3RW55/55F

3RW52

3RW50

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Industry Mall, see www.siemens.com/product?3RW	Simulation Tool for Soft Starters (STS), see page 6/8 or https://support.industry.siemens.com/cs/ww/en/view/101494917
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Sirius3rwFolder	

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3RW55 Failsafe

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3RW soft starters		Page
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	7/12
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	7/36
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

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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	7/71
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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 motors

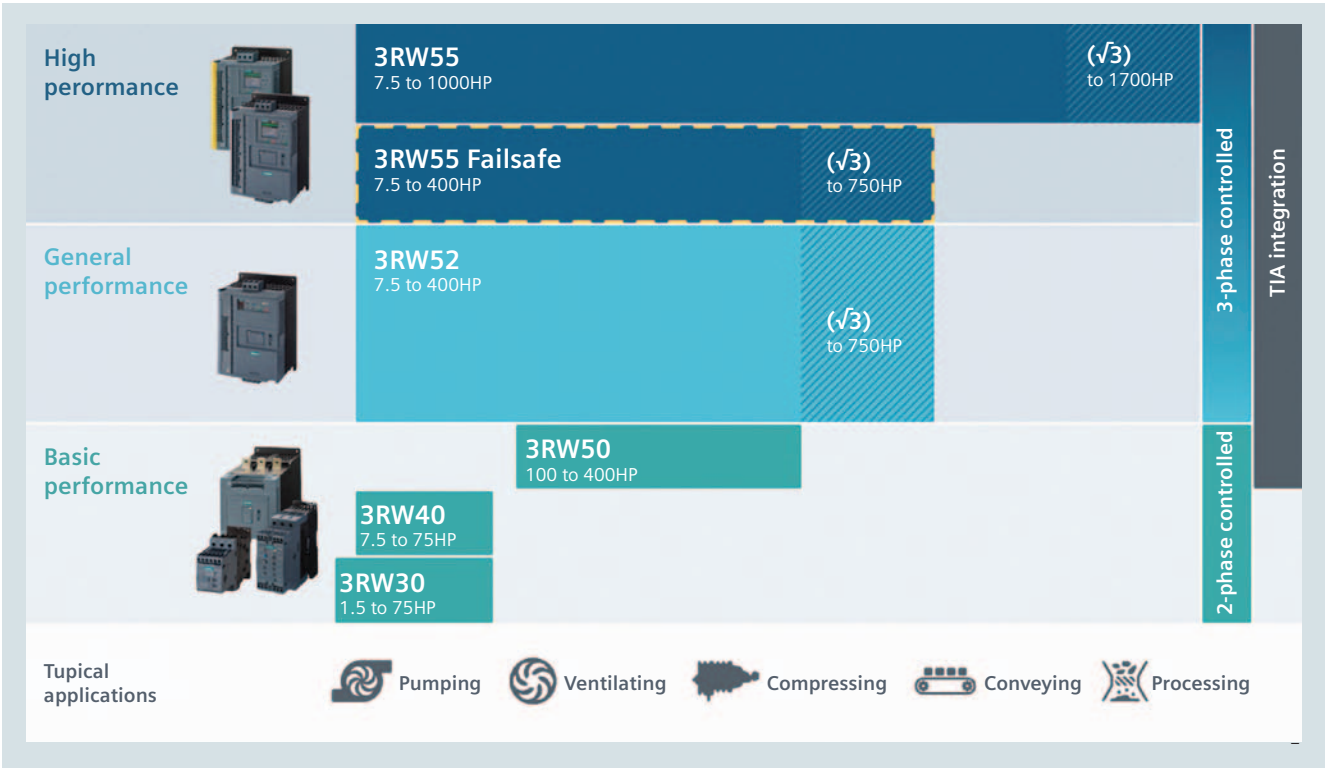
Note:

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.

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



SIRIUS 3RW Soft Starters

General data





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.

SIRIUS 3RW Soft Starters

General data

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	75 ... 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	100 ... 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

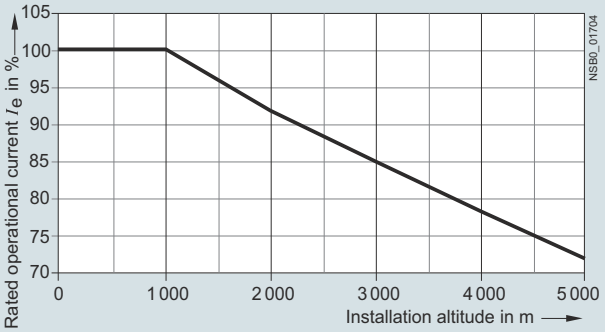
1) Inside-delta circuit only up to operational voltage 600 V.
2) Note derating above 40 °C.
3) Only soft starting available for 3RW30.
4) Calculate soft starter and motor with size allowance where required.
5) When using the motor overload protection according to ATEX/IECEx, an upstream contactor may 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.

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

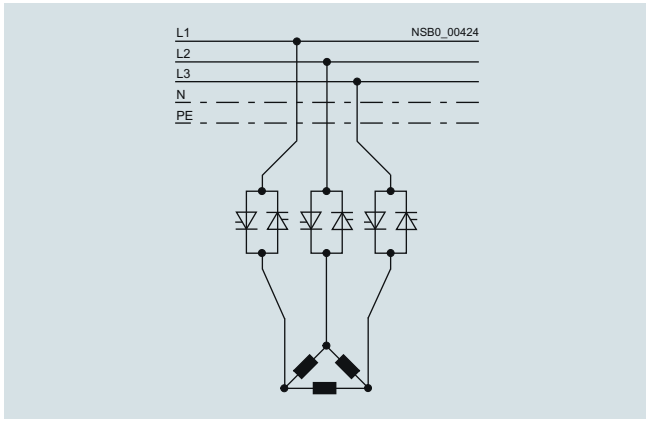
Everything at a glance: Simulation and results list

Circuit concept

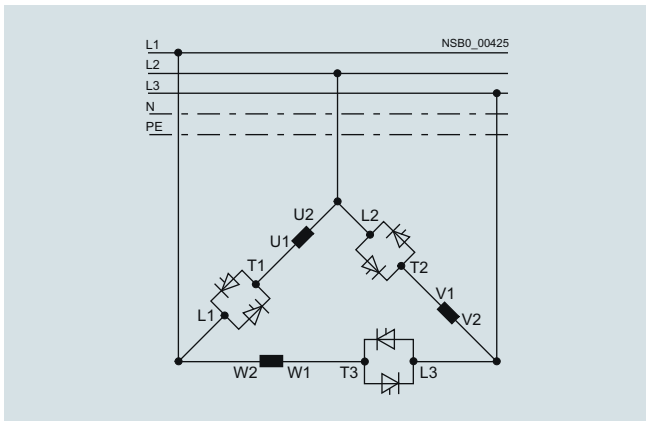
Three-phase controlled SIRIUS 3RW soft starters can be operated in two different types of circuit:

- 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).

ATEX/IECEx-certified motor overload protection

Ambient 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 overdimensioned 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_e	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_e	e.g. 4 = 200 ... 480 V AC									□	
Example		**3RW52**	**1**	**5**	**–**	**1**	**A**	**C**	**0**	**4**	

Note:

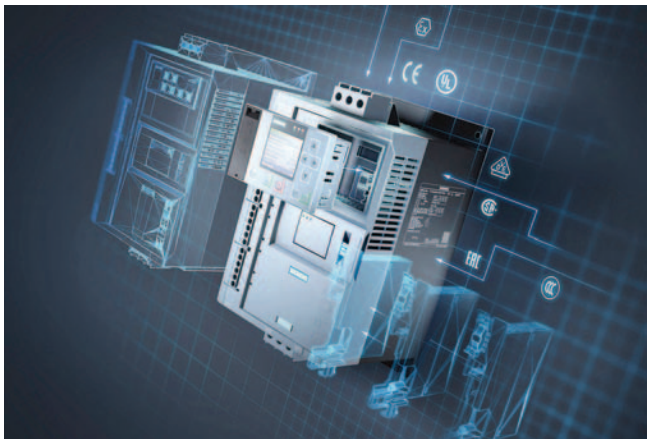
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

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

Benefits

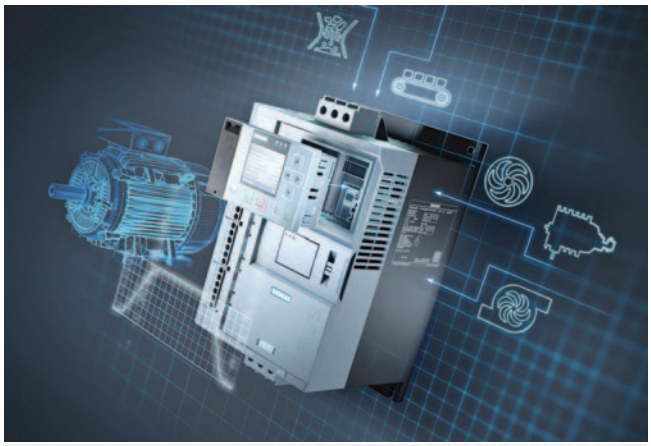
Can be flexibly deployed in many applications

Strong portfolio: comprehensive, coordinated soft starter portfolio



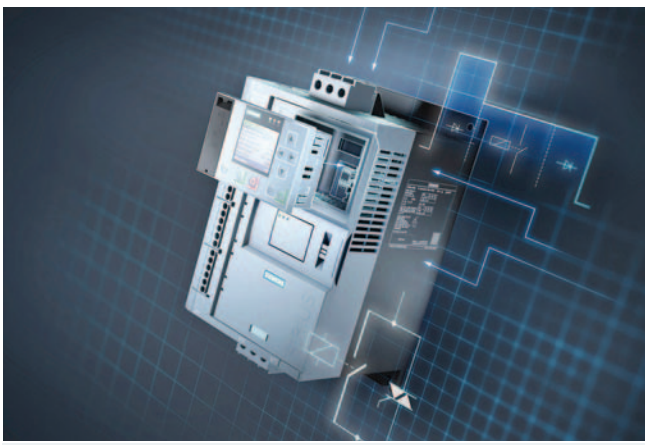
- The right hardware for all requirements, soft starters for tasks ranging from simple to demanding starting in Basic, General and High Performance versions
- Extensive portfolio for individual expansion: Optional HMIs for installation in the device or mounting on the control cabinet door
- Communication 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



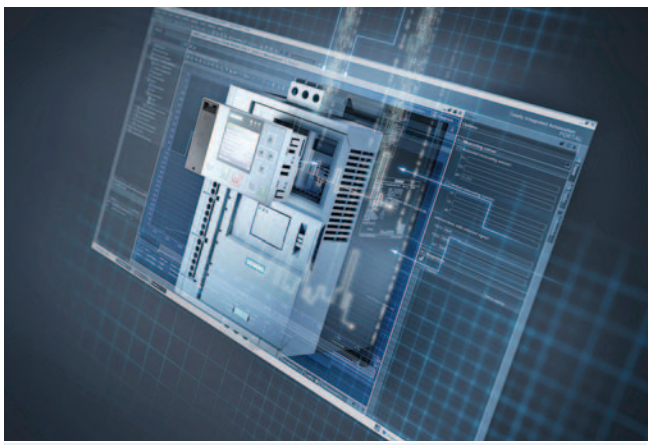
- Can be used in a wide variety of applications: Pumping, ventilating, compressing, moving and processing
- Integrated, self-learning automatic parameterization depending on motor starting conditions
- Application-specific functionality such as pump cleaning and pump stop
- Condition monitoring: Current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

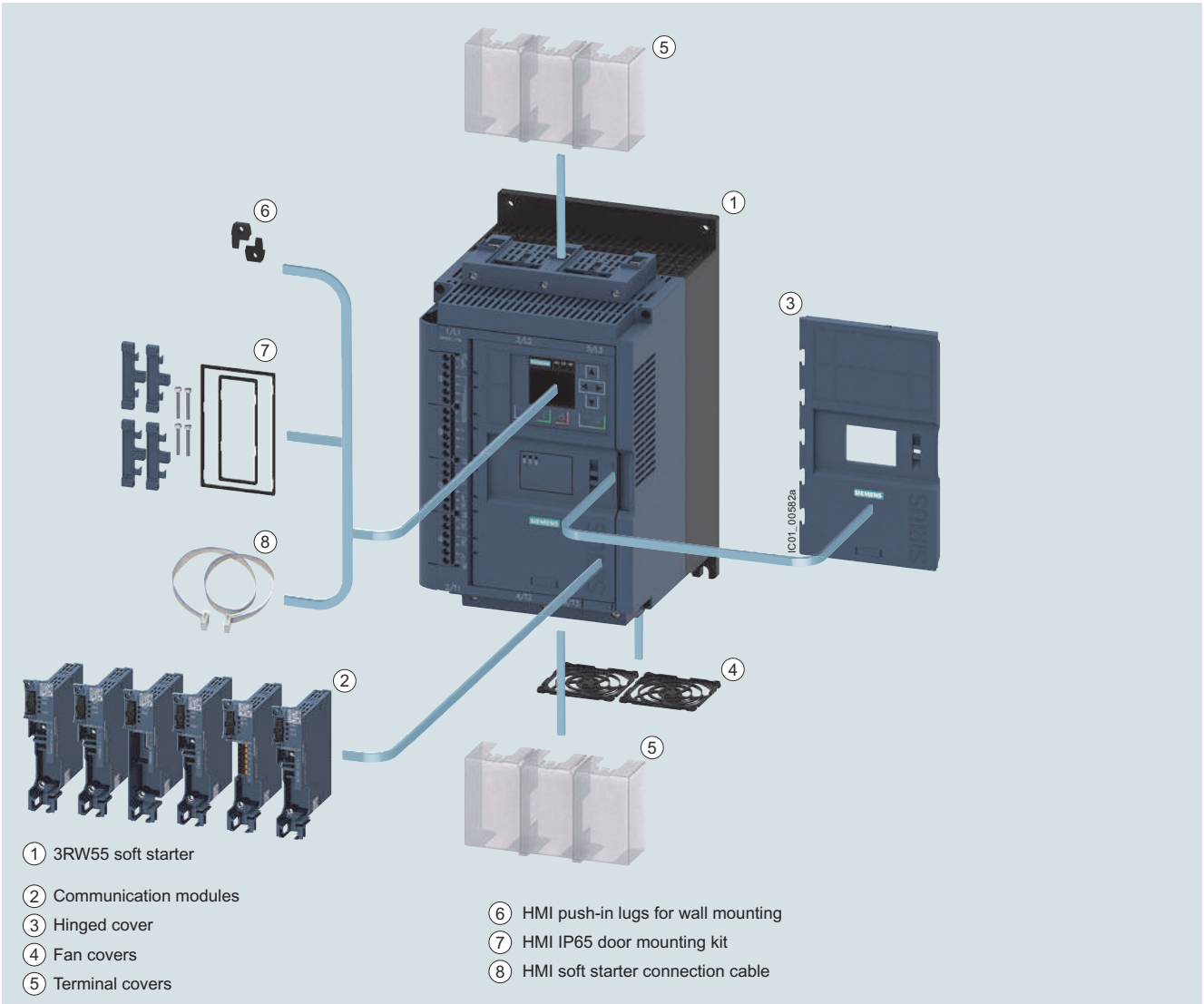
Overview

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.

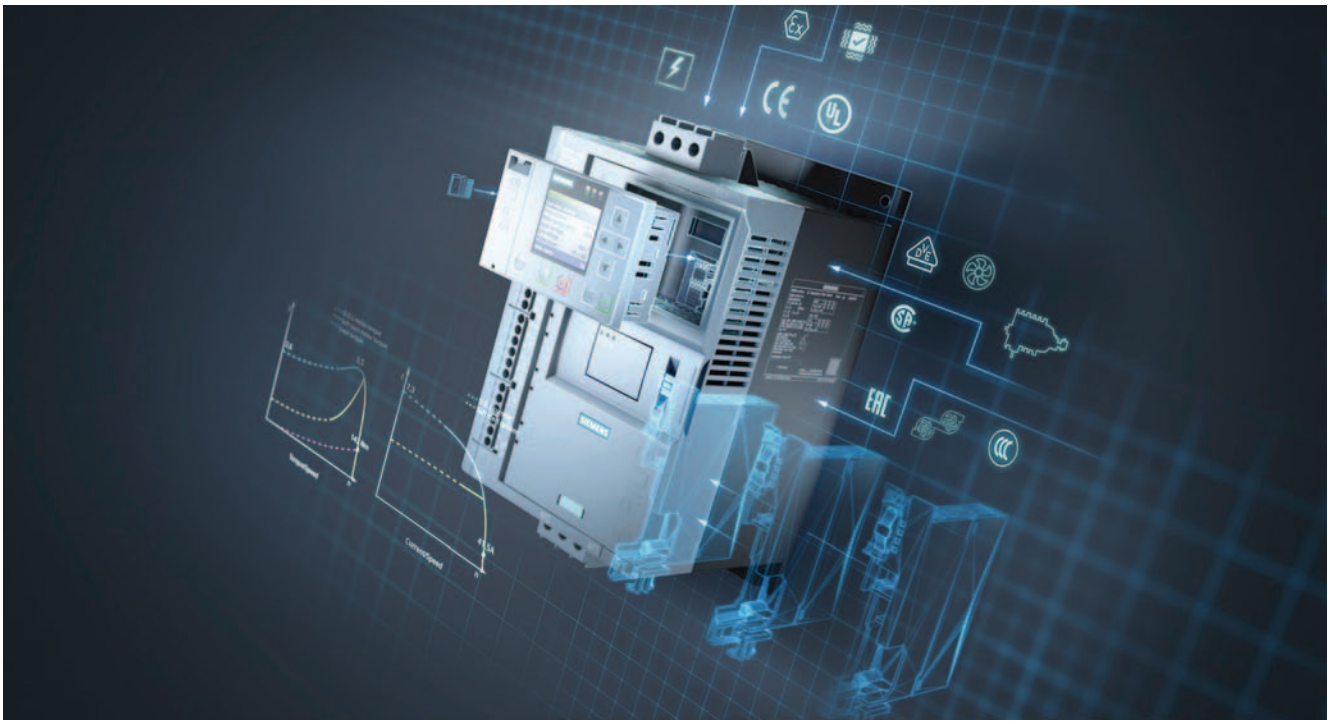
The functions have been specially designed to offer maximum user friendliness. The HMI (with color display, local interface and a slot for micro SD memory card) and plug-in communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) ensure maximum flexibility. With their modern hybrid switching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



1 3RW55 soft starter
2 Communication modules
3 Hinged cover
4 Fan covers
5 Terminal covers
6 HMI push-in lugs for wall mounting
7 HMI IP65 door mounting kit
8 HMI soft starter connection cable

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

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.

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	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW55..-.HA.4	3RW55..-.HA.5	3RW55..-.HA.6
Power electronics				
Operational voltage, rated value	V	200 ... 480	200 ... 600	200 ... 690
• Relative negative tolerance/relative positive tolerance	%	-15/10		
Operational voltage for inside-delta circuit, rated value	V	200 ... 480	200 ... 600	
• Relative negative tolerance/relative positive tolerance	%	-15/10		
Operating frequency, rated value	Hz	50 ... 60		
• Relative negative tolerance/relative positive tolerance	%	-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.

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, AC-53a	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
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

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, AC-53a	A	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

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, 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	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

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

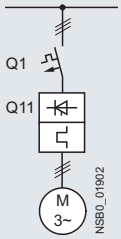
Type		3RW5552	3RW5553	3RW5554	3RW5556	3RW5558
Rated operational current I_e	A	630	720	840	1 100	1 280
Power electronics						
Load rating with rated operational current I_e						
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
Permissible rated motor current and starts/h						
Normal starting (CLASS 10A)						
Rated motor current I_M, T_u = 40/50/60 °C ON period = 70%; motor protection activated	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 280/1 139/1 030
• 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 ON period = 70%; motor protection activated	A	630/561/510	720/641/580	840/748/670	1 100/979/890	1 225/1 130/1 030
• 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 ON period = 70%; motor protection activated	A	500/450/400	520/470/420	570/520/470	920/840/760	980/900/810
• 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	380/340/300	400/360/320	420/380/340	740/670/600	790/720/650
• 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

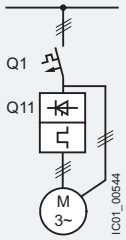
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

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).

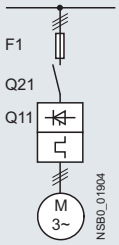
Motor feeders according to IEC with 3NA3 fuses

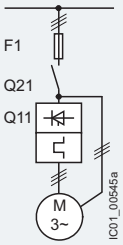
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

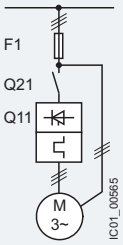
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

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	for systems up to 480 V in the delta	for systems up to 600 V in the delta
Q11	F1	Q21	Q21	F1	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "1" ToC 1	**Inline circuit**			**Inside-delta circuit**				
3RW5513	3NA3820-6	3RT2025	3RT2025	3NA3820-6	3RT2027	3RT2035	3RT2025	3RT2025
3RW5514	3NA3820-6	3RT2026	3RT2027	3NA3820-6	3RT2027	3RT2037	3RT2026	3RT2027
3RW5515	3NA3822-6	3RT2027	3RT2037	3NA3822-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5516	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2037	3RT2038	3RT2035	3RT2037
3RW5517	3NA3824-6	3RT2035	3RT2037	3NA3824-6	3RT2038	3RT2046	3RT2035	3RT2037
3RW5521	3NA3824-6	3RT2027	3RT2037	3NA3824-6	3RT2036	3RT2037	3RT2027	3RT2037
3RW5524	3NA3824-6	3RT2036	3RT2037	3NA3824-6	3RT2046	3RT2047	3RT2036	3RT2037
3RW5525	3NA3830-6	3RT2037	3RT2046	3NA3830-6	3RT2047	3RT1054	3RT2037	3RT2046
3RW5526	3NA3132-6	3RT2038	3RT2046	3NA3132-6	3RT1055	3RT1055	3RT2038	3RT2046
3RW5527	3NA3136-6	3RT2046	3RT2047	3NA3136-6	3RT1056	3RT1056	3RT2046	3RT2047
3RW5534	3NA3244-6	3RT1054	3RT1054	3NA3244-6	3RT1064	3RT1064	3RT1054	3RT1054
3RW5535	3NA3244-6	3RT1055	3RT1055	3NA3244-6	3RT1065	3RT1065	3RT1055	3RT1055
3RW5536	3NA3365-6	3RT1056	3RT1064	3NA3365-6	3RT1066	3RT1075	3RT1056	3RT1064
3RW5543	2 x 3NA3354-6	3RT1064	3RT1064	2 x 3NA3354-6	3RT1075	3RT1075	3RT1064	3RT1064
3RW5544	2 x 3NA3354-6	3RT1065	3RT1065	2 x 3NA3354-6	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	3RT1076	3RT1276	2 x 3NA3365-6	3TF69	3TF69	3RT1076	3RT1276
3RW5548	2 x 3NA3365-6	3TF68	3TF68	2 x 3NA3365-6	--	--	3TF68	3TF68
3RW5552	2 x 3NA3365-6	3TF68	3TF69	--	--	--	3TF68	3TF69
3RW5553	2 x 3NA3365-6	3TF69	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.

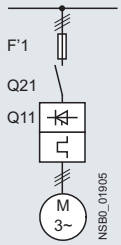
Motor feeders according to IEC with 3NE1/3NB3 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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" ToC 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).

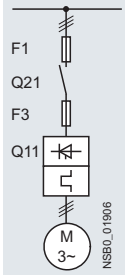
Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

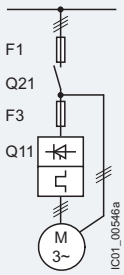
aR class partial-range fuses for semiconductor protection

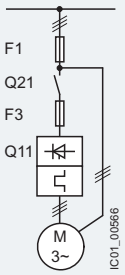
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

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" ToC 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	3NE3334-0B	3RT1056	3RT1064	3NA3365-6	3NE3334-0B	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_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 7/21). 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 with up to 600 V.

Reversing operation with reversing contactors

Note:

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 contactors

Note:

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	
	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
Q11	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

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

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

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

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 ... 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 circuit
Spring-loaded terminals
Screw terminals

2
6

Control supply voltage
24 V AC/DC
110 ... 250 V AC

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 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

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

0
1

[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.

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 circuit
Spring-loaded terminals
Screw terminals

Control supply voltage
24 V AC/DC
110 ... 250 V AC

3RW5534-**2**HA**0**6
3RW5534-**6**HA**1**6

[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.

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

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

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.

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 circuit
Spring-loaded terminals
Screw terminals

2
6

Control supply voltage
24 V AC/DC
110 ... 250 V AC

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 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

1
3

Control supply voltage
24 V AC/DC
110 ... 250 V AC

0
1

[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.

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

2
6

Control supply voltage
24 V AC/DC
110 ... 250 V AC

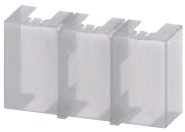
0
1

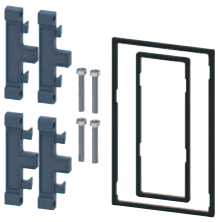
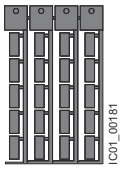
[1] 3RW55 soft starter with screw terminals for operational voltage up to 600 V:
- Sizes 3 and 4: Standard delivery time SD = 2 days (d).
- Size 5: Standard delivery time SD = 5 days (d).

Note:

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

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

	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									
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW55	IP65	For HMI modules	►	**3RW5980-0HD00**		1	1 unit
Connecting cables									
 3UF793.-0BA00-0	**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									
 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 plates**[1]		20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units
3RW55 starter kit									
 3RW5951-1ES04	**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).

Overview

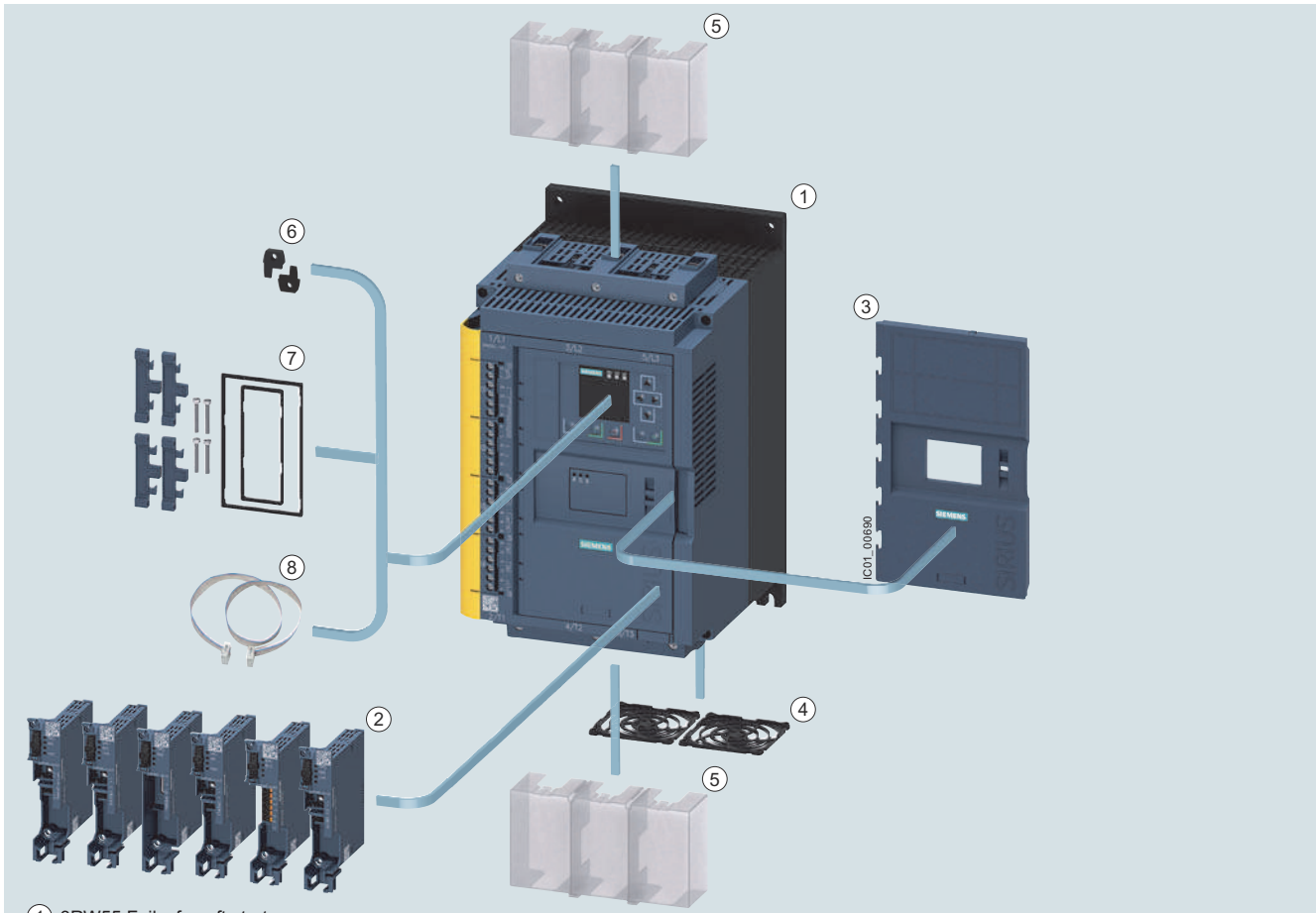
More information

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.



1 3RW55 Failsafe soft starter
2 Communication modules
3 Hinged cover
4 Fan covers
5 Terminal covers
6 HMI push-in lugs for wall mounting
7 HMI IP65 door mounting kit
8 HMI soft starter connection cable

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

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	210 × 393 × 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.

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	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW55..-.HF.4
Power electronics		
Operational voltage, rated value	V	200 ... 480
• Relative negative tolerance/relative positive tolerance	%	-15/10
Operational voltage for inside-delta circuit, rated value	V	200 ... 480
• Relative negative tolerance/relative positive tolerance	%	-15/10
Operating frequency, rated value	Hz	50 ... 60
• Relative negative tolerance/relative positive tolerance	%	-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 NEW

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, AC-53a	A	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

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, AC-53a	A	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

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, 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	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

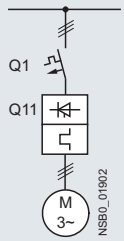
Type		3RW5543	3RW5544	3RW5545	3RW5546	3RW5547	3RW5548
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	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	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

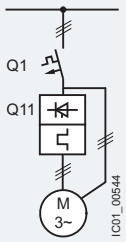
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

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
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
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.

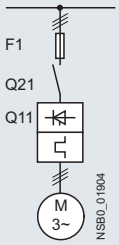
Motor feeders according to IEC with 3NA3 fuses

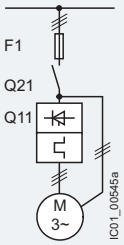
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

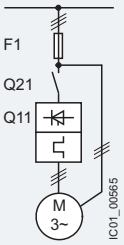
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

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" ToC 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.

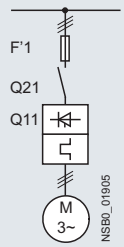
Motor feeders according to IEC with 3NE1 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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 480 V
Q11	F'1	Q21
Type	Type	Type
Type of coordination "2" ToC 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).

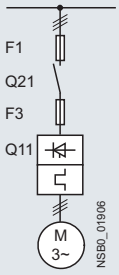
Motor feeders according to IEC with 3NE8 / 3NE3 / 3NC3 fuses

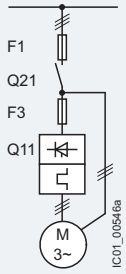
aR class partial-range fuses for semiconductor protection

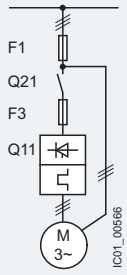
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

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	F1	F3	Q21	F1	F3	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "2" ToC 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.

Reversing operation with reversing contactors

Note:

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 480 V
Q11	Q21 / Q22	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

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 At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors 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 — **1**
Spring-loaded terminals — **3**

Control supply voltage
24 V AC/DC — **0**
110 ... 250 V AC — **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 At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors 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 — **2**
Screw terminals — **6**

Control supply voltage
24 V AC/DC — **0**
110 ... 250 V AC — **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.

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 At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors 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 → **1**
Spring-loaded terminals → **3**

Control supply voltage
24 V AC/DC → **0**
110 ... 250 V AC → **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 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 At 230 V	At 400 V	Operational current	Rating [hp] for three-phase motors 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 → **2**
Screw terminals → **6**

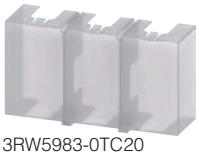
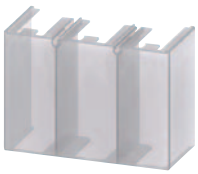
Control supply voltage
24 V AC/DC → **0**
110 ... 250 V AC → **1**

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

Note:

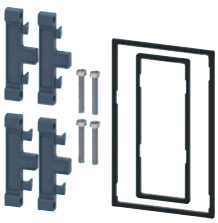
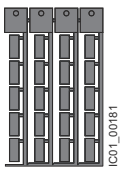
For the constraints for the motor outputs specified here, see page 7/7.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fan covers									
 3RW5983-0FC00	**Fan cover**	3RW551 (1x), 3RW552 (2x), 3RW553 (2x)	--	--	▶	**3RW5983-0FC00**		1	1 unit
		3RW554 (1x)	--	--	▶	**3RW5984-0FC00**		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
			Modbus RTU	--	▶	**3RW5980-0CR00**		1	1 unit
 3RW5980-0CR00			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									
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW55	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit
Connecting cables									
 3UF793.-0BA00-0	**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									
 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 plates[1)]**	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units

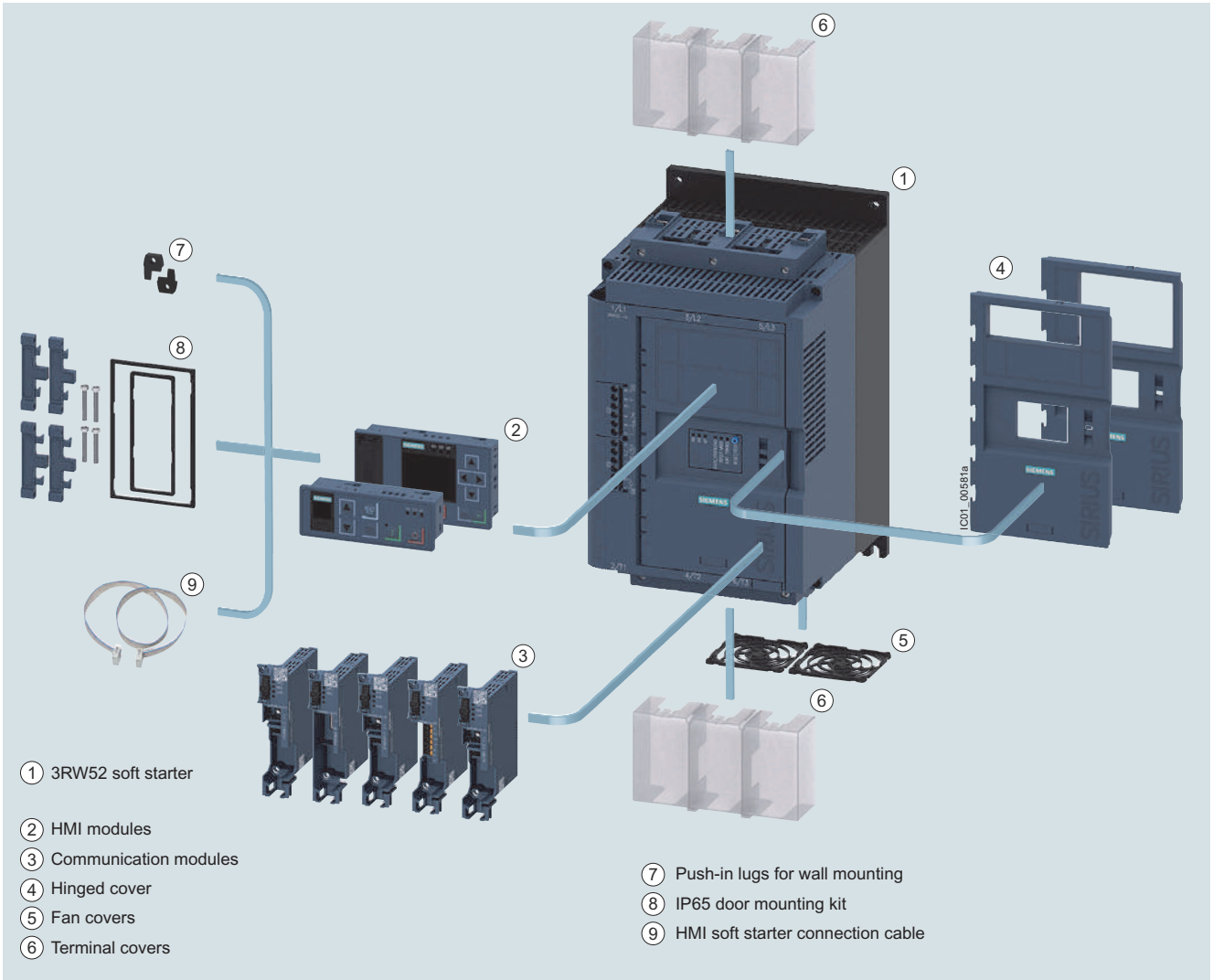
[1)] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter	Industry Online Support (SIOS) topic page, see https://support.industry.siemens.com/cs/ww/en/view/109747404
Industry Mall, see www.siemens.com/product?3RW52	Simulation Tool for Soft Starters (STS), see page 7/7 or https://support.industry.siemens.com/cs/ww/en/view/101494917
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=3rw52	SIRIUS Soft Starter ES (TIA Portal), see page 14/5

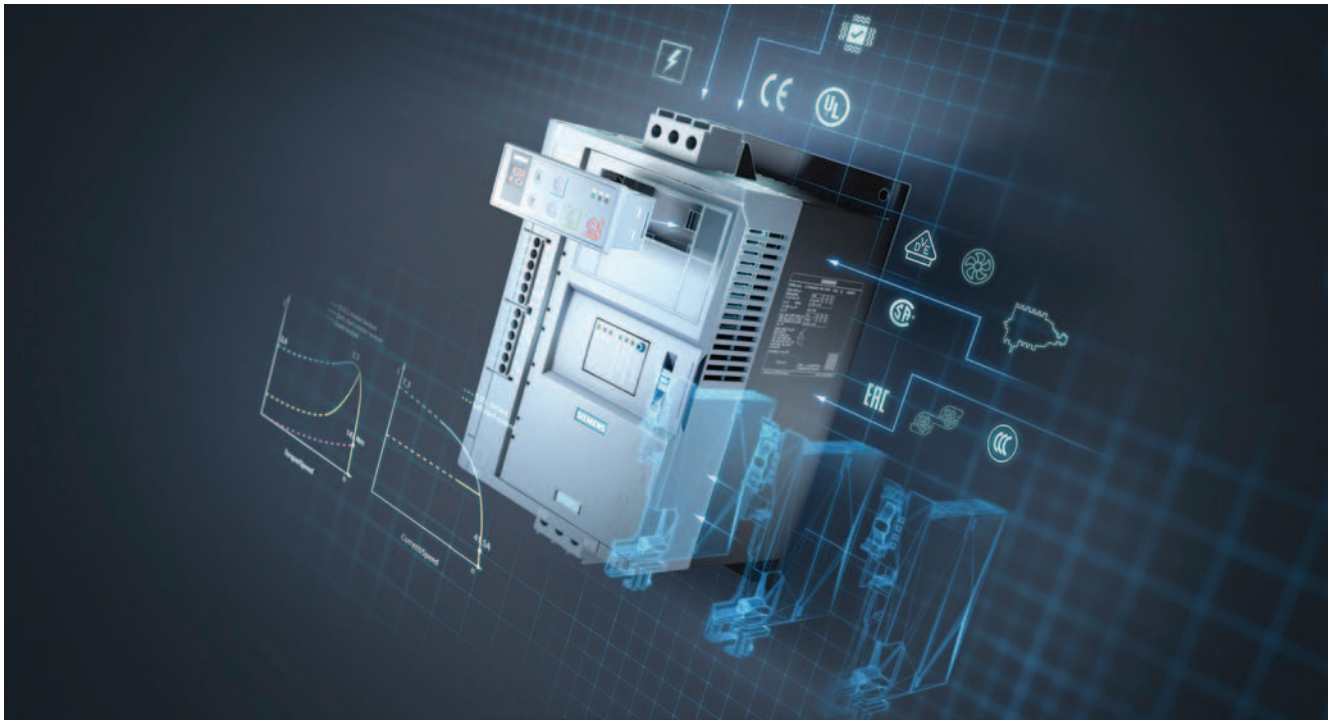
SIRIUS 3RW52 General Performance soft starters are the ideal solution for standard applications. With ideal three-phase motor control, they cover the performance range from 7.5 to 400HP @ 480V.

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

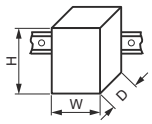
Benefits



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

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			IP20	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.

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	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW52..-..C.4	3RW52..-..C.5
Power electronics			
Operational voltage, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operational voltage for inside-delta circuit, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operating frequency, rated value	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-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.

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, AC-53a	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
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

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, AC-53a	A	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

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

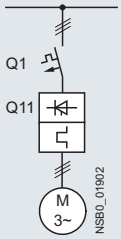
Type		3RW5243	3RW5244	3RW5245	3RW5246	3RW5247	3RW5248
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	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	30	20
- Start-up time 10 s	1/h	18	18	14	18	11	6
• 350% I_M							
- Start-up time 5 s	1/h	28	28	16	28	17	9
- Start-up time 10 s	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	A	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	1/h	21	21	21	21	21	18
- Start-up time 40 s	1/h	8	8	8	8	8	7
• 350% I_M							
- Start-up time 20 s	1/h	12	13	12	13	13	11
- Start-up time 40 s	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	A	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	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
• Minimum/maximum in inside-delta circuits	A	156/364	173/433	234/546	277/641	346/814	416/987

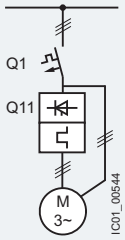
Motor feeders according to IEC with 3RV2/3VA motor starter protectors/circuit breakers (without semiconductor protection)

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**			
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.

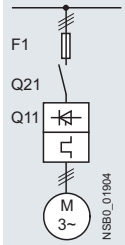
Motor feeders according to IEC with 3NA3 fuses

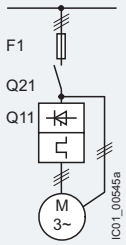
gG class full-range fuses for cable and line protection according to IEC 60269-2, without semiconductor protection

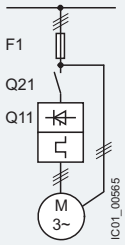
Type of coordination "1",
short-circuit breaking capacity I_q = 65 kA

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 600 V	for systems up to 480 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	Q21	Q21	F1	Q21	Q21	Q21	Q21
Type	Type	Type	Type	Type	Type	Type	Type	Type
Type of coordination "1" ToC 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	3RT1054	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.

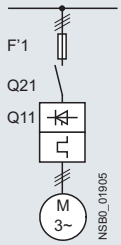
Motor feeders according to IEC with 3NE1 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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" ToC 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).

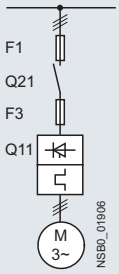
Motor feeders according to IEC with fuses 3NE8 / 3NE4 / 3NE3

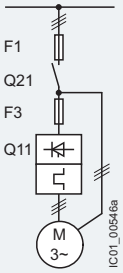
aR class partial-range fuses for semiconductor protection

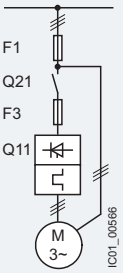
Type of coordination "2",
short-circuit breaking capacity I_q = 65 kA

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" ToC 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.

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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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 3 A T 0 1

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

2 6 A T 0 1

[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 > 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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

3RW5227-**1 3** **A T** **0 1**

[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.

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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

3RW5248-**2 6** **A T** **0 1**

[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.

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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

3RW5227-□□C□4: **1 3** **A T** **0 1**

[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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

3RW5248-□□C□4: **2 6** **A T** **0 1**

[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.

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*
Opera-tional cur-rent	Operating power for three-phase motors			Opera-tional cur-rent	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 — 1
Spring-loaded terminals — 3

Product function
Analog output — A
Thermistor motor protection — T

Control supply voltage
24 V AC/DC — 0
110 ... 250 V AC — 1

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.

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*
Opera-tional cur-rent	Operating power for three-phase motors			Opera-tional cur-rent	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 — 2
Screw terminals — 6

Product function
Analog output — A
Thermistor motor protection — T

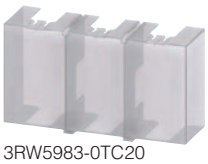
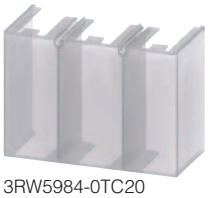
Control supply voltage
24 V AC/DC — 0
110 ... 250 V AC — 1

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

Note:

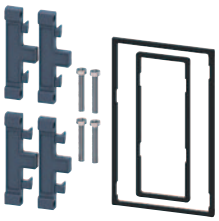
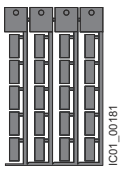
For the constraints for the motor outputs specified here, see page 7/7.

Selection and ordering data

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	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
 3RW5984-0TC20		3RW524 (2x)	--	--	▶	**3RW5984-0TC20**		1	1 unit
Enclosure components									
 3RW5950-0GL30	**Hinged cover**	3RW52	With cutout for High Feature HMI module	--	▶	**3RW5950-0GL30**		1	1 unit
 3RW5950-0GL40			With cutout for Standard HMI module	--	▶	**3RW5950-0GL40**		1	1 unit
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 d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules									
 3RW5980-0HF00	**HMI module**	3RW52	High Feature	--	▶	**3RW5980-0HF00**		1	1 unit
 3RW5980-0HS00			Standard	--	▶	**3RW5980-0HS00**		1	1 unit
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW52	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit
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 plates**[1]	--	20 mm x 7 mm, titanium gray	For SIRIUS devices	20	**3RT2900-1SB20**		100	340 units

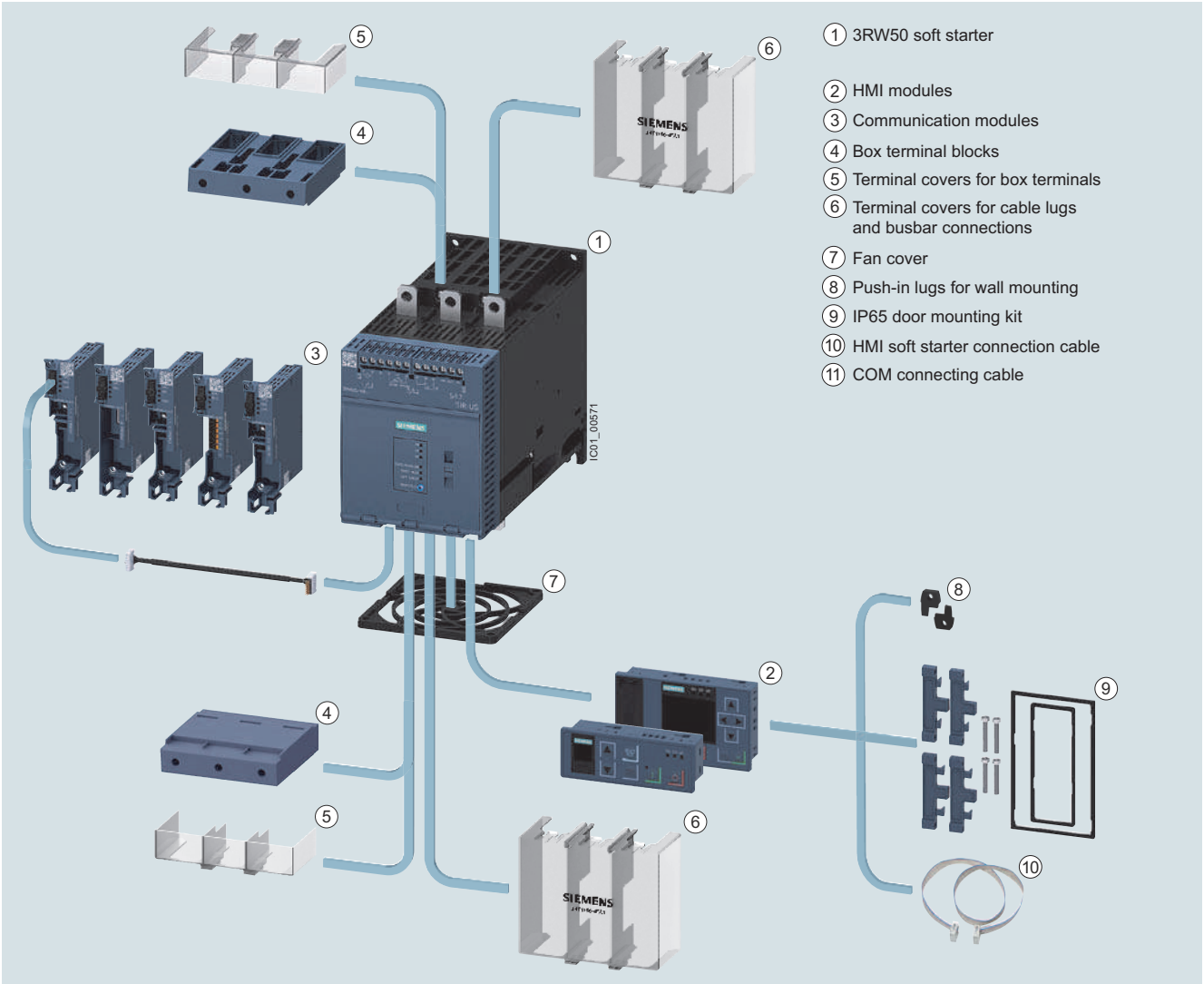
[1] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/15).

Overview

More information	
Homepage, see www.usa.siemens.com/soft-starter	Simulation Tool for Soft Starters (STS), see page 7/7 or https://support.industry.siemens.com/cs/ww/en/view/101494917
Industry Mall, see www.siemens.com/product?3RW50	SIRIUS Soft Starter ES (TIA Portal), see page 14/5
TIA Selection Tool Cloud (TST Cloud), see https://support.industry.siemens.com/cs/ww/en/view/109747404	

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.

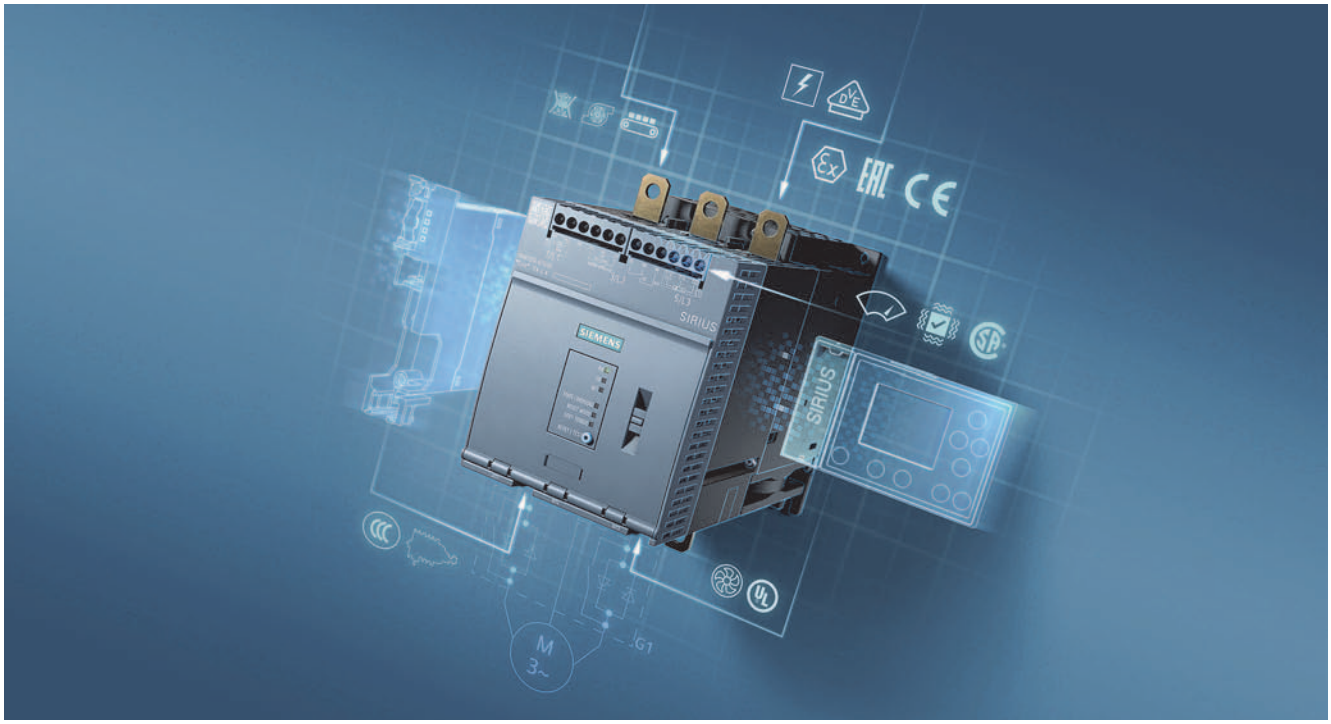
Optional HMI modules for installation in the control cabinet door, laterally mountable communication modules (PROFINET, PROFIBUS, EtherNet/IP and Modbus) and either an analog output or thermistor motor protection ensure maximum flexibility. With their modern hybrid switching technology, the SIRIUS 3RW50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

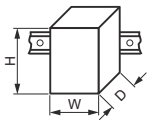
Benefits



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

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/25252/td	FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/25252/faq
Equipment Manual "SIRIUS 3RW50 Soft Starter", see https://support.industry.siemens.com/cs/ww/en/view/109753750	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 +/- 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, 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.

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	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-10/10	
Type of overvoltage protection		Varistors	
Type of short-circuit protection for control circuit[1]		Fuse 4 A gG (I_{cu} = 1 kA), fuse 6 A quick-response (I_{cu} = 1 kA), MCB C1 (I_{cu} = 600 A), MCB C6 (I_{cu} = 300 A)	

1) Not included in scope of supply

Type		3RW50..-..B.4	3RW50..-..B.5
Power electronics			
Operational voltage, rated value	V	200 ... 480	200 ... 600
• Relative negative tolerance/relative positive tolerance	%	-15/10	
Operating frequency, rated value	Hz	50 ... 60	
• Relative negative tolerance/relative positive tolerance	%	-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.

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, 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 ON period = 70%; motor protection activated	A	143/128/118	171/153/141
• 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 ON period = 70%; motor protection activated	A	143/128/118	171/153/141
• 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 ON period = 70%; motor protection activated	A	108/98/88	135/123/111
• 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

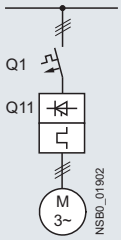
Type		3RW5072	3RW5073	3RW5074	3RW5075	3RW5076	3RW5077
Rated operational current I_e	A	210	250	315	370	470	570
Power electronics							
Load rating with rated operational current I_e							
IEC + UL/CSA, individual mounting at 40/50/60 °C, AC-53a	A	210/186/170	250/220/200	315/279/255	370/328/300	470/416/380	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	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 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 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 ON period = 70%; motor protection activated	A	162/146/130	200/180/160	219/195/171	258/230/202	272/254/218	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
Adjustable rated motor current I_M							
• Minimum/maximum	A	90/210	100/250	135/315	160/370	200/470	240/570

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			
	for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q
Type	Type	kA	Type	kA
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.

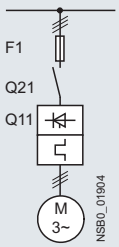
Motor feeders according to IEC with 3NA3 fuses

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 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" ToC 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.

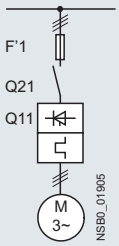
Motor feeders according to IEC with 3NE1 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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" ToC 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.

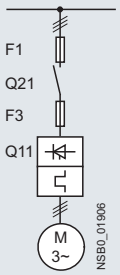
Motor feeders according to IEC with 3NE3 fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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

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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

3RW5055-□□B□4 → **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 At 230 V	At 400 V	At 500 V	Operational current	Rating [hp] for three-phase motors 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

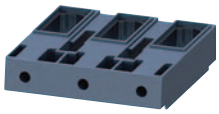
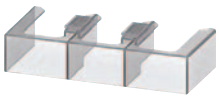
Control supply voltage
24 V AC/DC
110 ... 250 V AC

3RW5075-□□B□5 → **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).

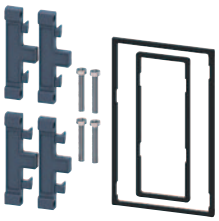
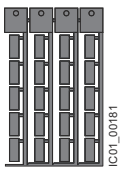
Note: For the constraints for the motor outputs specified here, see page 7/7.

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
					d					
Fan covers										
 3RW5985-0FC00	**Fan cover**	3RW50 (1x)	--	--	▶	**3RW5985-0FC00**		1	1 unit	42S
Box terminal block										
 3RT1956-4G	**Box terminal block for round and ribbon cables**	3RW505 (2x)	Up to 70 mm²	--	▶	**3RT1955-4G**		1	1 unit	41B
			Up to 120 mm²		▶	**3RT1956-4G**		1	1 unit	41B
		3RW507 (2x)	Up to 240 mm² (with auxiliary conductor connection)		▶	**3RT1966-4G**		1	1 unit	41B
Terminal covers										
 3RT1956-4EA2	**Covers for box terminals**	3RW505 (2x)	--	--	▶	**3RT1956-4EA2**		1	1 unit	41B
		3RW507 (2x)	--	--	2	**3RT1966-4EA2**		1	1 unit	41B
 3RT1956-4EA1	**Covers for cable lugs and busbar connections**	3RW505 (2x)	--	--	▶	**3RT1956-4EA1**		1	1 unit	41B
		3RW507 (2x)	--	--	2	**3RT1966-4EA1**		1	1 unit	41B
Communication modules										
 3RW5980-0CS00	**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
 3RW5900-0CC00	**COM connection cable** For mounting laterally on the device	3RW50	0.3 m	--	▶	**3RW5900-0CC00**		1	1 unit	42S

Basic Performance Soft Starters

3RW50 soft starters > Accessories

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	Application	SD d	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
 3RW5980-0HS00			Standard	--	▶	**3RW5980-0HS00**		1	1 unit	42S
 3RW5980-0HD00	**IP65 door mounting kit for HMI modules**	3RW50	IP65	For HMI modules	▶	**3RW5980-0HD00**		1	1 unit	42S
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).

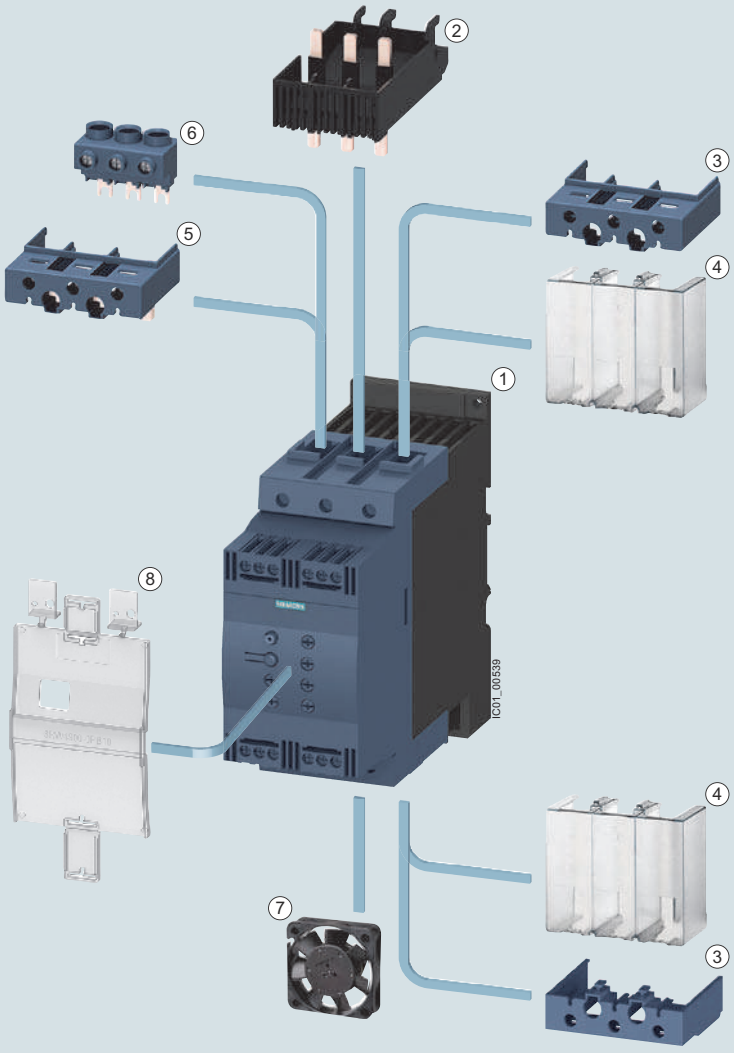
Overview

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.



1. 3RW40 soft starter
2. Link module to motor starter protector
3. Terminal cover for box terminals (S2, S3)
4. Terminal cover for cable lug and busbar connections (S3)
5. Auxiliary terminal (S3)
6. Infeed terminal (S0)
7. Fan
8. Sealing cover

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

Benefits


3RW402.

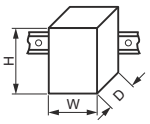
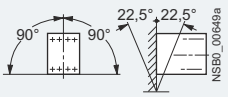
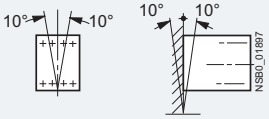
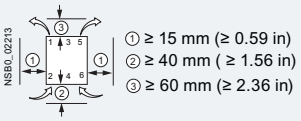
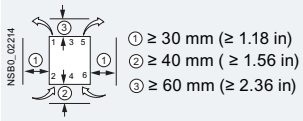

3RW403.


3RW404.

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

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		mm	45 x 125 x 154	55 x 144 x 170	70 x 160 x 188
• Spring-loaded terminals		mm	45 x 150 x 154	55 x 144 x 170	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]					
• With auxiliary fan (for 3RW402. ... 3RW404.)					
• Without auxiliary fan (for 3RW402. ... 3RW404.)					
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			IP20 for 3RW402.; all others 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	400 ... 600
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	

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.

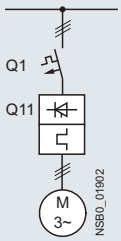
3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode. Factors for permissible switching frequency in other mounting position, direct mounting, side-by-side mounting, and implementation of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

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			
	for 400 V systems		for 500 V systems	
Q11	Q1	I_q	Q1	I_q
Type	Type	kA	Type	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.

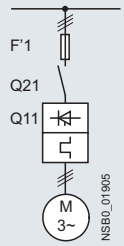
Motor feeders according to IEC with 3NE1 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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" ToC 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.

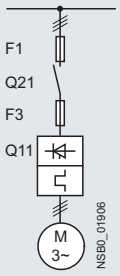
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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_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 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 Rated values of three-phase motors				3RW ambient temperature 50 °C Rated values of three-phase motors					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current I_e	Rating at operational voltage U_e 230 V	400 V	500 V	Operational current I_e	Rating at operational voltage U_e 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 **1**
- Spring-loaded terminals[2] **2**

Control supply voltage

- 24 V AC/DC **0**
- 110 ... 230 V AC/DC **1**

[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 Rated values of three-phase motors				3RW ambient temperature 50 °C Rated values of three-phase motors					Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Operational current I_e	Rating at operational voltage U_e 230 V	400 V	500 V	Operational current I_e	Rating at operational voltage U_e 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 terminals[2)]

1 2

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

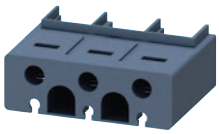
[2)] Main connection from size S2: screw terminals.

Note:

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

Selection and ordering data

	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	AWG cables, solid or stranded							
	mm²	mm²	AWG	Nm		d				
Three-phase infeed terminals										
 3RV2925-5AB	2.5 … 25	2.5 … 16	10 ... 4	3 ... 4	**S0** (3RW402.)	►	**3RV2925-5AB**		1	1 unit

	For soft starters Type	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
				d				
Auxiliary terminals								
 3RT2946-4F	**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
Covers for soft starters								
 3RT2936-4EA2	**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
 3RT1946-4EA1	**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
 3RW4900-0PB10	**Sealing covers**							
	3RW402. to 3RW404.	**S0, S2, S3**	--	5	**3RW4900-0PB10**		1	1 unit

Standard mounting rail adapters


3RA2932-1CA00

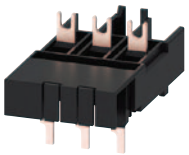
For motor starter protectors Size	For soft starters Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
S2	**S2**	For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing **Single-unit packaging**	2	**3RA2932-1CA00**		1	1 unit

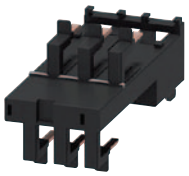
Fans (to increase switching frequency and for device mounting in positions different to the standard position)


3RW49..-8VB00

For soft starters Type	Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
3RW402.	**S0**	▶	**3RW4928-8VB00**		1	1 unit
3RW403., 3RW404.	**S2, S3**	▶	**3RW4947-8VB00**		1	1 unit

Link modules to motor starter protectors[1)]


3RA2921-1BA00


3RA2921-2GA00

For soft starters Type	Size	Motor starter protectors Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
				Screw terminals			
3RW402.	**S0**	**S00/S0**	2	**3RA2921-1BA00**		1	1 unit
3RW4036	**S2**	**S2**	▶	**3RA2931-1AA00**		1	1 unit
3RW404.	**S3**	**S3**	▶	**3RA1941-1AA00**		1	1 unit
				Spring-loaded terminals			
3RW402.	**S0**	**S0**	2	**3RA2921-2GA00**		1	1 unit

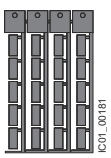
[1)] Can be used in size S0 up to 32 A.
Can be used in size S2 up to 65 A in combination with 3RA2932-1CA00 standard mounting rail adapter (specially for soft starters).
Can be used in size S3 only with mounting plate.

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


3RA2908-1A

Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Screwdrivers For all SIRIUS devices with spring-loaded terminals		**Spring-loaded terminals**			
Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	2	**3RA2908-1A**		1	1 unit

Blank labels



3RT2900-1SB20

Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Unit labeling plates[1)] For SIRIUS devices					
20 mm x 7 mm, titanium gray	20	**3RT2900-1SB20**		100	340 units

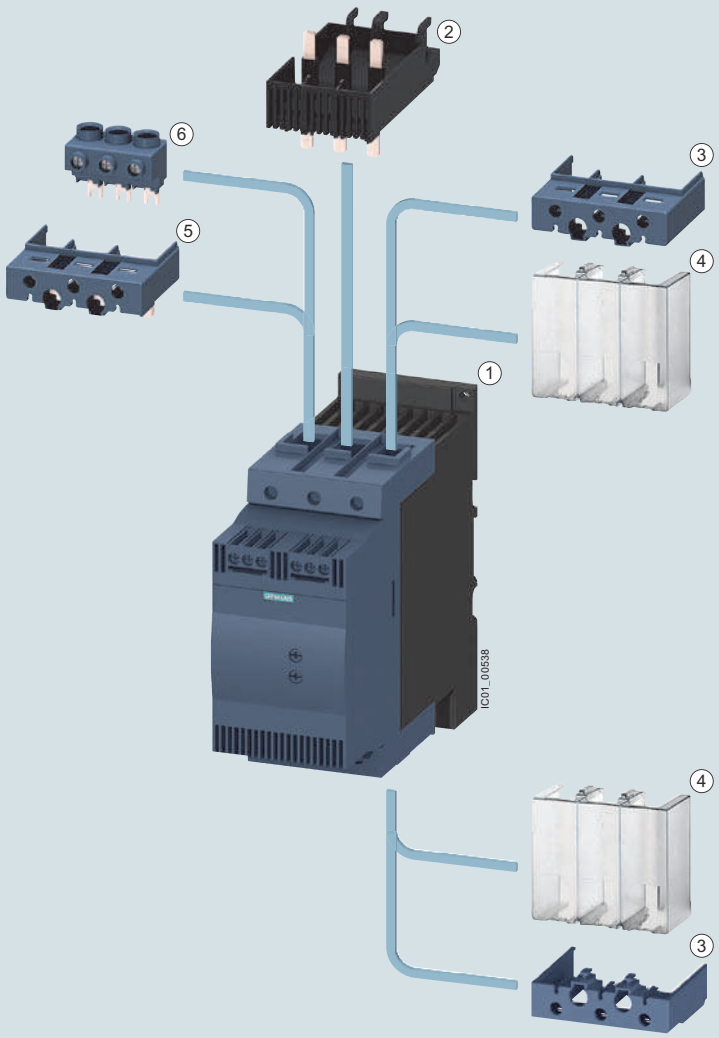
[1)] PC labeling systems for individual inscription of unit labeling plates are available from: murrplastik Systemtechnik GmbH (see page 16/14).

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.



1. 3RW30 soft starter
2. Link module to motor starter protector
3. Terminal cover for box terminals (S2, S3)
4. Terminal cover for cable lugs and busbar connections (S3)
5. Auxiliary terminal (S3)
6. Infeed terminal (S00, S0)

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

Benefits


3RW301.


3RW302.

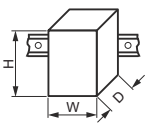
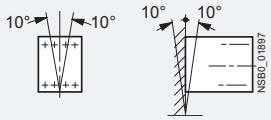
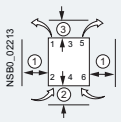
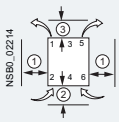

3RW303.


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 117 x 151	45 x 125 x 151 45 x 150 x 151	55 x 144 x 168 55 x 144 x 168	70 x 160 x 186 70 x 160 x 186
Permissible ambient temperature During operation During storage		 °C °C	 -25 ... +60; (derating from +40) -40 ... +80			
Weight		kg	0.58	0.69	1.20	1.71
Permissible mounting position[1] (auxiliary fan not possible)						
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			IP20 for 3RW301. and 3RW302.; IP00 for 3RW303. and 3RW304.			

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

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

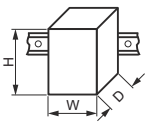
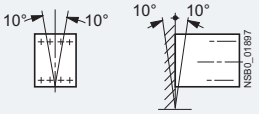
1) Measurement at 60 °C according to UL/CSA not required.
2) At 300% I_M, T_u = 40/50 °C.
3) For intermittent duty S4 with ON period = 30%, T_u = 40/50 °C, stand-alone installation vertical. The quoted switching frequencies do not apply for automatic mode.

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.
2) At 300% I_M, T_u = 40/50 °C.
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".

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.
2) At 300% I_M, T_u = 40/50 °C.
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.

Type		3RW3003-1CB54	3RW3003-2CB54
Mechanics and environment			
Mounting dimensions (W x H x D) 			
• Screw terminals	mm	22.5 x 100 x 120	--
• Spring-loaded terminals	mm	--	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		IP20 (IP00 terminal compartment)	
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.

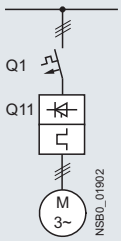
2) If this value is exceeded, problems with line capacities may arise, which can result in false firing.

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** for 400 V systems	
Q11	Q1	I_q
Type	Type	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.

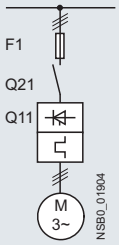
Motor feeders according to IEC with 3NA3 fuses

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 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 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.

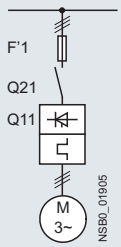
Motor feeders according to IEC with 3NE1 SITOR fuses

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

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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	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 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.

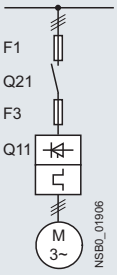
Motor feeders according to IEC with 3NE8 / 3NE4 / 3NE3 / 3NC fuses

aR class partial-range fuses for semiconductor protection

Type of coordination "2",
short-circuit breaking capacity I_q = 65 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 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
Q11	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 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.

Selection and ordering data

For simple starting conditions


3RW301.


3RW302.


3RW303.


3RW304.

3RW ambient temperature 40 °C Rated values of three-phase motors Operational current I_e	Rating at operational voltage U_e 230 V	400 V	500 V	3RW ambient temperature 50 °C Rated values of three-phase motors Operational current I_e	Rating at operational voltage U_e 200 V	230 V	460 V	575 V	Size	SD[1]	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
A	kW	kW	kW	A	hp	hp	hp	hp		d				
Rated operational voltage U_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 **1**
- Spring-loaded terminals[2] **2**

Control supply voltage U_s

- 24 V AC/DC **0**
- 110 ... 230 V AC/DC **1**

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										►	**3RW3003-1CB54**		1	1 unit
• With spring-loaded terminals										►	**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

Three-phase infeed terminals


3RV2925-5AB

Conductor cross-section: Solid or stranded	Conductor cross-section: Finely stranded with end sleeve	Conductor cross-section: AWG cables, solid or stranded	Tightening torque	For soft starters size	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
mm²	mm²	AWG	Nm		d				
2.5 … 25	2.5 … 16	10 ... 4	3 ... 4	S00 (3RW301.), S0 (3RW302.)	▶	**3RV2925-5AB**		1	1 unit

Auxiliary terminals


3RT2946-4F

For soft starters: Type	For soft starters: Size		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				
Auxiliary terminals, 3-pole							
3RW304.	**S3**		5	**3RT2946-4F**		1	1 unit

Covers for soft starters


3RT2946-4EA2

Terminal covers for box terminals
Additional touch protection to be fitted at the box terminals (two units required per device)

3RW303.	**S2**	▶	**3RT2936-4EA2**	1	1 unit
3RW304.	**S3**	▶	**3RT2946-4EA2**	1	1 unit


3RT1946-4EA1

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)

3RW304.	**S3**	5	**3RT1946-4EA1**	1	1 unit

Mounting rails for mounting contactors for the customer assembly of 3RA21 load feeders with busbar adapters for 60 mm systems


8US1998-7CB45

For motor starter protectors: Size	For soft starters: Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
			d				
		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.					
--	**S0**	For pushing onto the device adapter, including fixing screws	2	**8US1998-7CB45**		1	10 units

Standard mounting rail adapters


3RA2932-1CA00

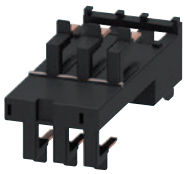
		For mechanical fixing of motor starter protector and soft starter; for snapping onto standard mounting rail or for screw fixing				
S2	**S2**	**Single-unit packaging**	2	**3RA2932-1CA00**	1	1 unit

Basic Performance Soft Starters

3RW30 soft starters > Accessories

For soft starters Type	Size	Motor starter protectors Size	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Link modules to motor starter protectors[1]							
				Screw terminals			
3RW301.	**S00**	**S00**	2	**3RA2921-1BA00**		1	1 unit
3RW302.	**S0**	**S00/S0**	2	**3RA2921-1BA00**		1	1 unit
3RW3036	**S2**	**S2**	▶	**3RA2931-1AA00**		1	1 unit
3RW304.	**S3**	**S3**	▶	**3RA1941-1AA00**		1	1 unit
				Spring-loaded terminals			
3RW301.	**S00**	**S00**	2	**3RA2911-2GA00**		1	1 unit
3RW302.	**S0**	**S0**	2	**3RA2921-2GA00**		1	1 unit


3RA2921-1BA00


3RA2921-2GA00

[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.

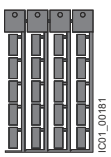
Version	Functionality Functions	Use	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Covers and push-in lugs (only for 3RW3003)							
Sealable covers	For securing against unauthorized adjustment of setting knobs	For devices with 1 or 2 CO contacts	5	**3RP1902**		1	5 units
Push-in lugs for screw fixing	--	For devices with 1 or 2 CO contacts	5	**3RP1903**		1	10 units


3RP1902


3RP1903

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


3RA2908-1A

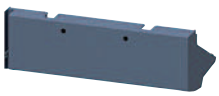


3RT2900-1SB20

[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

For 3RW55/3RW55 Failsafe

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
Fans								
 3RW5983-0FF00	**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
Terminals and terminal covers								
 3RW5982-0TB00	**Box terminal block**	3RW552 (2x)	--	▶	**3RW5982-0TB00**		1	1 unit
					Screw terminals			
 3RW5980-1TR00	**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
					Spring-loaded 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
 3RW5955-0TC20	**Terminal cover**	3RW555	--	▶	**3RW5955-0TC20**		1	1 unit

Basic Performance Soft Starters

For 3RW55/3RW55 Failsafe

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	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
3RW5950-0GD30		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

Basic Performance Soft Starters

For 3RW55/3RW55 Failsafe

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
HMI modules								
 3RW5980-0HF00	**HMI module**	3RW55	High Feature	▶	**3RW5980-0HF00**		1	1 unit
 3RW5980-0HL00	**Interface cover**	3RW55	--	▶	**3RW5980-0HL00**		1	1 unit
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

Basic Performance Soft Starters

For 3RW52

	Product designation	Manufacturer's Article No. of the soft starter	Type of product	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*
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
					Screw terminals			
 3RW5980-1TR00	**Removable control terminals**	3RW521.-1.C.., 3RW522.-1.C.., 3RW523.-6.C.., 3RW524.-6.C..	contains 2 blocks each with 6 terminals	▶	**3RW5980-1TR00**		1	1 unit
					Spring-loaded terminals			
		3RW521.-3.C.., 3RW522.-3.C.., 3RW523.-2.C.., 3RW524.-2.C..	contains 2 blocks each with 6 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

Basic Performance Soft Starters

For 3RW52

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

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

Overview

The family of 3RW40 and 3RW44 softstarters are available in stand alone enclosed control designs for smooth starting and stopping of standard NEMA design B three phase inductive motors, thus eliminating physical stresses to the system and load while minimizing starting current. These pre-engineered enclosed designs offer convenience and flexibility in and UL/CSA certified offering. Enclosed styles are available in combination and non-combination configurations through 600HP and system voltages of 200V, 230V, 480V, and 600V.

The Class 73 offers either the 3RW40 or 3RW44 in a non-combination style offering. These non-combination styles come standard with a choice of Type 1, 3R, 12, 4 NEMA rated enclosure, a control transformer, Sirius softstarter with built-in overload and bypass, line side power terminal block, and a reset pushbutton. The enclosed offering can be powerfully matched with a wide variety of factory modified options such as pushbutton control, pilot lights, metering and other control options such as isolation contactors and emergency start bypass starters. 3RW44 enclosed styles are also available with optional through the door keypad and Profibus communication.

The Class 74 offering includes all of the features of the Class 73 in a combination style design. Standard options are either a circuit breaker or fusible disconnect providing short circuit protection and soft starting in one package.

Application

The Class 73/74 product is a fully enclosed solid state reduced voltage starter designed for a wide variety of industrial applications. The enclosed softstarter offerings are ideal for new as well as existing applications where total motor controls is required.

Proper selection based on application data is made simple following these easy steps:

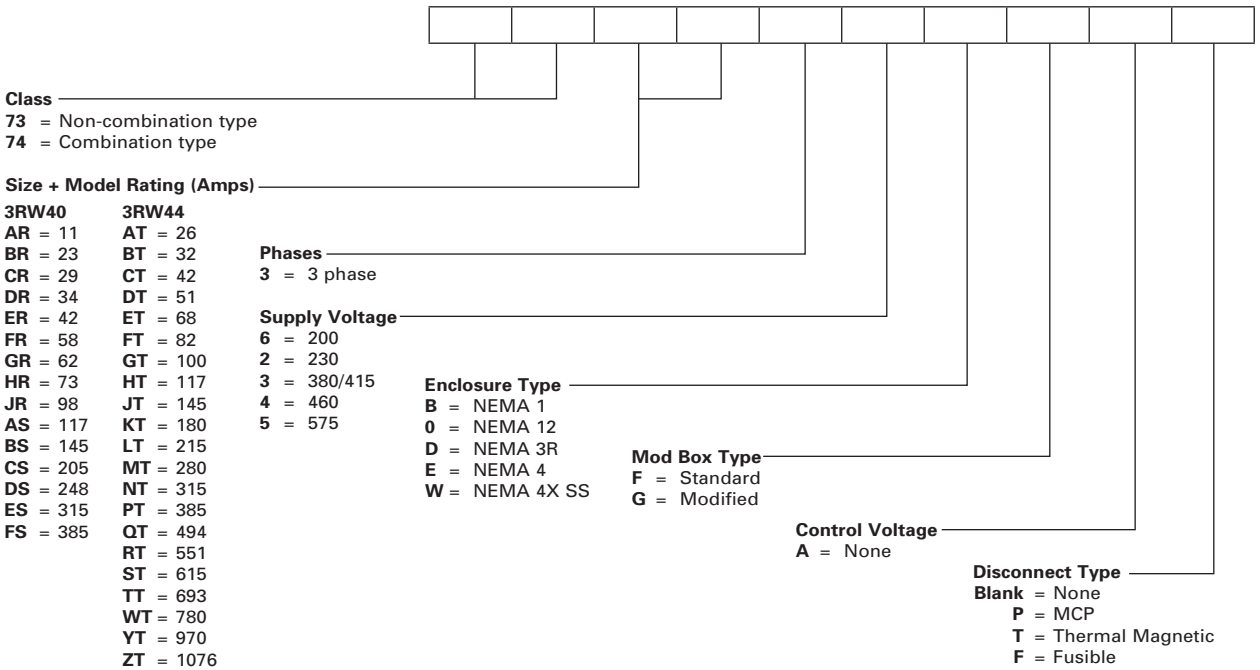
- Select proper RVSS by application
  - Select the 3RW40 versus the 3RW44 using the application info provided in the open section of the catalog
- Select the rating chart for normal starting or sever duty starting
  - Normal starting is rated at 350% of rated motor current IM for 10 seconds and based on starts per hour – representative of a class 20 application.
  - Severe starting is rated at 350% of rated motor current Im for 20 seconds and based on starts per hour – representative of a Class 20 application
- Select model using Motor nameplate data
  - Identify correct motor voltage column
  - Select rate current or HP row
  - Find ordering number under desired enclosure type column (e.g. NEMA 1)
  - Select appropriate system voltage
- Select factory modification on page 6/40 [1)]

Example:
3RW44, N12, CB disconnect, 460V, 200HP with a start/stop and red run light

Order No.
74MT34BFAP A1 FC

Product Nomenclature

Class 73 and 74 Enclosed Soft Starters



1) Some modifications will require a larger 'Modified' box than the standard box e.g. Isolation contactor, space heater, etc. See page 7/124 for instructions.

3RW Soft Starters

3RW40 Size S0-S3 Non-Combo

3RW40 Enclosed features:
- Available in NEMA 1,12,3R,4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10,15,or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 7/124.
- ► For dimensional drawings see page 7/125.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Line side power terminal block
- Reset button
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 73 starters are built to UL and CSA standards

3RW40 for Standard Applications

Enclosed Non-Combination (Starter Only)

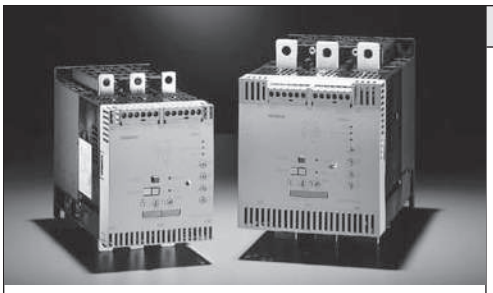
Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Ie for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	73AR3_BFA		73AR3_DFA		73AR3_0FA		73AR3_EFA		73AR3_WFA	
23	5	7.5	15	—	13	3RW4026-1BB14	73BR3_BFA		73BR3_DFA		73BR3_0FA		73BR3_EFA		73BR3_WFA	
29	7.5	10	20	—	16	3RW4027-1BB14	73CR3_BFA		73CR3_DFA		73CR3_0FA		73CR3_EFA		73CR3_WFA	
34	10	10	25	—	18	3RW4028-1BB14	73DR3_BFA		73DR3_DFA		73DR3_0FA		73DR3_EFA		73DR3_WFA	
42	10	15	30	—	23	3RW4036-1BB14	73ER3_BFA		73ER3_DFA		73ER3_0FA		73ER3_EFA		73ER3_WFA	
58	15	20	40	—	31	3RW4037-1BB14	73FR3_BFA		73FR3_DFA		73FR3_0FA		73FR3_EFA		73FR3_WFA	
62	20	20	40	—	33	3RW4038-1BB14	73GR3_BFA		73GR3_DFA		73GR3_0FA		73GR3_EFA		73GR3_WFA	
73	20	25	50	—	39	3RW4046-1BB14	73HR3_BFA		73HR3_DFA		73HR3_0FA		73HR3_EFA		73HR3_WFA	
98	30	30	75	—	52	3RW4047-1BB14	73JR3_BFA		73JR3_DFA		73JR3_0FA		73JR3_EFA		73JR3_WFA	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor

3RW Soft Starters

Enclosed 3RW40



3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW40 is designed for normal starting applications (Class 10 applications).
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer
- Line side power terminal block
- Reset button

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 73 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	**3RW4055-6BB34**	**73AS3_BFA**		**73AS3_DFA**		**73AS3_0FA**		**73AS3_EFA**		**73AS3_WFA**	
145	40	50	100	—	75	**3RW4056-6BB34**	**73BS3_BFA**		**73BS3_DFA**		**73BS3_0FA**		**73BS3_EFA**		**73BS3_WFA**	
205	60	75	150	—	112	**3RW4073-6BB34**	**73CS3_BFA**		**73CS3_DFA**		**73CS3_0FA**		**73CS3_EFA**		**73CS3_WFA**	
248	75	100	200	—	149	**3RW4074-6BB34**	**73DS3_BFA**		**73DS3_DFA**		**73DS3_0FA**		**73DS3_EFA**		**73DS3_WFA**	
315	100	125	250	—	186	**3RW4075-6BB34**	**73ES3_BFA**		**73ES3_DFA**		**73ES3_0FA**		**73ES3_EFA**		**73ES3_WFA**	
385	125	150	300	—	224	**3RW4076-6BB34**	**73FS3_BFA**		**73FS3_DFA**		**73FS3_0FA**		**73FS3_EFA**		**73FS3_WFA**	
						200V	**6**		**6**		**6**		**6**		**6**	
						230V	**2**		**2**		**2**		**2**		**2**	
						380V	**3**		**3**		**3**		**3**		**3**	
						460V	**4**		**4**		**4**		**4**		**4**	
117	—	—	75	100	—	**3RW4055-6BB35**	**73AS35BFA**		**73AS35DFA**		**73AS350FA**		**73AS35EFA**		**73AS35WFA**	
145	—	—	100	150	—	**3RW4056-6BB35**	**73BS35BFA**		**73BS35DFA**		**73BS350FA**		**73BS35EFA**		**73BS35WFA**	
205	—	—	150	200	—	**3RW4073-6BB35**	**73CS35BFA**		**73CS35DFA**		**73CS350FA**		**73CS35EFA**		**73CS35WFA**	
248	—	—	200	250	—	**3RW4074-6BB35**	**73DS35BFA**		**73DS35DFA**		**73DS350FA**		**73DS35EFA**		**73DS35WFA**	
315	—	—	250	300	—	**3RW4075-6BB35**	**73ES35BFA**		**73ES35DFA**		**73ES350FA**		**73ES35EFA**		**73ES35WFA**	
385	—	—	300	400	—	**3RW4076-6BB35**	**73FS35BFA**		**73FS35DFA**		**73FS350FA**		**73FS35EFA**		**73FS35WFA**	

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	**3RW4055-6BB34**	**73AS3_BFA**		**73AS3_DFA**		**73AS3_0FA**		**73AS3_EFA**		**73AS3_WFA**	
132	40	50	100	—	75	**3RW4056-6BB34**	**73BS3_BFA**		**73BS3_DFA**		**73BS3_0FA**		**73BS3_EFA**		**73BS3_WFA**	
185	60	60	125	—	93	**3RW4073-6BB34**	**73CS3_BFA**		**73CS3_DFA**		**73CS3_0FA**		**73CS3_EFA**		**73CS3_WFA**	
205	60	75	150	—	112	**3RW4074-6BB34**	**73DS3_BFA**		**73DS3_DFA**		**73DS3_0FA**		**73DS3_EFA**		**73DS3_WFA**	
280	75	100	200	—	149	**3RW4075-6BB34**	**73ES3_BFA**		**73ES3_DFA**		**73ES3_0FA**		**73ES3_EFA**		**73ES3_WFA**	
340	100	125	250	—	186	**3RW4076-6BB34**	**73FS3_BFA**		**73FS3_DFA**		**73FS3_0FA**		**73FS3_EFA**		**73FS3_WFA**	
						200V	**6**		**6**		**6**		**6**		**6**	
						230V	**2**		**2**		**2**		**2**		**2**	
						380V	**3**		**3**		**3**		**3**		**3**	
						460V	**4**		**4**		**4**		**4**		**4**	
112	—	—	75	75	—	**3RW4055-6BB35**	**73AS35BFA**		**73AS35DFA**		**73AS350FA**		**73AS35EFA**		**73AS35WFA**	
132	—	—	100	125	—	**3RW4056-6BB35**	**73BS35BFA**		**73BS35DFA**		**73BS350FA**		**73BS35EFA**		**73BS35WFA**	
185	—	—	125	150	—	**3RW4073-6BB35**	**73CS35BFA**		**73CS35DFA**		**73CS350FA**		**73CS35EFA**		**73CS35WFA**	
205	—	—	150	200	—	**3RW4074-6BB35**	**73DS35BFA**		**73DS35DFA**		**73DS350FA**		**73DS35EFA**		**73DS35WFA**	
280	—	—	200	250	—	**3RW4075-6BB35**	**73ES35BFA**		**73ES35DFA**		**73ES350FA**		**73ES35EFA**		**73ES35WFA**	
340	—	—	250	300	—	**3RW4076-6BB35**	**73FS35BFA**		**73FS35DFA**		**73FS350FA**		**73FS35EFA**		**73FS35WFA**	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.
② Starter selection is dependent on type of application. Im = FLA rating of motor.

3RW Soft Starters

3RW40 – Size S0-S3 Circuit Breaker

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 7/124.
- ► For dimensional drawings see page 7/125.

Class 74 non-combination starters include:
- NEMA rated enclosure
- Circuit Breaker disconnect with shunt trip
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 74 starters are built to UL and CSA standards

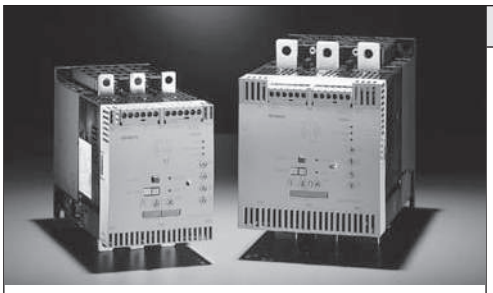
3RW40 for Standard Applications

Enclosed Circuit Breaker Combination (Starter With Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Ie for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	74AR3_BFAP		74AR3_DFAP		74AR3_0FAP		74AR3_EFAP		74AR3_WFAP	
23	5	7.5	15	—	13	3RW4026-1BB14	74BR3_BFAP		74BR3_DFAP		74BR3_0FAP		74BR3_EFAP		74BR3_WFAP	
29	7.5	10	20	—	16	3RW4027-1BB14	74CR3_BFAP		74CR3_DFAP		74CR3_0FAP		74CR3_EFAP		74CR3_WFAP	
34	10	10	25	—	18	3RW4028-1BB14	74DR3_BFAP		74DR3_DFAP		74DR3_0FAP		74DR3_EFAP		74DR3_WFAP	
42	10	15	30	—	23	3RW4036-1BB14	74ER3_BFAP		74ER3_DFAP		74ER3_0FAP		74ER3_EFAP		74ER3_WFAP	
58	15	20	40	—	31	3RW4037-1BB14	74FR3_BFAP		74FR3_DFAP		74FR3_0FAP		74FR3_EFAP		74FR3_WFAP	
62	20	20	40	—	33	3RW4038-1BB14	74GR3_BFAP		74GR3_DFAP		74GR3_0FAP		74GR3_EFAP		74GR3_WFAP	
73	20	25	50	—	39	3RW4046-1BB14	74HR3_BFAP		74HR3_DFAP		74HR3_0FAP		74HR3_EFAP		74HR3_WFAP	
98	30	30	75	—	52	3RW4047-1BB14	74JR3_BFAP		74JR3_DFAP		74JR3_0FAP		74JR3_EFAP		74JR3_WFAP	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor



3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW40 is designed for normal starting applications (Class 10 applications).
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 74 non-combination starters include:
- NEMA rated enclosure
- Circuit breaker disconnect with shunt trip
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Circuit Breaker Combination (Starter with Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAP		74AS3_DFAP		74AS3_0FAP		74AS3_EFAP		74AS3_WFAP	
145	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAP		74BS3_DFAP		74BS3_0FAP		74BS3_EFAP		74BS3_WFAP	
205	60	75	150	—	112	3RW4073-6BB34	74CS3_BFAP		74CS3_DFAP		74CS3_0FAP		74CS3_EFAP			
248	75	100	200	—	149	3RW4074-6BB34	74DS3_BFAP		74DS3_DFAP		74DS3_0FAP		74DS3_EFAP			
315	100	125	250	—	186	3RW4075-6BB34	74ES3_BFAP		74ES3_DFAP		74ES3_0FAP		74ES3_EFAP			
385	125	150	300	—	224	3RW4076-6BB34	74FS3_BFAP		74FS3_DFAP		74FS3_0FAP		74FS3_EFAP			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
117	—	—	75	100	—	3RW4055-6BB35	74AS35BFAP		74AS35DFAP		74AS350FAP		74AS35EFAP		74AS35WFAP	
145	—	—	100	150	—	3RW4056-6BB35	74BS35BFAP		74BS35DFAP		74BS350FAP		74BS35EFAP		74BS35WFAP	
205	—	—	150	200	—	3RW4073-6BB35	74CS35BFAP		74CS35DFAP		74CS350FAP		74CS35EFAP			
248	—	—	200	250	—	3RW4074-6BB35	74DS35BFAP		74DS35DFAP		74DS350FAP		74DS35EFAP			
315	—	—	250	300	—	3RW4075-6BB35	74ES35BFAP		74ES35DFAP		74ES350FAP		74ES35EFAP			
385	—	—	300	400	—	3RW4076-6BB35	74FS35BFAP		74FS35DFAP		74FS350FAP		74FS35EFAP			

Enclosed Circuit Breaker Combination (Starter with Circuit Breaker Disconnect)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAP		74AS3_DFAP		74AS3_0FAP		74AS3_EFAP		74AS3_WFAP	
132	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAP		74BS3_DFAP		74BS3_0FAP		74BS3_EFAP		74BS3_WFAP	
185	60	60	125	—	93	3RW4073-6BB34	74CS3_BFAP		74CS3_DFAP		74CS3_0FAP		74CS3_EFAP			
205	60	75	150	—	112	3RW4074-6BB34	74DS3_BFAP		74DS3_DFAP		74DS3_0FAP		74DS3_EFAP			
280	75	100	200	—	149	3RW4075-6BB34	74ES3_BFAP		74ES3_DFAP		74ES3_0FAP		74ES3_EFAP			
340	100	125	250	—	186	3RW4076-6BB34	74FS3_BFAP		74FS3_DFAP		74FS3_0FAP		74FS3_EFAP			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
112	—	—	75	75	—	3RW4055-6BB35	74AS35BFAP		74AS35DFAP		74AS350FAP		74AS35EFAP		74AS35WFAP	
132	—	—	100	125	—	3RW4056-6BB35	74BS35BFAP		74BS35DFAP		74BS350FAP		74BS35EFAP		74BS35WFAP	
185	—	—	125	150	—	3RW4073-6BB35	74CS35BFAP		74CS35DFAP		74CS350FAP		74CS35EFAP			
205	—	—	150	200	—	3RW4074-6BB35	74DS35BFAP		74DS35DFAP		74DS350FAP		74DS35EFAP			
280	—	—	200	250	—	3RW4075-6BB35	74ES35BFAP		74ES35DFAP		74ES350FAP		74ES35EFAP			
340	—	—	250	300	—	3RW4076-6BB35	74FS35BFAP		74FS35DFAP		74FS350FAP		74FS35EFAP			

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

3RW Soft Starters

3RW40 – Size S0-S3 Fusible

3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in Bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10,15,or 20
- Internal self protection
- Fault monitoring
- Isolation Contactor

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW40 is designed for normal starting applications.
- ► For factory modifications see page 7/124.
- ► For dimensional drawings see page 7/125.

Class 73 non-combination starters include:
- NEMA rated enclosure
- Fusible Disconnect
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control Circuit Transformer
- Isolation Contactor

Ideal applications for 3RW40 enclosed softstarters
- Fans
- Pumps
- Easy starting loads starting in less than 10 seconds

Class 74 starters are built to UL and CSA standards

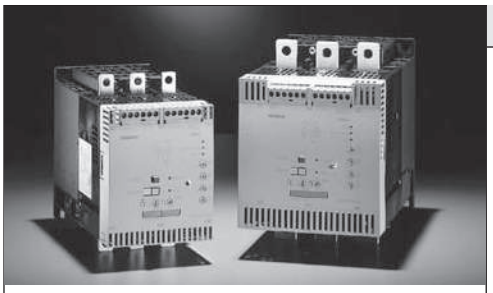
3RW40 for Standard Applications

Enclosed Fusible Combination (Starter With Fusible Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Ie for 10s)②										
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
11	3	3	7.5	—	6	3RW4024-1BB14	74AR3_BFAF		74AR3_DFAF		74AR3_0FAF		74AR3_EFAF		74AR3_WFAF	
23	5	7.5	15	—	13	3RW4026-1BB14	74BR3_BFAF		74BR3_DFAF		74BR3_0FAF		74BR3_EFAF		74BR3_WFAF	
29	7.5	10	20	—	16	3RW4027-1BB14	74CR3_BFAF		74CR3_DFAF		74CR3_0FAF		74CR3_EFAF		74CR3_WFAF	
34	10	10	25	—	18	3RW4028-1BB14	74DR3_BFAF		74DR3_DFAF		74DR3_0FAF		74DR3_EFAF		74DR3_WFAF	
42	10	15	30	—	23	3RW4036-1BB14	74ER3_BFAF		74ER3_DFAF		74ER3_0FAF		74ER3_EFAF		74ER3_WFAF	
58	15	20	40	—	31	3RW4037-1BB14	74FR3_BFAF		74FR3_DFAF		74FR3_0FAF		74FR3_EFAF		74FR3_WFAF	
62	20	20	40	—	33	3RW4038-1BB14	74GR3_BFAF		74GR3_DFAF		74GR3_0FAF		74GR3_EFAF		74GR3_WFAF	
73	20	25	50	—	39	3RW4046-1BB14	74HR3_BFAF		74HR3_DFAF		74HR3_0FAF		74HR3_EFAF		74HR3_WFAF	
98	30	30	75	—	52	3RW4047-1BB14	74JR3_BFAF		74JR3_DFAF		74JR3_0FAF		74JR3_EFAF		74JR3_WFAF	
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C

② Starter selection is dependent on type of application. Ie = FLA rating of motor



3RW40 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Voltage ramp up and ramp down
- Current limit adjustment of 125 - 550%
- Internal overload class 10, 15, or 20
- Internal self protection
- Fault monitoring

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW40 is designed for normal starting applications (Class 10 applications).
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 74 combination starters include:
- NEMA rated enclosure
- Fusible disconnect
- 3RW40 Sirius softstarter with built-in OL and bypass
- Control circuit transformer

Ideal applications for 3RW40 enclosed softstarters:
- Fans
- Pumps
- Building/construction machines
- Presses
- Escalators
- Transport systems
- Air conditioning systems
- Ventilators
- Assembly lines

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW40 for Standard Applications

Enclosed Fusible Combination (Starter with Fusible Disconnect)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
117	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAF		74AS3_DFAF		74AS3_0FAF		74AS3_EFAF		74AS3_WFAF	
145	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAF		74BS3_DFAF		74BS3_0FAF		74BS3_EFAF		74BS3_WFAF	
205	60	75	150	—	112	3RW4073-6BB34	74CS3_BFAF		74CS3_DFAF		74CS3_0FAF		74CS3_EFAF			
248	75	100	200	—	149	3RW4074-6BB34	74DS3_BFAF		74DS3_DFAF		74DS3_0FAF		74DS3_EFAF			
315	100	125	250	—	186	3RW4075-6BB34	74ES3_BFAF		74ES3_DFAF		74ES3_0FAF		74ES3_EFAF			
385	125	150	300	—	224	3RW4076-6BB34	74FS3_BFAF		74FS3_DFAF		74FS3_0FAF		74FS3_EFAF			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
117	—	—	75	100	—	3RW4055-6BB35	74AS35BFAF		74AS35DFAF		74AS350FAF		74AS35EFAF		74AS35WFAF	
145	—	—	100	150	—	3RW4056-6BB35	74BS35BFAF		74BS35DFAF		74BS350FAF		74BS35EFAF		74BS35WFAF	
205	—	—	150	200	—	3RW4073-6BB35	74CS35BFAF		74CS35DFAF		74CS350FAF		74CS35EFAF			
248	—	—	200	250	—	3RW4074-6BB35	74DS35BFAF		74DS35DFAF		74DS350FAF		74DS35EFAF			
315	—	—	250	300	—	3RW4075-6BB35	74ES35BFAF		74ES35DFAF		74ES350FAF		74ES35EFAF			
385	—	—	300	400	—	3RW4076-6BB35	74FS35BFAF		74FS35DFAF		74FS350FAF		74FS35EFAF			

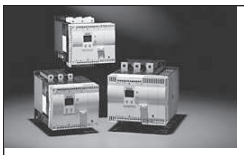
Enclosed Fusible Combination (Starter with Fusible Disconnect)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Ie for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
112	30	40	75	—	56	3RW4055-6BB34	74AS3_BFAF		74AS3_DFAF		74AS3_0FAF		74AS3_EFAF		74AS3_WFAF	
132	40	50	100	—	75	3RW4056-6BB34	74BS3_BFAF		74BS3_DFAF		74BS3_0FAF		74BS3_EFAF		74BS3_WFAF	
185	60	60	125	—	93	3RW4073-6BB34	74CS3_BFAF		74CS3_DFAF		74CS3_0FAF		74CS3_EFAF			
205	60	75	150	—	112	3RW4074-6BB34	74DS3_BFAF		74DS3_DFAF		74DS3_0FAF		74DS3_EFAF			
280	75	100	200	—	149	3RW4075-6BB34	74ES3_BFAF		74ES3_DFAF		74ES3_0FAF		74ES3_EFAF			
340	100	125	250	—	186	3RW4076-6BB34	74FS3_BFAF		74FS3_DFAF		74FS3_0FAF		74FS3_EFAF			
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
112	—	—	75	75	—	3RW4055-6BB35	74AS35BFAF		74AS35DFAF		74AS350FAF		74AS35EFAF		74AS35WFAF	
132	—	—	100	125	—	3RW4056-6BB35	74BS35BFAF		74BS35DFAF		74BS350FAF		74BS35EFAF		74BS35WFAF	
185	—	—	125	150	—	3RW4073-6BB35	74CS35BFAF		74CS35DFAF		74CS350FAF		74CS35EFAF			
205	—	—	150	200	—	3RW4074-6BB35	74DS35BFAF		74DS35DFAF		74DS350FAF		74DS35EFAF			
280	—	—	200	250	—	3RW4075-6BB35	74ES35BFAF		74ES35DFAF		74ES350FAF		74ES35EFAF			
340	—	—	250	300	—	3RW4076-6BB35	74FS35BFAF		74FS35DFAF		74FS350FAF		74FS35EFAF			

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

Enclosed 3RW44



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW44 is designed for normal starting applications.
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 73 starters are built to UL and CSA standards.

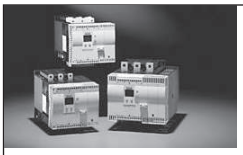
3RW44 For High Feature Applications

Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	73AT3_BFA		73AT3_DFA		73AT3_0FA		73AT3_EFA		73AT3_WFA	
32	10	10	20	—	15	3RW4423-1BC34	73BT3_BFA		73BT3_DFA		73BT3_0FA		73BT3_EFA		73BT3_WFA	
42	10	15	25	—	19	3RW4424-1BC34	73CT3_BFA		73CT3_DFA		73CT3_0FA		73CT3_EFA		73CT3_WFA	
51	15	15	30	—	22	3RW4425-1BC34	73DT3_BFA		73DT3_DFA		73DT3_0FA		73DT3_EFA		73DT3_WFA	
68	20	25	50	—	37	3RW4426-1BC34	73ET3_BFA		73ET3_DFA		73ET3_0FA		73ET3_EFA		73ET3_WFA	
82	25	30	60	—	45	3RW4427-1BC34	73FT3_BFA		73FT3_DFA		73FT3_0FA		73FT3_EFA		73FT3_WFA	
100	30	30	75	—	56	3RW4434-6BC34	73GT3_BFA		73GT3_DFA		73GT3_0FA		73GT3_EFA		73GT3_WFA	
117	30	40	75	—	56	3RW4435-6BC34	73HT3_BFA		73HT3_DFA		73HT3_0FA		73HT3_EFA		73HT3_WFA	
145	40	50	100	—	75	3RW4436-6BC34	73JT3_BFA		73JT3_DFA		73JT3_0FA		73JT3_EFA		73JT3_WFA	
180	60	60	125	—	93	3RW4443-6BC34	73KT3_BFA		73KT3_DFA		73KT3_0FA		73KT3_EFA		73KT3_WFA	
215	60	75	150	—	112	3RW4444-6BC34	73LT3_BFA		73LT3_DFA		73LT3_0FA		73LT3_EFA		73LT3_WFA	
280	75	100	200	—	149	3RW4445-6BC34	73MT3_BFA		73MT3_DFA		73MT3_0FA		73MT3_EFA		73MT3_WFA	
315	100	125	250	—	186	3RW4446-6BC34	73NT3_BFA		73NT3_DFA		73NT3_0FA		73NT3_EFA		73NT3_WFA	
385	125	150	300	—	224	3RW4447-6BC34	73PT3_BFA		73PT3_DFA		73PT3_0FA		73PT3_EFA		73PT3_WFA	
494	150	200	400	—	298	3RW4453-6BC34	73QT3_BFA		73QT3_DFA		73QT3_0FA		73QT3_EFA			
551	150	200	450	—	336	3RW4454-6BC34	73RT3_BFA		73RT3_DFA		73RT3_0FA		73RT3_EFA			
615	200	250	500	—	373	3RW4455-6BC34	73ST3_BFA		73ST3_DFA		73ST3_0FA		73ST3_EFA			
693	200	250	550	—	410	3RW4456-6BC34	73TT3_BFA		73TT3_DFA		73TT3_0FA		73TT3_EFA			
780	200	250	600	—	447	3RW4457-6BC34	73WT3_BFA		73WT3_DFA		73WT3_0FA					
970	350	350	800	—	597	3RW4465-6BC34	73YT3_BFA				73YT3_0FA					
1076	350	400	900	—	972	3RW4466-6BC34	73ZT3_BFA				73ZT3_0FA					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	73AT35BFA		73AT35DFA		73AT350FA		73AT35EFA		73AT35WFA	
32	—	—	20	25	—	3RW4423-1BC35	73BT35BFA		73BT35DFA		73BT350FA		73BT35EFA		73BT35WFA	
42	—	—	25	30	—	3RW4424-1BC35	73CT35BFA		73CT35DFA		73CT350FA		73CT35EFA		73CT35WFA	
51	—	—	30	40	—	3RW4425-1BC35	73DT35BFA		73DT35DFA		73DT350FA		73DT35EFA		73DT35WFA	
68	—	—	50	50	—	3RW4426-1BC35	73ET35BFA		73ET35DFA		73ET350FA		73ET35EFA		73ET35WFA	
82	—	—	60	75	—	3RW4427-1BC35	73FT35BFA		73FT35DFA		73FT350FA		73FT35EFA		73FT35WFA	
100	—	—	75	75	—	3RW4434-6BC35	73GT35BFA		73GT35DFA		73GT350FA		73GT35EFA		73GT35WFA	
117	—	—	75	100	—	3RW4435-6BC35	73HT35BFA		73HT35DFA		73HT350FA		73HT35EFA		73HT35WFA	
145	—	—	100	125	—	3RW4436-6BC35	73JT35BFA		73JT35DFA		73JT350FA		73JT35EFA		73JT35WFA	
180	—	—	125	150	—	3RW4443-6BC35	73KT35BFA		73KT35DFA		73KT350FA		73KT35EFA		73KT35WFA	
215	—	—	150	200	—	3RW4444-6BC35	73LT35BFA		73LT35DFA		73LT350FA		73LT35EFA		73LT35WFA	
280	—	—	200	250	—	3RW4445-6BC35	73MT35BFA		73MT35DFA		73MT350FA		73MT35EFA		73MT35WFA	
315	—	—	250	300	—	3RW4446-6BC35	73NT35BFA		73NT35DFA		73NT350FA		73NT35EFA		73NT35WFA	
385	—	—	300	400	—	3RW4447-6BC35	73PT35BFA		73PT35DFA		73PT350FA		73PT35EFA		73PT35WFA	
494	—	—	400	500	—	3RW4453-6BC35	73QT35BFA		73QT35DFA		73QT350FA		73QT35EFA			
551	—	—	450	600	—	3RW4454-6BC35	73RT35BFA		73RT35DFA		73RT350FA		73RT35EFA			
615	—	—	500	700	—	3RW4455-6BC35	73ST35BFA		73ST35DFA		73ST350FA		73ST35EFA			
693	—	—	550	750	—	3RW4456-6BC35	73TT35BFA		73TT35DFA		73TT350FA		73TT35EFA			
780	—	—	600	850	—	3RW4457-6BC35	73WT35BFA		73WT35DFA		73WT350FA		73WT35EFA			
970	—	—	800	1000	—	3RW4465-6BC35	73YT35BFA				73YT350FA					
1076	—	—	900	1100	—	3RW4466-6BC35	73ZT35BFA				73ZT350FA					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 10, 15, or 20
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW44 is designed for normal starting applications.
- ► For factory modifications see page 7/124.
- ► For dimensional drawings see page 7/125.

Class 73 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Control circuit transformer
- Line side power terminal block
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 73 starters are built to UL and CSA standards.

3RW44 For High Feature Applications

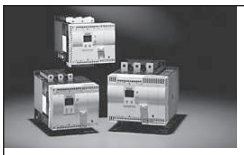
Enclosed Non-Combination (Starter Only)

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	73AT3_BFA		73AT3_DFA		73AT3_0FA		73AT3_EFA		73AT3_WFA	
32	10	10	20	—	15	3RW4423-1BC34	73BT3_BFA		73BT3_DFA		73BT3_0FA		73BT3_EFA		73BT3_WFA	
42	10	15	25	—	19	3RW4424-1BC34	73CT3_BFA		73CT3_DFA		73CT3_0FA		73CT3_EFA		73CT3_WFA	
51	15	15	30	—	22	3RW4425-1BC34	73DT3_BFA		73DT3_DFA		73DT3_0FA		73DT3_EFA		73DT3_WFA	
68	20	25	50	—	37	3RW4426-1BC34	73ET3_BFA		73ET3_DFA		73ET3_0FA		73ET3_EFA		73ET3_WFA	
82	25	30	60	—	45	3RW4427-1BC34	73FT3_BFA		73FT3_DFA		73FT3_0FA		73FT3_EFA		73FT3_WFA	
97	30	30	60	—	45	3RW4434-6BC34	73GT3_BFA		73GT3_DFA		73GT3_0FA		73GT3_EFA		73GT3_WFA	
113	30	40	75	—	56	3RW4435-6BC34	73HT3_BFA		73HT3_DFA		73HT3_0FA		73HT3_EFA		73HT3_WFA	
134	40	50	75	—	56	3RW4436-6BC34	73JT3_BFA		73JT3_DFA		73JT3_0FA		73JT3_EFA		73JT3_WFA	
175	50	60	100	—	75	3RW4443-6BC34	73KT3_BFA		73KT3_DFA		73KT3_0FA		73KT3_EFA		73KT3_WFA	
195	60	75	125	—	93	3RW4444-6BC34	73LT3_BFA		73LT3_DFA		73LT3_0FA		73LT3_EFA		73LT3_WFA	
243	75	75	150	—	112	3RW4445-6BC34	73MT3_BFA		73MT3_DFA		73MT3_0FA		73MT3_EFA		73MT3_WFA	
263	75	100	200	—	149	3RW4446-6BC34	73NT3_BFA		73NT3_DFA		73NT3_0FA		73NT3_EFA		73NT3_WFA	
326	100	125	250	—	186	3RW4447-6BC34	73PT3_BFA		73PT3_DFA		73PT3_0FA		73PT3_EFA		73PT3_WFA	
494	150	150	400	—	224	3RW4453-6BC34	73QT3_BFA		73QT3_DFA		73QT3_0FA		73QT3_EFA			
551	150	200	450	—	298	3RW4454-6BC34	73RT3_BFA		73RT3_DFA		73RT3_0FA		73RT3_EFA			
615	200	200	500	—	336	3RW4455-6BC34	73ST3_BFA		73ST3_DFA		73ST3_0FA		73ST3_EFA			
634	200	250	500	—	373	3RW4456-6BC34	73TT3_BFA		73TT3_DFA		73TT3_0FA		73TT3_EFA			
650	200	250	550	—	410	3RW4457-6BC34	73WT3_BFA		73WT3_DFA		73WT3_0FA		73WT3_EFA			
880	300	350	700	—	522	3RW4465-6BC34	73YT3_BFA				73YT3_0FA					
940	300	350	750	—	559	3RW4466-6BC34	73ZT3_BFA				73ZT3_0FA					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	73AT35BFA		73AT35DFA		73AT350FA		73AT35EFA		73AT35WFA	
32	—	—	20	25	—	3RW4423-1BC35	73BT35BFA		73BT35DFA		73BT350FA		73BT35EFA		73BT35WFA	
42	—	—	25	30	—	3RW4424-1BC35	73CT35BFA		73CT35DFA		73CT350FA		73CT35EFA		73CT35WFA	
51	—	—	30	40	—	3RW4425-1BC35	73DT35BFA		73DT35DFA		73DT350FA		73DT35EFA		73DT35WFA	
68	—	—	50	50	—	3RW4426-1BC35	73ET35BFA		73ET35DFA		73ET350FA		73ET35EFA		73ET35WFA	
82	—	—	60	75	—	3RW4427-1BC35	73FT35BFA		73FT35DFA		73FT350FA		73FT35EFA		73FT35WFA	
97	—	—	60	75	—	3RW4434-6BC35	73GT35BFA		73GT35DFA		73GT350FA		73GT35EFA		73GT35WFA	
113	—	—	75	100	—	3RW4435-6BC35	73HT35BFA		73HT35DFA		73HT350FA		73HT35EFA		73HT35WFA	
134	—	—	75	125	—	3RW4436-6BC35	73JT35BFA		73JT35DFA		73JT350FA		73JT35EFA		73JT35WFA	
175	—	—	100	150	—	3RW4443-6BC35	73KT35BFA		73KT35DFA		73KT350FA		73KT35EFA		73KT35WFA	
195	—	—	125	200	—	3RW4444-6BC35	73LT35BFA		73LT35DFA		73LT350FA		73LT35EFA		73LT35WFA	
243	—	—	150	200	—	3RW4445-6BC35	73MT35BFA		73MT35DFA		73MT350FA		73MT35EFA		73MT35WFA	
263	—	—	200	250	—	3RW4446-6BC35	73NT35BFA		73NT35DFA		73NT350FA		73NT35EFA		73NT35WFA	
326	—	—	250	300	—	3RW4447-6BC35	73PT35BFA		73PT35DFA		73PT350FA		73PT35EFA		73PT35WFA	
494	—	—	400	500	—	3RW4453-6BC35	73QT35BFA		73QT35DFA		73QT350FA		73QT35EFA			
551	—	—	450	550	—	3RW4454-6BC35	73RT35BFA		73RT35DFA		73RT350FA		73RT35EFA			
615	—	—	500	600	—	3RW4455-6BC35	73ST35BFA		73ST35DFA		73ST350FA		73ST35EFA			
693	—	—	500	650	—	3RW4456-6BC35	73TT35BFA		73TT35DFA		73TT350FA		73TT35EFA			
780	—	—	550	700	—	3RW4457-6BC35	73WT35BFA		73WT35DFA		73WT350FA		73WT35EFA			
880	—	—	700	850	—	3RW4465-6BC35	73YT35BFA				73YT350FA					
940	—	—	750	900	—	3RW4466-6BC35	73ZT35BFA				73ZT350FA					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

Enclosed 3RW44



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ► Enclosed devices should be ordered by the FLA of the motor.
- ► The 3RW44 is designed for normal starting applications.
- ► For factory modifications see page 7/124.
- ► For dimensional drawings see page 7/125.
- ► For stocked versions see page 7/89.

Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Circuit breaker with disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

3RW44 For High Feature Applications

Enclosed Combination with Circuit Breaker Disconnect

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty (350% * Im for 10s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAP		74AT3_DFAP		74AT3_0FAP		74AT3_EFAP		74AT3_WFAP	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAP		74BT3_DFAP		74BT3_0FAP		74BT3_EFAP		74BT3_WFAP	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAP		74CT3_DFAP		74CT3_0FAP		74CT3_EFAP		74CT3_WFAP	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAP		74DT3_DFAP		74DT3_0FAP		74DT3_EFAP		74DT3_WFAP	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAP		74ET3_DFAP		74ET3_0FAP		74ET3_EFAP		74ET3_WFAP	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAP		74FT3_DFAP		74FT3_0FAP		74FT3_EFAP		74FT3_WFAP	
100	30	30	75	—	56	3RW4434-6BC34	74GT3_BFAP		74GT3_DFAP		74GT3_0FAP		74GT3_EFAP		74GT3_WFAP	
117	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAP		74HT3_DFAP		74HT3_0FAP		74HT3_EFAP		74HT3_WFAP	
145	40	50	100	—	75	3RW4436-6BC34	74JT3_BFAP		74JT3_DFAP		74JT3_0FAP		74JT3_EFAP		74JT3_WFAP	
180	60	60	125	—	93	3RW4443-6BC34	74KT3_BFAP		74KT3_DFAP		74KT3_0FAP		74KT3_EFAP			
215	60	75	150	—	112	3RW4444-6BC34	74LT3_BFAP		74LT3_DFAP		74LT3_0FAP		74LT3_EFAP			
280	75	100	200	—	149	3RW4445-6BC34	74MT3_BFAP		74MT3_DFAP		74MT3_0FAP		74MT3_EFAP			
315	100	125	250	—	186	3RW4446-6BC34	74NT3_BFAP		74NT3_DFAP		74NT3_0FAP		74NT3_EFAP			
385	125	150	300	—	224	3RW4447-6BC34	74PT3_BFAP		74PT3_DFAP		74PT3_0FAP		74PT3_EFAP			
494	150	200	400	—	298	3RW4453-6BC34	74QT3_BFAT		74QT3_DFAT		74QT3_0FAT		74QT3_EFAT			
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAT		74RT3_DFAT		74RT3_0FAT		74RT3_EFAT			
615	200	250	500	—	373	3RW4455-6BC34	74ST3_BFAT		74ST3_DFAT		74ST3_0FAT		74ST3_EFAT			
693	200	250	550	—	410	3RW4456-6BC34	74TT3_BFAT		74TT3_DFAT		74TT3_0FAT		74TT3_EFAT			
780	200	250	600	—	447	3RW4457-6BC34	74WT3_BFAT		74WT3_DFAT		74WT3_0FAT		74WT3_EFAT			
970	350	350	800	—	597	3RW4465-6BC34	74YT3_BFAT				74YT3_0FAT					
1076	350	400	900	—	672	3RW4466-6BC34	74ZT3_BFAT				74ZT3_0FAT					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAP		74AT35DFAP		74AT350FAP		74AT35EFAP		74AT35WFAP	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAP		74BT35DFAP		74BT350FAP		74BT35EFAP		74BT35WFAP	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAP		74CT35DFAP		74CT350FAP		74CT35EFAP		74CT35WFAP	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAP		74DT35DFAP		74DT350FAP		74DT35EFAP		74DT35WFAP	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAP		74ET35DFAP		74ET350FAP		74ET35EFAP		74ET35WFAP	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAP		74FT35DFAP		74FT350FAP		74FT35EFAP		74FT35WFAP	
100	—	—	75	75	—	3RW4434-6BC35	74GT35BFAP		74GT35DFAP		74GT350FAP		74GT35EFAP		74GT35WFAP	
117	—	—	75	100	—	3RW4435-6BC35	74HT35BFAP		74HT35DFAP		74HT350FAP		74HT35EFAP		74HT35WFAP	
145	—	—	100	125	—	3RW4436-6BC35	74JT35BFAP		74JT35DFAP		74JT350FAP		74JT35EFAP		74JT35WFAP	
180	—	—	125	150	—	3RW4443-6BC35	74KT35BFAP		74KT35DFAP		74KT350FAP		74KT35EFAP			
215	—	—	150	200	—	3RW4444-6BC35	74LT35BFAP		74LT35DFAP		74LT350FAP		74LT35EFAP			
280	—	—	200	250	—	3RW4445-6BC35	74MT35BFAP		74MT35DFAP		74MT350FAP		74MT35EFAP			
315	—	—	250	300	—	3RW4446-6BC35	74NT35BFAP		74NT35DFAP		74NT350FAP		74NT35EFAP			
385	—	—	300	400	—	3RW4447-6BC35	74PT35BFAP		74PT35DFAP		74PT350FAP		74PT35EFAP			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAT		74QT35DFAT		74QT350FAT		74QT35EFAT			
551	—	—	450	600	—	3RW4454-6BC35	74RT35BFAT		74RT35DFAT		74RT350FAT		74RT35EFAT			
615	—	—	500	700	—	3RW4455-6BC35	74ST35BFAT		74ST35DFAT		74ST350FAT		74ST35EFAT			
693	—	—	550	750	—	3RW4456-6BC35	74TT35BFAT		74TT35DFAT		74TT350FAT		74TT35EFAT			
780	—	—	600	850	—	3RW4457-6BC35	74WT35BFAT		74WT35DFAT		74WT350FAT		74WT35EFAT			
970	—	—	800	1000	—	3RW4465-6BC35	74YT35BFAT				74YT350FAT					
1076	—	—	900	1100	—	3RW4466-6BC35	74ZT35BFAT				74ZT350FAT					

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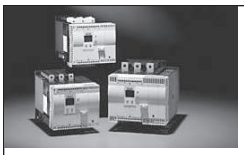

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- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
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- HVAC systems

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Class 74 starters are built to UL and CSA standards.

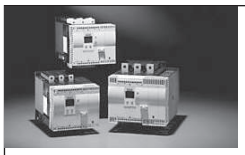
3RW44 For High Feature Applications

Enclosed Combination with Circuit Breaker Disconnect

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAP		74AT3_DFAP		74AT3_0FAP		74AT3_EFAP		74AT3_WFAP	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAP		74BT3_DFAP		74BT3_0FAP		74BT3_EFAP		74BT3_WFAP	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAP		74CT3_DFAP		74CT3_0FAP		74CT3_EFAP		74CT3_WFAP	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAP		74DT3_DFAP		74DT3_0FAP		74DT3_EFAP		74DT3_WFAP	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAP		74ET3_DFAP		74ET3_0FAP		74ET3_EFAP		74ET3_WFAP	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAP		74FT3_DFAP		74FT3_0FAP		74FT3_EFAP		74FT3_WFAP	
97	30	30	60	—	45	3RW4434-6BC34	74GT3_BFAP		74GT3_DFAP		74GT3_0FAP		74GT3_EFAP		74GT3_WFAP	
113	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAP		74HT3_DFAP		74HT3_0FAP		74HT3_EFAP		74HT3_WFAP	
134	40	50	75	—	56	3RW4436-6BC34	74JT3_BFAP		74JT3_DFAP		74JT3_0FAP		74JT3_EFAP		74JT3_WFAP	
175	50	60	100	—	75	3RW4443-6BC34	74KT3_BFAP		74KT3_DFAP		74KT3_0FAP		74KT3_EFAP			
195	60	75	125	—	93	3RW4444-6BC34	74LT3_BFAP		74LT3_DFAP		74LT3_0FAP		74LT3_EFAP			
243	75	75	150	—	112	3RW4445-6BC34	74MT3_BFAP		74MT3_DFAP		74MT3_0FAP		74MT3_EFAP			
263	75	100	200	—	149	3RW4446-6BC34	74NT3_BFAP		74NT3_DFAP		74NT3_0FAP		74NT3_EFAP			
326	100	125	250	—	186	3RW4447-6BC34	74PT3_BFAP		74PT3_DFAP		74PT3_0FAP		74PT3_EFAP			
494	150	150	400	—	224	3RW4453-6BC34	74QT3_BFAT		74QT3_DFAT		74QT3_0FAT		74QT3_EFAT			
551	150	200	450	—	298	3RW4454-6BC34	74RT3_BFAT		74RT3_DFAT		74RT3_0FAT		74RT3_EFAT			
615	200	200	500	—	336	3RW4455-6BC34	74ST3_BFAT		74ST3_DFAT		74ST3_0FAT		74ST3_EFAT			
634	200	250	500	—	373	3RW4456-6BC34	74TT3_BFAT		74TT3_DFAT		74TT3_0FAT		74TT3_EFAT			
650	200	250	550	—	410	3RW4457-6BC34	74WT3_BFAT		74WT3_DFAT		74WT3_0FAT		74WT3_EFAT			
880	300	350	700	—	522	3RW4465-6BC34	74YT3_BFAT				74YT3_0FAT					
940	300	350	750	—	559	3RW4466-6BC34	74ZT3_BFAT				74ZT3_0FAT					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAP		74AT35DFAP		74AT350FAP		74AT35EFAP		74AT35WFAP	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAP		74BT35DFAP		74BT350FAP		74BT35EFAP		74BT35WFAP	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAP		74CT35DFAP		74CT350FAP		74CT35EFAP		74CT35WFAP	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAP		74DT35DFAP		74DT350FAP		74DT35EFAP		74DT35WFAP	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAP		74ET35DFAP		74ET350FAP		74ET35EFAP		74ET35WFAP	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAP		74FT35DFAP		74FT350FAP		74FT35EFAP		74FT35WFAP	
97	—	—	60	75	—	3RW4434-6BC35	74GT35BFAP		74GT35DFAP		74GT350FAP		74GT35EFAP		74GT35WFAP	
113	—	—	75	100	—	3RW4435-6BC35	74HT35BFAP		74HT35DFAP		74HT350FAP		74HT35EFAP		74HT35WFAP	
134	—	—	75	125	—	3RW4436-6BC35	74JT35BFAP		74JT35DFAP		74JT350FAP		74JT35EFAP		74JT35WFAP	
175	—	—	100	150	—	3RW4443-6BC35	74KT35BFAP		74KT35DFAP		74KT350FAP		74KT35EFAP			
195	—	—	125	200	—	3RW4444-6BC35	74LT35BFAP		74LT35DFAP		74LT350FAP		74LT35EFAP			
243	—	—	150	200	—	3RW4445-6BC35	74MT35BFAP		74MT35DFAP		74MT350FAP		74MT35EFAP			
263	—	—	200	250	—	3RW4446-6BC35	74NT35BFAP		74NT35DFAP		74NT350FAP		74NT35EFAP			
326	—	—	250	300	—	3RW4447-6BC35	74PT35BFAP		74PT35DFAP		74PT350FAP		74PT35EFAP			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAT		74QT35DFAT		74QT350FAT		74QT35EFAT			
551	—	—	450	550	—	3RW4454-6BC35	74RT35BFAT		74RT35DFAT		74RT350FAT		74RT35EFAT			
615	—	—	500	600	—	3RW4455-6BC35	74ST35BFAT		74ST35DFAT		74ST350FAT		74ST35EFAT			
693	—	—	500	650	—	3RW4456-6BC35	74TT35BFAT		74TT35DFAT		74TT350FAT		74TT35EFAT			
780	—	—	550	700	—	3RW4457-6BC35	74WT35BFAT		74WT35DFAT		74WT350FAT		74WT35EFAT			
880	—	—	700	850	—	3RW4465-6BC35	74YT35BFAT				74YT350FAT					
940	—	—	750	900	—	3RW4466-6BC35	74ZT35BFAT				74ZT350FAT					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.
② Starter selection is dependent on type of application. Im = FLA rating of motor.

Enclosed 3RW44



3RW44 Enclosed features:
- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW44 is designed for normal starting applications.
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Fusible disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW44 For High Feature Applications

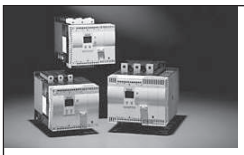
Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 10 Light Duty② (350% * Im for 10s)											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
100	30	30	75	—	56	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
117	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
145	40	50	100	—	75	3RW4436-6BC34	74JT3_BFAF		74JT3_DFAF		74JT3_0FAF		74JT3_EFAF		74JT3_WFAF	
180	60	60	125	—	93	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
215	60	75	150	—	112	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
280	75	100	200	—	149	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
315	100	125	250	—	186	3RW4446-6BC34	74NT3_BFAF		74NT3_DFAF		74NT3_0FAF		74NT3_EFAF			
385	125	150	300	—	224	3RW4447-6BC34	74PT3_BFAF		74PT3_DFAF		74PT3_0FAF		74PT3_EFAF			
494	150	200	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
615	200	250	500	—	373	3RW4455-6BC34	74ST3_BFAF				74ST3_0FAF					
693	200	250	550	—		3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
780	200	250	600	—	447	3RW4457-6BC34	74WT3_BFAF				74WT3_0FAF					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAF		74AT35DFAF		74AT350FAF		74AT35EFAF		74AT35WFAF	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAF		74BT35DFAF		74BT350FAF		74BT35EFAF		74BT35WFAF	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAF		74ET35DFAF		74ET350FAF		74ET35EFAF		74ET35WFAF	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAF		74FT35DFAF		74FT350FAF		74FT35EFAF		74FT35WFAF	
100	—	—	75	75	—	3RW4434-6BC35	74GT35BFAF		74GT35DFAF		74GT350FAF		74GT35EFAF		74GT35WFAF	
117	—	—	75	100	—	3RW4435-6BC35	74HT35BFAF		74HT35DFAF		74HT350FAF		74HT35EFAF		74HT35WFAF	
145	—	—	100	125	—	3RW4436-6BC35	74JT35BFAF		74JT35DFAF		74JT350FAF		74JT35EFAF		74JT35WFAF	
180	—	—	125	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
215	—	—	150	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
280	—	—	200	250	—	3RW4445-6BC35	74MT35BFAF		74MT35DFAF		74MT350FAF		74MT35EFAF			
315	—	—	250	300	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
385	—	—	300	400	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
551	—	—	450	600	—	3RW4454-6BC35	74RT35BFAF				74RT350FAF					
615	—	—	500	700	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	750	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	850	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

Enclosed 3RW44



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- Available in NEMA 1, 12, 3R, 4, and 4 stainless steel
- Compact size
- Built-in bypass contactor
- Multiple starting/stopping techniques including torque control
- Internal overload class 5, 10, 15, 20, or 30
- Built-in graphical LCD keypad
- Internal self protection
- Fault monitoring
- 3 parameter sets
- Communication capable via opt. Profibus module
- Programmable inputs and outputs
- External keypad available

Ordering Information

- ▶ Enclosed devices should be ordered by the FLA of the motor.
- ▶ The 3RW44 is designed for normal starting applications.
- ▶ For factory modifications see page 7/124.
- ▶ For dimensional drawings see page 7/125.

Class 74 non-combination starters include:
- NEMA rated enclosure
- 3RW44 Sirius softstarter with built-in OL and bypass
- Fusible disconnect
- Control circuit transformer
- Reset button

Ideal applications for 3RW44 enclosed softstarters:
- Fans
- Pumps
- Conveying systems and lifts
- Hydraulics
- Machine tools
- Mills saws
- Crushers and grinders
- Mixers
- HVAC systems

The 3RW44 severe duty rating table should be applied for high inertia applications such rock crushers, chippers, screw compressors, ect.

Class 74 starters are built to UL and CSA standards.

For all technical information, please consult the 2006 Industrial Controls Catalog or contact your local sales support center.

3RW44 For High Feature Applications

Enclosed Combination with Fusible Disconnect

Rated Operating Current	MAX HP①				KW	Class 20 Severe Duty (350% * Im for 20s)②											
	200V	230V	460V	575V	380V	OPEN Style (Starter Only)	NEMA 1	List Price $	NEMA 3R	List Price $	NEMA 12	List Price $	NEMA 4	List Price $	NEMA 4/4X Stainless Steel	List Price $
26	7.5	7.5	15	—	12	3RW4422-1BC34	74AT3_BFAF		74AT3_DFAF		74AT3_0FAF		74AT3_EFAF		74AT3_WFAF	
32	10	10	20	—	15	3RW4423-1BC34	74BT3_BFAF		74BT3_DFAF		74BT3_0FAF		74BT3_EFAF		74BT3_WFAF	
42	10	15	25	—	19	3RW4424-1BC34	74CT3_BFAF		74CT3_DFAF		74CT3_0FAF		74CT3_EFAF		74CT3_WFAF	
51	15	15	30	—	22	3RW4425-1BC34	74DT3_BFAF		74DT3_DFAF		74DT3_0FAF		74DT3_EFAF		74DT3_WFAF	
68	20	25	50	—	37	3RW4426-1BC34	74ET3_BFAF		74ET3_DFAF		74ET3_0FAF		74ET3_EFAF		74ET3_WFAF	
82	25	30	60	—	45	3RW4427-1BC34	74FT3_BFAF		74FT3_DFAF		74FT3_0FAF		74FT3_EFAF		74FT3_WFAF	
97	30	30	60	—	45	3RW4434-6BC34	74GT3_BFAF		74GT3_DFAF		74GT3_0FAF		74GT3_EFAF		74GT3_WFAF	
113	30	40	75	—	56	3RW4435-6BC34	74HT3_BFAF		74HT3_DFAF		74HT3_0FAF		74HT3_EFAF		74HT3_WFAF	
134	40	50	75	—	56	3RW4436-6BC34	74JT3_BFAF		74JT3_DFAF		74JT3_0FAF		74JT3_EFAF		74JT3_WFAF	
175	50	60	100	—	75	3RW4443-6BC34	74KT3_BFAF		74KT3_DFAF		74KT3_0FAF		74KT3_EFAF			
195	60	75	125	—	93	3RW4444-6BC34	74LT3_BFAF		74LT3_DFAF		74LT3_0FAF		74LT3_EFAF			
243	75	75	150	—	112	3RW4445-6BC34	74MT3_BFAF		74MT3_DFAF		74MT3_0FAF		74MT3_EFAF			
263	75	100	200	—	149	3RW4446-6BC34	74NT3_BFAF		74NT3_DFAF		74NT3_0FAF		74NT3_EFAF			
326	100	125	250	—	186	3RW4447-6BC34	74PT3_BFAF		74PT3_DFAF		74PT3_0FAF		74PT3_EFAF			
494	150	150	400	—	298	3RW4453-6BC34	74QT3_BFAF				74QT3_0FAF					
551	150	200	450	—	336	3RW4454-6BC34	74RT3_BFAF				74RT3_0FAF					
615	200	200	500	—	373	3RW4455-6BC34	74ST3_BFAF				74ST3_0FAF					
634	200	250	500	—	373	3RW4456-6BC34	74TT3_BFAF				74TT3_0FAF					
650	200	250	550	—	373	3RW4457-6BC34	74WT3_BFAF				74WT3_0FAF					
						200V	6		6		6		6		6	
						230V	2		2		2		2		2	
						380V	3		3		3		3		3	
						460V	4		4		4		4		4	
26	—	—	15	20	—	3RW4422-1BC35	74AT35BFAF		74AT35DFAF		74AT350FAF		74AT35EFAF		74AT35WFAF	
32	—	—	20	25	—	3RW4423-1BC35	74BT35BFAF		74BT35DFAF		74BT350FAF		74BT35EFAF		74BT35WFAF	
42	—	—	25	30	—	3RW4424-1BC35	74CT35BFAF		74CT35DFAF		74CT350FAF		74CT35EFAF		74CT35WFAF	
51	—	—	30	40	—	3RW4425-1BC35	74DT35BFAF		74DT35DFAF		74DT350FAF		74DT35EFAF		74DT35WFAF	
68	—	—	50	50	—	3RW4426-1BC35	74ET35BFAF		74ET35DFAF		74ET350FAF		74ET35EFAF		74ET35WFAF	
82	—	—	60	75	—	3RW4427-1BC35	74FT35BFAF		74FT35DFAF		74FT350FAF		74FT35EFAF		74FT35WFAF	
97	—	—	60	75	—	3RW4434-6BC35	74GT35BFAF		74GT35DFAF		74GT350FAF		74GT35EFAF		74GT35WFAF	
113	—	—	75	100	—	3RW4435-6BC35	74HT35BFAF		74HT35DFAF		74HT350FAF		74HT35EFAF		74HT35WFAF	
134	—	—	75	125	—	3RW4436-6BC35	74JT35BFAF		74JT35DFAF		74JT350FAF		74JT35EFAF		74JT35WFAF	
175	—	—	100	150	—	3RW4443-6BC35	74KT35BFAF		74KT35DFAF		74KT350FAF		74KT35EFAF			
195	—	—	125	200	—	3RW4444-6BC35	74LT35BFAF		74LT35DFAF		74LT350FAF		74LT35EFAF			
243	—	—	150	200	—	3RW4445-6BC35	74MT35BFAF		74MT35DFAF		74MT350FAF		74MT35EFAF			
263	—	—	200	250	—	3RW4446-6BC35	74NT35BFAF		74NT35DFAF		74NT350FAF		74NT35EFAF			
326	—	—	250	300	—	3RW4447-6BC35	74PT35BFAF		74PT35DFAF		74PT350FAF		74PT35EFAF			
494	—	—	400	500	—	3RW4453-6BC35	74QT35BFAF				74QT350FAF					
551	—	—	450	550	—	3RW4454-6BC35	74RT35BFAF				74RT350FAF					
615	—	—	500	600	—	3RW4455-6BC35	74ST35BFAF				74ST350FAF					
693	—	—	550	650	—	3RW4456-6BC35	74TT35BFAF				74TT350FAF					
780	—	—	600	700	—	3RW4457-6BC35	74WT35BFAF				74WT350FAF					

① Starter size is dependent on the nameplate Full Load Amps (FLA) rating of the motor. HPs are for reference only. Enclosed ratings are at 40°C.

② Starter selection is dependent on type of application. Im = FLA rating of motor.

Factory Modifications

Modification Available modifications in STANDARD enclosure	3RW Version	Enclosed Style	Enclosure NEMA Type	Mod Suffix
Push Buttons				
Start/Stop	3RW40/44	73/74	ALL	A1
Emergency Stop	3RW40/44	73/74	ALL	ES
Selector Switches				
Hand-Off-Auto	3RW40/44	73/74	ALL	A3
Hand-Off-Auto w/ start pushbutton	3RW40/44	73/74	ALL	S3
Off-On	3RW40/44	73/74	ALL	A4
Pilot Light				
Red 'On'	3RW40/44	73/74	ALL	FA
Green 'On'	3RW40/44	73/74	ALL	FB
Red 'Run'	3RW40/44	73/74	ALL	FC
Green 'Run'	3RW40/44	73/74	ALL	FD
LED Bulb Upgrade④	3RW40/44	73/74	ALL	FE
Red 'Off'	3RW40/44	73/74	ALL	FJ
Green 'Off'	3RW40/44	73/74	ALL	FK
Amber 'Fault'	3RW40/44	73/74	ALL	FL
White 'Control Power On'	3RW40/44	73/74	ALL	FW
Red, 'On' Push-to-Test	3RW40/44	73/74	ALL	FS
Green 'On' Push-to-Test	3RW40/44	73/74	ALL	FT
Green 'Off' Push-to-Test	3RW40/44	73/74	ALL	FU
Custom pilot light (state color and nameplate text)	3RW40/44	73/74	ALL	FZ
Through the Door Metering				
External keypad for 3RW44	3RW44	73/74	1,12	K1
Elapse time meter	3RW40/44	73/74	1,12 (120V)	M5
Control Options				
Profibus Communication Module (installed-connection cable not supplied)	3RW44	73/74	ALL	P1
Profinet Communication Module (installed-connection cable not supplied)	3RW44	73/74	ALL	P2
Ground Lug - 1 Conductor	3RW40/44	73/74	ALL	L10
Alarm Package (horn, light, relay & push button)	3RW40/44	73/74	1,3R,12	M7
Electronic 8 function timing relay (.05s - 100h) 24V/100-127V supplied mounted and unwired	3RW40/44	73/74	ALL	TR
Control Relay supplied mounted and unwired (4 pole max)	3RW40/44	73/74	ALL	R04 R22 R40
Circuit Breaker Shunt Trip (included std in 3RW40 versions)	3RW44	74	ALL	L6
Function identification plate w/ marking as specified	3RW40/44	73/74	ALL	N1
Service Entrance Labeled	3RW40/44	74	ALL	N3
Terminal Block 3 point	3RW40/44	73/74	ALL	TC3
Terminal Block 6 point	3RW40/44	73/74	ALL	TC6
Terminal Block 9 point	3RW40/44	73/74	ALL	TC9
Terminal Block 12 point	3RW40/44	73/74	ALL	TC12

Emergency HP Rated Bypass Starter	3RW Version	Class	Enclosure NEMA Type	Mod Suffix
	3RW40①②	73/74	1/12/3R/4	A12

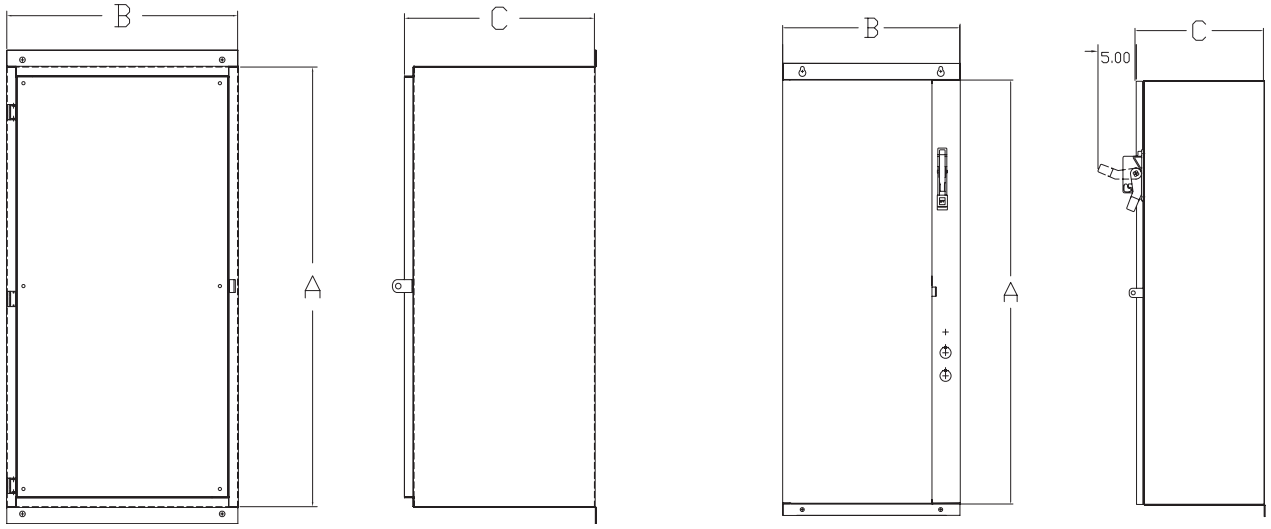
Available Modifications Requiring the MODIFIED OPTIONS Box Size (to be used with the selections ending in GA*)	3RW Version	Class	Enclosure NEMA Type	Mod Suffix
Isolation Contactor ③	3RW40/44	73/74	1/12/3R/4	IC
100 VA Extra CPT Capacity	3RW40/44	73/74	ALL	CA
Space Heater (120V separate control)	3RW40/44	73/74	ALL	SH
Space Heater w/ T-stat (120V separate control)	3RW40/44	73/74	ALL	ST
Lightning Arrestor	3RW40/44	73/74	ALL	L

① (A) For sizes 73YT & 73ZT, mods IC & A12 are available individually or together; (B) For sizes 74YT & 74ZT (combination w\CB), mods IC & A12 are only available individually (NOT together); (C) For sizes 74YT & 74ZT (combination w\ fusible disc), mods IC & A12 are NOT available individually or together.

② An isolation contactor is included with the emergency HP rated bypass starter for version 3RW40 soft starters.

③ Isolation contactor IC is included as standard with version 3RW40 model R (4th character of the cat. no.) soft starters.

④ Pilot lights are transformer type as standard. For LED type bulbs, order suffix FE in addition to the standard device suffix(es). For example, to order red "ON" and green "OFF" pilot lights with LED bulbs, order FA, FK and FE.



Dimensions are in inches and are for reference only (not for construction). Certain styles may deviate from values indicated.

Non-Combination Class 73

N1, N3R, N12, N4 Standard Enclosure

	Amps	A	B	C
3RW40new	11 - 73	25	18	13
	98	36	23	10
3RW40	117-145	36	18	15
	205-315	36	22	20
	385	54	36	20
3RW44	26 - 68	26	12.5	15
	82 - 117	36	18	15
	145 - 215	36	22	20
	280 - 385	54	36	20
	494 - 780	90	40	20
	970 - 1076	90	50	20

N4X Stainless Steel Standard Enclosure

	Amps	A	B	C
3RW40new	11- 98	55	29	11
3RW40	117	36	18	15
	145 - 205A	36	22	20
	248 - 385	54	36	20
3RW44	26 - 51	26	12.5	15
	68 - 82	36	18	15
	100 - 117	36	22	20
	145 - 385	54	36	20

N1, N3R, N12, N4 Modified Enclosure

	Amps	A	B	C
3RW40	117-385	56	36	20
3RW44	26-51	36	22	20
	68-385	54	36	20

N4X Stainless Steel Modified Enclosure

	Amps	A	B	C
3RW40	117-385	54	36	20
3RW44	26-51	36	22	20
	68-385	54	36	20

① Add 4" for N4.

Combination Type Class 74

N1, N3R, N12, N4 Standard Enclosure

	Amps	A	B	C
3RW40new	11 - 73	36	20	11
	98	46	20	10
3RW40	117	50	25	20
	145 - 205	66	25	20
	248 - 315	90	30	20
	385	90	40	20
3RW44	26 - 68	36	23	15
	82 - 117	50	25	20
	145 - 215	66	25	20
	280	90	30	20
	315 - 384	90	40	20
	494	90	40	20
	551 - 780	90	40①	20
	970 - 1076	90	50	20

N1, N12 Fusible

	Amps	A	B	C
3RW44	494-780	90	50	20

N4X Stainless Steel Standard Enclosure

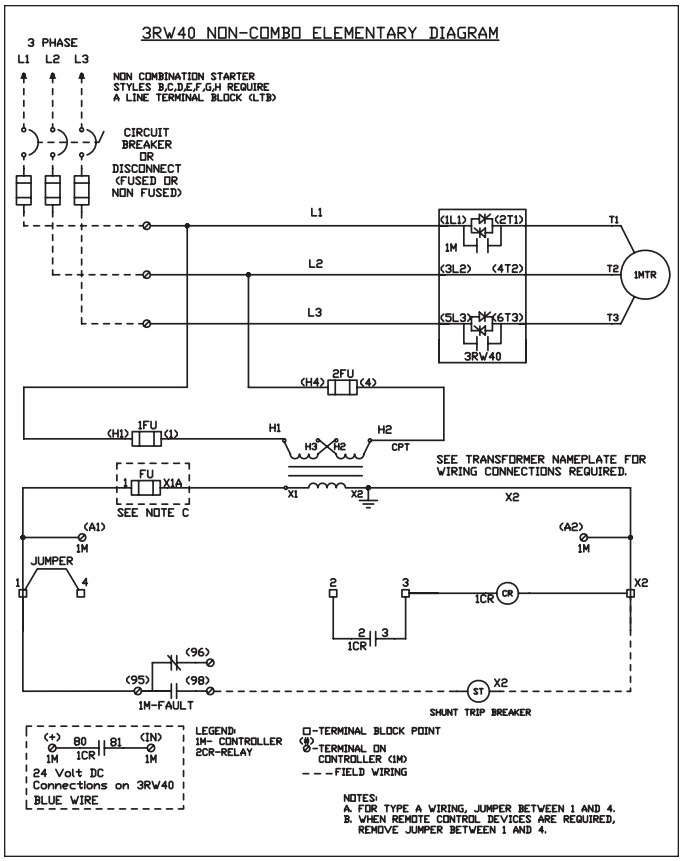
	Amps	A	B	C
3RW40new	11- 98	55	29	11
3RW40	117 - 145	54	36	20
	205 - 300	90	40	20
3RW44	26 - 42	36	23	15
	51 - 100	50	25	20
	117 - 145	54	36	20
	180 - 385	90	40	20

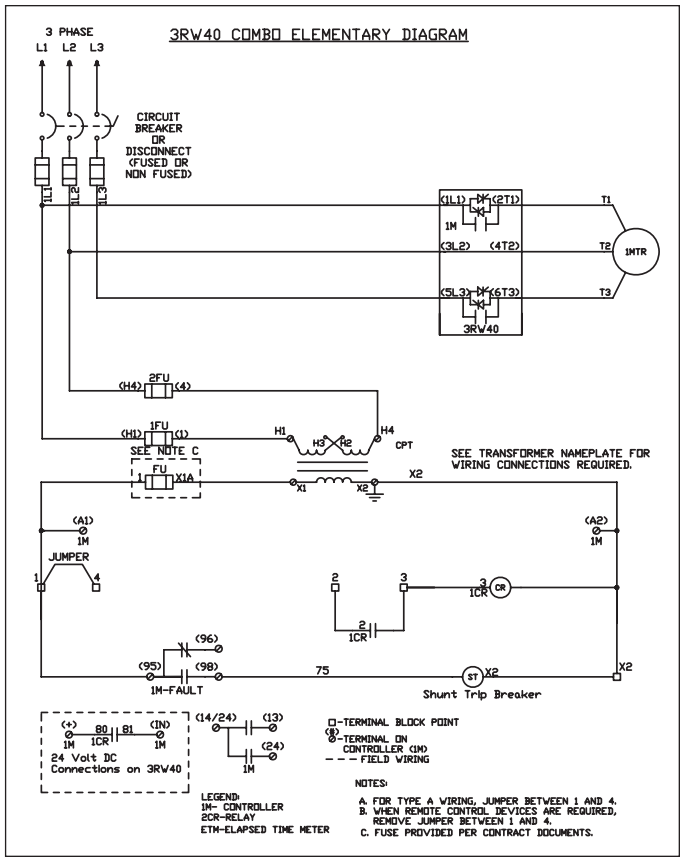
N1, N3R, N12, N4 Modified Enclosure

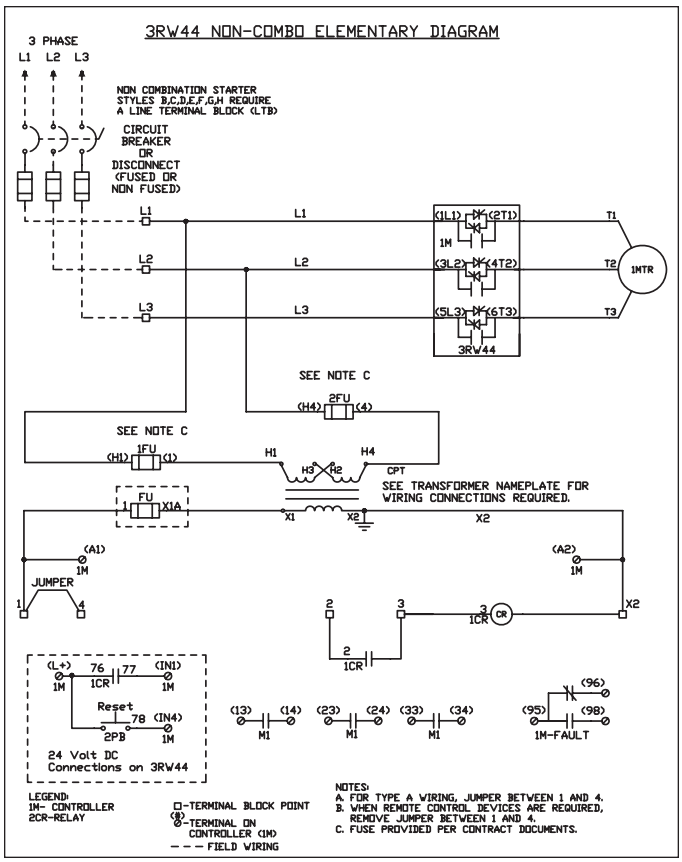
	Amps	A	B	C
3RW40	117 - 248	76	30	20
	315	90	30	20
	385	90	40	20
3RW44	26 - 215	76	30	20
	280	90	30	20
	315 - 385	90	40	20

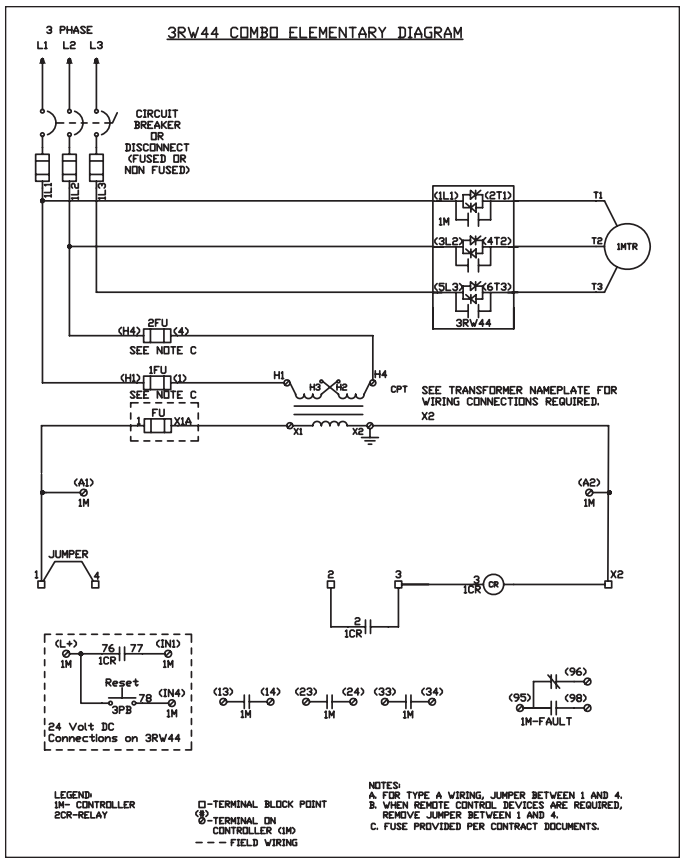
N4X Stainless Steel Modified Enclosure

	Amps	A	B	C
3RW40	117-145	76	30	20
3RW44	26-145	76	30	20


3RW40 NON-COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
NON COMBINATION STARTER
STYLES B,C,D,E,F,G,H REQUIRE
A LINE TERMINAL BLOCK (LTB)
CIRCUIT
BREAKER
OR
DISCONNECT
(FUSED OR
NON FUSED)
1MTR
3RW40
2FU
1FU
CPT
SEE TRANSFORMER NAMEPLATE FOR
WIRING CONNECTIONS REQUIRED.
SEE NOTE C
JUMPER
1CR
1M-FAULT
SHUNT TRIP BREAKER
24 Volt DC
Connections on 3RW40
BLUE WIRE
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON
CONTROLLER (1M)
---FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED,
REMOVE JUMPER BETWEEN 1 AND 4.


3RW40 COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
CIRCUIT
BREAKER
OR
DISCONNECT
(FUSED OR
NON FUSED)
1MTR
3RW40
2FU
1FU
CPT
SEE NOTE C
SEE TRANSFORMER NAMEPLATE FOR
WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
1M-FAULT
Shunt Trip Breaker
24 Volt DC
Connections on 3RW40
LEGEND:
1M- CONTROLLER
2CR-RELAY
ETM-ELAPSED TIME METER
-TERMINAL BLOCK POINT
-TERMINAL ON
CONTROLLER (1M)
---FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED,
REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.


3RW44 NON-COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
NON COMBINATION STARTER
STYLES B,C,D,E,F,G,H REQUIRE
A LINE TERMINAL BLOCK (LTB)
CIRCUIT
BREAKER
OR
DISCONNECT
(FUSED OR
NON FUSED)
1MTR
3RW44
SEE NOTE C
2FU
1FU
CPT
SEE TRANSFORMER NAMEPLATE FOR
WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
Reset
2PB
24 Volt DC
Connections on 3RW44
1M-FAULT
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON
CONTROLLER (1M)
---FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED,
REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.


3RW44 COMBO ELEMENTARY DIAGRAM
3 PHASE
L1 L2 L3
CIRCUIT
BREAKER
OR
DISCONNECT
(FUSED OR
NON FUSED)
1MTR
3RW44
2FU
SEE NOTE C
1FU
CPT
SEE TRANSFORMER NAMEPLATE FOR
WIRING CONNECTIONS REQUIRED.
JUMPER
1CR
Reset
3PB
24 Volt DC
Connections on 3RW44
1M-FAULT
LEGEND:
1M- CONTROLLER
2CR-RELAY
-TERMINAL BLOCK POINT
-TERMINAL ON
CONTROLLER (1M)
---FIELD WIRING
NOTES:
A. FOR TYPE A WIRING, JUMPER BETWEEN 1 AND 4.
B. WHEN REMOTE CONTROL DEVICES ARE REQUIRED,
REMOVE JUMPER BETWEEN 1 AND 4.
C. FUSE PROVIDED PER CONTRACT DOCUMENTS.

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 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)

[1] Refer 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	6SL3220-0YC10-0UU0
	1.1	1.5	6	6SL3220-0YC12-0UU0
	1.5	2	7.4	6SL3220-0YC14-0UU0
FSB	2	3	10.4	6SL3220-0YC16-0UU0
	3	4	13.6	6SL3220-0YC18-0UU0
	4	5.0	17.5	6SL3220-0YC20-0UU0
FSC	5.5	7.5	22	6SL3220-0YC22-0UU0
	7.5	10	28	6SL3220-0YC24-0UU0
FSD	11	15	42	6SL3220-0YC26-0UU0
	15	20	54	6SL3220-0YC28-0UU0
	18.5	25	68	6SL3220-0YC30-0UU0
FSE	22	30	80	6SL3220-0YC32-0UU0
	30	40	104	6SL3220-0YC34-0UU0
FSF	37	50	130	6SL3220-0YC36-0UU0
	45	60	154	6SL3220-0YC38-0UU0
	55	75	192	6SL3220-0YC40-0UU0

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 extenstion module	**0**
with I/O extenstion 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	6SL3220-0YE10-0
	1.1	1.5	3	6SL3220-0YE12-0
	1.5	2	3.4	6SL3220-0YE14-0
	2.2	3	4.8	6SL3220-0YE16-0
	3	4	6.2	6SL3220-0YE18-0
FSB	4	5	7.6	6SL3220-0YE20-0
	5.5	7.5	11	6SL3220-0YE22-0
	7.5	10	14	6SL3220-0YE24-0
FSC	11	15	21	6SL3220-0YE26-0
	15	20	27	6SL3220-0YE28-0
FSD	18.5	25	34	6SL3220-0YE30-0
	22	30	40	6SL3220-0YE32-0
	30	40	52	6SL3220-0YE34-0
	37	50	65	6SL3220-0YE36-0
FSE	45	60	77	6SL3220-0YE38-0
	55	75	96	6SL3220-0YE40-0
FSF	75	100	124	6SL3220-0YE42-0
	90	125	156	6SL3220-0YE44-0
	110	150	180	6SL3220-0YE46-0
	132	200	240	6SL3220-0YE48-0
FSG	160	250	302	6SL3220-0YE50-0
	200	300	361	6SL3220-0YE52-0
	250	400	477	6SL3220-0YE54-0
FSH	315	400	477	6SL3220-2YE56-0C0
	355	450	515	6SL3220-2YE58-0C0
	400	500	590	6SL3220-2YE60-0C0
FSJ	450	500	663	6SL3220-2YE62-0C0
	500	600	724	6SL3220-2YE64-0C0
	560	700	830	6SL3220-2YE66-0C0

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 extenstion module	**0**
with I/O extenstion 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

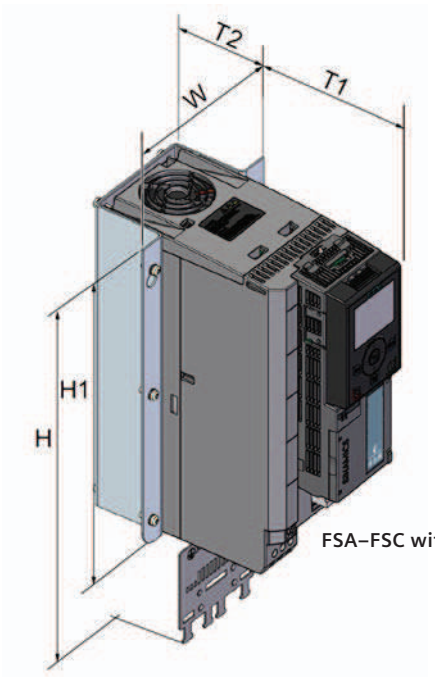
Voltage class 3AC 500...690V, 47...63Hz

Frame size	kW (690V)	hp (600V)	Rated Output Current I_L, A (600V)	Order number
FSD	3	4	5	6SL3220-0YH18-0□□0
	4	5	6.3	6SL3220-0YH20-0□□0
	5.5	7.5	9	6SL3220-0YH22-0□□0
	7.5	10	11	6SL3220-0YH24-0□□0
	11	10	14	6SL3220-0YH26-0□□0
	15	15	19	6SL3220-0YH28-0□□0
	18.5	20	23	6SL3220-0YH30-0□□0
	22	25	27	6SL3220-0YH32-0□□0
	30	30	35	6SL3220-0YH34-0□□0
	37	40	42	6SL3220-0YH36-0□□0
FSE	45	50	52	6SL3220-0YH38-0□□0
	55	60	62	6SL3220-0YH40-0□□0
FSF	75	75	80	6SL3220-0YH42-0□□0
	90	100	100	6SL3220-0YH44-0□□0
	110	125	125	6SL3220-0YH46-0□□0
	132	150	144	6SL3220-0YH48-0□□0
FSG	160	150	171	6SL3220-0YH50-0□C0
	200	200	208	6SL3220-0YH52-0□C0
	250	250	250	6SL3220-0YH54-0□C0
FSH	315	350	345	6SL3220-2YH56-0□C0
	355	400	388	6SL3220-2YH58-0□C0
	400	450	432	6SL3220-2YH60-0□C0
	450	500	487	6SL3220-2YH62-0□C0
FSJ	500	500	546	6SL3220-2YH64-0□C0
	560	600	610	6SL3220-2YH66-0□C0
	630	700	679	6SL3220-2YH68-0□C0

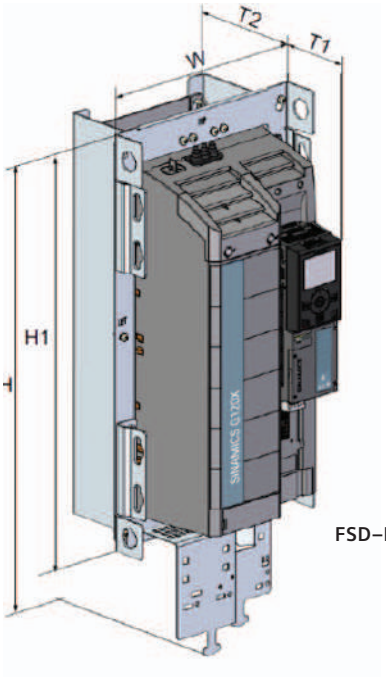
Order number		
Special coating according to IEC/EN 60721-3-3		
Class 3C2 (Standard)	2	
Class 3C3*	3	
User interface		
Blank (No operator panel/keypad)	1	
BOP-2 (Basic keypad, Class 3C3*)	2	
IOP-2 (Standard — high-resolution graphical color keypad, Class 3C3*)	3	
I/O extension module		
without I/O extenstion module	0	
with I/O extenstion 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.



FSA–FSC with PT kit



FSD–FSG with PT kit

SINAMICS G120X IP20 Push-Through kits

SINAMICS G120X	Push-Through kit (PT)	Overall dimensions of SINAIMCS 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 (H_2S), Chlorine (Cl) or Ammonia (NH_3) 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

Notes