device adapter, including fixing screws	2				
Standard mounting rail adapters								
	S2	S2	For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing		3RA2932-1CA00		1	1 unit
3RA2932-1CA00			Single-unit packaging	2				

Basic Performance Soft Starters

3RW30 soft starters > Accessories

For soft starters Type	Size	Motor starter protectors Size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				

Link modules to motor starter protectors¹⁾

3RA2921-1BA00

3RW301.	S00	S00	2
3RW302.	S0	S00/S0	2
3RW3036	S2	S2	▶
3RW304.	S3	S3	▶

Screw terminals



3RA2921-1BA00	1	1 unit
3RA2921-1BA00	1	1 unit
3RA2931-1AA00	1	1 unit
3RA1941-1AA00	1	1 unit



3RA2921-2GA00

3RW301.	S00	S00	2
3RW302.	S0	S0	2

Spring-loaded terminals



3RA2911-2GA00	1	1 unit
3RA2921-2GA00	1	1 unit

- ¹⁾ Can be used in size S0 up to 32 A.
Can be used in size S2 up to 65 A in combination with 3RA2932-1CA00 standard mounting rail adapter (specially for soft starters).
Can be used in size S3 only on mounting plate.

Version	Functionality Functions	Use	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				

Covers and push-in lugs (only for 3RW3003)



3RP1902



3RP1903

Sealable covers	For securing against unauthorized adjustment of setting knobs	For devices with 1 or 2 CO contacts	5	3RP1902		1	5 units
Push-in lugs for screw fixing	--	For devices with 1 or 2 CO contacts	5	3RP1903		1	10 units

Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
	d				

Tools for opening spring-loaded terminals in sizes S00 and S0



3RA2908-1A

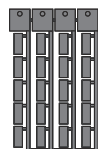
Screwdrivers
For all SIRIUS devices with spring-loaded terminals
Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated

Spring-loaded terminals



3RA2908-1A	1	1 unit
-------------------	---	--------

Blank labels



3RT2900-1SB20

Unit labeling plates¹⁾
For SIRIUS devices
20 mm x 7 mm, titanium gray

3RT2900-1SB20	100	340 units
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- ¹⁾ PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

High Performance Soft Starters

For 3RW55/3RW55 Failsafe

Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
d					
SIRIUS Soft Starter ES V16 Basic					
Basic Function Including Professional Trial License Engineering software, Software download 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface No cost to download: https://support.industry.siemens.com/cs/document/109771657					
SIRIUS Soft Starter ES V16 Professional					
 3ZS1320-6CC12-0YA5	Floating License for one User Engineering software, Software and documentation on DVD 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface or PROFIBUS/PROFINET • License Key on USB flash drive, includes DVD • License Key download, without DVD				
	5	3ZS1320-6CC12-0YA5		1	1 unit
	▶	3ZS1320-6CE12-0YB5		1	1 unit
Upgrade for Soft Starter ES 2007 Premium Floating License for one User Engineering software, Software and documentation on DVD License Key on USB flash drive 6 languages (English, German, French, Italian, Spanish, Chinese) Online functions via system interface or PROFIBUS/PROFINET	5	3ZS1320-6CC12-0YE5		1	1 unit

Hints:

Licenses from Soft Starter ES Standard and Premium V14 to V15.1 can also be used for Soft Starter ES V16 Professional

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	
					d				
Fans									
	Fan	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	▶	3RW5983-0FF00		1	1 unit	
		3RW554 (1x)	--	▶	3RW5984-0FF00		1	1 unit	
		3RW555 (3x)	--	▶	3RW5985-0FF00		1	1 unit	
						3RW5983-0FF00			
Terminals and terminal covers									
	Box terminal block	3RW552 (2x)	--	▶	3RW5982-0TB00		1	1 unit	
						3RW5982-0TB00			
	Removable control terminals	3RW551.-1H... (2x), 3RW552.-1H... (2x), 3RW553.-6H... (2x), 3RW554.-6H... (2x), 3RW555.-6H... (2x)	contains 2 blocks each with 6 terminals	▶	3RW5980-1TR00		1	1 unit	
						3RW5980-1TR00			
						3RW5980-1TR00			
						3RW5980-1TR00			
	Removable control terminals	3RW551.-3H... (2x), 3RW552.-3H... (2x), 3RW553.-2H... (2x), 3RW554.-2H... (2x), 3RW555.-2H... (2x)	contains 2 blocks each with 6 terminals	▶	3RW5980-2TR00		1	1 unit	
						3RW5980-2TR00			
						3RW5980-2TR00			
						3RW5980-2TR00			
	Terminal cover	3RW555	--	▶	3RW5955-0TC20		1	1 unit	
						3RW5955-0TC20			
					3RW5955-0TC20				

High Performance Soft Starters

For 3RW55/3RW55 Failsafe

Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Enclosure components							
 3RW5950-0GD20	Cover for control cable duct	3RW55...-HA..	Titanium gray	▶	3RW5950-0GD20	1	1 unit
		3RW55...-HF..	Yellow NEW	▶	3RW5950-0GD30	1	1 unit
 3RW5950-0GL30	Hinged cover	3RW55	With cutout for High Feature HMI module	▶	3RW5950-0GL30	1	1 unit

High Performance Soft Starters

For 3RW55/3RW55 Failsafe

Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules				d			
 3RW5980-0HF00	HMI module	3RW55	High Feature	▶	3RW5980-0HF00	1	1 unit
	Interface cover	3RW55	--	▶	3RW5980-0HL00	1	1 unit
 3RW5980-0HL00							
Connection cable for installing the HMI module in the soft starter							
 3UF7931-0AA00-0	Connection cable	--	0.1 m, flat	▶	3UF7931-0AA00-0	1	1 unit
Transport packaging							
 3RW5953-0VY00	Transport packaging	3RW551	--	▶	3RW5951-0VY00	1	1 unit
		3RW552, 3RW553	--	▶	3RW5953-0VY00	1	1 unit
		3RW554	--	▶	3RW5954-0VY00	1	1 unit
		3RW555	--	▶	3RW5955-0VY00	1	1 unit

General Performance Soft Starters

For 3RW52

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d			
Fans								
 3RW5983-0FF00	Fans	3RW5216/17 (1x), 3RW5226/27 (2x), 3RW523 (2x)	--	▶	3RW5983-0FF00		1	1 unit
		3RW524 (1x)	--	▶	3RW5984-0FF00		1	1 unit
Terminals								
 3RW5982-0TB00	Box terminal block	3RW522 (2x)	--	▶	3RW5982-0TB00		1	1 unit
 3RW5980-1TR00	Removable control terminals	3RW521.-1.C., 3RW522.-1.C., 3RW523.-6.C., 3RW524.-6.C..	contains 2 blocks each with 6 terminals	▶	Screw terminals 3RW5980-1TR00		1	1 unit
		3RW521.-3.C., 3RW522.-3.C., 3RW523.-2.C., 3RW524.-2.C..	contains 2 blocks each with 6 terminals	▶	Spring-loaded terminals 3RW5980-2TR00		1	1 unit
		Enclosure components						
 3RW5953-0GB00	Enclosure base	3RW522, 3RW523	--	▶	3RW5953-0GB00		1	1 unit
		3RW524	--	▶	3RW5954-0GB00		1	1 unit
 3RW5950-0GD20	Cover for control cable duct	3RW52	Titanium gray	▶	3RW5950-0GD20		1	1 unit

General Performance Soft Starters

For 3RW52

Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Enclosure components							
	Hinged cover	3RW52	Without cutout ▶	3RW5950-0GL20		1	1 unit
Transport packaging							
	Transport packaging	3RW521	-- ▶	3RW5951-0VY00		1	1 unit
		3RW522, 3RW523	-- ▶	3RW5953-0VY00		1	1 unit
		3RW524	-- ▶	3RW5954-0VY00		1	1 unit

Basic Performance Soft Starters

For 3RW50

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
					d			
Fan								
	Fan	3RW505 (1x)	--	▶	3RW5905-0FF00		1	1 unit
		3RW507 (1x)	--	▶	3RW5907-0FF00		1	1 unit
3RW5905-0FF00								
Terminals								
	Removable control terminals	3RW50...6.B..	contains 2 blocks each with 6 terminals	▶	Screw terminals 		1	1 unit
					3RW5980-1TR00			
		3RW50...2.B..	contains 2 blocks each with 6 terminals	▶	Spring-loaded terminals 		1	1 unit
3RW5980-1TR00								
Enclosure components								
	Hinged cover	3RW50	--	▶	3RW5900-0GL00		1	1 unit
3RW5900-0GL00								
Transport packaging								
	Transport packaging	3RW505	--	▶	3RW5905-0VY00		1	1 unit
		3RW507	--	▶	3RW5907-0VY00		1	1 unit
3RW5905-0VY00								

Soft starting from basic to the most demanding applications

Since motors play a critical role in processes, their performance must be both optimal and dependable without failure. Siemens 3RE47 enclosed soft starters help to ensure that! They help limit the starting current and torque to best fit the application. The motor is adjusted to the load of the driven

machine by means of stepless control of the voltage supply. Mechanical equipment is accelerated softly which improves process performance, reduces wear and tear and extends life of equipment. Furthermore, brownouts, current spikes and other disturbances to the electrical grid are minimized.

The comprehensive range of the 3RE47 enclosed soft starters offers the appropriate smart alternative for nearly every application, from basic to the most demanding motor requirements. They are shipped ready for installation, simple to commission, flexible to integrate and built to withstand harsh environments.

3RE47 Common features and general ratings

All three performance levels of the 3RE47 family of enclosed soft starters share the common features listed below.



- Pre-engineered package ready to install and run
- 200 - 600 V operational voltage
- 24 and 120 V AC control circuit with control power transformer included
- Internal bypass contactor for minimum power loss
- Motor overload protection
- Coated printed circuit boards
- Local and remote reset
- Terminal block for field connections of control circuit
- Enclosure NEMA types 1/12, 3R/4 and 4X 316 stainless steel
- Optional oversized enclosures for extra mounting panel space
- Circuit breaker, fusible disconnect and no disconnect
- Metal disconnect handle
- Factory installed options for convenience
- Field accessories for flexibility
- Listed as Service Entrance Equipment
- High short circuit current ratings up to 100k Amps
- 40o C (104o F) ambient operating temperature
- cULus Listed

3RE470 Basic performance enclosed soft starter

The 3RE470 Basic Performance enclosed soft starter powered with the SIRIUS 3RW40 open soft starter is suitable for soft starting and stopping of three-phase asynchronous motors. The device can be used for drives with an output of between 5 and 75HP @ 480V. Optional thermistor motor protection provides full motor protection. With its modern hybrid switching technology via its integral bypass contactor, the device offers efficient switching for long-term, energy-saving use.



- Powered with SIRIUS 3RW40 open soft starter
- Up to 75HP @ 480V (600V ratings also available)
- Operational current up to 98 A
- Soft starting and stopping
- Current limiting
- Refer to page 7/115 for a complete list of features



3RE471 General performance enclosed soft starter

The 3RE471 General Performance enclosed soft starter powered with the SIRIUS 3RW52 open soft starter is the ideal solution for standard applications. With ideal three-phase motor control, they cover the performance range from 7.5 to 400HP @ 480V. The standard feature HMI module, plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output (standard) or thermistor motor protection (optional) ensure maximum flexibility. With its modern hybrid switching technology via its integral bypass contactor, the device offers efficient switching for long-term, energy-saving use.

- Powered with SIRIUS 3RW52 open soft starter
- Operational current up to 416 A
- Up to 400HP @ 480V (600V ratings also available)
- TIA integration optional
- Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- Standard feature HMI module (high feature HMI module optional)
- Current limiting
- Analog output
- Soft torque for reduced mechanical loading and optimum pump stop
- Parameterization using potentiometers
- Refer to page 7/115 for a complete list of features

3RE472 High performance enclosed soft starter

Equipped with the utmost functionality, the 3RE472 High Performance enclosed soft starter powered with the SIRIUS 3RW55 open soft starter confidently handles even difficult starting and stopping operations. Thanks to innovative torque control, the device can be used for drives with an output of between 7.5 to 1000HP @ 480V. The functions have been specially designed to offer maximum user friendliness. The high feature HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With its modern hybrid switching technology via its integral bypass contactor, the device offers efficient switching for long-term, energy-saving use.

- Powered with SIRIUS 3RW55 open soft starter
- Operational current up to 1130 A
- Up to 1000HP @ 480V (600V ratings also available)
- TIA integration optional
- Plug-in communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus
- High feature HMI module with color display, local interface and slot for a micro SD memory card
- Extended protection functions
- Automatic parameterization for simple commissioning and reliability even under changing load conditions
- Pump stop for reduced mechanical loading and optimum pump stop control
- Refer to page 7/115 for a complete list of features



The 3RE47 provides these additional values to the customer

1. Cost savings

Internal bypass contactor, as standard, for reduced components and minimum power loss. Direct wiring from utility power lines without an intermediate disconnect due to UL rating as Service Entrance Equipment.

2. Reliability and sustained life of product

100% of soft starters undergo strict testing at the factory to ensure proper function. Electronics safeguarded against extreme environments by a protective coating. Rated for severe starting at 350% rated motor amps for 30 seconds. Enclosures strictly sized for proper heat dissipation ensuring fewer run-time disruptions and maximum life of electronic components. Fully gasketed door to help keep damaging contaminants out. Heavy-duty disconnect switch with double break switch action to reduce arcing and extend lifespan of switch.

3. Safety

High fault interrupting ratings up to 100kA at 600V. Built-in Safe Torque Off without additional components. Heavy-duty disconnect switch with visible blades and line side shield to guard personnel from contact with live parts.

4. Ease of installation and commissioning

Ideally sized enclosure to pull and terminate large power conductors and for field installing additional components. Terminal block for quick field connection minimizes installation cost and time. Streamlined installation with HMI digital display. Micro SD memory slot for quick downloading and uploading of parameter set for quick commissioning and to duplicate multiple starters. Automatic parameterization adapts to motor conditions optimizing performance and reliability.

5. Assurance and protection of equipment

Pump control for reduced water hammer as well as cleaning / deragging. 24/7 remote monitoring and control via optional communication modules for PROFINET, PROFIBUS, EtherNet/IP and Modbus protocols.

Disclaimer – The aforementioned values may not necessarily apply to every model. Please review the literature to determine which specific values apply to each model.

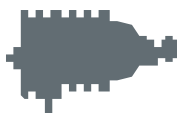
Your application in mind



Pumping



Ventilating



Compressing



Conveying



Processing

You choose the model based on your application

Applications	High Performance 3RE472	General Performance 3RE471	Basic Performance 3RE470
Normal starting (CLASS 10)			
Pumps	●	●	●
Pumps with special pump stop (to prevent water hammer)	●	○	●
Heat pumps	●	●	●
Hydraulic pumps	●	●	●
Presses	●	●	●
Conveyor belts	●	●	●
Roller conveyors	●	●	●
Screw conveyors	●	●	●
Escalators	●	●	●
Piston compressors	●	●	●
Screw compressors	●	●	●
Small fans ^①	●	●	●
Centrifugal blowers	●	●	●
Bow thrusters	●	●	●
Heavy starting (CLASS 20)			
Stirrers	●	○	○
Extruders	●	○	○
Lathes	●	○	○
Milling machines	●	○	○
Heavy starting (CLASS 30)			
Large fans ^②	●		
Circular saws/band saws	●		
Centrifuges	●		
Mills	●		
Crushers	●		

① The mass inertia of the fan is <10 times the mass inertia of the motor.
 ② The mass inertia of the fan is ≥10 times the mass inertia of the motor.

● Recommended soft starters
 ○ Possible soft starter

Features by model

	High Performance 3RE472	General Performance 3RE471	Basic Performance 3RE470
Powered by SIRIUS open soft starter	3RW55	3RW52	3RW40
Soft starting/ramp-down	✓	✓	✓
Voltage ramp	✓	✓	✓
Pump stop (torque control)	✓	—	—
Soft Torque (torque limit)	—	✓	—
Integral bypass contact system	✓	✓	✓
Intrinsic device protection	✓	✓	✓
Motor overload protection	✓	✓	✓
Thermistor motor protection evaluation	✓	✓	✓
Analog output	✓	✓	—
Remote RESET	✓	✓	✓
Adjustable current limiting	✓	✓	✓
Breakaway pulse	✓	—	—
Automatic parameterization	✓	—	—
Pump cleaning	✓	—	—
Condition monitoring	✓	—	—
User account administration with software	✓	—	—
Creep speed in both directions of rotation	✓	—	—
Reversing duty	✓	—	—
Reversing DC braking	✓	—	—
DC braking	✓	—	—
Dynamic DC braking	✓	—	—
Motor heating	✓	—	—
Communication function (optional)	✓	✓	—
Operating measured value display (optional)	✓	✓	—
Logbooks (optional)	✓	✓	—
Statistical data and slave pointer function (optional)	✓	✓	—
Trace function with software	✓	—	—
Programmable control inputs and outputs	✓	—	—
Number of parameter sets	3	1	1
Parameterizable with software	✓	—	—
Number of controlled phases	3	3	2
Heavy starting CLASS 30	✓	—	—

✓ Function available

— Function not available

For detailed explanation of each feature, refer to the open soft starter user's manual.

3RE47 Soft Starters

Ordering information and Simulation Tool

Choose a model (performance level)

Referring to the application and feature charts on the preceding pages, select the model (performance level) of the soft starter that best suits the required application.

Though not required to select an enclosed soft starter, it is recommended to first select the model and frame size of the open soft starter (i.e. 3RW5213) via the Simulation Tool for Soft Starters (STS). By inputting specific environmental, motor, and load data, the tool can recommend the open soft starter most suited for a specific application. Further details on the STS is given on this page.

Select a product

Once the model (performance level) is chosen, select the 3RE47 enclosed starter catalog number from the selection tables associated with the performance level of the soft starter. The selection tables include reference to the open soft starter if the STS was used to determine the model (performance level).

As optional, select factory modifications from the Factory Modifications and Accessories selection tables starting on page 7/136.

Configure a product

Instead of manually selecting a product, it may be configured with one of the configuration tools below. From the configurator, the product may also be added to your quote or order.

Compas go to <https://www.compas.siemens-info.com/mCompas/Compas/ManageJob#!/>

Industry Mall go to <https://mall.industry.siemens.com/mall/en/us/Catalog/Configurators>

Order a product without configuring it

If a catalog number is known, it may be directly entered into the [Industry Mall](#) ordering system. Simply enter the catalog number into the product search.

A catalog number with optional modification codes may also be directly entered. The following format must be used: <catalog number><-Z> <mod code 1><+mod code 2><+mod code 3>.

For example, 3RE47113NB430AA0-Z A01+F00+N01

Review technical data

Review the technical data starting on page 7/138 to check for constraints. Consult with the Siemens Application Engineering group componentsae.ic@siemens.com with any concerns.

Simulation Tool for Soft Starters (STS)

The Simulation Tool for Soft Starters (STS) provides a convenient means of designing soft starters using a simple, quick and easy-to-use interface.

Entering the motor and load data will simulate the application and prompts suggestions for suitable soft starters.

Link to the free download of the [Simulation Tool for Soft Starters \(STS\)](#)

- Simple, quick and user-friendly interface
- Detailed and up-to-date Siemens motor database, including IE3/IE4 motors
- Simulation of heavy starting up to Class 30
- Update-capable (e.g. motors, load types, functions)
- Fast simulations with minimum input data
- Immediate, graphical curve charts of start operations with limit values
- Table view of suitable soft starters for the application



Everything at a glance: Simulation and results list.

3RE47 Soft Starters

Catalog Number Builder

Nomenclature

3RE47 0 2 - 4 N A 4 3 - 0 A A 0

Performance level

- 0 = Basic performance (3RW40)
 1 = General performance (3RW52)
 2 = High performance (3RW55)

Operational current for normal starting (Class 10E) at 40° C Ambient to enclosure

Basic performance	General performance	High performance
24 = 11A	13 = 11.5A	13 = 11.5A
26 = 23A	14 = 15.9A	14 = 15.9A
27 = 29A	15 = 22.3A	15 = 22.3A
28 = 34A	16 = 28.4A	16 = 28.4A
36 = 42A	17 = 33.5A	17 = 33.5A
37 = 58A	24 = 41.6A	24 = 41.6A
38 = 62.1A	25 = 55.5A	25 = 55.5A
46 = 73A	26 = 68A	26 = 68A
47 = 98A	27 = 82.5A	27 = 82.5A
	34 = 101A	34 = 101A
	35 = 127A	35 = 127A
	36 = 146A	36 = 146A
	43 = 184A	43 = 184A
	44 = 220A	44 = 220A
	45 = 255A	45 = 279A
	46 = 328A	46 = 328A
	47 = 362A	47 = 416A
	48 = 416A	48 = 490A
		52 = 561A
		53 = 641A
		54 = 748A
		56 = 979A
		58 = 1130A

Enclosure type and size

- N = NEMA Type 1/12 – standard size
 P = NEMA Type 1/12 – oversized
 Q = NEMA Type 3R/4 – standard size
 R = NEMA Type 3R/4 – oversized
 L = NEMA Type 4X 316 SS – standard size
 M = NEMA Type 4X 316 SS – oversized

Disconnect type

- A = No disconnect
 B = Circuit breaker with thermal and magnetic trip
 F = Fusible disconnect switch

Operational voltage (Volts)

- 1 = 200/208 V
 2 = 320/240 V
 4 = 460/480 V
 5 = 575/600 V

Control voltage

- 1 = 24 VAC (internally supplied via CPT)
 3 = 120 VAC (internally supplied via CPT)

Line/Load cable entry

- 0 = Unspecified cable entry
 1 = Top/Top
 2 = Top/Bottom
 3 = Bottom/Top
 4 = Bottom/Bottom

Series / Generation

- 0 = 3RW40, 52 & 55

3RE470 Basic Performance

Non-combination (no disconnect device)

Ordering information

Ordering Information		Oversized												
 ► For factory modifications and accessories, see pages 7/136 - 7/137. ► For technical data, see pages 7/138 - 7/140. ► For wiring diagrams, see pages 7/141 - 7/143. ► For dimension diagrams, see pages 7/144 - 7/149. ► Highlighted catalog numbers indicate configurations with shortest lead time.		For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
	200 V	230 V	460 V	575 V	Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
11	3	3	7.5	10	3RE4702-4NA□□-0AA0	3RE4702-4QA□□-0AA0	3RE4702-4LA□□-0AA0	3RW4024-1BB□□
23	5	5	15	20	3RE4702-6NA□□-0AA0	3RE4702-6QA□□-0AA0	3RE4702-6LA□□-0AA0	3RW4026-1BB□□
29	7.5	7.5	20	25	3RE4702-7NA□□-0AA0	3RE4702-7QA□□-0AA0	3RE4702-7LA□□-0AA0	3RW4027-1BB□□
34	10	10	25	30	3RE4702-8NA□□-0AA0	3RE4702-8QA□□-0AA0	3RE4702-8LA□□-0AA0	3RW4028-1BB□□
42	10	15	30	40	3RE4703-6NA□□-0AA0	3RE4703-6QA□□-0AA0	3RE4703-6LA□□-0AA0	3RW4036-1BB□□
58	15	20	40	50	3RE4703-7NA□□-0AA0	3RE4703-7QA□□-0AA0	3RE4703-7LA□□-0AA0	3RW4037-1BB□□
62	20	20	40	60	3RE4703-8NA□□-0AA0	3RE4703-8QA□□-0AA0	3RE4703-8LA□□-0AA0	3RW4038-1BB□□
73	20	25	50	60	3RE4704-6NA□□-0AA0	3RE4704-6QA□□-0AA0	3RE4704-6LA□□-0AA0	3RW4046-1BB□□
98	30	30	75	75	3RE4704-7NA□□-0AA0	3RE4704-7QA□□-0AA0	3RE4704-7LA□□-0AA0	3RW4047-1BB□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

1
2
4
51
2
4
51
2
4
54
4
4
51
31
31
30
1

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
	200 V	230 V	460 V	575 V	Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
9	2	2	5	7.5	3RE4702-4NA□□-0AA0	3RE4702-4QA□□-0AA0	3RE4702-4LA□□-0AA0	3RW4024-1BB□□
19	5	5	10	15	3RE4702-6NA□□-0AA0	3RE4702-6QA□□-0AA0	3RE4702-6LA□□-0AA0	3RW4026-1BB□□
24	5	7.5	15	20	3RE4702-7NA□□-0AA0	3RE4702-7QA□□-0AA0	3RE4702-7LA□□-0AA0	3RW4027-1BB□□
28	7.5	10	20	25	3RE4702-8NA□□-0AA0	3RE4702-8QA□□-0AA0	3RE4702-8LA□□-0AA0	3RW4028-1BB□□
34	10	10	25	30	3RE4703-6NA□□-0AA0	3RE4703-6QA□□-0AA0	3RE4703-6LA□□-0AA0	3RW4036-1BB□□
42	10	15	30	40	3RE4703-7NA□□-0AA0	3RE4703-7QA□□-0AA0	3RE4703-7LA□□-0AA0	3RW4037-1BB□□
46	10	15	30	40	3RE4703-8NA□□-0AA0	3RE4703-8QA□□-0AA0	3RE4703-8LA□□-0AA0	3RW4038-1BB□□
58	15	20	40	50	3RE4704-6NA□□-0AA0	3RE4704-6QA□□-0AA0	3RE4704-6LA□□-0AA0	3RW4046-1BB□□
70	20	25	50	60	3RE4704-7NA□□-0AA0	3RE4704-7QA□□-0AA0	3RE4704-7LA□□-0AA0	3RW4047-1BB□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

1
2
4
51
2
4
51
2
4
54
4
4
51
31
31
30
1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE470 Basic Performance

Combination with circuit breaker

Ordering information

Ordering Information		Oversized												
 ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.		For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11	3	3	7.5	10	3RE4702-4NB□□-0AA0	3RE4702-4QB□□-0AA0	3RE4702-4LB□□-0AA0	3RW4024-1BB□□
23	5	5	15	20	3RE4702-6NB□□-0AA0	3RE4702-6QB□□-0AA0	3RE4702-6LB□□-0AA0	3RW4026-1BB□□
29	7.5	7.5	20	25	3RE4702-7NB□□-0AA0	3RE4702-7QB□□-0AA0	3RE4702-7LB□□-0AA0	3RW4027-1BB□□
34	10	10	25	30	3RE4702-8NB□□-0AA0	3RE4702-8QB□□-0AA0	3RE4702-8LB□□-0AA0	3RW4028-1BB□□
42	10	15	30	40	3RE4703-6NB□□-0AA0	3RE4703-6QB□□-0AA0	3RE4703-6LB□□-0AA0	3RW4036-1BB□□
58	15	20	40	50	3RE4703-7NB□□-0AA0	3RE4703-7QB□□-0AA0	3RE4703-7LB□□-0AA0	3RW4037-1BB□□
62	20	20	40	60	3RE4703-8NB□□-0AA0	3RE4703-8QB□□-0AA0	3RE4703-8LB□□-0AA0	3RW4038-1BB□□
73	20	25	50	60	3RE4704-6NB□□-0AA0	3RE4704-6QB□□-0AA0	3RE4704-6LB□□-0AA0	3RW4046-1BB□□
98	30	30	75	75	3RE4704-7NB□□-0AA0	3RE4704-7QB□□-0AA0	3RE4704-7LB□□-0AA0	3RW4047-1BB□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
9	2	2	5	7.5	3RE4702-4NB□□-0AA0	3RE4702-4QB□□-0AA0	3RE4702-4LB□□-0AA0	3RW4024-1BB□□
19	5	5	10	15	3RE4702-6NB□□-0AA0	3RE4702-6QB□□-0AA0	3RE4702-6LB□□-0AA0	3RW4026-1BB□□
24	5	7.5	15	20	3RE4702-7NB□□-0AA0	3RE4702-7QB□□-0AA0	3RE4702-7LB□□-0AA0	3RW4027-1BB□□
28	7.5	10	20	25	3RE4702-8NB□□-0AA0	3RE4702-8QB□□-0AA0	3RE4702-8LB□□-0AA0	3RW4028-1BB□□
34	10	10	25	30	3RE4703-6NB□□-0AA0	3RE4703-6QB□□-0AA0	3RE4703-6LB□□-0AA0	3RW4036-1BB□□
42	10	15	30	40	3RE4703-7NB□□-0AA0	3RE4703-7QB□□-0AA0	3RE4703-7LB□□-0AA0	3RW4037-1BB□□
46	10	15	30	40	3RE4703-8NB□□-0AA0	3RE4703-8QB□□-0AA0	3RE4703-8LB□□-0AA0	3RW4038-1BB□□
58	15	20	40	50	3RE4704-6NB□□-0AA0	3RE4704-6QB□□-0AA0	3RE4704-6LB□□-0AA0	3RW4046-1BB□□
70	20	25	50	60	3RE4704-7NB□□-0AA0	3RE4704-7QB□□-0AA0	3RE4704-7LB□□-0AA0	3RW4047-1BB□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE470 Basic Performance

Combination with fusible disconnect

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)	
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant		
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number		
11	3	3	7.5	10	3RE4702-4NF□□-0AA0	3RE4702-4QF□□-0AA0	3RE4702-4LF□□-0AA0	3RW4024-1BB□□	
23	5	5	15	20	3RE4702-6NF□□-0AA0	3RE4702-6QF□□-0AA0	3RE4702-6LF□□-0AA0	3RW4026-1BB□□	
29	7.5	7.5	20	25	3RE4702-7NF□□-0AA0	3RE4702-7QF□□-0AA0	3RE4702-7LF□□-0AA0	3RW4027-1BB□□	
34	10	10	25	30	3RE4702-8NF□□-0AA0	3RE4702-8QF□□-0AA0	3RE4702-8LF□□-0AA0	3RW4028-1BB□□	
42	10	15	30	40	3RE4703-6NF□□-0AA0	3RE4703-6QF□□-0AA0	3RE4703-6LF□□-0AA0	3RW4036-1BB□□	
58	15	20	40	50	3RE4703-7NF□□-0AA0	3RE4703-7QF□□-0AA0	3RE4703-7LF□□-0AA0	3RW4037-1BB□□	
62	20	20	40	60	3RE4703-8NF□□-0AA0	3RE4703-8QF□□-0AA0	3RE4703-8LF□□-0AA0	3RW4038-1BB□□	
73	20	25	50	60	3RE4704-6NF□□-0AA0	3RE4704-6QF□□-0AA0	3RE4704-6LF□□-0AA0	3RW4046-1BB□□	
98	30	30	75	75	3RE4704-7NF□□-0AA0	3RE4704-7QF□□-0AA0	3RE4704-7LF□□-0AA0	3RW4047-1BB□□	
Operational voltage					200/208 V	1	1	1	4
					230/240 V	2	2	2	4
Control voltage					460/480 V	4	4	4	4
					575/600 V	5	5	5	5
					24 VAC [Ⓢ]	1	1	1	0
					120 VAC [Ⓢ]	3	3	3	1

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)	
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant		
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number		
9	2	2	5	7.5	3RE4702-4NF□□-0AA0	3RE4702-4QF□□-0AA0	3RE4702-4LF□□-0AA0	3RW4024-1BB□□	
19	5	5	10	15	3RE4702-6NF□□-0AA0	3RE4702-6QF□□-0AA0	3RE4702-6LF□□-0AA0	3RW4026-1BB□□	
24	5	7.5	15	20	3RE4702-7NF□□-0AA0	3RE4702-7QF□□-0AA0	3RE4702-7LF□□-0AA0	3RW4027-1BB□□	
28	7.5	10	20	25	3RE4702-8NF□□-0AA0	3RE4702-8QF□□-0AA0	3RE4702-8LF□□-0AA0	3RW4028-1BB□□	
34	10	10	25	30	3RE4703-6NF□□-0AA0	3RE4703-6QF□□-0AA0	3RE4703-6LF□□-0AA0	3RW4036-1BB□□	
42	10	15	30	40	3RE4703-7NF□□-0AA0	3RE4703-7QF□□-0AA0	3RE4703-7LF□□-0AA0	3RW4037-1BB□□	
46	10	15	30	40	3RE4703-8NF□□-0AA0	3RE4703-8QF□□-0AA0	3RE4703-8LF□□-0AA0	3RW4038-1BB□□	
58	15	20	40	50	3RE4704-6NF□□-0AA0	3RE4704-6QF□□-0AA0	3RE4704-6LF□□-0AA0	3RW4046-1BB□□	
70	20	25	50	60	3RE4704-7NF□□-0AA0	3RE4704-7QF□□-0AA0	3RE4704-7LF□□-0AA0	3RW4047-1BB□□	
Operational voltage					200/208 V	1	1	1	4
					230/240 V	2	2	2	4
					460/480 V	4	4	4	4
					575/600 V	5	5	5	5
Control voltage					24 VAC [Ⓢ]	1	1	1	0
					120 VAC [Ⓢ]	3	3	3	1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

Ⓢ Internally supplied with CPT.

3RE471 General Performance

Non-combination (no disconnect device)

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NA□□-0AA0	3RE4711-3QA□□-0AA0	3RE4711-3LA□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NA□□-0AA0	3RE4711-4QA□□-0AA0	3RE4711-4LA□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NA□□-0AA0	3RE4711-5QA□□-0AA0	3RE4711-5LA□□-0AA0	3RW5215-1AC□□
28.4	7.5	10	20	25	3RE4711-6NA□□-0AA0	3RE4711-6QA□□-0AA0	3RE4711-6LA□□-0AA0	3RW5216-1AC□□
33.5	10	10	20	30	3RE4711-7NA□□-0AA0	3RE4711-7QA□□-0AA0	3RE4711-7LA□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NA□□-0AA0	3RE4712-4QA□□-0AA0	3RE4712-4LA□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NA□□-0AA0	3RE4712-5QA□□-0AA0	3RE4712-5LA□□-0AA0	3RW5225-1AC□□
68	20	25	50	60	3RE4712-6NA□□-0AA0	3RE4712-6QA□□-0AA0	3RE4712-6LA□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NA□□-0AA0	3RE4712-7QA□□-0AA0	3RE4712-7LA□□-0AA0	3RW5227-1AC□□
101	30	30	75	100	3RE4713-4NA□□-0AA0	3RE4713-4QA□□-0AA0	3RE4713-4LA□□-0AA0	3RW5234-6AC□□
127	40	40	100	125	3RE4713-5NA□□-0AA0	3RE4713-5QA□□-0AA0	3RE4713-5LA□□-0AA0	3RW5235-6AC□□
146	50	50	100	150	3RE4713-6NA□□-0AA0	3RE4713-6QA□□-0AA0	3RE4713-6LA□□-0AA0	3RW5236-6AC□□
184	60	60	150	150	3RE4714-3NA□□-0AA0	3RE4714-3QA□□-0AA0	3RE4714-3LA□□-0AA0	3RW5243-6AC□□
220	60	75	150	200	3RE4714-4NA□□-0AA0	3RE4714-4QA□□-0AA0	3RE4714-4LA□□-0AA0	3RW5244-6AC□□
255	75	100	200	250	3RE4714-5NA□□-0AA0	3RE4714-5QA□□-0AA0	3RE4714-5LA□□-0AA0	3RW5245-6AC□□
328	100	125	250	300	3RE4714-6NA□□-0AA0	3RE4714-6QA□□-0AA0	3RE4714-6LA□□-0AA0	3RW5246-6AC□□
362	150	150	350	450	3RE4714-7NA□□-0AA0	3RE4714-7QA□□-0AA0	3RE4714-7LA□□-0AA0	3RW5247-6AC□□
416	150	200	400	500	3RE4714-8NA□□-0AA0	3RE4714-8QA□□-0AA0	3RE4714-8LA□□-0AA0	3RW5248-6AC□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

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5
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① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE471 General Performance

Non-combination (no disconnect device)

Ordering information

	Ordering Information	Oversized														
	▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.	For oversized enclosures ①, change the 9th character of the catalog number as follows:														
		<table><tr><th>NEMA Type</th><th>From</th><th>To</th></tr><tr><td>1/12</td><td>N</td><td>P</td></tr><tr><td>3R/4</td><td>Q</td><td>R</td></tr><tr><td>4X</td><td>L</td><td>M</td></tr></table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M		
	NEMA Type	From	To													
1/12	N	P														
3R/4	Q	R														
4X	L	M														

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NA□□-0AA0	3RE4711-3QA□□-0AA0	3RE4711-3LA□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NA□□-0AA0	3RE4711-4QA□□-0AA0	3RE4711-4LA□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NA□□-0AA0	3RE4711-5QA□□-0AA0	3RE4711-5LA□□-0AA0	3RW5215-1AC□□
27.2	7.5	7.5	20	25	3RE4711-6NA□□-0AA0	3RE4711-6QA□□-0AA0	3RE4711-6LA□□-0AA0	3RW5216-1AC□□
30.5	7.5	10	20	25	3RE4711-7NA□□-0AA0	3RE4711-7QA□□-0AA0	3RE4711-7LA□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NA□□-0AA0	3RE4712-4QA□□-0AA0	3RE4712-4LA□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NA□□-0AA0	3RE4712-5QA□□-0AA0	3RE4712-5LA□□-0AA0	3RW5225-1AC□□
59	15	20	40	50	3RE4712-6NA□□-0AA0	3RE4712-6QA□□-0AA0	3RE4712-6LA□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NA□□-0AA0	3RE4712-7QA□□-0AA0	3RE4712-7LA□□-0AA0	3RW5227-1AC□□
97	30	30	75	75	3RE4713-4NA□□-0AA0	3RE4713-4QA□□-0AA0	3RE4713-4LA□□-0AA0	3RW5234-6AC□□
103	30	30	75	100	3RE4713-5NA□□-0AA0	3RE4713-5QA□□-0AA0	3RE4713-5LA□□-0AA0	3RW5235-6AC□□
117	30	40	75	100	3RE4713-6NA□□-0AA0	3RE4713-6QA□□-0AA0	3RE4713-6LA□□-0AA0	3RW5236-6AC□□
146	40	50	100	150	3RE4714-3NA□□-0AA0	3RE4714-3QA□□-0AA0	3RE4714-3LA□□-0AA0	3RW5243-6AC□□
180	60	60	150	175	3RE4714-4NA□□-0AA0	3RE4714-4QA□□-0AA0	3RE4714-4LA□□-0AA0	3RW5244-6AC□□
171	50	60	125	175	3RE4714-5NA□□-0AA0	3RE4714-5QA□□-0AA0	3RE4714-5LA□□-0AA0	3RW5245-6AC□□
230	75	75	175	200	3RE4714-6NA□□-0AA0	3RE4714-6QA□□-0AA0	3RE4714-6LA□□-0AA0	3RW5246-6AC□□
236	75	75	175	200	3RE4714-7NA□□-0AA0	3RE4714-7QA□□-0AA0	3RE4714-7LA□□-0AA0	3RW5247-6AC□□
262	75	100	200	250	3RE4714-8NA□□-0AA0	3RE4714-8QA□□-0AA0	3RE4714-8LA□□-0AA0	3RW5248-6AC□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

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① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE471 General Performance

Combination with circuit breaker

Ordering information

Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.
- ▶ Highlighted catalog numbers indicate configurations with shortest lead time.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
	200 V	230 V	460 V	575 V	Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NB□□-0AA0	3RE4711-3QB□□-0AA0	3RE4711-3LB□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NB□□-0AA0	3RE4711-4QB□□-0AA0	3RE4711-4LB□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NB□□-0AA0	3RE4711-5QB□□-0AA0	3RE4711-5LB□□-0AA0	3RW5215-1AC□□
28.4	7.5	10	20	25	3RE4711-6NB□□-0AA0	3RE4711-6QB□□-0AA0	3RE4711-6LB□□-0AA0	3RW5216-1AC□□
33.5	10	10	20	30	3RE4711-7NB□□-0AA0	3RE4711-7QB□□-0AA0	3RE4711-7LB□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NB□□-0AA0	3RE4712-4QB□□-0AA0	3RE4712-4LB□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NB□□-0AA0	3RE4712-5QB□□-0AA0	3RE4712-5LB□□-0AA0	3RW5225-1AC□□
68	20	25	50	60	3RE4712-6NB□□-0AA0	3RE4712-6QB□□-0AA0	3RE4712-6LB□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NB□□-0AA0	3RE4712-7QB□□-0AA0	3RE4712-7LB□□-0AA0	3RW5227-1AC□□
101	30	30	75	100	3RE4713-4NB□□-0AA0	3RE4713-4QB□□-0AA0	3RE4713-4LB□□-0AA0	3RW5234-6AC□□
127	40	40	100	125	3RE4713-5NB□□-0AA0	3RE4713-5QB□□-0AA0	3RE4713-5LB□□-0AA0	3RW5235-6AC□□
146	50	50	100	150	3RE4713-6NB□□-0AA0	3RE4713-6QB□□-0AA0	3RE4713-6LB□□-0AA0	3RW5236-6AC□□
184	60	60	150	150	3RE4714-3NB□□-0AA0	3RE4714-3QB□□-0AA0	3RE4714-3LB□□-0AA0	3RW5243-6AC□□
220	60	75	150	200	3RE4714-4NB□□-0AA0	3RE4714-4QB□□-0AA0	3RE4714-4LB□□-0AA0	3RW5244-6AC□□
255	75	100	200	250	3RE4714-5NB□□-0AA0	3RE4714-5QB□□-0AA0	3RE4714-5LB□□-0AA0	3RW5245-6AC□□
328	100	125	250	300	3RE4714-6NB□□-0AA0	3RE4714-6QB□□-0AA0	3RE4714-6LB□□-0AA0	3RW5246-6AC□□
362	150	150	350	450	3RE4714-7NB□□-0AA0	3RE4714-7QB□□-0AA0	3RE4714-7LB□□-0AA0	3RW5247-6AC□□
416	150	200	400	500	3RE4714-8NB□□-0AA0	3RE4714-8QB□□-0AA0	3RE4714-8LB□□-0AA0	3RW5248-6AC□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

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① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE471 General Performance

Combination with circuit breaker

Ordering information

Ordering Information		Oversized												
 ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.		For oversized enclosures ①, change the 9th character of the catalog number as follows: <table> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NB□□-0AA0	3RE4711-3QB□□-0AA0	3RE4711-3LB□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NB□□-0AA0	3RE4711-4QB□□-0AA0	3RE4711-4LB□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NB□□-0AA0	3RE4711-5QB□□-0AA0	3RE4711-5LB□□-0AA0	3RW5215-1AC□□
27.2	7.5	7.5	20	25	3RE4711-6NB□□-0AA0	3RE4711-6QB□□-0AA0	3RE4711-6LB□□-0AA0	3RW5216-1AC□□
30.5	7.5	10	20	25	3RE4711-7NB□□-0AA0	3RE4711-7QB□□-0AA0	3RE4711-7LB□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NB□□-0AA0	3RE4712-4QB□□-0AA0	3RE4712-4LB□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NB□□-0AA0	3RE4712-5QB□□-0AA0	3RE4712-5LB□□-0AA0	3RW5225-1AC□□
59	15	20	40	50	3RE4712-6NB□□-0AA0	3RE4712-6QB□□-0AA0	3RE4712-6LB□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NB□□-0AA0	3RE4712-7QB□□-0AA0	3RE4712-7LB□□-0AA0	3RW5227-1AC□□
97	30	30	75	75	3RE4713-4NB□□-0AA0	3RE4713-4QB□□-0AA0	3RE4713-4LB□□-0AA0	3RW5234-6AC□□
103	30	30	75	100	3RE4713-5NB□□-0AA0	3RE4713-5QB□□-0AA0	3RE4713-5LB□□-0AA0	3RW5235-6AC□□
117	30	40	75	100	3RE4713-6NB□□-0AA0	3RE4713-6QB□□-0AA0	3RE4713-6LB□□-0AA0	3RW5236-6AC□□
146	40	50	100	150	3RE4714-3NB□□-0AA0	3RE4714-3QB□□-0AA0	3RE4714-3LB□□-0AA0	3RW5243-6AC□□
180	60	60	150	175	3RE4714-4NB□□-0AA0	3RE4714-4QB□□-0AA0	3RE4714-4LB□□-0AA0	3RW5244-6AC□□
171	50	60	125	175	3RE4714-5NB□□-0AA0	3RE4714-5QB□□-0AA0	3RE4714-5LB□□-0AA0	3RW5245-6AC□□
230	75	75	175	200	3RE4714-6NB□□-0AA0	3RE4714-6QB□□-0AA0	3RE4714-6LB□□-0AA0	3RW5246-6AC□□
236	75	75	175	200	3RE4714-7NB□□-0AA0	3RE4714-7QB□□-0AA0	3RE4714-7LB□□-0AA0	3RW5247-6AC□□
262	75	100	200	250	3RE4714-8NB□□-0AA0	3RE4714-8QB□□-0AA0	3RE4714-8LB□□-0AA0	3RW5248-6AC□□

Operational voltage	200/208 V	1
	230/240 V	2
	460/480 V	4
	575/600 V	5
Control voltage	24 VAC②	1
	120 VAC②	3

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE471 General Performance

Combination with fusible disconnect

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NF□□-0AA0	3RE4711-3QF□□-0AA0	3RE4711-3LF□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NF□□-0AA0	3RE4711-4QF□□-0AA0	3RE4711-4LF□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NF□□-0AA0	3RE4711-5QF□□-0AA0	3RE4711-5LF□□-0AA0	3RW5215-1AC□□
28.4	7.5	10	20	25	3RE4711-6NF□□-0AA0	3RE4711-6QF□□-0AA0	3RE4711-6LF□□-0AA0	3RW5216-1AC□□
33.5	10	10	20	30	3RE4711-7NF□□-0AA0	3RE4711-7QF□□-0AA0	3RE4711-7LF□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NF□□-0AA0	3RE4712-4QF□□-0AA0	3RE4712-4LF□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NF□□-0AA0	3RE4712-5QF□□-0AA0	3RE4712-5LF□□-0AA0	3RW5225-1AC□□
68	20	25	50	60	3RE4712-6NF□□-0AA0	3RE4712-6QF□□-0AA0	3RE4712-6LF□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NF□□-0AA0	3RE4712-7QF□□-0AA0	3RE4712-7LF□□-0AA0	3RW5227-1AC□□
101	30	30	75	100	3RE4713-4NF□□-0AA0	3RE4713-4QF□□-0AA0	3RE4713-4LF□□-0AA0	3RW5234-6AC□□
127	40	40	100	125	3RE4713-5NF□□-0AA0	3RE4713-5QF□□-0AA0	3RE4713-5LF□□-0AA0	3RW5235-6AC□□
146	50	50	100	150	3RE4713-6NF□□-0AA0	3RE4713-6QF□□-0AA0	3RE4713-6LF□□-0AA0	3RW5236-6AC□□
184	60	60	150	150	3RE4714-3NF□□-0AA0	3RE4714-3QF□□-0AA0	3RE4714-3LF□□-0AA0	3RW5243-6AC□□
220	60	75	150	200	3RE4714-4NF□□-0AA0	3RE4714-4QF□□-0AA0	3RE4714-4LF□□-0AA0	3RW5244-6AC□□
255	75	100	200	250	3RE4714-5NF□□-0AA0	3RE4714-5QF□□-0AA0	3RE4714-5LF□□-0AA0	3RW5245-6AC□□
328	100	125	250	300	3RE4714-6NF□□-0AA0	3RE4714-6QF□□-0AA0	3RE4714-6LF□□-0AA0	3RW5246-6AC□□
362	150	150	350	450	3RE4714-7NF□□-0AA0	3RE4714-7QF□□-0AA0	3RE4714-7LF□□-0AA0	3RW5247-6AC□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

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① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE471 General Performance

Combination with fusible disconnect

Ordering information

Ordering Information		Oversized												
 ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149.		For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4711-3NF□□-0AA0	3RE4711-3QF□□-0AA0	3RE4711-3LF□□-0AA0	3RW5213-1AC□□
15.9	3	5	10	10	3RE4711-4NF□□-0AA0	3RE4711-4QF□□-0AA0	3RE4711-4LF□□-0AA0	3RW5214-1AC□□
22.3	5	7.5	15	20	3RE4711-5NF□□-0AA0	3RE4711-5QF□□-0AA0	3RE4711-5LF□□-0AA0	3RW5215-1AC□□
27.2	7.5	7.5	20	25	3RE4711-6NF□□-0AA0	3RE4711-6QF□□-0AA0	3RE4711-6LF□□-0AA0	3RW5216-1AC□□
30.5	7.5	10	20	25	3RE4711-7NF□□-0AA0	3RE4711-7QF□□-0AA0	3RE4711-7LF□□-0AA0	3RW5217-1AC□□
41.6	10	10	30	40	3RE4712-4NF□□-0AA0	3RE4712-4QF□□-0AA0	3RE4712-4LF□□-0AA0	3RW5224-1AC□□
55.5	15	20	40	50	3RE4712-5NF□□-0AA0	3RE4712-5QF□□-0AA0	3RE4712-5LF□□-0AA0	3RW5225-1AC□□
59	15	20	40	50	3RE4712-6NF□□-0AA0	3RE4712-6QF□□-0AA0	3RE4712-6LF□□-0AA0	3RW5226-1AC□□
82.5	25	30	60	75	3RE4712-7NF□□-0AA0	3RE4712-7QF□□-0AA0	3RE4712-7LF□□-0AA0	3RW5227-1AC□□
97	30	30	75	75	3RE4713-4NF□□-0AA0	3RE4713-4QF□□-0AA0	3RE4713-4LF□□-0AA0	3RW5234-6AC□□
103	30	30	75	100	3RE4713-5NF□□-0AA0	3RE4713-5QF□□-0AA0	3RE4713-5LF□□-0AA0	3RW5235-6AC□□
117	30	40	75	100	3RE4713-6NF□□-0AA0	3RE4713-6QF□□-0AA0	3RE4713-6LF□□-0AA0	3RW5236-6AC□□
146	40	50	100	150	3RE4714-3NF□□-0AA0	3RE4714-3QF□□-0AA0	3RE4714-3LF□□-0AA0	3RW5243-6AC□□
180	60	60	150	175	3RE4714-4NF□□-0AA0	3RE4714-4QF□□-0AA0	3RE4714-4LF□□-0AA0	3RW5244-6AC□□
171	50	60	125	175	3RE4714-5NF□□-0AA0	3RE4714-5QF□□-0AA0	3RE4714-5LF□□-0AA0	3RW5245-6AC□□
230	75	75	175	200	3RE4714-6NF□□-0AA0	3RE4714-6QF□□-0AA0	3RE4714-6LF□□-0AA0	3RW5246-6AC□□
236	75	75	175	200	3RE4714-7NF□□-0AA0	3RE4714-7QF□□-0AA0	3RE4714-7LF□□-0AA0	3RW5247-6AC□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC®
120 VAC®



① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

® Internally supplied with CPT.

3RE472 High Performance

Non-Combination (no disconnect device)

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149. ▶ Highlighted catalog numbers indicate configurations with shortest lead time.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NA□□-0AA0	3RE4721-3QA□□-0AA0	3RE4721-3LA□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NA□□-0AA0	3RE4721-4QA□□-0AA0	3RE4721-4LA□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NA□□-0AA0	3RE4721-5QA□□-0AA0	3RE4721-5LA□□-0AA0	3RW5515-1HA□□
28.4	7.5	10	20	25	3RE4721-6NA□□-0AA0	3RE4721-6QA□□-0AA0	3RE4721-6LA□□-0AA0	3RW5516-1HA□□
33.5	10	10	20	30	3RE4721-7NA□□-0AA0	3RE4721-7QA□□-0AA0	3RE4721-7LA□□-0AA0	3RW5517-1HA□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
41.6	10	10	30	40	3RE4722-4NA□□-0AA0	3RE4722-4QA□□-0AA0	3RE4722-4LA□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NA□□-0AA0	3RE4722-5QA□□-0AA0	3RE4722-5LA□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NA□□-0AA0	3RE4722-6QA□□-0AA0	3RE4722-6LA□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NA□□-0AA0	3RE4722-7QA□□-0AA0	3RE4722-7LA□□-0AA0	3RW5527-1HA□□
101	30	30	75	100	3RE4723-4NA□□-0AA0	3RE4723-4QA□□-0AA0	3RE4723-4LA□□-0AA0	3RW5534-6HA□□
128	40	40	100	125	3RE4723-5NA□□-0AA0	3RE4723-5QA□□-0AA0	3RE4723-5LA□□-0AA0	3RW5535-6HA□□
153	50	50	100	150	3RE4723-6NA□□-0AA0	3RE4723-6QA□□-0AA0	3RE4723-6LA□□-0AA0	3RW5536-6HA□□
186	60	60	150	150	3RE4724-3NA□□-0AA0	3RE4724-3QA□□-0AA0	3RE4724-3LA□□-0AA0	3RW5543-6HA□□
220	60	75	150	200	3RE4724-4NA□□-0AA0	3RE4724-4QA□□-0AA0	3RE4724-4LA□□-0AA0	3RW5544-6HA□□
279	75	100	200	250	3RE4724-5NA□□-0AA0	3RE4724-5QA□□-0AA0	3RE4724-5LA□□-0AA0	3RW5545-6HA□□
328	100	125	250	300	3RE4724-6NA□□-0AA0	3RE4724-6QA□□-0AA0	3RE4724-6LA□□-0AA0	3RW5546-6HA□□
416	150	150	350	450	3RE4724-7NA□□-0AA0	3RE4724-7QA□□-0AA0	3RE4724-7LA□□-0AA0	3RW5547-6HA□□
490	150	200	400	500	3RE4724-8NA□□-0AA0	3RE4724-8QA□□-0AA0	3RE4724-8LA□□-0AA0	3RW5548-6HA□□
561	200	200	450	600	3RE4725-2NA□□-0AA0	3RE4725-2QA□□-0AA0	3RE4725-2LA□□-0AA0	3RW5552-6HA□□
641	200	250	500	700	3RE4725-3NA□□-0AA0	3RE4725-3QA□□-0AA0	3RE4725-3LA□□-0AA0	3RW5553-6HA□□
748	250	300	600	800	3RE4725-4NA□□-0AA0	3RE4725-4QA□□-0AA0	3RE4725-4LA□□-0AA0	3RW5554-6HA□□
979	350	400	850	1100	3RE4725-6NA□□-0AA0	3RE4725-6QA□□-0AA0	3RE4725-6LA□□-0AA0	3RW5556-6HA□□
1130	400	450	1000	1250	3RE4725-8NA□□-0AA0	3RE4725-8QA□□-0AA0	3RE4725-8LA□□-0AA0	3RW5558-6HA□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

Line/Load cable entry Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Non-Combination (no disconnect device)

Ordering information



Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.
- ▶ Highlighted catalog numbers indicate configurations with shortest lead time.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
	200 V	230 V	460 V	575 V	Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NA□□-0AA0	3RE4721-3QA□□-0AA0	3RE4721-3LA□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NA□□-0AA0	3RE4721-4QA□□-0AA0	3RE4721-4LA□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NA□□-0AA0	3RE4721-5QA□□-0AA0	3RE4721-5LA□□-0AA0	3RW5515-1HA□□
27.2	7.5	7.5	20	25	3RE4721-6NA□□-0AA0	3RE4721-6QA□□-0AA0	3RE4721-6LA□□-0AA0	3RW5516-1HA□□
30.5	7.5	10	20	25	3RE4721-7NA□□-0AA0	3RE4721-7QA□□-0AA0	3RE4721-7LA□□-0AA0	3RW5517-1HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

Control voltage

24 VAC^②
120 VAC^②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
	200 V	230 V	460 V	575 V	Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number	
41.6	10	10	30	40	3RE4722-4NA□□-0AA0	3RE4722-4QA□□-0AA0	3RE4722-4LA□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NA□□-0AA0	3RE4722-5QA□□-0AA0	3RE4722-5LA□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NA□□-0AA0	3RE4722-6QA□□-0AA0	3RE4722-6LA□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NA□□-0AA0	3RE4722-7QA□□-0AA0	3RE4722-7LA□□-0AA0	3RW5527-1HA□□
97	30	30	75	75	3RE4723-4NA□□-0AA0	3RE4723-4QA□□-0AA0	3RE4723-4LA□□-0AA0	3RW5534-6HA□□
113	30	40	75	100	3RE4723-5NA□□-0AA0	3RE4723-5QA□□-0AA0	3RE4723-5LA□□-0AA0	3RW5535-6HA□□
129	40	40	100	125	3RE4723-6NA□□-0AA0	3RE4723-6QA□□-0AA0	3RE4723-6LA□□-0AA0	3RW5536-6HA□□
146	40	50	100	150	3RE4724-3NA□□-0AA0	3RE4724-3QA□□-0AA0	3RE4724-3LA□□-0AA0	3RW5543-6HA□□
180	60	60	150	175	3RE4724-4NA□□-0AA0	3RE4724-4QA□□-0AA0	3RE4724-4LA□□-0AA0	3RW5544-6HA□□
207	60	75	175	200	3RE4724-5NA□□-0AA0	3RE4724-5QA□□-0AA0	3RE4724-5LA□□-0AA0	3RW5545-6HA□□
230	75	75	175	200	3RE4724-6NA□□-0AA0	3RE4724-6QA□□-0AA0	3RE4724-6LA□□-0AA0	3RW5546-6HA□□
254	75	100	200	250	3RE4724-7NA□□-0AA0	3RE4724-7QA□□-0AA0	3RE4724-7LA□□-0AA0	3RW5547-6HA□□
262	75	100	200	250	3RE4724-8NA□□-0AA0	3RE4724-8QA□□-0AA0	3RE4724-8LA□□-0AA0	3RW5548-6HA□□
450	150	175	350	450	3RE4725-2NA□□-0AA0	3RE4725-2QA□□-0AA0	3RE4725-2LA□□-0AA0	3RW5552-6HA□□
470	150	175	350	450	3RE4725-3NA□□-0AA0	3RE4725-3QA□□-0AA0	3RE4725-3LA□□-0AA0	3RW5553-6HA□□
520	175	200	450	500	3RE4725-4NA□□-0AA0	3RE4725-4QA□□-0AA0	3RE4725-4LA□□-0AA0	3RW5554-6HA□□
840	300	350	700	800	3RE4725-6NA□□-0AA0	3RE4725-6QA□□-0AA0	3RE4725-6LA□□-0AA0	3RW5556-6HA□□
900	300	350	750	950	3RE4725-8NA□□-0AA0	3RE4725-8QA□□-0AA0	3RE4725-8LA□□-0AA0	3RW5558-6HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3
1
2
3
4

1
2
4
5
1
3
1
2
3
4

1
2
4
5
1
3
1
2
3
4

4
4
4
6
0
1

Control voltage

24 VAC^②
120 VAC^②

Line/Load cable entry

Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Non-Combination (no disconnect device)

Ordering information



Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.
- ▶ Highlighted catalog numbers indicate configurations with shortest lead time.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 30 Severe Starting (350% rated motor full load amps for 30 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NA□□-0AA0	3RE4721-3QA□□-0AA0	3RE4721-3LA□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NA□□-0AA0	3RE4721-4QA□□-0AA0	3RE4721-4LA□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NA□□-0AA0	3RE4721-5QA□□-0AA0	3RE4721-5LA□□-0AA0	3RW5515-1HA□□
23.6	5	7.5	15	20	3RE4721-6NA□□-0AA0	3RE4721-6QA□□-0AA0	3RE4721-6LA□□-0AA0	3RW5516-1HA□□
26	7.5	7.5	15	20	3RE4721-7NA□□-0AA0	3RE4721-7QA□□-0AA0	3RE4721-7LA□□-0AA0	3RW5517-1HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

Control voltage

24 VAC^②
120 VAC^②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
38	10	10	25	30	3RE4722-4NA□□-0AA0	3RE4722-4QA□□-0AA0	3RE4722-4LA□□-0AA0	3RW5524-1HA□□
48	15	15	30	40	3RE4722-5NA□□-0AA0	3RE4722-5QA□□-0AA0	3RE4722-5LA□□-0AA0	3RW5525-1HA□□
62	20	20	40	60	3RE4722-6NA□□-0AA0	3RE4722-6QA□□-0AA0	3RE4722-6LA□□-0AA0	3RW5526-1HA□□
75.5	20	25	50	60	3RE4722-7NA□□-0AA0	3RE4722-7QA□□-0AA0	3RE4722-7LA□□-0AA0	3RW5527-1HA□□
81	25	30	60	75	3RE4723-4NA□□-0AA0	3RE4723-4QA□□-0AA0	3RE4723-4LA□□-0AA0	3RW5534-6HA□□
98	30	30	75	75	3RE4723-5NA□□-0AA0	3RE4723-5QA□□-0AA0	3RE4723-5LA□□-0AA0	3RW5535-6HA□□
105	30	40	75	100	3RE4723-6NA□□-0AA0	3RE4723-6QA□□-0AA0	3RE4723-6LA□□-0AA0	3RW5536-6HA□□
122	40	40	75	100	3RE4724-3NA□□-0AA0	3RE4724-3QA□□-0AA0	3RE4724-3LA□□-0AA0	3RW5543-6HA□□
140	40	50	100	125	3RE4724-4NA□□-0AA0	3RE4724-4QA□□-0AA0	3RE4724-4LA□□-0AA0	3RW5544-6HA□□
159	50	60	125	150	3RE4724-5NA□□-0AA0	3RE4724-5QA□□-0AA0	3RE4724-5LA□□-0AA0	3RW5545-6HHA□
174	50	60	125	150	3RE4724-6NA□□-0AA0	3RE4724-6QA□□-0AA0	3RE4724-6LA□□-0AA0	3RW5546-6HA□□
190	60	60	150	175	3RE4724-7NA□□-0AA0	3RE4724-7QA□□-0AA0	3RE4724-7LA□□-0AA0	3RW5547-6HA□□
200	60	75	150	200	3RE4724-8NA□□-0AA0	3RE4724-8QA□□-0AA0	3RE4724-8LA□□-0AA0	3RW5548-6HA□□
340	100	125	250	350	3RE4725-2NA□□-0AA0	3RE4725-2QA□□-0AA0	3RE4725-2LA□□-0AA0	3RW5552-6HA□□
360	125	150	250	350	3RE4725-3NA□□-0AA0	3RE4725-3QA□□-0AA0	3RE4725-3LA□□-0AA0	3RW5553-6HA□□
380	125	150	300	350	3RE4725-4NA□□-0AA0	3RE4725-4QA□□-0AA0	3RE4725-4LA□□-0AA0	3RW5554-6HA□□
670	200	250	550	700	3RE4725-6NA□□-0AA0	3RE4725-6QA□□-0AA0	3RE4725-6LA□□-0AA0	3RW5556-6HA□□
720	250	250	600	750	3RE4725-8NA□□-0AA0	3RE4725-8QA□□-0AA0	3RE4725-8LA□□-0AA0	3RW5558-6HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3
1
2
3
4

1
2
4
5
1
3
1
2
3
4

1
2
4
5
1
3
1
2
3
4

4
4
4
6
0
1

Control voltage

24 VAC^②
120 VAC^②

Line/Load cable entry

Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with circuit breaker

Ordering information



Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.
- ▶ Highlighted catalog numbers indicate configurations with shortest lead time.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12	Type 3R/4	Type 4X 316 Stainless Steel	
	200 V	230 V	460 V	575 V	General purpose, dust-tight Indoor only Catalog Number	Weatherproof, watertight, dust-tight Catalog Number	Watertight, dust-tight corrosion resistant Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NB□□-0AA0	3RE4721-3QB□□-0AA0	3RE4721-3LB□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NB□□-0AA0	3RE4721-4QB□□-0AA0	3RE4721-4LB□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NB□□-0AA0	3RE4721-5QB□□-0AA0	3RE4721-5LB□□-0AA0	3RW5515-1HA□□
28.4	7.5	10	20	25	3RE4721-6NB□□-0AA0	3RE4721-6QB□□-0AA0	3RE4721-6LB□□-0AA0	3RW5516-1HA□□
33.5	10	10	20	30	3RE4721-7NB□□-0AA0	3RE4721-7QB□□-0AA0	3RE4721-7LB□□-0AA0	3RW5517-1HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

Control voltage

24 VAC@
120 VAC②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12	Type 3R/4	Type 4X 316 Stainless Steel	
	200 V	230 V	460 V	575 V	General purpose, dust-tight Indoor only Catalog Number	Weatherproof, watertight, dust-tight Catalog Number	Watertight, dust-tight corrosion resistant Catalog Number	
41.6	10	10	30	40	3RE4722-4NB□□-0AA0	3RE4722-4QB□□-0AA0	3RE4722-4LB□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NB□□-0AA0	3RE4722-5QB□□-0AA0	3RE4722-5LB□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NB□□-0AA0	3RE4722-6QB□□-0AA0	3RE4722-6LB□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NB□□-0AA0	3RE4722-7QB□□-0AA0	3RE4722-7LB□□-0AA0	3RW5527-1HA□□
101	30	30	75	100	3RE4723-4NB□□-0AA0	3RE4723-4QB□□-0AA0	3RE4723-4LB□□-0AA0	3RW5534-6HA□□
128	40	40	100	125	3RE4723-5NB□□-0AA0	3RE4723-5QB□□-0AA0	3RE4723-5LB□□-0AA0	3RW5535-6HA□□
153	50	50	100	150	3RE4723-6NB□□-0AA0	3RE4723-6QB□□-0AA0	3RE4723-6LB□□-0AA0	3RW5536-6HA□□
186	60	60	150	150	3RE4724-3NB□□-0AA0	3RE4724-3QB□□-0AA0	3RE4724-3LB□□-0AA0	3RW5543-6HA□□
220	60	75	150	200	3RE4724-4NB□□-0AA0	3RE4724-4QB□□-0AA0	3RE4724-4LB□□-0AA0	3RW5544-6HA□□
279	75	100	200	250	3RE4724-5NB□□-0AA0	3RE4724-5QB□□-0AA0	3RE4724-5LB□□-0AA0	3RW5545-6HA□□
328	100	125	250	300	3RE4724-6NB□□-0AA0	3RE4724-6QB□□-0AA0	3RE4724-6LB□□-0AA0	3RW5546-6HA□□
416	150	150	350	450	3RE4724-7NB□□-0AA0	3RE4724-7QB□□-0AA0	3RE4724-7LB□□-0AA0	3RW5547-6HA□□
490	150	200	400	500	3RE4724-8NB□□-0AA0	3RE4724-8QB□□-0AA0	3RE4724-8LB□□-0AA0	3RW5548-6HA□□
561	200	200	450	600	3RE4725-2NB□□-0AA0	3RE4725-2QB□□-0AA0	3RE4725-2LB□□-0AA0	3RW5552-6HA□□
641	200	250	500	700	3RE4725-3NB□□-0AA0	3RE4725-3QB□□-0AA0	3RE4725-3LB□□-0AA0	3RW5553-6HA□□
748	250	300	600	800	3RE4725-4NB□□-0AA0	3RE4725-4QB□□-0AA0	3RE4725-4LB□□-0AA0	3RW5554-6HA□□
979	350	400	850	1100	3RE4725-6NB□□-0AA0	3RE4725-6QB□□-0AA0	3RE4725-6LB□□-0AA0	3RW5556-6HA□□
1130	400	450	1000	1250	3RE4725-8NB□□-0AA0	3RE4725-8QB□□-0AA0	3RE4725-8LB□□-0AA0	3RW5558-6HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
6
0
1

Control voltage

24 VAC@
120 VAC②

Line/Load cable entry

Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

1
2
3
4

1
2
3
4

1
2
3
4

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with circuit breaker

Ordering information

	Ordering Information ► For factory modifications and accessories, see pages 7/136 - 7/137. ► For technical data, see pages 7/138 - 7/140. ► For wiring diagrams, see pages 7/141 - 7/143. ► For dimension diagrams, see pages 7/144 - 7/149. ► Highlighted catalog numbers indicate configurations with shortest lead time.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12	Type 3R/4	Type 4X 316 Stainless Steel	
	200 V	230 V	460 V	575 V	General purpose, dust-tight Indoor only	Weatherproof, watertight, dust-tight	Watertight, dust-tight corrosion resistant	
11.5	2	3	7.5	10	3RE4721-3NB□□-0AA0	3RE4721-3QB□□-0AA0	3RE4721-3LB□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NB□□-0AA0	3RE4721-4QB□□-0AA0	3RE4721-4LB□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NB□□-0AA0	3RE4721-5QB□□-0AA0	3RE4721-5LB□□-0AA0	3RW5515-1HA□□
27.2	7.5	7.5	20	25	3RE4721-6NB□□-0AA0	3RE4721-6QB□□-0AA0	3RE4721-6LB□□-0AA0	3RW5516-1HA□□
30.5	7.5	10	20	25	3RE4721-7NB□□-0AA0	3RE4721-7QB□□-0AA0	3RE4721-7LB□□-0AA0	3RW5517-1HA□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12	Type 3R/4	Type 4X 316 Stainless Steel	
	200 V	230 V	460 V	575 V	General purpose, dust-tight Indoor only	Weatherproof, watertight, dust-tight	Watertight, dust-tight corrosion resistant	
41.6	10	10	30	40	3RE4722-4NB□□-0AA0	3RE4722-4QB□□-0AA0	3RE4722-4LB□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NB□□-0AA0	3RE4722-5QB□□-0AA0	3RE4722-5LB□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NB□□-0AA0	3RE4722-6QB□□-0AA0	3RE4722-6LB□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NB□□-0AA0	3RE4722-7QB□□-0AA0	3RE4722-7LB□□-0AA0	3RW5527-1HA□□
97	30	30	75	75	3RE4723-4NB□□-0AA0	3RE4723-4QB□□-0AA0	3RE4723-4LB□□-0AA0	3RW5534-6HA□□
113	30	40	75	100	3RE4723-5NB□□-0AA0	3RE4723-5QB□□-0AA0	3RE4723-5LB□□-0AA0	3RW5535-6HA□□
129	40	40	100	125	3RE4723-6NB□□-0AA0	3RE4723-6QB□□-0AA0	3RE4723-6LB□□-0AA0	3RW5536-6HA□□
146	40	50	100	150	3RE4724-3NB□□-0AA0	3RE4724-3QB□□-0AA0	3RE4724-3LB□□-0AA0	3RW5543-6HA□□
180	60	60	150	175	3RE4724-4NB□□-0AA0	3RE4724-4QB□□-0AA0	3RE4724-4LB□□-0AA0	3RW5544-6HA□□
207	60	75	175	200	3RE4724-5NB□□-0AA0	3RE4724-5QB□□-0AA0	3RE4724-5LB□□-0AA0	3RW5545-6HA□□
230	75	75	175	200	3RE4724-6NB□□-0AA0	3RE4724-6QB□□-0AA0	3RE4724-6LB□□-0AA0	3RW5546-6HA□□
254	75	100	200	250	3RE4724-7NB□□-0AA0	3RE4724-7QB□□-0AA0	3RE4724-7LB□□-0AA0	3RW5547-6HA□□
262	75	100	200	250	3RE4724-8NB□□-0AA0	3RE4724-8QB□□-0AA0	3RE4724-8LB□□-0AA0	3RW5548-6HA□□
450	150	175	350	450	3RE4725-2NB□□-0AA0	3RE4725-2QB□□-0AA0	3RE4725-2LB□□-0AA0	3RW5552-6HA□□
470	150	175	350	450	3RE4725-3NB□□-0AA0	3RE4725-3QB□□-0AA0	3RE4725-3LB□□-0AA0	3RW5553-6HA□□
520	175	200	450	500	3RE4725-4NB□□-0AA0	3RE4725-4QB□□-0AA0	3RE4725-4LB□□-0AA0	3RW5554-6HA□□
840	300	350	700	800	3RE4725-6NB□□-0AA0	3RE4725-6QB□□-0AA0	3RE4725-6LB□□-0AA0	3RW5556-6HA□□
900	300	350	750	950	3RE4725-8NB□□-0AA0	3RE4725-8QB□□-0AA0	3RE4725-8LB□□-0AA0	3RW5558-6HA□□

Operational voltage 200/208 V
230/240 V
460/480 V
575/600 V

Control voltage 24 VAC^②
120 VAC^②

Line/Load cable entry Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with circuit breaker

Ordering information



Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.
- ▶ Highlighted catalog numbers indicate configurations with shortest lead time.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 30 Severe Starting (350% rated motor full load amps for 30 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NB□□-0AA0	3RE4721-3QB□□-0AA0	3RE4721-3LB□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NB□□-0AA0	3RE4721-4QB□□-0AA0	3RE4721-4LB□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NB□□-0AA0	3RE4721-5QB□□-0AA0	3RE4721-5LB□□-0AA0	3RW5515-1HA□□
23.6	5	7.5	15	20	3RE4721-6NB□□-0AA0	3RE4721-6QB□□-0AA0	3RE4721-6LB□□-0AA0	3RW5516-1HA□□
26	7.5	7.5	15	20	3RE4721-7NB□□-0AA0	3RE4721-7QB□□-0AA0	3RE4721-7LB□□-0AA0	3RW5517-1HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
5
0
1

Control voltage

24 VAC^②
120 VAC^②

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
38	10	10	25	30	3RE4722-4NB□□-0AA0	3RE4722-4QB□□-0AA0	3RE4722-4LB□□-0AA0	3RW5524-1HA□□
48	15	15	30	40	3RE4722-5NB□□-0AA0	3RE4722-5QB□□-0AA0	3RE4722-5LB□□-0AA0	3RW5525-1HA□□
62	20	20	40	60	3RE4722-6NB□□-0AA0	3RE4722-6QB□□-0AA0	3RE4722-6LB□□-0AA0	3RW5526-1HA□□
75.5	20	25	50	60	3RE4722-7NB□□-0AA0	3RE4722-7QB□□-0AA0	3RE4722-7LB□□-0AA0	3RW5527-1HA□□
81	25	30	60	75	3RE4723-4NB□□-0AA0	3RE4723-4QB□□-0AA0	3RE4723-4LB□□-0AA0	3RW5534-6HA□□
98	30	30	75	75	3RE4723-5NB□□-0AA0	3RE4723-5QB□□-0AA0	3RE4723-5LB□□-0AA0	3RW5535-6HA□□
105	30	40	75	100	3RE4723-6NB□□-0AA0	3RE4723-6QB□□-0AA0	3RE4723-6LB□□-0AA0	3RW5536-6HA□□
122	40	40	75	100	3RE4724-3NB□□-0AA0	3RE4724-3QB□□-0AA0	3RE4724-3LB□□-0AA0	3RW5543-6HA□□
140	40	50	100	125	3RE4724-4NB□□-0AA0	3RE4724-4QB□□-0AA0	3RE4724-4LB□□-0AA0	3RW5544-6HA□□
159	50	60	125	150	3RE4724-5NB□□-0AA0	3RE4724-5QB□□-0AA0	3RE4724-5LB□□-0AA0	3RW5545-6HA□□
174	50	60	125	150	3RE4724-6NB□□-0AA0	3RE4724-6QB□□-0AA0	3RE4724-6LB□□-0AA0	3RW5546-6HA□□
190	60	60	150	175	3RE4724-7NB□□-0AA0	3RE4724-7QB□□-0AA0	3RE4724-7LB□□-0AA0	3RW5547-6HA□□
200	60	75	150	200	3RE4724-8NB□□-0AA0	3RE4724-8QB□□-0AA0	3RE4724-8LB□□-0AA0	3RW5548-6HA□□
340	100	125	250	350	3RE4725-2NB□□-□AA0	3RE4725-2QB□□-□AA0	3RE4725-2LB□□-□AA0	3RW5552-6HA□□
360	125	150	250	350	3RE4725-3NB□□-□AA0	3RE4725-3QB□□-□AA0	3RE4725-3LB□□-□AA0	3RW5553-6HA□□
380	125	150	300	350	3RE4725-4NB□□-□AA0	3RE4725-4QB□□-□AA0	3RE4725-4LB□□-□AA0	3RW5554-6HA□□
670	200	250	550	700	3RE4725-6NB□□-□AA0	3RE4725-6QB□□-□AA0	3RE4725-6LB□□-□AA0	3RW5556-6HA□□
720	250	250	600	750	3RE4725-8NB□□-□AA0	3RE4725-8QB□□-□AA0	3RE4725-8LB□□-□AA0	3RW5558-6HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5
1
3

1
2
4
5
1
3

1
2
4
5
1
3

4
4
4
6
0
1

Control voltage

24 VAC^②
120 VAC^②

Line/Load cable entry

Top/Top
Top/Bottom
Bottom/Top
Bottom/Bottom

1
2
3
4

1
2
3
4

1
2
3
4

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with fusible disconnect

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 10 Normal Starting (350% rated motor full load amps for 10 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NF□□-0AA0	3RE4721-3QF□□-0AA0	3RE4721-3LF□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NF□□-0AA0	3RE4721-4QF□□-0AA0	3RE4721-4LF□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NF□□-0AA0	3RE4721-5QF□□-0AA0	3RE4721-5LF□□-0AA0	3RW5515-1HA□□
28.4	7.5	10	20	25	3RE4721-6NF□□-0AA0	3RE4721-6QF□□-0AA0	3RE4721-6LF□□-0AA0	3RW5516-1HA□□
33.5	10	10	20	30	3RE4721-7NF□□-0AA0	3RE4721-7QF□□-0AA0	3RE4721-7LF□□-0AA0	3RW5517-1HA□□
Operational voltage					200/208 V	1	1	1
					230/240 V	2	2	4
Control voltage					460/480 V	4	4	4
					575/600 V	5	5	5
					24 VAC ^②	1	1	0
					120 VAC ^②	3	3	1

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
41.6	10	10	30	40	3RE4722-4NF□□-0AA0	3RE4722-4QF□□-0AA0	3RE4722-4LF□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NF□□-0AA0	3RE4722-5QF□□-0AA0	3RE4722-5LF□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NF□□-0AA0	3RE4722-6QF□□-0AA0	3RE4722-6LF□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NF□□-0AA0	3RE4722-7QF□□-0AA0	3RE4722-7LF□□-0AA0	3RW5527-1HA□□
101	30	30	75	100	3RE4723-4NF□□-0AA0	3RE4723-4QF□□-0AA0	3RE4723-4LF□□-0AA0	3RW5534-6HA□□
128	40	40	100	125	3RE4723-5NF□□-0AA0	3RE4723-5QF□□-0AA0	3RE4723-5LF□□-0AA0	3RW5535-6HA□□
153	50	50	100	150	3RE4723-6NF□□-0AA0	3RE4723-6QF□□-0AA0	3RE4723-6LF□□-0AA0	3RW5536-6HA□□
186	60	60	150	150	3RE4724-3NF□□-0AA0	3RE4724-3QF□□-0AA0	3RE4724-3LF□□-0AA0	3RW5543-6HA□□
220	60	75	150	200	3RE4724-4NF□□-0AA0	3RE4724-4QF□□-0AA0	3RE4724-4LF□□-0AA0	3RW5544-6HA□□
279	75	100	200	250	3RE4724-5NF□□-0AA0	3RE4724-5QF□□-0AA0	3RE4724-5LF□□-0AA0	3RW5545-6HA□□
328	100	125	250	300	3RE4724-6NF□□-0AA0	3RE4724-6QF□□-0AA0	3RE4724-6LF□□-0AA0	3RW5546-6HA□□
416	150	150	350	450	3RE4724-7NF□□-0AA0	3RE4724-7QF□□-0AA0	3RE4724-7LF□□-0AA0	3RW5547-6HA□□
Operational voltage					200/208 V	1	1	4
					230/240 V	2	2	4
Control voltage					460/480 V	4	4	4
					575/600 V	5	5	6
					24 VAC ^②	1	1	0
					120 VAC ^②	3	3	1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with fusible disconnect

Ordering information



Ordering Information

- ▶ For factory modifications and accessories, see pages 7/136 - 7/137.
- ▶ For technical data, see pages 7/138 - 7/140.
- ▶ For wiring diagrams, see pages 7/141 - 7/143.
- ▶ For dimension diagrams, see pages 7/144 - 7/149.

Oversized

For oversized enclosures ①, change the 9th character of the catalog number as follows:

NEMA Type	From	To
1/12	N	P
3R/4	Q	R
4X	L	M

Class 20 Heavy Starting (350% rated motor full load amps for 20 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NF□□-0AA0	3RE4721-3QF□□-0AA0	3RE4721-3LF□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NF□□-0AA0	3RE4721-4QF□□-0AA0	3RE4721-4LF□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NF□□-0AA0	3RE4721-5QF□□-0AA0	3RE4721-5LF□□-0AA0	3RW5515-1HA□□
27.2	7.5	7.5	20	25	3RE4721-6NF□□-0AA0	3RE4721-6QF□□-0AA0	3RE4721-6LF□□-0AA0	3RW5516-1HA□□
30.5	7.5	10	20	25	3RE4721-7NF□□-0AA0	3RE4721-7QF□□-0AA0	3RE4721-7LF□□-0AA0	3RW5517-1HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5

1
2
4
5

1
2
4
5

4
4
4
5

Control voltage

24 VAC^②
120 VAC^②

1
3

1
3

1
3

0
1

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
41.6	10	10	30	40	3RE4722-4NF□□-0AA0	3RE4722-4QF□□-0AA0	3RE4722-4LF□□-0AA0	3RW5524-1HA□□
55.5	15	20	40	50	3RE4722-5NF□□-0AA0	3RE4722-5QF□□-0AA0	3RE4722-5LF□□-0AA0	3RW5525-1HA□□
68	20	25	50	60	3RE4722-6NF□□-0AA0	3RE4722-6QF□□-0AA0	3RE4722-6LF□□-0AA0	3RW5526-1HA□□
82.5	25	30	60	75	3RE4722-7NF□□-0AA0	3RE4722-7QF□□-0AA0	3RE4722-7LF□□-0AA0	3RW5527-1HA□□
97	30	30	75	75	3RE4723-4NF□□-0AA0	3RE4723-4QF□□-0AA0	3RE4723-4LF□□-0AA0	3RW5534-6HA□□
113	30	40	75	100	3RE4723-5NF□□-0AA0	3RE4723-5QF□□-0AA0	3RE4723-5LF□□-0AA0	3RW5535-6HA□□
129	40	40	100	125	3RE4723-6NF□□-0AA0	3RE4723-6QF□□-0AA0	3RE4723-6LF□□-0AA0	3RW5536-6HA□□
146	40	50	100	150	3RE4724-3NF□□-0AA0	3RE4724-3QF□□-0AA0	3RE4724-3LF□□-0AA0	3RW5543-6HA□□
180	60	60	150	175	3RE4724-4NF□□-0AA0	3RE4724-4QF□□-0AA0	3RE4724-4LF□□-0AA0	3RW5544-6HA□□
207	60	75	175	200	3RE4724-5NF□□-0AA0	3RE4724-5QF□□-0AA0	3RE4724-5LF□□-0AA0	3RW5545-6HA□□
230	75	75	175	200	3RE4724-6NF□□-0AA0	3RE4724-6QF□□-0AA0	3RE4724-6LF□□-0AA0	3RW5546-6HA□□
254	75	100	200	250	3RE4724-7NF□□-0AA0	3RE4724-7QF□□-0AA0	3RE4724-7LF□□-0AA0	3RW5547-6HA□□

Operational voltage

200/208 V
230/240 V
460/480 V
575/600 V

1
2
4
5

1
2
4
5

1
2
4
5

4
4
4
6

Control voltage

24 VAC^②
120 VAC^②

1
3

1
3

1
3

0
1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE472 High Performance

Combination with fusible disconnect

Ordering information

	Ordering Information ▶ For factory modifications and accessories, see pages 7/136 - 7/137. ▶ For technical data, see pages 7/138 - 7/140. ▶ For wiring diagrams, see pages 7/141 - 7/143. ▶ For dimension diagrams, see pages 7/144 - 7/149.	Oversized For oversized enclosures ①, change the 9th character of the catalog number as follows: <table border="1"> <thead> <tr> <th>NEMA Type</th><th>From</th><th>To</th></tr> </thead> <tbody> <tr> <td>1/12</td><td>N</td><td>P</td></tr> <tr> <td>3R/4</td><td>Q</td><td>R</td></tr> <tr> <td>4X</td><td>L</td><td>M</td></tr> </tbody> </table>	NEMA Type	From	To	1/12	N	P	3R/4	Q	R	4X	L	M
NEMA Type	From	To												
1/12	N	P												
3R/4	Q	R												
4X	L	M												

Class 30 Severe Starting (350% rated motor full load amps for 30 seconds)

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
11.5	2	3	7.5	10	3RE4721-3NF□□-0AA0	3RE4721-3QF□□-0AA0	3RE4721-3LF□□-0AA0	3RW5513-1HA□□
15.9	3	5	10	10	3RE4721-4NF□□-0AA0	3RE4721-4QF□□-0AA0	3RE4721-4LF□□-0AA0	3RW5514-1HA□□
22.3	5	7.5	15	20	3RE4721-5NF□□-0AA0	3RE4721-5QF□□-0AA0	3RE4721-5LF□□-0AA0	3RW5515-1HA□□
23.6	5	7.5	15	20	3RE4721-6NF□□-0AA0	3RE4721-6QF□□-0AA0	3RE4721-6LF□□-0AA0	3RW5516-1HA□□
26	7.5	7.5	15	20	3RE4721-7NF□□-0AA0	3RE4721-7QF□□-0AA0	3RE4721-7LF□□-0AA0	3RW5517-1HA□□
Operational voltage					200/208 V 230/240 V 460/480 V 575/600 V	1 2 4 5	1 2 4 5	4 4 4 5
Control voltage					24 VAC ^② 120 VAC ^②	1 3	1 3	0 1

Max. Motor Full Load Amps	3-Phase Motor Hp Rating				NEMA Type Enclosure			Open Soft Starter (reference only)
					Type 1/12 General purpose, dust-tight Indoor only	Type 3R/4 Weatherproof, watertight, dust-tight	Type 4X 316 Stainless Steel Watertight, dust-tight corrosion resistant	
	200 V	230 V	460 V	575 V	Catalog Number	Catalog Number	Catalog Number	
38	10	10	25	30	3RE4722-4NF□□-0AA0	3RE4722-4QF□□-0AA0	3RE4722-4LF□□-0AA0	3RW5524-1HA□□
48	15	15	30	40	3RE4722-5NF□□-0AA0	3RE4722-5QF□□-0AA0	3RE4722-5LF□□-0AA0	3RW5525-1HA□□
62	20	20	40	60	3RE4722-6NF□□-0AA0	3RE4722-6QF□□-0AA0	3RE4722-6LF□□-0AA0	3RW5526-1HA□□
75.5	20	25	50	60	3RE4722-7NF□□-0AA0	3RE4722-7QF□□-0AA0	3RE4722-7LF□□-0AA0	3RW5527-1HA□□
81	25	30	60	75	3RE4723-4NF□□-0AA0	3RE4723-4QF□□-0AA0	3RE4723-4LF□□-0AA0	3RW5534-6HA□□
98	30	30	75	75	3RE4723-5NF□□-0AA0	3RE4723-5QF□□-0AA0	3RE4723-5LF□□-0AA0	3RW5535-6HA□□
105	30	40	75	100	3RE4723-6NF□□-0AA0	3RE4723-6QF□□-0AA0	3RE4723-6LF□□-0AA0	3RW5536-6HA□□
122	40	40	75	100	3RE4724-3NF□□-0AA0	3RE4724-3QF□□-0AA0	3RE4724-3LF□□-0AA0	3RW5543-6HA□□
140	40	50	100	125	3RE4724-4NF□□-0AA0	3RE4724-4QF□□-0AA0	3RE4724-4LF□□-0AA0	3RW5544-6HA□□
159	50	60	125	150	3RE4724-5NF□□-0AA0	3RE4724-5QF□□-0AA0	3RE4724-5LF□□-0AA0	3RW5545-6HA□□
174	50	60	125	150	3RE4724-6NF□□-0AA0	3RE4724-6QF□□-0AA0	3RE4724-6LF□□-0AA0	3RW5546-6HA□□
190	60	60	150	175	3RE4724-7NF□□-0AA0	3RE4724-7QF□□-0AA0	3RE4724-7LF□□-0AA0	3RW5547-6HA□□
Operational voltage					200/208 V 230/240 V 460/480 V 575/600 V	1 2 4 5	1 2 4 5	4 4 4 6
Control voltage					24 VAC ^② 120 VAC ^②	1 3	1 3	0 1

① Oversized enclosures are required for certain factory modifications as indicated starting on page 7/136.

Oversized enclosures may also be ordered for additional panel space to accommodate field installed components.

② Internally supplied with CPT.

3RE47 Soft Starters

Factory Modifications and Accessories

Selection Tables

Pilot devices



Device ^①	Factory installed Mod code	Field installed Catalog number
Start-Stop push buttons, momentary	A01	49SAP05
Emergency Stop push button	A15	NA
Hand-Off-Auto selector switch	A03	49SAS01
Off-On selector switch	A04	49SAS04
HOA switch and Start push button	A16	NA

Pilot lights



Device ^①	Voltage	Factory installed Mod code	Field installed Catalog number
Red ON	24 V AC	F00	49SPL0BRJ
	120 V AC		49SPL0BRF
Green OFF	24 V AC	F08	49SPL0AGJ
	120 V AC		49SPL0AGF
Amber Fault	24 V AC	F10	N/A
	120 V AC		N/A

HMI modules

Std. Feature HMI
3RW5980-0HS00
(For reference only)High Feature HMI
3RW5980-0HF00

Device	Performance level	Factory installed Mod code	Field installed Catalog number
Standard featured HMI mounted on soft starter	Basic (3RE470)	NA	NA
	General (3RE471)	(Standard)	NA
	High (3RE472)	NA	NA
Standard featured HMI mounted on enclosure door	Basic (3RE470)	NA	NA
	General (3RE471)	H00	NA
	High (3RE472)	NA	NA
High featured HMI mounted on soft starter	Basic (3RE470)	NA	NA
	General (3RE471)	H02	NA
	High (3RE472)	(Standard)	NA
High featured HMI mounted on enclosure door	Basic (3RE470)	NA	NA
	General (3RE471)	H01	NA
	High (3RE472)	H01	NA

Control power transformer – 100 VA extra capacity



Field installed Mod code

C00

Networking / Communication



3RW5980-0CS00

3RW5980-0CR00

Device	Performance level	Factory installed Mod code	Field installed Catalog number
PROFIBUS communication	General (3RE471), High (3RE472)	N01	3RW5980-0CP00
Standard PROFINET communication	General (3RE471), High (3RE472)	N02	3RW5980-0CS00
High Feature PROFINET communication	High (3RE472)	N03	3RW5950-0CH00
Ethernet/IP communication	General (3RE471), High (3RE472)	N04	3RW5980-0CE00
Modbus RTU communication	General (3RE471), High (3RE472)	N05	3RW5980-0CR00
Modbus TCP communication	General (3RE471), High (3RE472)	N06	3RW5980-0CT00

① 30 mm devices with brushed aluminum legend plates.
Pilot lights include LED bulbs.

Control relay – 2 NO and 2 NC (contacts are customer wired)

	Control voltage	Factory installed Mod code	Field installed Catalog number
	24 V AC	R22	3RH2122-1AB00
	120 V AC	R22	3RH2122-1AK60

Isolation contactor

	Oversized enclosure required	Factory installed Mod code
	Yes	K03

Emergency bypass starter with selector switch

	Oversized enclosure required	Factory installed Mod code
	Yes	K04

Thermistor motor protection

Performance level	Factory installed Mod code
Basic (3RE470) 24 V control only	V11
General (3RE471)®	V11
High (3RE472)	(Standard)

Lug kit

Description	Performance level	Field installed Catalog number
For connecting field installed power conductors to soft starter line / load busbars. Each kit includes three (3) lug assemblies.	3RE4713 and 3RE4723	3RE49030JAA
	3RE4714 and 3RE4724	3RE49030JAB
	3RE4725	3RE49030JAC

Failsafe – Safe torque Off

	Description	Performance Level	Factory installed Mod code
	Integrated fail-safe digital input for directly connecting the emergency stop, and thus covers SIL 1 STO applications	High (3RE472)	X01

Surge protective device – Type 2 100kA per phase

	Description	Oversized enclosure required	Factory installed Mod code
	Provides protection for electronic loads	Yes	S02

Space heater with thermostat

	Description	Factory installed Mod code
	Protects components within the enclosure from condensation when the unit is not running	E01

Special modification undefined

Description	Factory installed Mod code
Specify special modification within the order notes	Y00

More accessories for open soft starters:

3RW40, [see page 7/92](#)

3RW52, [see page 7/69](#)

3RW55, [see page 7/34](#)

© Thermistor motor protection with 3RE471 is optional in lieu of standard analog output.
Both thermistor motor protection and analog output together is not available.

The soft starters may be used in isolated supply networks (IT systems) up to 600 V AC. For long starting times it is recommended to have a PTC sensor or temperature switch in the motor.

This also applies for the ramp-down modes torque control, pump stop and DC braking, because during the ramp-down time in these modes, an additional current loading applies in contrast to free ramp-down. No capacitive elements are permitted in the motor feeder between the SIRIUS 3RW soft starter and the motor (e.g. no reactive-power compensation equipment). In addition, neither static systems for reactive-power compensation nor dynamic PFC (Power Factor Correction) must be operated in parallel during starting and ramp-down of the soft starter. This is important to prevent faults arising on the compensation equipment and/or the soft starter. Please observe the maximum starts per hour specified in the technical specifications.

When three-phase motors are switched on, voltage drops occur as a rule on starters of all types (direct-on-line starters, wye-delta starters, soft starters). The infeed transformer must always be sized such that the voltage dip when starting the motor remains within the permissible tolerance. If the infeed transformer is sized with only a small margin, it is best for the control voltage to be supplied from a separate circuit (independently of the main voltage) in order to avoid the

potential switching off of the soft starter. For sizing soft starters, we recommend our Simulation Tool for Soft Starters (STS), see page 8. Recommended parameters for the initial commissioning of our soft starters are listed in every report

of our Simulation Tool for Soft Starters (STS). In addition, our High Performance soft starters provide support by means of their commissioning wizards.

The rated operating temperature of the enclosed starter is 40 degree C (104 degree F) ambient to the outside of the enclosure. Consult with the Siemens Application Engineering group componentsae.ic@siemens.com if the ambient temperature for an application exceeds the rated temperature.

More Information

3RW open soft starters web page, <https://new.siemens.com/us/en/products/automation/industrial-controls/sirius/sirius-hybrid/3rw-soft-starter.html>

3RE47 enclosed soft starters web page, usa.siemens.com/3re47

Simulation Tool for Open Soft Starters (STS), see page 8

3RE47 enclosed soft starter Industry Online Support (SIOS) topic page <https://support.industry.siemens.com/cs/ww/en/view/109812963>



3RE47 Soft Starters

Technical Data

Non-combination starter maximum starts per hour

3RE47 Cat No	Starter Cat No	Standard enclosure			Oversized enclosure		
		Max starts per hour @300 full rated current					
		10 SEC (CLASS 10E)	20 SEC (CLASS 20E)	30 SEC (CLASS 30E)	10 SEC (CLASS 10E)	20 SEC (CLASS 20E)	30 SEC (CLASS 30E)
3RE47024	3RW4024	36	34	NA	36	34	NA
3RE47026	3RW4026	15	15	NA	15	15	NA
3RE47027	3RW4027	16	14	NA	16	14	NA
3RE47028	3RW4028	12	13	NA	12	13	NA
3RE47036	3RW4036	26	21	NA	26	21	NA
3RE47037	3RW4037	15	22	NA	15	22	NA
3RE47038	3RW4038	15	24	NA	15	24	NA
3RE47046	3RW4046	15	16	NA	15	16	NA
3RE47047	3RW4047	10	16	NA	10	16	NA
		Max starts per hour @350 full rated current					
3RE47113	3RW5213	13	7	NA	13	7	NA
3RE47114	3RW5214	13	7	NA	13	7	NA
3RE47115	3RW5215	13	7	NA	13	7	NA
3RE47116	3RW5216	13	7	NA	13	7	NA
3RE47117	3RW5217	13	7	NA	13	7	NA
3RE47213	3RW5513	4	7	3	4	7	3
3RE47214	3RW5514	4	7	3	4	7	3
3RE47215	3RW5515	4	7	3	4	7	3
3RE47216	3RW5516	4	7	3	4	7	3
3RE47217	3RW5517	4	7	3	4	7	3
3RE47124	3RW5224	13	7	NA	13	7	NA
3RE47125	3RW5225	13	4	NA	13	4	NA
3RE47126	3RW5226	13	7	NA	13	7	NA
3RE47127	3RW5227	13	7	NA	13	7	NA
3RE47224	3RW5524	4	7	3	4	7	3
3RE47225	3RW5525	4	7	3	4	7	3
3RE47226	3RW5526	4	4	3	4	4	3
3RE47227	3RW5527	4	7	3	4	7	3
3RE47134	3RW5234	10	5	NA	13	7	NA
3RE47135	3RW5235	7	4	NA	12	6	NA
3RE47136	3RW5236	5	3	NA	10	5	NA
3RE47234	3RW5534	4	4	2	4	7	3
3RE47235	3RW5535	4	4	2	4	7	3
3RE47236	3RW5536	4	3	2	4	6	3
3RE47143	3RW5243	6	3	NA	11	5	NA
3RE47144	3RW5244	5	2	NA	10	5	NA
3RE47145	3RW5245	8	4	NA	11	5	NA
3RE47146	3RW5246	7	3	NA	10	5	NA
3RE47147	3RW5247	6	3	NA	13	7	NA
3RE47148	3RW5248	7	4	NA	13	7	NA
3RE47243	3RW5543	4	3	2	4	5	3
3RE47244	3RW5544	4	3	2	4	6	3
3RE47245	3RW5545	4	4	3	4	5	3
3RE47246	3RW5546	4	4	2	4	5	3
3RE47247	3RW5547	4	3	2	4	7	3
3RE47248	3RW5548	4	4	3	4	7	3
3RE47252	3RW5552	4	7	3	4	7	3
3RE47253	3RW5553	4	7	3	4	7	3
3RE47254	3RW5554	4	5	3	4	7	3
3RE47256	3RW5556	4	3	2	4	5	3
3RE47258	3RW5558	4	4	3	4	5	4

For enclosed soft starters, the maximum starts per hour indicated in this table takes precedence over what may be indicated for the corresponding open soft starter.

Consult with Siemens Application Engineering group @componentsae.ic@siemens.com if the maximum starts per hour for an application exceeds that indicated in this table.

3RE47 Soft Starters

Technical Data

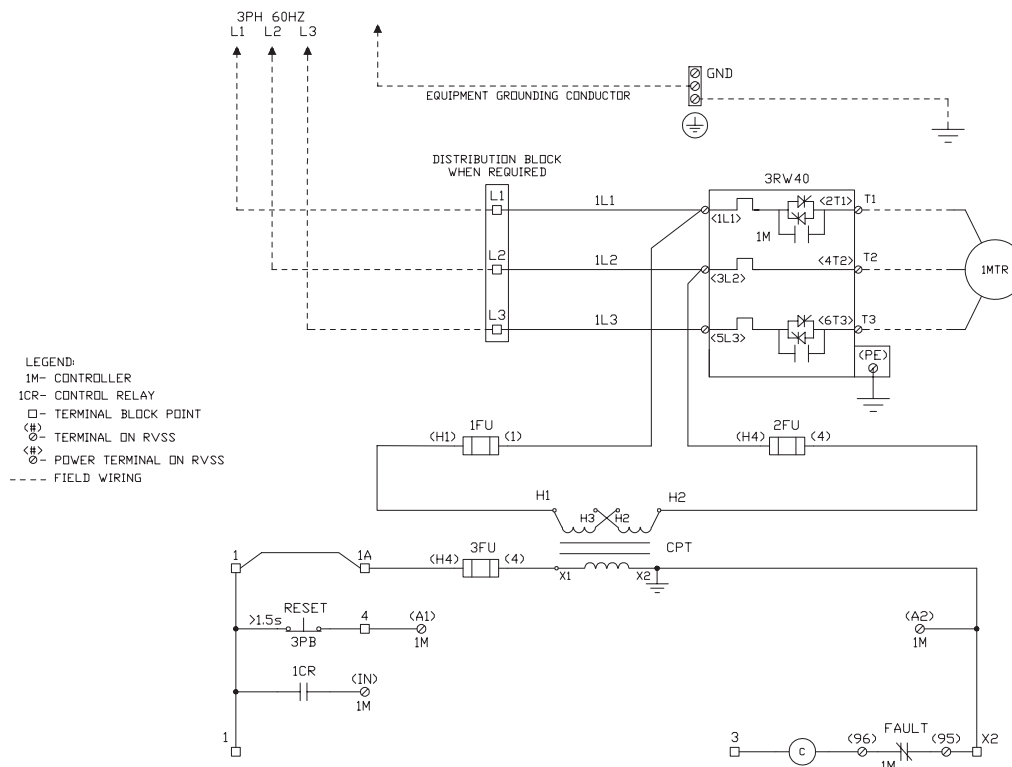
Combination starter maximum starts per hour

3RE47 Cat No	Starter Cat No	Standard enclosure			Oversized enclosure		
		Max starts per hour @300 full rated current					
		10 SEC (CLASS 10E)	20 SEC (CLASS 20E)	30 SEC (CLASS 30E)	10 SEC (CLASS 10E)	20 SEC (CLASS 20E)	30 SEC (CLASS 30E)
3RE47024	3RW4024	34	NA	NA	34	NA	NA
3RE47026	3RW4026	15	NA	NA	15	NA	NA
3RE47027	3RW4027	14	NA	NA	14	NA	NA
3RE47028	3RW4028	13	NA	NA	13	NA	NA
3RE47036	3RW4036	21	NA	NA	21	NA	NA
3RE47037	3RW4037	22	NA	NA	22	NA	NA
3RE47038	3RW4038	24	NA	NA	24	NA	NA
3RE47046	3RW4046	16	NA	NA	16	NA	NA
3RE47047	3RW4047	16	NA	NA	16	NA	NA
		Max starts per hour @350 full rated current					
3RE47113	3RW5213	13	7	NA	13	7	NA
3RE47114	3RW5214	13	7	NA	13	7	NA
3RE47115	3RW5215	13	7	NA	13	7	NA
3RE47116	3RW5216	13	7	NA	13	7	NA
3RE47117	3RW5217	13	7	NA	13	7	NA
3RE47213	3RW5513	4	7	3	4	7	3
3RE47214	3RW5514	4	7	3	4	7	3
3RE47215	3RW5515	4	7	3	4	7	3
3RE47216	3RW5516	4	7	3	4	7	3
3RE47217	3RW5517	4	7	3	4	7	3
3RE47124	3RW5224	13	7	NA	13	7	NA
3RE47125	3RW5225	13	4	NA	13	4	NA
3RE47126	3RW5226	13	7	NA	13	7	NA
3RE47127	3RW5227	13	7	NA	13	7	NA
3RE47224	3RW5524	4	7	3	4	7	3
3RE47225	3RW5525	4	7	3	4	7	3
3RE47226	3RW5526	4	7	3	4	7	3
3RE47227	3RW5527	4	7	3	4	7	3
3RE47134	3RW5234	13	6	NA	13	7	NA
3RE47135	3RW5235	9	4	NA	13	7	NA
3RE47136	3RW5236	6	3	NA	13	6	NA
3RE47234	3RW5534	4	7	3	4	7	3
3RE47235	3RW5535	4	5	3	4	7	3
3RE47236	3RW5536	4	4	2	4	7	3
3RE47143	3RW5243	10	5	NA	10	7	NA
3RE47144	3RW5244	10	5	NA	12	6	NA
3RE47145	3RW5245	8	4	NA	12	7	NA
3RE47146	3RW5246	8	4	NA	13	7	NA
3RE47147	3RW5247	7	3	NA	10	5	NA
3RE47148	3RW5248	7	3	NA	7	3	NA
3RE47243	3RW5543	4	5	3	4	7	3
3RE47244	3RW5544	4	5	3	4	7	3
3RE47245	3RW5545	4	4	2	4	7	3
3RE47246	3RW5546	4	4	3	4	7	3
3RE47247	3RW5547	4	3	3	4	5	3
3RE47248	3RW5548	4	3	3	4	3	2
3RE47252	3RW5552	4	6	3	4	7	3
3RE47253	3RW5553	4	6	3	4	7	3
3RE47254	3RW5554	4	4	3	4	7	3
3RE47256	3RW5556	4	4	3	4	5	3
3RE47258	3RW5558	4	4	3	4	3	2

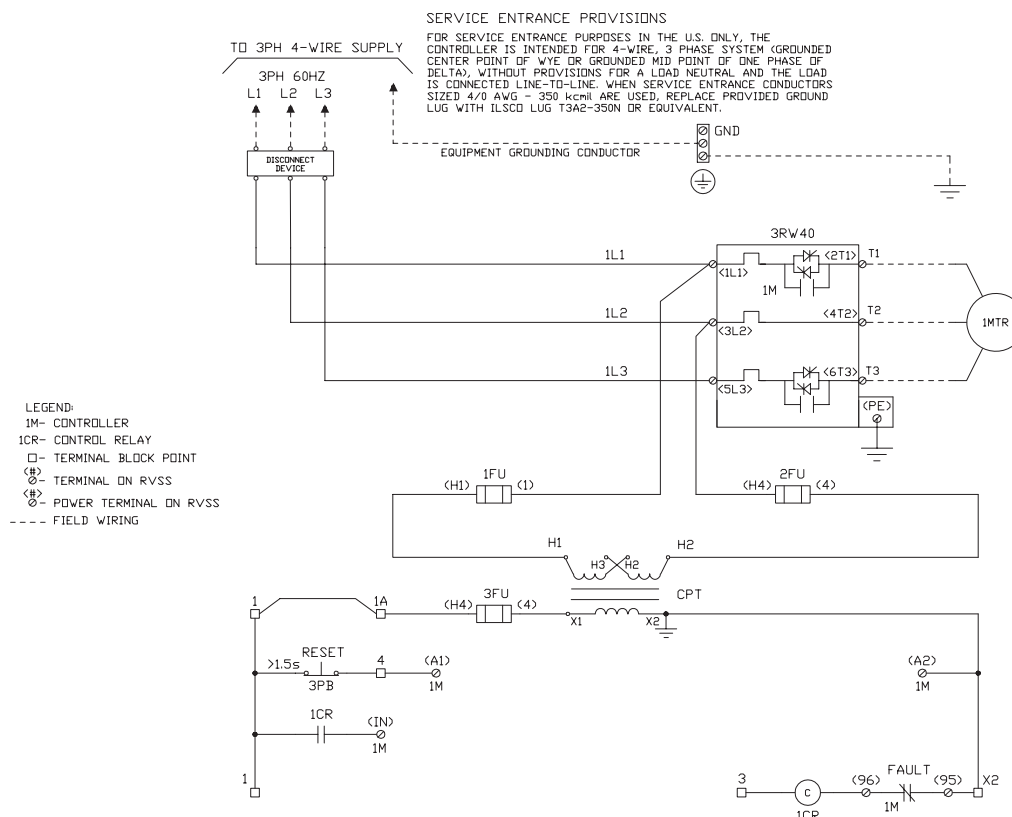
For enclosed soft starters, the maximum starts per hour indicated in this table takes precedence over what may be indicated for the corresponding open soft starter.

Consult with Siemens Application Engineering group @componentsae.ic@siemens.com if the maximum starts per hour for an application exceeds that indicated in this table.

3RE470 Non-Combination (no disconnect device)



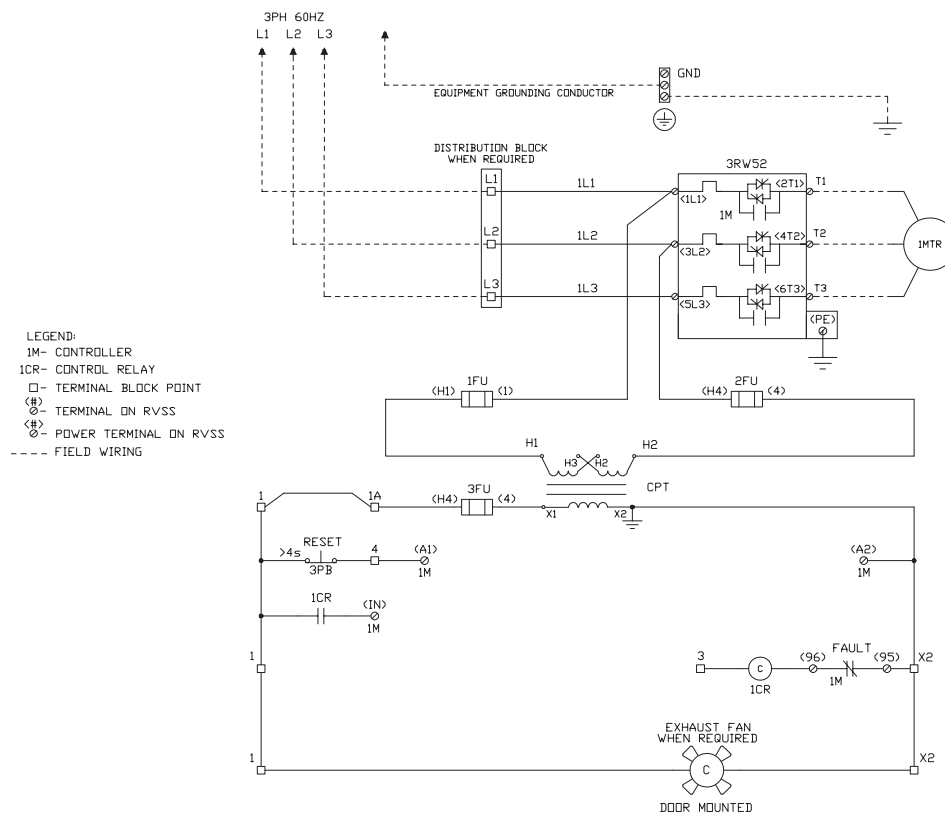
3RE470 Combination with disconnect device



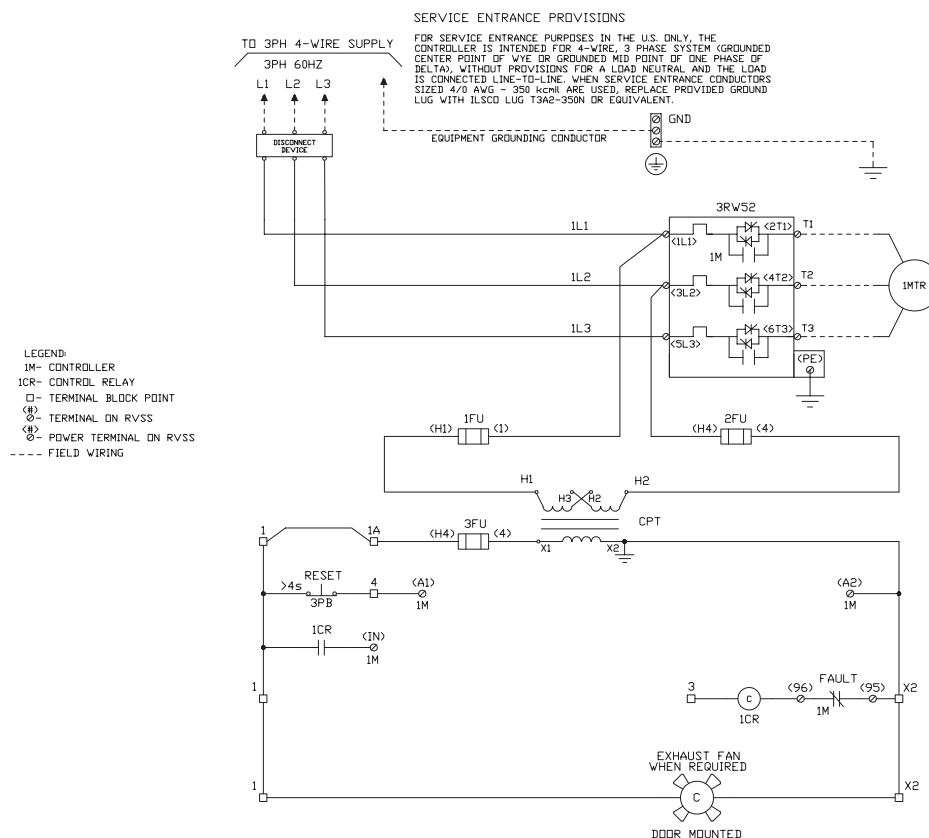
3RE471 Soft Starters

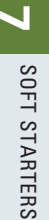
Wiring Diagrams

3RE471 Non-Combination (no disconnect device)



3RE471 Combination with disconnect device





3RE47 Soft Starters

Dimension Diagrams

FIGURE 1

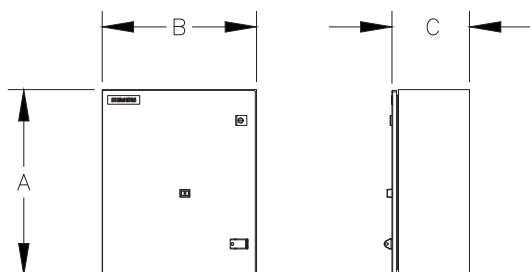
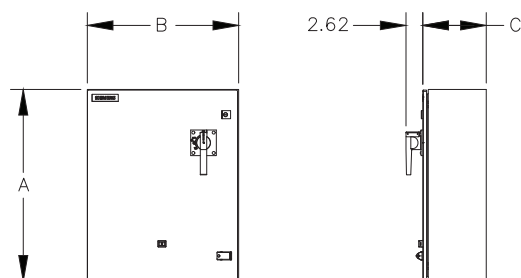


FIGURE 2


3RE47 with 3RW40 open starters
NEMA 1, 12, 3R and 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47024	1	24	20	10	1	30	24	10
3RE47026	1	24	20	10	1	30	24	10
3RE47027	1	24	20	10	1	30	24	10
3RE47028	1	24	20	10	1	30	24	10
3RE47036	1	30	24	10	1	36	30	10
3RE47037	1	30	24	10	1	36	30	10
3RE47038	1	30	24	10	1	36	30	10
3RE47046	1	30	24	10	1	36	30	10
Combination Starter								
3RE47024	2	30	24	10	2	36	30	10
3RE47026	2	30	24	10	2	36	30	10
3RE47027	2	30	24	10	2	36	30	10
3RE47028	2	30	24	10	2	36	30	10
3RE47036	2	30	24	10	2	36	30	10
3RE47037	2	30	24	10	2	36	30	10
3RE47038	2	30	24	10	2	36	30	10
3RE47046	2	30	24	10	2	36	30	10
3RE47047	2	36	30	10	2	42	36	10

3RE47 with 3RW40 open starters
NEMA 4X stainless steel

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47024	1	24	20	10	1	30	24	10
3RE47026	1	24	20	10	1	30	24	10
3RE47027	1	24	20	10	1	30	24	10
3RE47028	1	24	20	10	1	30	24	10
3RE47036	1	30	24	10	1	36	30	12
3RE47037	1	30	24	10	1	36	30	12
3RE47038	1	30	24	10	1	36	30	12
3RE47046	1	30	24	10	1	36	30	12
Combination Starter								
3RE47024	2	30	24	10	2	36	30	12
3RE47026	2	30	24	10	2	36	30	12
3RE47027	2	30	24	10	2	36	30	12
3RE47028	2	30	24	10	2	36	30	12
3RE47036	2	30	24	10	2	36	30	12
3RE47037	2	30	24	10	2	36	30	12
3RE47038	2	36	30	12	2	42	36	12
3RE47046	2	36	30	12	2	42	36	12
3RE47047	2	36	30	12	2	42	36	10

3RE47 with 3RW52 & 3RW55 open starters
NEMA 1, 12, 3R and 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47113/3RE47213	1	24	20	10	1	30	24	10
3RE47114/3RE47214	1	24	20	10	1	30	24	10
3RE47115/3RE47215	1	24	20	10	1	30	24	10
3RE47116/3RE47216	1	24	20	10	1	30	24	10
3RE47117/3RE47217	1	24	20	10	1	30	24	10
3RE47124/3RE47224	1	24	20	10	1	30	24	10
3RE47125/3RE47225	1	24	20	10	1	30	24	10
3RE47126/3RE47226	1	24	20	10	1	30	24	10
3RE47127/3RE47227	1	30	24	10	1	36	30	10
3RE47134/3RE47234	1	30	24	10	1	36	30	10
3RE47135/3RE47235	1	30	24	10	1	36	30	10
3RE47136/3RE47236	1	30	24	10	1	36	30	10

3RE47 with 3RW52 & 3RW55 open starters
NEMA 4X stainless steel

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47113/3RE47213	1	24	20	10	1	30	24	10
3RE47114/3RE47214	1	24	20	10	1	30	24	10
3RE47115/3RE47215	1	24	20	10	1	30	24	10
3RE47116/3RE47216	1	24	20	10	1	30	24	10
3RE47117/3RE47217	1	24	20	10	1	30	24	10
3RE47124/3RE47224	1	30	24	10	1	36	30	12
3RE47125/3RE47225	1	30	24	10	1	36	30	12
3RE47126/3RE47226	1	36	30	12	1	42	36	12
3RE47127/3RE47227	1	36	30	12	1	42	36	12
3RE47134/3RE47234	1	36	30	12	1	42	36	12
3RE47135/3RE47235	1	36	30	12	1	42	36	12
3RE47136/3RE47236	1	42	36	12	1	60	36	12

3RE47 Soft Starters

Dimension Diagrams

FIGURE 1

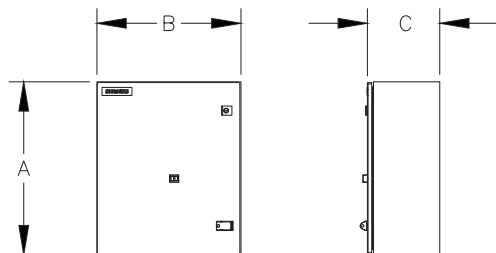


FIGURE 2

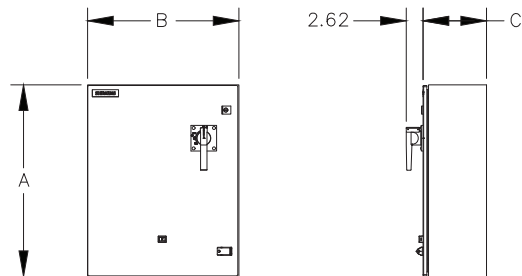


FIGURE 3

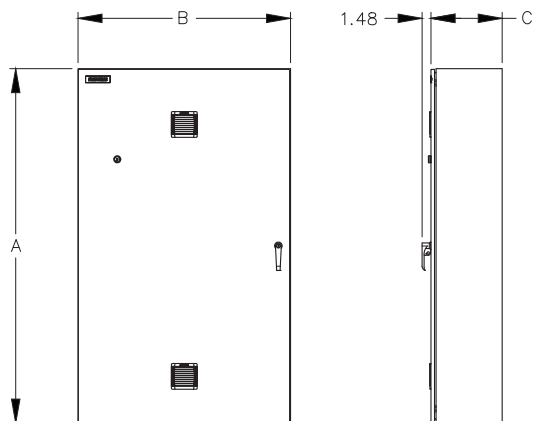
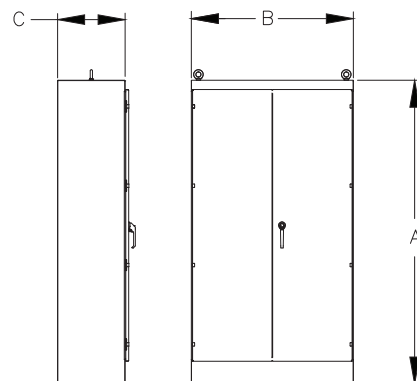


FIGURE 7



3RE47 with 3RW52 & 3RW55 open starters
NEMA 1, 12, 3R and 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47113/3RE47213	2	30	24	10	2	36	30	10
3RE47114/3RE47214	2	30	24	10	2	36	30	10
3RE47115/3RE47215	2	30	24	10	2	36	30	10
3RE47116/3RE47216	2	30	24	10	2	36	30	10
3RE47117/3RE47217	2	30	24	10	2	36	30	10
3RE47124/3RE47224	2	36	30	10	2	42	36	10
3RE47125/3RE47225	2	36	30	10	2	42	36	10
3RE47126/3RE47226	2	36	30	10	2	42	36	10
3RE47127/3RE47227	2	36	30	10	2	42	36	10
3RE47134/3RE47234	2	36	30	10	2	42	36	10
3RE47135/3RE47235	2	36	30	10	2	42	36	10
3RE47136/3RE47236	2	36	30	10	2	42	36	10

3RE47 with 3RW52 & 3RW55 open starters
NEMA 1 & 12

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non Combination Starter								
3RE47143/3RE47243	1	36	30	10	1	42	36	12
3RE47144/3RE47244	1	36	30	10	1	42	36	12
3RE47145/3RE47245	1	36	30	10	1	42	36	12
3RE47146/3RE47246	1	60	36	12	1	60	36	12
3RE47147/3RE47247	1	60	36	12	7	90	36	24
3RE47148/3RE47248	3	60	36	12	7	90	36	24

3RE47 with 3RW52 & 3RW55 open starters
NEMA 4X stainless steel

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47113/3RE47213	2	30	24	10	2	36	30	12
3RE47114/3RE47214	2	30	24	10	2	36	30	12
3RE47115/3RE47215	2	30	24	10	2	36	30	12
3RE47116/3RE47216	2	30	24	10	2	36	30	12
3RE47117/3RE47217	2	30	24	10	2	36	30	12
3RE47124/3RE47224	2	36	30	12	2	42	36	12
3RE47125/3RE47225	2	36	30	12	2	42	36	12
3RE47126/3RE47226	2	36	30	12	2	42	36	12
3RE47127/3RE47227	2	36	30	12	2	42	36	12
3RE47134/3RE47234	2	42	36	12	2	60	36	12
3RE47135/3RE47235	2	42	36	12	2	60	36	12
3RE47136/3RE47236	2	60	36	12	2	72	30	24

3RE47 with 3RW52 & 3RW55 open starters
NEMA 3R & 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non Combination Starter								
3RE47143/3RE47243	1	36	30	10	1	42	36	12
3RE47144/3RE47244	1	36	30	10	1	42	36	12
3RE47145/3RE47245	1	36	30	10	1	42	36	12
3RE47146/3RE47246	1	48	36	12	1	60	36	12
3RE47147/3RE47247	1	60	36	12	7	90	36	24
3RE47148/3RE47248	7	90	36	24	7	90	48	20

3RE47 Soft Starters

Dimension Diagrams

FIGURE 1

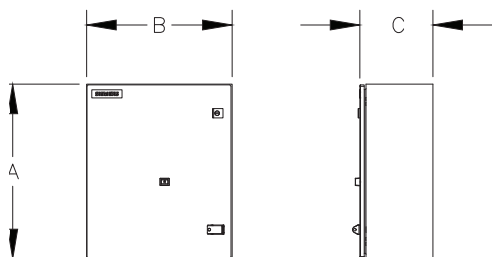


FIGURE 2

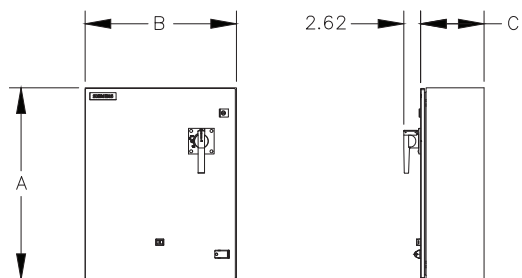


FIGURE 4

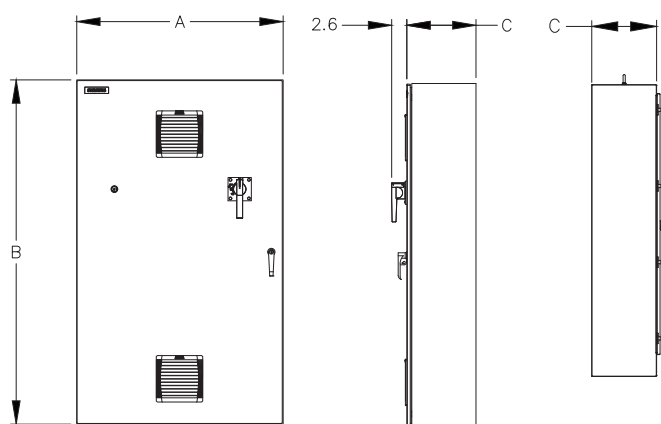


FIGURE 7

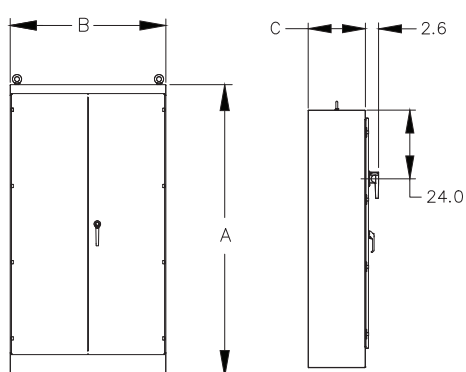
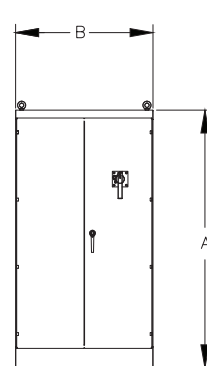


FIGURE 8


**3RE47 with 3RW52 & 3RW55 open starters
NEMA 4X stainless steel**

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47143/3RE47243	1	60	36	12	7	72	30	24
3RE47144/3RE47244	1	60	36	12	7	72	30	24
3RE47145/3RE47245	7	71	30	24	7	90	36	20
3RE47146/3RE47246	7	90	36	20	7	90	48	20
3RE47147/3RE47247	7	90	36	20	7	90	48	20
3RE47148/3RE47248	7	90	36	20	7	90	48	20

**3RE47 with 3RW52 & 3RW55 open starters
NEMA 1 & 12**

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47143/3RE47243	2	48	36	12	2	60	36	12
3RE47144/3RE47244	2	48	36	12	2	60	36	12
3RE47145/3RE47245	2	60	36	12	8	90	36	24
3RE47146/3RE47246	4	48	36	12	8	90	36	24
3RE47147/3RE47247	4	60	36	12	8	90	36	24
3RE47148/3RE47248	4	60	36	12	8	90	36	24

FIGURE 2

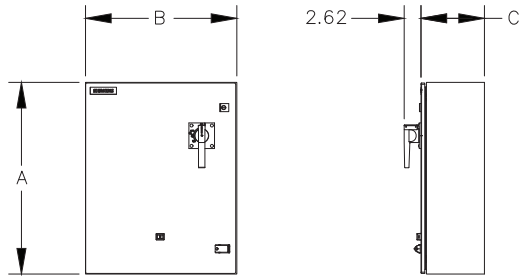


FIGURE 7

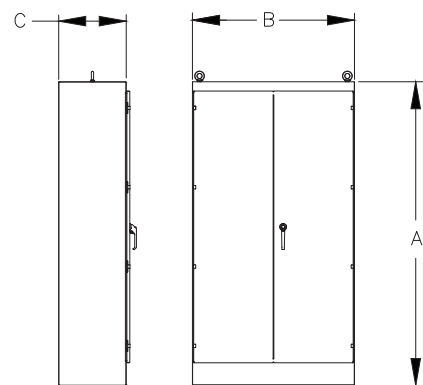


FIGURE 8

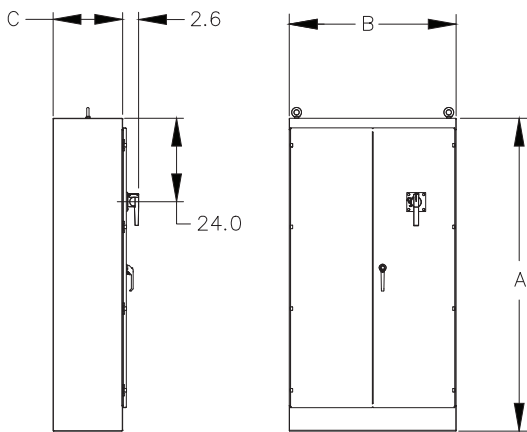
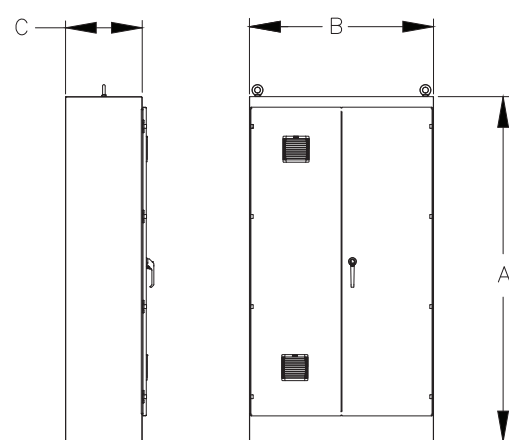


FIGURE 9



3RE47 with 3RW52 & 3RW55 open starters NEMA 3R & 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47143/3RE47243	2	48	36	12	2	60	36	12
3RE47144/3RE47244	2	48	36	12	2	60	36	12
3RE47145/3RE47245	2	60	36	12	8	90	36	24
3RE47146/3RE47246	8	90	36	24	8	90	48	20
3RE47147/3RE47247	8	90	36	24	8	90	48	20
3RE47148/3RE47248	8	90	36	24	8	90	48	20

3RE47 with 3RW52 & 3RW55 open starters NEMA 4X stainless steel

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47143/3RE47243	8	71	30	24	8	90	36	20
3RE47144/3RE47244	8	90	36	20	8	90	48	20
3RE47145/3RE47245	8	90	36	20	8	90	48	20
3RE47146/3RE47246	8	90	36	20	8	90	48	20
3RE47147/3RE47247	8	90	48	20	8	90	72	20
3RE47148/3RE47248	8	90	48	20	8	90	72	20

3RE47 with 3RW55 open starters NEMA 1 & 12

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47252	7	90	48	20	7	90	60	20
3RE47253	7	90	48	20	7	90	60	20
3RE47254	7	90	48	20	7	90	60	20
3RE47256	7	90	48	20	7	90	60	20
3RE47258	9	90	48	20	7	90	60	20

3RE47 Soft Starters

Dimension Diagrams

FIGURE 5

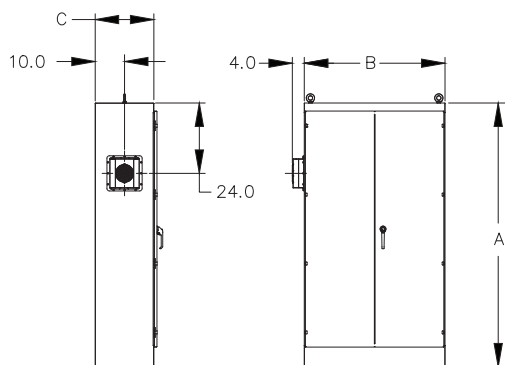


FIGURE 7

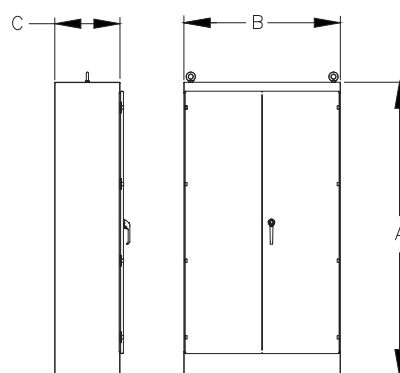


FIGURE 8

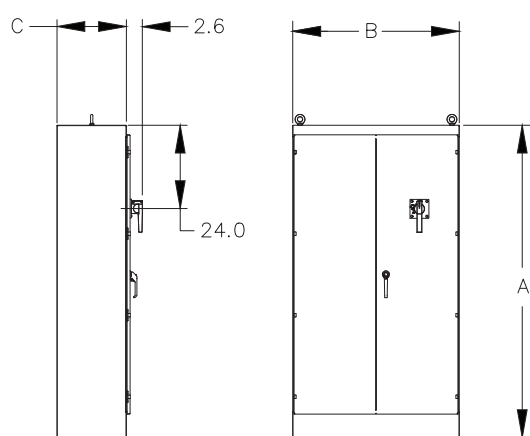
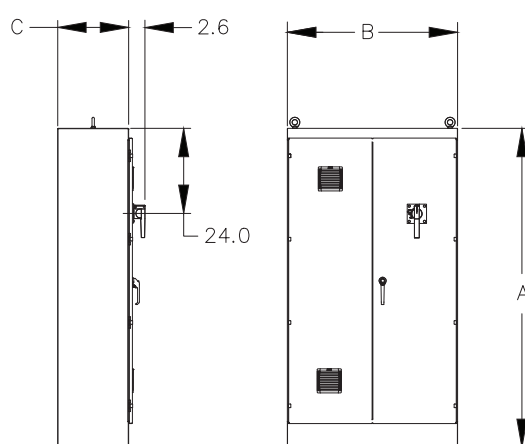


FIGURE 10


**3RE47 with 3RW55 open starters
NEMA 3R & 4**

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47252	7	90	48	20	7	90	60	20
3RE47253	7	90	48	20	7	90	60	20
3RE47254	7	90	48	20	7	90	60	20
3RE47256	7	90	48	20	7	90	60	20
3RE47258	5	90	48	20	7	90	60	20

**3RE47 with 3RW55 open starters
NEMA 4X stainless steel**

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Non-Combination Starter								
3RE47252	7	90	48	20	7	90	72	20
3RE47253	7	90	48	20	7	90	72	20
3RE47254	7	90	48	20	7	90	72	20
3RE47256	5	90	48	20	7	90	72	20
3RE47258	5	90	48	20	7	90	72	20

**3RE47 with 3RW55 open starters
NEMA 1 & 12**

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47252	8	90	48	20	8	90	60	20
3RE47253	8	90	48	20	8	90	60	20
3RE47254	8	90	48	20	8	90	60	20
3RE47256	8	90	48	20	8	90	60	20
3RE47258	10	90	48	20	8	90	60	20

3RE47 Soft Starters

Dimension Diagrams

FIGURE 6

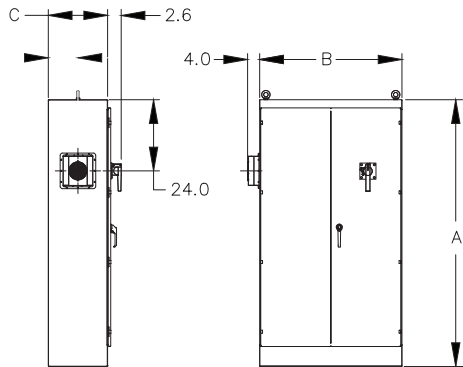
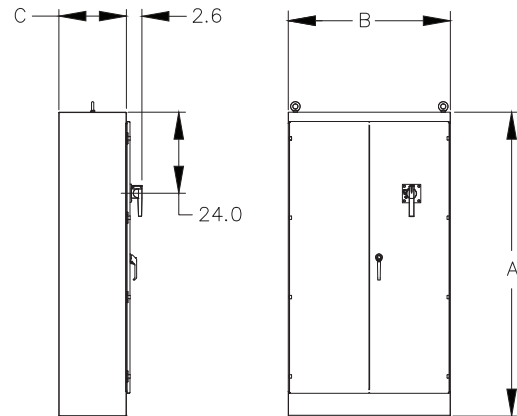


FIGURE 8

3RE47 with 3RW55 open starters
NEMA 3R & 4

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
3RE47252	8	90	48	20	8	90	60	20
3RE47253	8	90	48	20	8	90	60	20
3RE47254	8	90	48	20	8	90	60	20
3RE47256	8	90	48	20	8	90	60	20
3RE47258	6	90	48	20	8	90	60	20

3RE47 with 3RW55 open starters
NEMA 4X stainless steel

Catalog number	Standard enclosure				Oversized enclosure			
	FIG	A	B	C	FIG	A	B	C
Combination Starter								
—	8	90	48	20	8	90	72	20
3RE47253	8	90	48	20	8	90	72	20
3RE47254	6	90	48	20	8	90	72	20
3RE47256	6	90	48	20	8	90	72	20
3RE47258	6	90	48	20	8	90	72	20

SINAMICS G120X

An infrastructure drive for pumps, fans and compressors

Siemens introduces an exciting new addition to the existing SINAMICS product portfolio—the G120X—an “infrastructure” drive up to 700 hp (630kW), which is targeted for pump, fan and compressor applications in the water/wastewater, HVAC, irrigation/agriculture and industrial chiller and refrigeration industries.

Seamless process for higher efficiency

SINAMICS G120X is simple, seamless, cost- and energy-efficient, robust, reliable and fit for digitalization. It integrates easily into existing applications, works with any standard motor (induction, synchronous and synchronous reluctance) and can be configured for cost-optimization and resource-saving operation which ultimately helps reduce total cost of ownership. SINAMICS G120X meets all the latest industry standards with regard to energy efficiency and product safety, and offers enhanced safety with SIL3-rated safety functions and up to 100kA short-circuit current rating according to new UL61800-5-1 design.



Application functions

Pump-specific		
- Deragging or blockage protection - Pipe filling - Multi-pump control - Pump switchover - Stop mode - Service mode - Cascade control mode	- Blockage, leakage and dry-running protection - Cavitation protection - Condensation protection - Frost protection	
Fan-specific		
- Flying restart - Automatic restart - Skip frequency bands	- Fire mode (essential service mode) - No load, torque and rotation (belt) monitoring with sensor	
Increase energy efficiency and system performance		
- Eco mode - Hibernation or sleep mode	- Bypass mode - Energy/flow calculator	- Support to high efficiency motors (PMSM and SRM) - Real time clock and programmable timer (3)
Optimize pump and fan operation and increase system availability		
Keep running mode	PID controller	- Dual ramp - Multi-speed setpoints

Protection functions

- Phase-loss detection for both supply and motor
- Overvoltage controller
- Undervoltage controller
- Drive overtemperature protection
- Loss of analog input signal monitoring
- External fault and warning monitoring (up to 3)
- Motor overtemperature protection (with and without sensor)
- Motor overload monitoring and protection
- Motor short-circuit and ground fault protection
- Speed and torque monitoring
- Blocking and stalling monitoring and protection
- Detection of missing communication telegrams
- Detection of communication bus interruption

Technical data

Line voltage and output power range		
	FSA...FSF	3AC 200V (-20%)...240V (+10%) 1 hp...75 hp (0.75kW...55kW)
	FSA...FSG	3AC 380V (-20%)...480V (+10%) 1 hp...400 hp (0.75kW...250kW)
	FSH, FSJ	3AC 380V (-15%)...480V (+10%) 400 hp...700 hp (315kW...560kW)
	FSD...FSG	3AC 500V (-20%)...690V (+10%) 4 hp...250 hp (3kW...250kW)
	FSH, FSJ	3AC 500V (-15%)...690V (+10%) 350 hp...700 hp (315kW...630kW)
Output voltage		3AC 0V....line voltage x 0.97
Input frequency		47 Hz...63 Hz
Output frequency		
	FSA...FSG	0 Hz...550 Hz (depending upon the control mode)
	FSH, FSJ	0 Hz...150 Hz (depending upon the control mode)
Fundamental power factor (Cos φ)		0.96...0.99
Efficiency class		IE2 (Based on power losses according to EN 50598-2 and IEC 61800-9-2)
Efficiency (η)		98%
Motor control		■ V/Hz control (linear, linear with flux current control/FCC, parabolic and eco mode) ■ Sensorless less vector control (SLVC)
Supported motor types		■ Asynchronous (induction) motor ■ Permanent magnet synchronous motor (PMSM) ■ Synchronous reluctance motor (SRM)
Degree of protection		IP20/UL Open Type
Operating temperature		-4° F to 113° F (-20° C to 45° C) without derating > 113° F up to 140° F (> 45° C up to 60° C) with derating For PROFINET, EtherNet/IP™ up to 55° C (131° F) with derating
Overload		
Low Overload (LO)/Variable Torque (VT)		110% x I _L for 60s
High Overload (HO)/Constant Torque (CT)		150% x I _H for 60s
Communication		PROFINET, EtherNet/IP™, USS, Modbus RTU, BACnet MS/TP, PROFIBUS DP
Functional safety		Hardware-based SIL3 Safe Torque Off (STO) function with on/off switch
Short-circuit current rating (SCCR)		Up to 100kA according to NEW UL 61800-5-1 design
Control inputs and outputs		
6 Digital Inputs (DI 0 ... DI 5)		24V (12–30V) electrically isolated, 4mA current, PNP/NPN switchable
2 Digital (Relay) Outputs (DO 0...DO 1)		Type C, 250V AC, 2A/30V DC, 2A for resistive, inductive or capacitive load
2 Analog Inputs (AI 0...AI 1)		Differential input 0V... 10V or -10V ... +10V: typical current drain: 0.1 mA, max. voltage 35V 0/4 mA ... 20 mA: 120 Ω input resistance, voltage < 10V, current < 80 mA
1 Analog Output (AO 0)		Not isolated, switchable between voltage (0V... 10V) and current (0/4 mA ... 20 mA) via parameter setting
1 motor temperature sensor input		PTC, KTY, PT1000, bi-metallic switch with normally closed contact
1 failsafe digital input		STO — electrically isolated
1 internal aux. supply voltage		24V DC, max. 250 mA 10V DC, max. 10 mA
1 external aux. supply voltage		24V DC (20.4 ... 28.8V DC), current consumption 0.5A
1 memory card slot		For optional SD memory cards (as a backup storage device for saving of the settings after drive commissioning, and also for a series commissioning of a several identical drives via cloning of the settings)
Additional control inputs and outputs (With optional I/O Extension Module)		
2 Digital Inputs (DI 6...DI 7)		24V (12–30V) electrically isolated, 4mA current, PNP / NPN switchable
4 Digital (Relay) Outputs (DO 2...DO 5)		2x Type A and 2x Type C relay outputs rated 250V AC, 2A / 30V DC, 2A for resistive, inductive or capacitive load
1 Analog Input (AI 2)		Analog current input (0/4 mA ... 20 mA) or Temperature sensor input (Pt10000 / LG-Ni10000 / DIN-Ni1000)
1 motor temperature sensor input (AI 3)		Temperature sensor input (Sensor Pt10000 / LG-Ni10000 / DIN-Ni1000)
2 Analog Output (AO 1 ... AO 2)		Not isolated, switchable between voltage (0V... 10V) and current (0/4 mA ... 20 mA) via parameter setting
User interface		
	Standard	Intelligent Operator Panel (IOP-2)—a high-resolution graphical color keypad
	Optional	Smart Access Module (SAM) Part number: 6SL3255-0AA00-5AA0—a WiFi-based web server module and engineering tool for quick setup and diagnostics using a mobile device (PC, smartphone, tablet, etc.)
		Basic Operator Panel (BOP-2)—a basic keypad Blank (no Operator Panel/keypad)

SINAMICS G120X

It's the simple, seamless and easy-to-use drive — right out of the box.



Digitalization

Digitalization and IoT based secured health monitoring	
SINAMICS CONNECT 300 and Analyze MyDrives	SINAMICS CONNECT 300 (Part number: 6SL3255-0AG30-0AA0) is the IoT gateway. It is designed to acquire data through the serial port of the SINAMICS G120X and synchronize the data to MindSphere (cloud-based open IoT operating system of Siemens) using the MindSphere application Analyze MyDrives (AMD). This offers users the opportunity to analyze valuable operating data gathered from the drive and enables the visualization and analysis of status information, providing users with valuable data which can be used as the basis for process optimization and maintenance strategies. For more information visit: www.siemens.com/sinamics-digitalization

Certification

Certification / marking	
	■ cULus marking according to UL61800-5-1 and CSA C22.2 No. 274 with SCCR up to 100kA ■ CE marking according to European Low-Voltage Directive 2014/35/EU and IEC/EN 61800-5-1, Machinery directive 2006/42/EC and IEC/EN 61800-5-2, EMC Directive 2014/30/EU and IEC/EN 61800-3, RoHS directive 2011/65/EU and EN 50581 ■ IE2 efficiency level based on power losses according to EN 50598-2 and IEC 61800-9-2 ■ Safe torque off (STO) SIL3 rating according to IEC/EN 61800-5-2 ■ EAC, K, RCM (formerly C-Tick), REACH, RoHS II, SEMI F47

Dimensions and clearance distances FSA...FSJ

Frame size	Dimensions				Max. weight of frame	
	H mm (inch)	W mm (inch)	D mm (inch)	Additional depth with Operator Panel mm (inch)	No filter kg (lbs) ¹	With filter kg (lbs) ¹
FSA	232 (9.1)	73 (2.9)	209 (8.2)	9 (0.4)	3.4 (7.5)	3.6 (8)
FSB	275 (10.8)	100 (3.9)			5.8 (12.8)	6.2 (13.7)
FSC	295 (11.6)	140 (5.5)			7.11 (15.7)	7.7 (17)
FSD	472 (18.6)	200 (7.9)	239 (9.4)		18.8 (41.5)	19.5 (43)
FSE	551 (21.7)	275 (10.8)			26.7 (59)	28.7 (63.3)
FSF	709 (27.9)	305 (12)	360 (14.2)		66.5 (146.6)	71 (156.53)
FSG	999.4 (39.3)	305 (12)				120 (264.6)
FSH	1696 (66.8)	548 (21.6)	393 (15.5)	—	—	162 (357.2)
FSJ	1621 (63.8)	801 (31.5)				250 (551.16)

¹Refer to SINAMICS G120X operating instructions or rating plate information of a unit to obtain the weight specific to each rating / order number



For additional information on SINAMICS G120X

- SINAMICS G120X Catalog: [click to download PDF](#)
- SINAMICS G120X Webpage: www.usa.siemens.com/sinamics-g120x
- For additional technical information including operating instructions please visit SINAMICS G120X Technical Reference site: <https://support.industry.siemens.com/cs/us/en/ps/25454>

SINAMICS G120X—Selection and ordering data

Voltage class 3AC 200...240V, 47...63Hz																			
Frame size	kW (200V)	hp (240V)	Rated Output Current I _L , A (240V)	Order number															
FSA	0.75	1	4.2	6	S	L	3	2	0	–	Y	C	1	0	–	U	0		
	1.1	1.5	6	6	S	L	3	2	0	–	Y	C	1	2	–	U	0		
	1.5	2	7.4	6	S	L	3	2	0	–	Y	C	1	4	–	U	0		
FSB	2	3	10.4	6	S	L	3	2	0	–	Y	C	1	6	–	U	0		
	3	4	13.6	6	S	L	3	2	0	–	Y	C	1	8	–	U	0		
	4	5.0	17.5	6	S	L	3	2	0	–	Y	C	2	0	–	U	0		
FSC	5.5	7.5	22	6	S	L	3	2	0	–	Y	C	2	2	–	U	0		
	7.5	10	28	6	S	L	3	2	0	–	Y	C	2	4	–	U	0		
FSD	11	15	42	6	S	L	3	2	0	–	Y	C	2	6	–	U	0		
	15	20	54	6	S	L	3	2	0	–	Y	C	2	8	–	U	0		
	18.5	25	68	6	S	L	3	2	0	–	Y	C	3	0	–	U	0		
FSE	22	30	80	6	S	L	3	2	0	–	Y	C	3	2	–	U	0		
	30	40	104	6	S	L	3	2	0	–	Y	C	3	4	–	U	0		
FSF	37	50	130	6	S	L	3	2	0	–	Y	C	3	6	–	U	0		
	45	60	154	6	S	L	3	2	0	–	Y	C	3	8	–	U	0		
	55	75	192	6	S	L	3	2	0	–	Y	C	4	0	–	U	0		
Special coating according to IEC/EN 60721-3-3																			
Class 3C2 (Standard)										2									
Class 3C3*										3									
User interface																			
Blank (No operator panel/keypad)										1									
BOP-2 (Basic keypad, Class 3C3*)										2									
IOP-2 (Standard—high-resolution graphical color keypad, Class 3C3*)										3									
I/O extension module																			
without I/O extension module																	0		
with I/O extension module, Class 3C3*																	1		
EMC class																			
No EMI/RFI filter																		U	
Communication interface																			
PROFINET, EtherNet/IP™ (Standard)																			F
USS, Modbus, RTU, BACnet MS/TP																			B
PROFIBUS DP																			P
*Special coating or sealing for operation in harsh/corrosive environments																			

SINAMICS G120X—Selection and ordering data

Voltage class 3AC 380...480V, 47...63Hz																			
Frame size	kW (400V)	hp (480V)	Rated Output Current I _L , A (480V)	Order number															
FSA	0.75	1	2.1	6	S	L	3	2		0	–	Y	E	1	0	–			0
	1.1	1.5	3	6	S	L	3	2		0	–	Y	E	1	2	–			0
	1.5	2	3.4	6	S	L	3	2		0	–	Y	E	1	4	–			0
	2.2	3	4.8	6	S	L	3	2		0	–	Y	E	1	6	–			0
	3	4	6.2	6	S	L	3	2		0	–	Y	E	1	8	–			0
FSB	4	5	7.6	6	S	L	3	2		0	–	Y	E	2	0	–			0
	5.5	7.5	11	6	S	L	3	2		0	–	Y	E	2	2	–			0
	7.5	10	14	6	S	L	3	2		0	–	Y	E	2	4	–			0
FSC	11	15	21	6	S	L	3	2		0	–	Y	E	2	6	–			0
	15	20	27	6	S	L	3	2		0	–	Y	E	2	8	–			0
FSD	18.5	25	34	6	S	L	3	2		0	–	Y	E	3	0	–			0
	22	30	40	6	S	L	3	2		0	–	Y	E	3	2	–			0
	30	40	52	6	S	L	3	2		0	–	Y	E	3	4	–			0
	37	50	65	6	S	L	3	2		0	–	Y	E	3	6	–			0
FSE	45	60	77	6	S	L	3	2		0	–	Y	E	3	8	–			0
	55	75	96	6	S	L	3	2		0	–	Y	E	4	0	–			0
FSF	75	100	124	6	S	L	3	2		0	–	Y	E	4	2	–			0
	90	125	156	6	S	L	3	2		0	–	Y	E	4	4	–			0
	110	150	180	6	S	L	3	2		0	–	Y	E	4	6	–			0
	132	200	240	6	S	L	3	2		0	–	Y	E	4	8	–			0
FSG	160	250	302	6	S	L	3	2		0	–	Y	E	5	0	–			0
	200	300	361	6	S	L	3	2		0	–	Y	E	5	2	–			0
	250	400	477	6	S	L	3	2		0	–	Y	E	5	4	–			0
FSH	315	400	477	6	S	L	3	2	2	0	–	Y	E	5	6	–		C	0
	355	450	515	6	S	L	3	2	2	0	–	Y	E	5	8	–		C	0
	400	500	590	6	S	L	3	2	2	0	–	Y	E	6	0	–		C	0
FSJ	450	500	663	6	S	L	3	2	2	0	–	Y	E	6	2	–		C	0
	500	600	724	6	S	L	3	2	2	0	–	Y	E	6	4	–		C	0
	560	700	830	6	S	L	3	2	2	0	–	Y	E	6	6	–		C	0
Special coating according to IEC/EN 60721-3-3																			
Class 3C2 (Standard)										2									
Class 3C3 *										3									
User interface																			
Blank (No operator panel/keypad)										1									
BOP-2 (Basic keypad, Class 3C3 *)										2									
IOP-2 (Standard — high-resolution graphical color keypad, Class 3C3 *)										3									
I/O extension module																			
without I/O extension module										0									
with I/O extension module, Class 3C3 *										1									
EMC class																			
No filter (Standard — without integrated EMI/RFI filter) for FSA to FSF only										U									
Filter C2 (With integrated EMI/RFI filter Category C2) for FSA to FSG only, see Note 1										A									
Filter C3 (Standard — with integrated EMI/RFI filter Category C3) for FSG to FSJ only, see Note 1										C									
Communication interface																			
PROFINET, EtherNet/IP™ (Standard)										F									
USS, Modbus, RTU, BACnet MS/TP										B									
PROFIBUS DP										P									

*Special coating or sealing for operation in harsh/corrosive environments

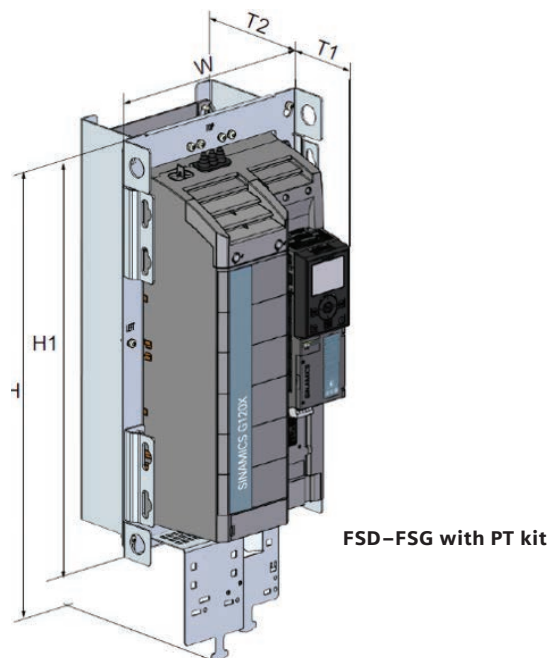
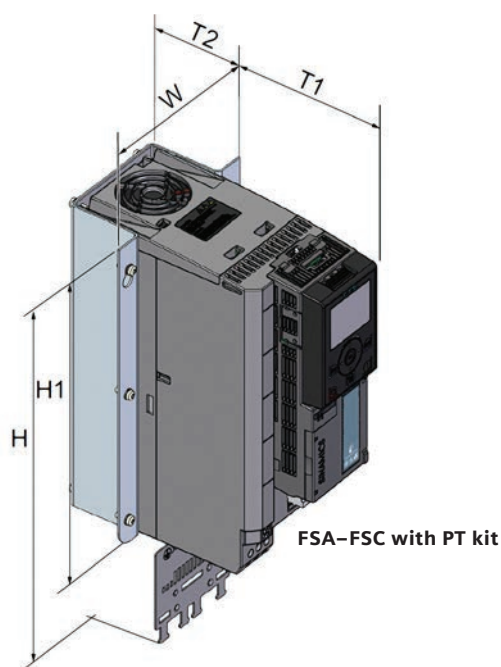
Note 1: For frame sizes FSG, FSH and FSJ, the filter can be deactivated by removing a grounding screw/clip for applications in an ungrounded or a high-resistance grounded or a corner-grounded supply system. Please refer to the SINAMICS G120X Operating Instructions for more information.

SINAMICS G120X—Selection and ordering data

Voltage class 3AC 500...690V, 47...63Hz																			
Frame size	kW (690V)	hp (600V)	Rated Output Current I _L , A (600V)	Order number															
FSD	3	4	5	6	S	L	3	2	0	–	Y	H	1	8	–				0
	4	5	6.3	6	S	L	3	2	0	–	Y	H	2	0	–				0
	5.5	7.5	9	6	S	L	3	2	0	–	Y	H	2	2	–				0
	7.5	10	11	6	S	L	3	2	0	–	Y	H	2	4	–				0
	11	10	14	6	S	L	3	2	0	–	Y	H	2	6	–				0
	15	15	19	6	S	L	3	2	0	–	Y	H	2	8	–				0
	18.5	20	23	6	S	L	3	2	0	–	Y	H	3	0	–				0
	22	25	27	6	S	L	3	2	0	–	Y	H	3	2	–				0
FSE	30	30	35	6	S	L	3	2	0	–	Y	H	3	4	–				0
	37	40	42	6	S	L	3	2	0	–	Y	H	3	6	–				0
	45	50	52	6	S	L	3	2	0	–	Y	H	3	8	–				0
FSF	55	60	62	6	S	L	3	2	0	–	Y	H	4	0	–				0
	75	75	80	6	S	L	3	2	0	–	Y	H	4	2	–				0
	90	100	100	6	S	L	3	2	0	–	Y	H	4	4	–				0
FSG	110	125	125	6	S	L	3	2	0	–	Y	H	4	6	–				0
	132	150	144	6	S	L	3	2	0	–	Y	H	4	8	–				0
	160	150	171	6	S	L	3	2	0	–	Y	H	5	0	–		C		0
	200	200	208	6	S	L	3	2	0	–	Y	H	5	2	–		C		0
FSH	250	250	250	6	S	L	3	2	0	–	Y	H	5	4	–		C		0
	315	350	345	6	S	L	3	2	2	0	–	Y	H	5	6	–	C		0
	355	400	388	6	S	L	3	2	2	0	–	Y	H	5	8	–	C		0
	400	450	432	6	S	L	3	2	2	0	–	Y	H	6	0	–	C		0
FSJ	450	500	487	6	S	L	3	2	2	0	–	Y	H	6	2	–	C		0
	500	500	546	6	S	L	3	2	2	0	–	Y	H	6	4	–	C		0
	560	600	610	6	S	L	3	2	2	0	–	Y	H	6	6	–	C		0
	630	700	679	6	S	L	3	2	2	0	–	Y	H	6	8	–	C		0
Special coating according to IEC/EN 60721-3-3																			
Class 3C2 (Standard)										2									
Class 3C3*										3									
User interface																			
Blank (No operator panel/keypad)										1									
BOP-2 (Basic keypad, Class 3C3*)										2									
IOP-2 (Standard—high-resolution graphical color keypad, Class 3C3*)										3									
I/O extension module																			
without I/O extension module										0									
with I/O extension module, Class 3C3*										1									
EMC class																			
No filter (Standard—without integrated EMI/RFI filter) for FSD to FSF only																		U	
Filter C2 (With integrated EMI/RFI filter Category C2) for FSD to FSE only																		A	
Filter C3 (With integrated EMI/RFI filter Category C3) for FSF to FSJ only, standard for FSG to FSJ, see Note 1																		C	
Communication interface																			
PROFINET, EtherNet/IP™ (Standard)																		F	
USS, Modbus, RTU, BACnet MS/TP																		B	
PROFIBUS DP																		P	

*Special coating or sealing for operation in harsh/corrosive environments

Note 1: For frame sizes FSG, FSH and FSJ, the filter can be deactivated by removing a grounding screw/clip for applications in an ungrounded or a high-resistance grounded or a corner-grounded supply system. Please refer to the SINAMICS G120X Operating Instructions for more information.



SINAMICS G120X IP20 Push-Through kits

SINAMICS G120X	Push-Through kit (PT)	Overall dimensions of SINAMICS G120X with PT kit installed				
		Width mm (inch)	Height mm (inch)		Depth mm (inch)	
Frame size	Part number	W	H = with shield plate	H1= without shield plate	T1 = front of PT bracket	T2 = back of PT bracket
FSA	6SL3261-6GA00-0BA0	127 (5.0)	324 (12.8)	234 (9.2)	160 (6.3)	57 (2.2)
FSB	6SL3261-6GB00-0BA0	154 (6.1)	384 (15.1)	279 (11.0)	153 (6.0)	66 (2.6)
FSC	6SL3261-6GC00-0BA0	192 (7.6)	407 (16.0)	295 (11.6)	154 (6.1)	65 (2.6)
FSD	6SL3261-6GD00-0BA0	271 (10.7)	647 (25.5)	514 (20.2)	142 (5.6)	98 (3.9)
FSE	6SL3261-6GE00-0BA0	360 (14.2)	773 (30.4)	600 (23.6)	145 (5.7)	93 (3.7)
FSF	6SL3261-6GF00-0BA0	396 (15.6)	1003 (39.5)	749 (29.5)	185 (7.3)	185 (7.3)
FSG	6SL3261-6GG00-0BA0	384 (15.1)	1275 (50.2)	1026 (40.4)	184 (7.3)	188 (7.4)

SINAMICS G120X—options and features

Options

- Special coating (Class 3C3) for operation of a drive in the harsh environments where corrosive gases for example, Hydrogen Sulfide (H₂S), Chlorine (Cl) or Ammonia (NH₃) are often present
- Add-on Push-Through (PT) kit to enable UL Open Type/IP20 drive in to UL Open Type/IP20 push-through drive (up to FSG)
- Input and output reactors
- Output dv/dt filter
- Output Sinusoidal filter
- Passive line harmonic filter
- EMI/RFI filters
- Communication: PROFINET, EtherNet/IP™, USS, Modbus RTU, BACnet MS/TP and PROFIBUS DP
- I/O extension module