

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

#### Overview

In addition to soft starting and soft ramp-down, the solid-state SIRIUS 3RW44 soft starters provide numerous functions for higher-level requirements. They cover a performance range up to 710 kW (at 400 V) in the inline circuit and up to 1200 kW (at 400 V) in the inside-delta circuit.

The 3RW44 soft starters are characterized by a compact design for space-saving and clearly arranged control cabinet layouts. For optimized motor starting and stopping the innovative SIRIUS 3RW44 soft starters are an attractive alternative with considerable savings potential compared to applications with a frequency converter. The new torque control and adjustable current limiting enable the High-Feature soft starters to be used in nearly every conceivable task. They guarantee the reliable avoidance of sudden torque applications and current peaks during motor starting and stopping. This creates savings potential when calculating the size of the switchgear and when servicing the machinery installed. Be it for inline circuits or inside-delta circuits – the SIRIUS 3RW44 soft starter offers savings especially in terms of size and equipment costs.

The bypass contacts already integrated in the soft starter bypass the thyristors after a motor ramp-up is detected. This results in a further great reduction in the heat loss occurring during operation of the soft starter at rated value.

Combinations of various starting, operating and ramp-down possibilities ensure an optimum adaptation to the application-specific requirements. Operation and commissioning can be performed with the menu-controlled keypad and a menu-prompted, multi-line graphic display with background lighting. The optimized motor ramp-up and ramp-down can be effected quickly, easily and reliably by means of just a few settings with a previously selected language. Four-key operation and plain-text displays for each menu point guarantee full clarity at every moment of the parameterization and operation.

#### Applicable standards

- IEC 60947-4-2
- UL/CSA

#### Functionality

Equipped with modern, ergonomic user prompting the 3RW44 soft starters can be commissioned quickly and easily using a keypad and a menu-prompted, multi-line graphic display with background lighting. The optimized motor ramp-up and ramp-down can be effected quickly, easily and reliably by means of just a few settings with a selectable language. Four-key operation and plain-text displays for each menu point guarantee full clarity at every moment of the parameterization and operation. During operation and when control voltage is applied, the display field continuously presents measured values and operating values as well as warnings and fault messages. An external display and operator module can be connected by means of a connection cable to the soft starter, thus enabling active indications and the like to be read directly from the control cabinet door.

The SIRIUS 3RW44 soft starters are equipped with optimum functionality. An integral bypass contact system reduces the power loss of the soft starter during operation. This reliably prevents heating of the switchgear environment. The SIRIUS 3RW44 soft starters have internal intrinsic device protection. This prevents thermal overloading of the power section's thyristors, e. g. due to unacceptably high closing operations.

Wiring outlay for installing an additional motor overload relay is no longer needed as the SIRIUS 3RW44 soft starters perform this function too. In addition they offer adjustable trip classes and a thermistor motor protection function. As an option the thyristors can also be protected by SITOR semiconductor fuses from short-circuiting so that the soft starter is still functional after a short circuit (coordination type "2"). And even inrush current peaks are reliably avoided thanks to adjustable current limiting.

As a further option the SIRIUS 3RW44 soft starters can be upgraded with a PROFIBUS DP module. Thanks to their communication capability and their programmable control inputs and relay outputs the SIRIUS 3RW44 soft starters can be very easily and quickly integrated in higher-level controllers.

In addition a creep speed function is available for positioning and setting jobs. With this function the motor can be controlled in both directions of rotation with reduced torque and an adjustable, low speed.

On the other hand the SIRIUS 3RW44 soft starters offer a new, combined DC braking function for the fast stopping of driving loads.

#### Highlights

- Soft starting with breakaway pulse, torque control or voltage ramp, adjustable torque or current limiting as well as any combination of these, depending on load type
- Integrated bypass contact system to minimize power loss
- Various setting options for the starting parameters such as starting torque, starting voltage, ramp-up and ramp-down time, and much more in three separate parameter sets
- Start-up detection
- Inside-delta circuit for savings in terms of size and equipment costs
- Various ramp-down modes selectable: free ramp-down, torque-controlled pump ramp-down, combined DC braking
- Solid-state motor overload and intrinsic device protection
- Thermistor motor protection
- Keypad with a menu-prompted, multi-line graphic display with background lighting
- Interface for communication with the PC for more accurate setting of the parameters as well as for control and monitoring
- Simple adaptation to the motor feeder
- Simple mounting and commissioning
- Display of operating states and fault messages
- Connection to PROFIBUS with optional PROFIBUS DP module
- External display and operator module
- Mains voltages from 200 to 690 V, 50 to 60 Hz
- Can be used up to 60 °C (derating from 40 °C)

#### Soft Starter ES parameterization software<sup>1)</sup>

Soft Starter ES software is used for the parameterization, monitoring and service diagnostics of SIRIUS 3RW44 High Feature soft starters.

#### SIRIUS 3RW44 Soft Starter Function Block Library for SIMATIC PCS 7<sup>1)</sup>

The SIRIUS 3RW44 soft starter PCS 7 function block library can be used for simple and easy integration of SIRIUS 3RW44 soft starters into the SIMATIC PCS 7 process control system.

<sup>1)</sup> See Chapter 12 "Planning, Configuration and Visualizing for SIRIUS".

#### Application

The SIRIUS 3RW44 solid-state soft starters are suitable for the torque-controlled soft starting and smooth ramp-down as well as braking of three-phase asynchronous motors.

#### Application areas

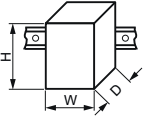
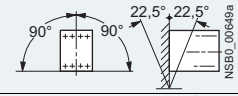
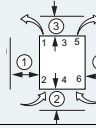
See "Selection aid for soft starters" on page 4/6.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### Technical specifications

Type		3RW44 2.	3RW44 3.	3RW44 4.	3RW44 5.	3RW44 6.	
<b>Mechanics and environment</b>							
<b>Mounting dimensions (WxHxD)</b>							
<ul style="list-style-type: none"> <li>Screw terminals</li> <li>Spring-type terminals</li> </ul>		mm	170 x 184 x 270	170 x 198 x 270	210 x 230 x 298	510 x 638.5 x 290	576 x 667 x 290
		mm	170 x 184 x 270	170 x 198 x 270	210 x 230 x 298	510 x 638.5 x 290	576 x 667 x 290
<b>Permissible ambient temperature</b>							
Operation	°C	0 ... +60; (derating from +40)					
Storage	°C	-25 ... +80					
<b>Weight</b>	kg	6.5	7.9	11.5	50	78	
<b>Permissible mounting position</b>							
							
<b>Installation type</b>							
Stand-alone installation							
							
<ul style="list-style-type: none"> <li>① ≥ 5 mm (≥ 0.2 in)</li> <li>② ≥ 75 mm (≥ 3 in)</li> <li>③ ≥ 100 mm (≥ 4 in)</li> </ul>							
<b>Permissible installation altitude</b>							
	m	5 000 (derating from 1000, see <a href="#">Characteristic curves page 4/7</a> ); higher on request					
<b>Degree of protection</b>							
IP00							

Type	Terminal		3RW44 ...BC3.	3RW44 ...BC4.
<b>Control electronics</b>				
<b>Rated values</b>				
Rated control supply voltage	A1/A2/PE	V	115 AC	230 AC
• Tolerance		%	-15/+10	-15/+10
Rated frequency		Hz	50 ... 60	50 ... 60
• Tolerance		%	±10	±10

Type		3RW44 ...BC.4	3RW44 ...BC.5	3RW44 ...BC.6
<b>Power electronics</b>				
<b>Rated operational voltage for inline circuit</b>	V AC	200 ... 460	400 ... 600	400 ... 690
Tolerance	%	-15/+10	-15/+10	-15/+10
<b>Maximum blocking voltage (thyristor)</b>	V AC	1 400	1 800	1 800
<b>Rated operational voltage for inside-delta circuit</b>	V AC	200 ... 460	400 ... 600	400 ... 600
Tolerance	%	-15/+10	-15/+10	-15/+10
<b>Rated frequency</b>	Hz	50 ... 60		
Tolerance	%	±10		
<b>Uninterrupted duty at 40 °C (% of I<sub>e</sub>)</b>	%	115		
<b>Minimum load (% of set motor current I<sub>M</sub>)</b>	%	8		
<b>Maximum cable length</b> between soft starter and motor	m	500 <sup>1)</sup>		

<sup>1)</sup> At the project configuration stage, it is important to make allowance for the voltage drop on the motor cable up to the motor connection. If necessary, higher values for the rated operational voltage or current must be calculated accordingly for the soft starter.

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#### Motor feeders with soft starters

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

If type of coordination "2" is to be fulfilled, 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 therefore unsuitable for further use (protection of persons and equipment guaranteed).

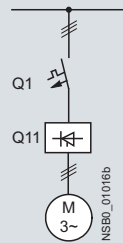
ToC  
2

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 equipment guaranteed).

The type of coordination refers to soft starters in combination with the stipulated protective device (motor starter protector/circuit breaker/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.

#### Inline circuit fuseless version



Soft starters		Motor starter protectors/circuit breakers <sup>1)</sup>	
Q11 Type	Rated current A	Q1 Type	Rated current A
<b>Type of coordination "1": 3RW44 22 ... 3RW44 27: <math>I_q = 32 \text{ kA}</math>; 3RW44 34 and 3RW44 35: <math>I_q = 16 \text{ kA}</math>; 3RW44 36 ... 3RW44 66: <math>I_q = 65 \text{ kA}</math></b>			
3RW44 22	29	3RV10 42-4HA10	50
3RW44 23	36	3RV10 42-4JA10	63
3RW44 24	47	3RV10 42-4KA10	75
3RW44 25	57	3RV10 42-4LA10	90
3RW44 26	77	3RV10 42-4MA10	100
3RW44 27	93	3RV10 42-4MA10	100
3RW44 34	113	3VL17 16-2DD36	160
3RW44 35	134	3VL17 16-2DD36	160
3RW44 36	162	3VL37 25-2DC36	250
3RW44 43	203	3VL47 31-3DC36	315
3RW44 44	250	3VL47 31-3DC36	315
3RW44 45	313	3VL47 40-3DC36	400
3RW44 46	356	3VL47 40-3DC36	400
3RW44 47	432	3VL57 50-3DC36	500
3RW44 53	551	3VL67 80-3AB36	800
3RW44 54	615	3VL67 80-3AB36	800
3RW44 55	693	3VL67 80-3AB36	800
3RW44 56	780	3VL77 10-3AB36	1 000
3RW44 57	880	3VL77 10-3AB36	1 000
3RW44 58	970	3VL77 12-3AB36	1 250
3RW44 65	1 076	3VL77 12-3AB36	1 250
3RW44 66	1 214	3VL77 12-3AB36	1 250

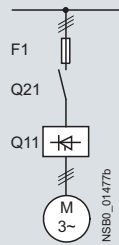
<sup>1)</sup> The rated motor current must be considered when selecting the devices.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### Inline circuit fused version (line protection only)



Soft starters Q11 Type	Rated current A	Line fuses, maximum 690 V +5 %			Line contactor up to 400 V (optional)		Braking contactors <sup>1)2)</sup> (for example circuit see the 3RW44 manual)	
		F1 Type	Rated current A	Size	Q21 Type	Q91 Type	Q92 Type	
<b>Type of coordination "1"<sup>3)</sup>: <math>I_q = 65 \text{ kA}</math></b>								
3RW44 22	29	3NA3 820-6	50	00	3RT10 34	3RT15 26	--	
3RW44 23	36	3NA3 822-6	63	00	3RT10 35	3RT15 26	--	
3RW44 24	47	3NA3 824-6	80	00	3RT10 36	3RT15 35	--	
3RW44 25	57	3NA3 830-6	100	00	3RT10 44	3RT15 35	--	
3RW44 26	77	3NA3 132-6	125	1	3RT10 45	3RT10 24	3RT10 35	
3RW44 27	93	3NA3 136-6	160	1	3RT10 46	3RT10 25	3RT10 36	
3RW44 34	113	3NA3 244-6	250	2	3RT10 54	3RT10 34	3RT10 44	
3RW44 35	134	3NA3 244-6	250	2	3RT10 55	3RT10 36	3RT10 45	
3RW44 36	162	3NA3 365-6	500	3	3RT10 56	3RT10 44	3RT10 45	
3RW44 43	203	2 x 3NA3 354-6	2 x 355	3	3RT10 64	3RT10 44	3RT10 54	
3RW44 44	250	2 x 3NA3 354-6	2 x 355	3	3RT10 65	3RT10 44	3RT10 55	
3RW44 45	313	2 x 3NA3 365-6	2 x 500	3	3RT10 75	3RT10 54	3RT10 56	
3RW44 46	356	2 x 3NA3 365-6	2 x 500	3	3RT10 75	3RT10 54	3RT10 56	
3RW44 47	432	2 x 3NA3 365-6	2 x 500	3	3RT10 76	3RT10 55	3RT10 64	
3RW44 53	551	2 x 3NA3 365-6	2 x 500	3	3TF68	3RT10 64	3RT10 66	
3RW44 54	615	2 x 3NA3 365-6	2 x 500	3	3TF68	3RT10 64	3RT10 75	
3RW44 55	693	2 x 3NA3 365-6	2 x 500	3	3TF69	3RT10 65	3RT10 75	
3RW44 56	780	2 x 3NA3 365-6	2 x 500	3	3TF69	3RT10 65	3RT10 75	
3RW44 57	880	2 x 3NA3 365-6	2 x 500	3	--	3RT10 75	3RT10 76	
3RW44 58	970	3 x 3NA3 365-6	3 x 500	3	--	3RT10 75	3RT10 76	
3RW44 65	1076	3 x 3NA3 365-6	3 x 500	3	--	3RT10 75	3TF68	
3RW44 66	1214	3 x 3NA3 365-6	3 x 500	3	--	3RT10 76	3TF68	

<sup>1)</sup> If the ramp-down function "Combined braking" is selected, no braking contactor is required.  
If the ramp-down function "DC braking" is selected, a braking contactor must be used in addition (see table for type).  
For applications with large centrifugal masses ( $J_{Load} > J_{Motor}$ ) we recommend the function "DC braking".

<sup>2)</sup> Additional auxiliary relay K4:  
LZX:RT4A4T30  
(3RW44 soft starter with rated control supply voltage 230 V AC),  
LZX:RT4A4S15  
(3RW44 soft starter with rated control supply voltage 115 V AC).

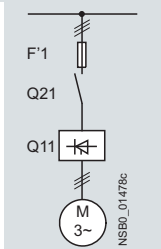
<sup>3)</sup> The type of coordination "1" refers to soft starters in combination with the stipulated fuse, not to any additional components in the feeder.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

Inline circuit fused version with 3NE1 SITOR all-range fuse (semiconductor and line protection)



For matching fuse bases see Catalog LV 10.1

- "Switch Disconnectors"
- "Fuse Systems" --> "SITOR Semiconductor Fuses" or at [www.siemens.com/sitor](http://www.siemens.com/sitor)

Soft starters Q11 Type	ToC 2 Rated current A	All-range fuses F'1 Type				Voltage V	Size	Line contactor up to 400 V (optional) Q21 Type	Braking contactors <sup>1)2)</sup> (for example circuit see the 3RW44 manual) Q91 Type		Q92 Type
		Rated current A	Rated current A	Voltage V	Size						
<b>Type of coordination "2"<sup>3)</sup>: <math>I_q = 65 \text{ kA}</math></b>											
3RW44 22	29	3NE1 020-2	80	690 +5 %	00	3RT10 34	3RT15 26	--			
3RW44 23	36	3NE1 020-2	80	690 +5 %	00	3RT10 35	3RT15 26	--			
3RW44 24	47	3NE1 021-2	100	690 +5 %	00	3RT10 36	3RT15 35	--			
3RW44 25	57	3NE1 022-2	125	690 +5 %	00	3RT10 44	3RT15 35	--			
3RW44 26	77	3NE1 022-2	125	690 +5 %	00	3RT10 45	3RT10 24	3RT10 35			
3RW44 27	93	3NE1 224-2	160	690 +5 %	1	3RT10 46	3RT10 25	3RT10 36			
3RW44 34	113	3NE1 225-2	200	690 +5 %	1	3RT10 54	3RT10 34	3RT10 44			
3RW44 35	134	3NE1 227-2	250	690 +5 %	1	3RT10 55	3RT10 36	3RT10 45			
3RW44 36	162	3NE1 227-2	250	690 +5 %	1	3RT10 56	3RT10 44	3RT10 45			
3RW44 43	203	3NE1 230-2	315	600 +10 %	1	3RT10 64	3RT10 44	3RT10 54			
3RW44 44	250	3NE1 331-2	350	460 +10 %	2	3RT10 65	3RT10 44	3RT10 55			
3RW44 45	313	3NE1 333-2	450	690 +5 %	2	3RT10 75	3RT10 54	3RT10 56			
3RW44 46	356	3NE1 334-2	500	690 +5 %	2	3RT10 75	3RT10 54	3RT10 56			
3RW44 47	432	3NE1 435-2	560	690 +5 %	3	3RT10 76	3RT10 55	3RT10 64			
3RW44 53	551	2 x 3NE1 334-2	500	690 +10 %	2	3TF68	3RT10 64	3RT10 66			
3RW44 54	615	2 x 3NE1 334-2	500	690 +10 %	2	3TF68	3RT10 64	3RT10 75			
3RW44 55	693	2 x 3NE1 334-2	500	690 +10 %	2	3TF69	3RT10 65	3RT10 75			
3RW44 56	780	2 x 3NE1 435-2	560	690 +10 %	3	3TF69	3RT10 65	3RT10 75			
3RW44 57	880	2 x 3NE1 435-2	560	690 +10 %	3	--	3RT10 75	3RT10 76			
3RW44 58	970	2 x 3NE1 435-2	560	690 +10 %	3	--	3RT10 75	3RT10 76			
3RW44 65	1076	3 x 3NE1 334-2	500	690 +10 %	2	--	3RT10 75	3TF68			
3RW44 66	1214	3 x 3NE1 435-2	560	690 +10 %	3	--	3RT10 76	3TF68			

1) If the ramp-down function "Combined braking" is selected, no braking contactor is required.  
If the ramp-down function "DC braking" is selected, a braking contactor must be used in addition (see table for type).  
For applications with large centrifugal masses ( $J_{Load} > J_{Motor}$ ) we recommend the function "DC braking".

2) Additional auxiliary relay K4:  
LZX:RT4A4T30  
(3RW44 soft starter with rated control supply voltage 230 V AC),  
LZX:RT4A4S15  
(3RW44 soft starter with rated control supply voltage 115 V AC).

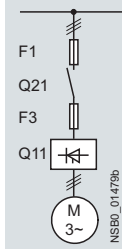
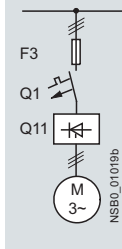
3) The type of coordination "2" refers to soft starters in combination with the stipulated fuse, not to any additional components in the feeder.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

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**Inline circuit fused version with 3NE or 3NC SITOR semiconductor fuse**  
(semiconductor protection by fuse, line and overload protection by motor starter protector/circuit breaker)



For matching fuse bases see Catalog LV 10.1

- "Switch Disconnectors"
- "Fuse Systems" --> "SITOR Semiconductor Fuses" or at [www.siemens.com/sitor](http://www.siemens.com/sitor)

Soft starters Q11 Type	ToC 2 Rated current A	Semiconductor fuses, minimum			Semiconductor fuses, maximum			Semiconductor fuses (cylinder)		
		690 V +10 % F3 Type	Rated current A	Size	690 V +10 % F3 Type	Rated current A	Size	F3 Type	Rated current A	Size
<b>Type of coordination "2"<sup>3)</sup>: I<sub>q</sub> = 65 kA</b>										
3RW44 22	29	3NE4 120	80	0	3NE4 121	100	0	3NC2 280	80	22 x 58
3RW44 23	36	3NE4 121	100	0	3NE4 121	100	0	3NC2 200	100	22 x 58
3RW44 24	47	3NE4 121	100	0	3NE4 122	125	0	3NC2 200	100	22 x 58
3RW44 25	57	3NE4 122	125	0	3NE4 124	160	0	--	--	--
3RW44 26	77	3NE4 124	160	0	3NE4 124	160	0	--	--	--
3RW44 27	93	3NE3 224	160	1	3NE3 332-0B	400	2	--	--	--
3RW44 34	113	3NE3 225	200	1	3NE3 335	560	2	--	--	--
3RW44 35	134	3NE3 225	200	1	3NE3 335	560	2	--	--	--
3RW44 36	162	3NE3 227	250	1	3NE3 333	450	2	--	--	--
3RW44 43	203	3NE3 230-0B	315	1	3NE3 333	450	2	--	--	--
3RW44 44	250	3NE3 230-0B	315	1	3NE3 333	450	2	--	--	--
3RW44 45	313	3NE3 233	450	1	3NE3 336	630	2	--	--	--
3RW44 46	356	3NE3 333	450	2	3NE3 336	630	2	--	--	--
3RW44 47	432	3NE3 335	560	2	3NE3 338-8	800	2	--	--	--
3RW44 53	551	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 54	615	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 55	693	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 56	780	2 x 3NE3 336	630	2	2 x 3NE3 340-8	900	2	--	--	--
3RW44 57	880	2 x 3NE3 336	630	2	2 x 3NE3 340-8	900	2	--	--	--
3RW44 58	970	2 x 3NE3 336	630	2	2 x 3NE3 340-8	900	2	--	--	--
3RW44 65	1076	2 x 3NE3 340-8	900	2	3 x 3NE3 338-8	800	2	--	--	--
3RW44 66	1214	2 x 3NE3 340-8	900	2	3 x 3NE3 338-8	800	2	--	--	--

Soft starters Q11 Type	ToC 2 Rated current A	Line contactor up to 400 V (optional) Q21 Type	Braking contactors <sup>1)2)</sup> (for example circuit see the 3RW44 manual)		Motor starter protectors/ circuit breakers		Line fuses, maximum		
			Q91 Type	Q92 Type	Q1 Type	Rated current A	690 V +5 % F1 Type	Rated current A	Size
<b>Type of coordination "2"<sup>3)</sup>: I<sub>q</sub> = 65 kA</b>									
3RW44 22	29	3RT10 34	3RT15 26	--	3RV10 41-4HA10	50	3NA3 820-6	50	00
3RW44 23	36	3RT10 35	3RT15 26	--	3RV10 41-4JA10	63	3NA3 822-6	63	00
3RW44 24	47	3RT10 36	3RT15 35	--	3RV10 41-4KA10	75	3NA3 824-6	80	00
3RW44 25	57	3RT10 44	3RT15 35	--	3RV10 41-4LA10	90	3NA3 830-6	100	00
3RW44 26	77	3RT10 45	3RT10 24	3RT10 35	3RV10 41-4MA10	100	3NA3 132-6	125	1
3RW44 27	93	3RT10 46	3RT10 25	3RT10 36	3RV10 41-4MA10	100	3NA3 136-6	160	1
3RW44 34	113	3RT10 54	3RT10 34	3RT10 44	3VL17 16	160	3NA3 244-6	250	2
3RW44 35	134	3RT10 55	3RT10 36	3RT10 45	3VL17 16	160	3NA3 244-6	250	2
3RW44 36	162	3RT10 56	3RT10 44	3RT10 45	3VL37 25	250	3NA3 365-6	500	3
3RW44 43	203	3RT10 64	3RT10 44	3RT10 54	3VL47 31	315	2 x 3NA3 354-6	2 x 355	3
3RW44 44	250	3RT10 65	3RT10 44	3RT10 55	3VL47 31	315	2 x 3NA3 354-6	2 x 355	3
3RW44 45	313	3RT10 75	3RT10 54	3RT10 56	3VL47 40	400	2 x 3NA3 365-6	2 x 500	3
3RW44 46	356	3RT10 75	3RT10 54	3RT10 56	3VL47 40	400	2 x 3NA3 365-6	2 x 500	3
3RW44 47	432	3RT10 76	3RT10 55	3RT10 64	3VL57 50	500	2 x 3NA3 365-6	2 x 500	3
3RW44 53	551	3TF68	3RT10 64	3RT10 66	3VL67 80	800	2 x 3NA3 365-6	2 x 500	3
3RW44 54	615	3TF68	3RT10 64	3RT10 75	3VL67 80	800	2 x 3NA3 365-6	2 x 500	3
3RW44 55	693	3TF69	3RT10 65	3RT10 75	3VL67 80	800	2 x 3NA3 365-6	2 x 500	3
3RW44 56	780	3TF69	3RT10 65	3RT10 75	3VL77 10	1000	2 x 3NA3 365-6	2 x 500	3
3RW44 57	880	--	3RT10 75	3RT10 76	3VL77 10	1000	2 x 3NA3 365-6	2 x 500	3
3RW44 58	970	--	3RT10 75	3RT10 76	3VL77 12	1250	3 x 3NA3 365-6	3 x 500	3
3RW44 65	1076	--	3RT10 75	3TF68	3VL77 12	1250	3 x 3NA3 365-6	3 x 500	3
3RW44 66	1214	--	3RT10 76	3TF68	3VL77 12	1250	3 x 3NA3 365-6	3 x 500	3

<sup>1)</sup> If the ramp-down function "Combined braking" is selected, no braking contactor is required. If the ramp-down function "DC braking" is selected, a braking contactor must be used in addition (see table for type).  
For applications with large centrifugal masses ( $J_{Load} > J_{Motor}$ ) we recommend the function "DC braking".

<sup>2)</sup> Additional auxiliary relay K4:  
LZX:RT4A4T30 (3RW44 soft starter with rated control supply voltage 230 V AC),  
LZX:RT4A4S15 (3RW44 soft starter with rated control supply voltage 115 V AC).

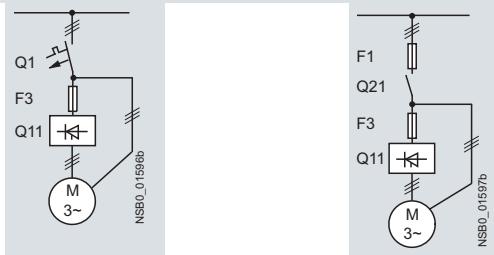
<sup>3)</sup> The type of coordination "2" refers to soft starters in combination with the stipulated protective device (motor starter protector/circuit breaker/fuse), not to any additional components in the feeder.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

**Inside-delta circuit fused version with 3NE or 3NC SITOR fuses**  
 (semiconductor protection by fuse, lead and overload protection by motor starter protector/circuit breaker)



For matching fuse bases see Catalog LV 10.1

- "Switch Disconnectors"
- "Fuse Systems" --> "SITOR Semiconductor Fuses" or at [www.siemens.com/sitor](http://www.siemens.com/sitor)

Soft starters Q11 Type	Rated current A	Semiconductor fuses, minimum			Semiconductor fuses, maximum			Semiconductor fuses (cylinder)		
		690 V +10 % F3 Type	Rated current A	Size	690 V +10 % F3 Type	Rated current A	Size	F3 Type	Rated current A	Size
<b>Type of coordination "2"<sup>1)</sup></b>										
3RW44 22	50	3NE4 120	80	0	3NE4 121	100	0	3NC2 280	80	22 x 58
3RW44 23	62	3NE4 121	100	0	3NE4 121	100	0	3NC2 200	100	22 x 58
3RW44 24	81	3NE4 121	100	0	3NE4 122	125	0	3NC2 200	100	22 x 58
3RW44 25	99	3NE4 122	125	0	3NE4 124	160	0	--	--	--
3RW44 26	133	3NE4 124	160	0	3NE4 124	160	0	--	--	--
3RW44 27	161	3NE3 224	160	1	3NE3 332-0B	400	2	--	--	--
3RW44 34	196	3NE3 225	200	1	3NE3 335	560	2	--	--	--
3RW44 35	232	3NE3 225	200	1	3NE3 335	560	2	--	--	--
3RW44 36	281	3NE3 227	250	1	3NE3 333	450	2	--	--	--
3RW44 43	352	3NE3 230-0B	315	1	3NE3 333	450	2	--	--	--
3RW44 44	433	3NE3 230-0B	315	1	3NE3 333	450	2	--	--	--
3RW44 45	542	3NE3 233	450	1	3NE3 336	630	2	--	--	--
3RW44 46	617	3NE3 333	450	2	3NE3 336	630	2	--	--	--
3RW44 47	748	3NE3 335	560	2	3NE3 338-8	800	2	--	--	--
3RW44 53	954	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 54	1065	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 55	1200	2 x 3NE3 335	560	2	3 x 3NE3 334-0B	500	2	--	--	--
3RW44 56	1351	2 x 3NE3 336	630	2	2 x 3NE3 340-8	900	2	--	--	--
3RW44 57	1524	2 x 3NE3 336	630	2	3 x 3NE3 340-8	900	2	--	--	--
3RW44 58	1680	2 x 3NE3 336	630	2	3 x 3NE3 340-8	900	2	--	--	--
3RW44 65	1864	2 x 3NE3 340-8	900	2	3 x 3NE3 338-8	800	2	--	--	--
3RW44 66	2103	2 x 3NE3 340-8	900	2	3 x 3NE3 338-8	800	2	--	--	--

Soft starters Q11 Type	Rated current A	Line contactor up to 400 V (optional) Q21 Type	Motor starter protectors/circuit breakers		Line fuses, maximum		
			440 V +10 % Q1 Type	Rated current A	690 V +5 % F1 Type	Rated current A	Size
<b>Type of coordination "2"<sup>1)</sup></b>							
3RW44 22	50	3RT10 36-1AP04	3RV10 42-4KA10	75	3NA3 824-6	80	00
3RW44 23	62	3RT10 44-1AP04	3RV10 42-4LA10	90	3NA3 830-6	100	00
3RW44 24	81	3RT10 46-1AP04	3RV10 42-4MA10	100	3NA3 132-6	125	1
3RW44 25	99	3RT10 54-1AP36	3VL27 16	160	3NA3 136-6	160	1
3RW44 26	133	3RT10 55-6AP36	3VL27 16	160	3NA3 240-6	200	2
3RW44 27	161	3RT10 56-6AP36	3VL37 20	200	3NA3 244-6	250	2
3RW44 34	196	3RT10 64-6AP36	3VL37 25	250	3NA3 360-6	400	3
3RW44 35	232	3RT10 65-6AP36	3VL47 31	315	3NA3 360-6	400	3
3RW44 36	281	3RT10 66-6AP36	3VL47 40	400	2 x 3NA3 360-6	2 x 400	3
3RW44 43	352	3RT10 75-6AP36	3VL47 40	400	2 x 3NA3 365-6	2 x 500	3
3RW44 44	433	3RT10 76-6AP36	3VL57 50	500	2 x 3NA3 365-6	2 x 500	3
3RW44 45	542	3TF68 44-OCM7	3VL57 63	800	3 x 3NA3 365-6	3 x 500	3
3RW44 46	617	3TF68 44-OCM7	3VL67 80	800	3 x 3NA3 365-6	3 x 500	3
3RW44 47	748	3TF69	3VL67 80	800	3 x 3NA3 365-6	3 x 500	3
3RW44 53	954	--	3VL77 10	1000	3 x 3NA3 365-6	3 x 500	3
3RW44 54	1065	--	3VL77 12	1250	2 x 3NA3 365-6	3 x 500	3
3RW44 55	1200	--	3VL87 16	1600	3 x 3NA3 365-6	3 x 500	3
3RW44 56	1351	--	3VL87 16	1600	3 x 3NA3 372	3 x 630	3
3RW44 57	1524	--	3VL87 16	1600	3 x 3NA3 372	3 x 630	3
3RW44 58	1680	--	3WL12 20	2000	2 x 3NA3 480	2 x 1000	4
3RW44 65	1864	--	3WL12 25	2500	2 x 3NA3 482	2 x 1250	4
3RW44 66	2103	--	3WL12 25	2500	2 x 3NA3 482	2 x 1250	4

<sup>1)</sup> The type of coordination "2" refers to soft starters in combination with the stipulated protective device (motor starter protector/circuit breaker/fuse), not to any additional components in the feeder.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### Selection and ordering data

#### SIRIUS 3RW44 for normal starting (CLASS 10) in inline circuit



3RW ambient temperature 40 °C					3RW ambient temperature 50 °C					DT	Normal starting (CLASS 10) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors					Rated values of induction motors										
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 200 ... 460 V<sup>1)</sup></b>															
29	5.5	15	--	--	--	26	7.5	7.5	15	--	▶	3RW44 22-□BC□4	1	1 unit	131
36	7.5	18.5	--	--	--	32	10	10	20	--	▶	3RW44 23-□BC□4	1	1 unit	131
47	11	22	--	--	--	42	10	15	25	--	▶	3RW44 24-□BC□4	1	1 unit	131
57	15	30	--	--	--	51	15	15	30	--	▶	3RW44 25-□BC□4	1	1 unit	131
77	18.5	37	--	--	--	68	20	20	50	--	▶	3RW44 26-□BC□4	1	1 unit	131
93	22	45	--	--	--	82	25	25	60	--	▶	3RW44 27-□BC□4	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
113	30	55	--	--	--	100	30	30	75	--	B	3RW44 34-□BC□4	1	1 unit	131
134	37	75	--	--	--	117	30	40	75	--	B	3RW44 35-□BC□4	1	1 unit	131
162	45	90	--	--	--	145	40	50	100	--	B	3RW44 36-□BC□4	1	1 unit	131
203	55	110	--	--	--	180	50	60	125	--	B	3RW44 43-□BC□4	1	1 unit	131
250	75	132	--	--	--	215	60	75	150	--	B	3RW44 44-□BC□4	1	1 unit	131
313	90	160	--	--	--	280	75	100	200	--	B	3RW44 45-□BC□4	1	1 unit	131
356	110	200	--	--	--	315	100	125	250	--	B	3RW44 46-□BC□4	1	1 unit	131
432	132	250	--	--	--	385	125	150	300	--	B	3RW44 47-□BC□4	1	1 unit	131
551	160	315	--	--	--	494	150	200	400	--	C	3RW44 53-□BC□4	1	1 unit	131
615	200	355	--	--	--	551	150	200	450	--	C	3RW44 54-□BC□4	1	1 unit	131
693	200	400	--	--	--	615	200	250	500	--	C	3RW44 55-□BC□4	1	1 unit	131
780	250	450	--	--	--	693	200	250	600	--	C	3RW44 56-□BC□4	1	1 unit	131
880	250	500	--	--	--	780	250	300	700	--	C	3RW44 57-□BC□4	1	1 unit	131
970	315	560	--	--	--	850	300	350	750	--	C	3RW44 58-□BC□4	1	1 unit	131
1076	355	630	--	--	--	970	350	400	850	--	C	3RW44 65-□BC□4	1	1 unit	131
1214	400	710	--	--	--	1076	350	450	950	--	C	3RW44 66-□BC□4	1	1 unit	131

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>2)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> 3RW44 2 ... 3RW44 4, soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 10
- Maximum starting current in % of motor current  $I_e$ : 300
- Maximum number of starts per hour in 1/h: 5

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.



# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C				DT	Normal starting (CLASS 10) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors						Rated values of induction motors									
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 400 ... 600 V<sup>1)</sup></b>															
29	--	15	<b>18.5</b>	--	--	26	--	--	15	<b>20</b>	A	<b>3RW44 22-□BC□5</b>	1	1 unit	131
36	--	18.5	<b>22</b>	--	--	32	--	--	20	<b>25</b>	A	<b>3RW44 23-□BC□5</b>	1	1 unit	131
47	--	22	<b>30</b>	--	--	42	--	--	25	<b>30</b>	A	<b>3RW44 24-□BC□5</b>	1	1 unit	131
57	--	30	<b>37</b>	--	--	51	--	--	30	<b>40</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
77	--	37	<b>45</b>	--	--	68	--	--	50	<b>50</b>	A	<b>3RW44 26-□BC□5</b>	1	1 unit	131
93	--	45	<b>55</b>	--	--	82	--	--	60	<b>75</b>	A	<b>3RW44 27-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
113	--	55	<b>75</b>	--	--	100	--	--	75	<b>75</b>	B	<b>3RW44 34-□BC□5</b>	1	1 unit	131
134	--	75	<b>90</b>	--	--	117	--	--	75	<b>100</b>	B	<b>3RW44 35-□BC□5</b>	1	1 unit	131
162	--	90	<b>110</b>	--	--	145	--	--	100	<b>125</b>	B	<b>3RW44 36-□BC□5</b>	1	1 unit	131
203	--	110	<b>132</b>	--	--	180	--	--	125	<b>150</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131
250	--	132	<b>160</b>	--	--	215	--	--	150	<b>200</b>	B	<b>3RW44 44-□BC□5</b>	1	1 unit	131
313	--	160	<b>200</b>	--	--	280	--	--	200	<b>250</b>	B	<b>3RW44 45-□BC□5</b>	1	1 unit	131
356	--	200	<b>250</b>	--	--	315	--	--	250	<b>300</b>	B	<b>3RW44 46-□BC□5</b>	1	1 unit	131
432	--	250	<b>315</b>	--	--	385	--	--	300	<b>400</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131
551	--	315	<b>355</b>	--	--	494	--	--	400	<b>500</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
615	--	355	<b>400</b>	--	--	551	--	--	450	<b>600</b>	C	<b>3RW44 54-□BC□5</b>	1	1 unit	131
693	--	400	<b>500</b>	--	--	615	--	--	500	<b>700</b>	C	<b>3RW44 55-□BC□5</b>	1	1 unit	131
780	--	450	<b>560</b>	--	--	693	--	--	600	<b>750</b>	C	<b>3RW44 56-□BC□5</b>	1	1 unit	131
880	--	500	<b>630</b>	--	--	780	--	--	700	<b>850</b>	C	<b>3RW44 57-□BC□5</b>	1	1 unit	131
970	--	560	<b>710</b>	--	--	850	--	--	750	<b>900</b>	C	<b>3RW44 58-□BC□5</b>	1	1 unit	131
1076	--	630	<b>800</b>	--	--	970	--	--	850	<b>1 100</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
1 214	--	710	<b>900</b>	--	--	1 076	--	--	950	<b>1 200</b>	C	<b>3RW44 66-□BC□5</b>	1	1 unit	131

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>2)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> Soft starter with screw terminals:  
3RW44 2 ... 3RW44 4. Delivery time class A,  
3RW44 5 ... 3RW44 6. Delivery time class B.

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 10
- Maximum starting current in % of motor current  $I_e$ : 300
- Maximum number of starts per hour in 1/h: 5

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C					DT	Normal starting (CLASS 10) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors						Rated values of induction motors										
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$									
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V						
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp	Order No.	Price per PU				
<b>Inline circuit, rated operational voltage 400 ... 690 V</b>																
29	--	15	18.5	<b>30</b>	--	26	--	--	15	<b>20</b>	B	3RW44 22-□BC□6	1	1 unit	131	
36	--	18.5	22	<b>37</b>	--	32	--	--	20	<b>25</b>	B	3RW44 23-□BC□6	1	1 unit	131	
47	--	22	30	<b>45</b>	--	42	--	--	25	<b>30</b>	B	3RW44 24-□BC□6	1	1 unit	131	
57	--	30	37	<b>55</b>	--	51	--	--	30	<b>40</b>	B	3RW44 25-□BC□6	1	1 unit	131	
77	--	37	45	<b>75</b>	--	68	--	--	50	<b>50</b>	B	3RW44 26-□BC□6	1	1 unit	131	
93	--	45	55	<b>90</b>	--	82	--	--	60	<b>75</b>	B	3RW44 27-□BC□6	1	1 unit	131	
<b>Order No. supplement for connection types</b>																
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																
113	--	55	75	<b>110</b>	--	100	--	--	75	<b>75</b>	B	3RW44 34-□BC□6	1	1 unit	131	
134	--	75	90	<b>132</b>	--	117	--	--	75	<b>100</b>	B	3RW44 35-□BC□6	1	1 unit	131	
162	--	90	110	<b>160</b>	--	145	--	--	100	<b>125</b>	B	3RW44 36-□BC□6	1	1 unit	131	
203	--	110	132	<b>200</b>	--	180	--	--	125	<b>150</b>	B	3RW44 43-□BC□6	1	1 unit	131	
250	--	132	160	<b>250</b>	--	215	--	--	150	<b>200</b>	B	3RW44 44-□BC□6	1	1 unit	131	
313	--	160	200	<b>315</b>	--	280	--	--	200	<b>250</b>	B	3RW44 45-□BC□6	1	1 unit	131	
356	--	200	250	<b>355</b>	--	315	--	--	250	<b>300</b>	B	3RW44 46-□BC□6	1	1 unit	131	
432	--	250	315	<b>400</b>	--	385	--	--	300	<b>400</b>	B	3RW44 47-□BC□6	1	1 unit	131	
551	--	315	355	<b>560</b>	--	494	--	--	400	<b>500</b>	C	3RW44 53-□BC□6	1	1 unit	131	
615	--	355	400	<b>630</b>	--	551	--	--	450	<b>600</b>	C	3RW44 54-□BC□6	1	1 unit	131	
693	--	400	500	<b>710</b>	--	615	--	--	500	<b>700</b>	C	3RW44 55-□BC□6	1	1 unit	131	
780	--	450	560	<b>800</b>	--	693	--	--	600	<b>750</b>	C	3RW44 56-□BC□6	1	1 unit	131	
880	--	500	630	<b>900</b>	--	780	--	--	700	<b>850</b>	C	3RW44 57-□BC□6	1	1 unit	131	
970	--	560	710	<b>1000</b>	--	850	--	--	750	<b>900</b>	C	3RW44 58-□BC□6	1	1 unit	131	
1076	--	630	800	<b>1100</b>	--	970	--	--	850	<b>1100</b>	C	3RW44 65-□BC□6	1	1 unit	131	
1214	--	710	900	<b>1200</b>	--	1076	--	--	950	<b>1200</b>	C	3RW44 66-□BC□6	1	1 unit	131	

**Order No. supplement for connection types**

- With spring-type terminals
- With screw terminals

**Order No. supplement for the rated control supply voltage  $U_s$ <sup>1)</sup>**

- 115 V AC
- 230 V AC

<sup>1)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 10
- Maximum starting current in % of motor current  $I_e$ : 300
- Maximum number of starts per hour in 1/h: 5

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

**SIRIUS 3RW44 for heavy starting (CLASS 20) in inline circuit**



3RW44 2.



3RW44 3.



3RW44 4.



3RW44 5.



3RW44 6.

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C					DT	Heavy starting (CLASS 20) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors						Rated values of induction motors										
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU				
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V						
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp						
<b>Inline circuit, rated operational voltage 200 ... 460 V<sup>1)</sup></b>																
29	5.5	<b>15</b>	--	--	--	26	7.5	7.5	<b>15</b>	--	▶	<b>3RW44 22-□BC□4</b>	1	1 unit	131	
36	7.5	<b>18.5</b>	--	--	--	32	10	10	<b>20</b>	--	▶	<b>3RW44 23-□BC□4</b>	1	1 unit	131	
47	11	<b>22</b>	--	--	--	42	10	15	<b>25</b>	--	▶	<b>3RW44 24-□BC□4</b>	1	1 unit	131	
57	15	<b>30</b>	--	--	--	51	15	15	<b>30</b>	--	▶	<b>3RW44 25-□BC□4</b>	1	1 unit	131	
77	18.5	<b>37</b>	--	--	--	68	20	20	<b>50</b>	--	▶	<b>3RW44 27-□BC□4</b>	1	1 unit	131	
<b>Order No. supplement for connection types</b>																
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																
93	22	<b>45</b>	--	--	--	82	25	25	<b>60</b>	--	B	<b>3RW44 34-□BC□4</b>	1	1 unit	131	
113	30	<b>55</b>	--	--	--	100	30	30	<b>75</b>	--	B	<b>3RW44 35-□BC□4</b>	1	1 unit	131	
134	37	<b>75</b>	--	--	--	117	30	40	<b>75</b>	--	B	<b>3RW44 36-□BC□4</b>	1	1 unit	131	
162	45	<b>90</b>	--	--	--	145	40	50	<b>100</b>	--	B	<b>3RW44 43-□BC□4</b>	1	1 unit	131	
203	55	<b>110</b>	--	--	--	180	50	60	<b>125</b>	--	B	<b>3RW44 45-□BC□4</b>	1	1 unit	131	
250	75	<b>132</b>	--	--	--	215	60	75	<b>150</b>	--	B	<b>3RW44 46-□BC□4</b>	1	1 unit	131	
313	90	<b>160</b>	--	--	--	280	75	100	<b>200</b>	--	B	<b>3RW44 47-□BC□4</b>	1	1 unit	131	
356	110	<b>200</b>	--	--	--	315	100	125	<b>250</b>	--	B	<b>3RW44 47-□BC□4</b>	1	1 unit	131	
432	132	<b>250</b>	--	--	--	385	125	150	<b>300</b>	--	C	<b>3RW44 53-□BC□4</b>	1	1 unit	131	
551	160	<b>315</b>	--	--	--	494	150	200	<b>400</b>	--	C	<b>3RW44 53-□BC□4</b>	1	1 unit	131	
615	200	<b>355</b>	--	--	--	551	150	200	<b>450</b>	--	C	<b>3RW44 55-□BC□4</b>	1	1 unit	131	
693	200	<b>400</b>	--	--	--	615	200	250	<b>500</b>	--	C	<b>3RW44 57-□BC□4</b>	1	1 unit	131	
780	250	<b>450</b>	--	--	--	693	200	250	<b>600</b>	--	C	<b>3RW44 65-□BC□4</b>	1	1 unit	131	
880	250	<b>500</b>	--	--	--	780	250	300	<b>700</b>	--	C	<b>3RW44 65-□BC□4</b>	1	1 unit	131	
970	315	<b>560</b>	--	--	--	850	300	350	<b>750</b>	--	C	<b>3RW44 65-□BC□4</b>	1	1 unit	131	

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>2)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> 3RW44 2. to 3RW44 4. soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 40
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the de-

signed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C				DT	Heavy starting (CLASS 20) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors						Rated values of induction motors									
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 400 ... 600 V<sup>1)</sup></b>															
29	--	15	<b>18.5</b>	--	--	26	--	--	15	<b>20</b>	A	3RW44 22-□BC□5	1	1 unit	131
36	--	18.5	<b>22</b>	--	--	32	--	--	20	<b>25</b>	A	3RW44 23-□BC□5	1	1 unit	131
47	--	22	<b>30</b>	--	--	42	--	--	25	<b>30</b>	A	3RW44 24-□BC□5	1	1 unit	131
57	--	30	<b>37</b>	--	--	51	--	--	30	<b>40</b>	A	3RW44 25-□BC□5	1	1 unit	131
77	--	37	<b>45</b>	--	--	68	--	--	50	<b>50</b>	A	3RW44 27-□BC□5	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
93	--	45	<b>55</b>	--	--	82	--	--	60	<b>75</b>	B	3RW44 34-□BC□5	1	1 unit	131
113	--	55	<b>75</b>	--	--	100	--	--	75	<b>75</b>	B	3RW44 35-□BC□5	1	1 unit	131
134	--	75	<b>90</b>	--	--	117	--	--	75	<b>100</b>	B	3RW44 36-□BC□5	1	1 unit	131
162	--	90	<b>110</b>	--	--	145	--	--	100	<b>125</b>	B	3RW44 43-□BC□5	1	1 unit	131
203	--	110	<b>132</b>	--	--	180	--	--	125	<b>150</b>	B	3RW44 45-□BC□5	1	1 unit	131
250	--	132	<b>160</b>	--	--	215	--	--	150	<b>200</b>	B	3RW44 46-□BC□5	1	1 unit	131
313	--	160	<b>200</b>	--	--	280	--	--	200	<b>250</b>	B	3RW44 47-□BC□5	1	1 unit	131
356	--	200	<b>250</b>	--	--	315	--	--	250	<b>300</b>	B	3RW44 47-□BC□5	1	1 unit	131
432	--	250	<b>315</b>	--	--	385	--	--	300	<b>400</b>	C	3RW44 53-□BC□5	1	1 unit	131
551	--	315	<b>355</b>	--	--	494	--	--	400	<b>500</b>	C	3RW44 53-□BC□5	1	1 unit	131
615	--	355	<b>400</b>	--	--	551	--	--	450	<b>600</b>	C	3RW44 54-□BC□5	1	1 unit	131
693	--	400	<b>500</b>	--	--	615	--	--	500	<b>700</b>	C	3RW44 57-□BC□5	1	1 unit	131
780	--	450	<b>560</b>	--	--	693	--	--	600	<b>750</b>	C	3RW44 65-□BC□5	1	1 unit	131
880	--	500	<b>630</b>	--	--	780	--	--	700	<b>850</b>	C	3RW44 65-□BC□5	1	1 unit	131
970	--	560	<b>710</b>	--	--	850	--	--	750	<b>900</b>	C	3RW44 65-□BC□5	1	1 unit	131

**Order No. supplement for connection types**

- With spring-type terminals
- With screw terminals

**Order No. supplement for the rated control supply voltage  $U_s$ <sup>2)</sup>**

- 115 V AC
- 230 V AC

<sup>1)</sup> Soft starter with screw terminals:  
3RW44 2. to 3RW44 4. Delivery time class A,  
3RW44 5. to 3RW44 6. Delivery time class B.

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 40
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

3RW ambient temperature 40 °C					3RW ambient temperature 50 °C				DT	Heavy starting (CLASS 20) in inline circuit	PU (UNIT, SET, M)	PS*	PG		
Rated values of induction motors					Rated values of induction motors										
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 400 ... 690 V</b>															
29	--	15	18.5	<b>30</b>	--	26	--	--	15	<b>20</b>	B	3RW44 22-□BC□6	1	1 unit	131
36	--	18.5	22	<b>37</b>	--	32	--	--	20	<b>25</b>	B	3RW44 23-□BC□6	1	1 unit	131
47	--	22	30	<b>45</b>	--	42	--	--	25	<b>30</b>	B	3RW44 24-□BC□6	1	1 unit	131
57	--	30	37	<b>55</b>	--	51	--	--	30	<b>40</b>	B	3RW44 25-□BC□6	1	1 unit	131
77	--	37	45	<b>75</b>	--	68	--	--	50	<b>50</b>	B	3RW44 27-□BC□6	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
93	--	45	55	<b>90</b>	--	82	--	--	60	<b>75</b>	B	3RW44 34-□BC□6	1	1 unit	131
113	--	55	75	<b>110</b>	--	100	--	--	75	<b>75</b>	B	3RW44 35-□BC□6	1	1 unit	131
134	--	75	90	<b>132</b>	--	117	--	--	75	<b>100</b>	B	3RW44 36-□BC□6	1	1 unit	131
162	--	90	110	<b>160</b>	--	145	--	--	100	<b>125</b>	B	3RW44 43-□BC□6	1	1 unit	131
203	--	110	132	<b>200</b>	--	180	--	--	125	<b>150</b>	B	3RW44 45-□BC□6	1	1 unit	131
250	--	132	160	<b>250</b>	--	215	--	--	150	<b>200</b>	B	3RW44 46-□BC□6	1	1 unit	131
313	--	160	200	<b>315</b>	--	280	--	--	200	<b>250</b>	B	3RW44 47-□BC□6	1	1 unit	131
356	--	200	250	<b>355</b>	--	315	--	--	250	<b>300</b>	B	3RW44 47-□BC□6	1	1 unit	131
432	--	250	315	<b>400</b>	--	385	--	--	300	<b>400</b>	C	3RW44 53-□BC□6	1	1 unit	131
551	--	315	355	<b>560</b>	--	494	--	--	400	<b>500</b>	C	3RW44 53-□BC□6	1	1 unit	131
615	--	355	400	<b>630</b>	--	551	--	--	450	<b>600</b>	C	3RW44 55-□BC□6	1	1 unit	131
693	--	400	500	<b>710</b>	--	615	--	--	500	<b>700</b>	C	3RW44 57-□BC□6	1	1 unit	131
780	--	450	560	<b>800</b>	--	693	--	--	600	<b>750</b>	C	3RW44 65-□BC□6	1	1 unit	131
880	--	500	630	<b>900</b>	--	780	--	--	700	<b>850</b>	C	3RW44 65-□BC□6	1	1 unit	131
970	--	560	710	<b>1 000</b>	--	850	--	--	750	<b>900</b>	C	3RW44 65-□BC□6	1	1 unit	131

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>1)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 40
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### SIRIUS 3RW44 for very heavy starting (CLASS 30) in inline circuit



3RW44 2.						3RW44 3.					3RW44 4.				3RW44 5.				3RW44 6.											
3RW ambient temperature 40 °C											3RW ambient temperature 50 °C											DT	Very heavy starting (CLASS 30) in inline circuit			PU (UNIT, SET, M)	PS*	PG		
Rated values of induction motors											Rated values of induction motors																			
Operational current $I_e$		Rating at operational voltage $U_e$					Operational current $I_e$		Rating at operational voltage $U_e$					Order No.			Price per PU													
A		230 V	400 V	500 V	690 V	1000 V	A		200 V	230 V	460 V	575 V	hp	hp	hp	hp														
		kW	kW	kW	kW	kW			hp	hp	hp	hp																		
<b>Inline circuit, rated operational voltage 200 ... 460 V<sup>1)</sup></b>																														
29	5.5	15	--	--	--	26	7.5	7.5	15	--	▶	3RW44 22-□BC□4	1	1	unit	131														
36	7.5	18.5	--	--	--	32	10	10	20	--	▶	3RW44 24-□BC□4	1	1	unit	131														
47	11	22	--	--	--	42	10	15	25	--	▶	3RW44 25-□BC□4	1	1	unit	131														
57	15	30	--	--	--	51	15	15	30	--	▶	3RW44 25-□BC□4	1	1	unit	131														
<b>Order No. supplement for connection types</b>																														
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																														
77	18.5	37	--	--	--	68	20	20	50	--	B	3RW44 34-□BC□4	1	1	unit	131														
93	22	45	--	--	--	82	25	25	60	--	B	3RW44 35-□BC□4	1	1	unit	131														
113	30	55	--	--	--	100	30	30	75	--	B	3RW44 43-□BC□4	1	1	unit	131														
134	37	75	--	--	--	117	30	40	75	--	B	3RW44 43-□BC□4	1	1	unit	131														
162	45	90	--	--	--	145	40	50	100	--	B	3RW44 43-□BC□4	1	1	unit	131														
203	55	110	--	--	--	180	50	60	125	--	B	3RW44 46-□BC□4	1	1	unit	131														
250	75	132	--	--	--	215	60	75	150	--	B	3RW44 47-□BC□4	1	1	unit	131														
313	90	160	--	--	--	280	75	100	200	--	C	3RW44 53-□BC□4	1	1	unit	131														
356	110	200	--	--	--	315	100	125	250	--	C	3RW44 53-□BC□4	1	1	unit	131														
432	132	250	--	--	--	385	125	150	300	--	C	3RW44 53-□BC□4	1	1	unit	131														
551	160	315	--	--	--	494	150	200	400	--	C	3RW44 55-□BC□4	1	1	unit	131														
615	200	355	--	--	--	551	150	200	450	--	C	3RW44 58-□BC□4	1	1	unit	131														
693	200	400	--	--	--	615	200	250	500	--	C	3RW44 65-□BC□4	1	1	unit	131														
780	250	450	--	--	--	693	200	250	600	--	C	3RW44 65-□BC□4	1	1	unit	131														
880	250	500	--	--	--	780	250	300	700	--	C	3RW44 65-□BC□4	1	1	unit	131														
970	315	560	--	--	--	850	300	350	750	--	C	3RW44 66-□BC□4	1	1	unit	131														

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>2)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> 3RW44 2. to 3RW44 4. soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 60
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the de-

signed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

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

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C				DT	Very heavy starting (CLASS 30) in inline circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors						Rated values of induction motors									
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 400 ... 600 V<sup>1)</sup></b>															
29	--	15	<b>18.5</b>	--	--	26	--	--	15	<b>20</b>	A	<b>3RW44 22-□BC□5</b>	1	1 unit	131
36	--	18.5	<b>22</b>	--	--	32	--	--	20	<b>25</b>	A	<b>3RW44 24-□BC□5</b>	1	1 unit	131
47	--	22	<b>30</b>	--	--	42	--	--	25	<b>30</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
57	--	30	<b>37</b>	--	--	51	--	--	30	<b>40</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
• With screw terminals															
• With spring-type terminals															
77	--	37	<b>45</b>	--	--	68	--	50	<b>50</b>	B	<b>3RW44 34-□BC□5</b>	1	1 unit	131	
93	--	45	<b>55</b>	--	--	82	--	60	<b>75</b>	B	<b>3RW44 35-□BC□5</b>	1	1 unit	131	
113	--	55	<b>75</b>	--	--	100	--	75	<b>75</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131	
134	--	75	<b>90</b>	--	--	117	--	75	<b>100</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131	
162	--	90	<b>110</b>	--	--	145	--	100	<b>125</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131	
203	--	110	<b>132</b>	--	--	180	--	125	<b>150</b>	B	<b>3RW44 46-□BC□5</b>	1	1 unit	131	
250	--	132	<b>160</b>	--	--	215	--	150	<b>200</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131	
313	--	160	<b>200</b>	--	--	280	--	200	<b>250</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131	
356	--	200	<b>250</b>	--	--	315	--	250	<b>300</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131	
432	--	250	<b>315</b>	--	--	385	--	300	<b>400</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131	
551	--	315	<b>355</b>	--	--	494	--	400	<b>500</b>	C	<b>3RW44 55-□BC□5</b>	1	1 unit	131	
615	--	355	<b>400</b>	--	--	551	--	450	<b>600</b>	C	<b>3RW44 58-□BC□5</b>	1	1 unit	131	
693	--	400	<b>500</b>	--	--	615	--	500	<b>700</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131	
780	--	450	<b>560</b>	--	--	693	--	600	<b>750</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131	
880	--	500	<b>630</b>	--	--	780	--	700	<b>850</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131	
--	--	--	--	--	--	850	--	750	<b>900</b>	C	<b>3RW44 66-□BC□5</b>	1	1 unit	131	

#### Order No. supplement for connection types

- With spring-type terminals
- With screw terminals

#### Order No. supplement for the rated control supply voltage $U_s$ <sup>2)</sup>

- 115 V AC
- 230 V AC

<sup>1)</sup> Soft starter with screw terminals:  
3RW44 2. to 3RW44 4. Delivery time class A,  
3RW44 5. to 3RW44 6. Delivery time class B.

<sup>2)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

#### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 60
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the de-signed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C						3RW ambient temperature 50 °C					DT	Very heavy starting (CLASS 30) in inline circuit	PU (UNIT, SET, M)	PS*	PG
Rated values of induction motors						Rated values of induction motors									
Operational current $I_e$	Rating at operational voltage $U_e$					Operational current $I_e$	Rating at operational voltage $U_e$				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inline circuit, rated operational voltage 400 ... 690 V</b>															
29	--	15	18.5	<b>30</b>	--	26	--	--	15	<b>20</b>	B	3RW44 22-□BC□6	1	1 unit	131
36	--	18.5	22	<b>37</b>	--	32	--	--	20	<b>25</b>	B	3RW44 24-□BC□6	1	1 unit	131
47	--	22	30	<b>45</b>	--	42	--	--	25	<b>30</b>	B	3RW44 25-□BC□6	1	1 unit	131
57	--	30	37	<b>55</b>	--	51	--	--	30	<b>40</b>	B	3RW44 25-□BC□6	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
77	--	37	45	<b>75</b>	--	68	--	--	50	<b>50</b>	B	3RW44 34-□BC□6	1	1 unit	131
93	--	45	55	<b>90</b>	--	82	--	--	60	<b>75</b>	B	3RW44 35-□BC□6	1	1 unit	131
113	--	55	75	<b>110</b>	--	100	--	--	75	<b>75</b>	B	3RW44 43-□BC□6	1	1 unit	131
134	--	75	90	<b>132</b>	--	117	--	--	75	<b>100</b>	B	3RW44 43-□BC□6	1	1 unit	131
162	--	90	110	<b>160</b>	--	145	--	--	100	<b>125</b>	B	3RW44 43-□BC□6	1	1 unit	131
203	--	110	132	<b>200</b>	--	180	--	--	125	<b>150</b>	B	3RW44 46-□BC□6	1	1 unit	131
250	--	132	160	<b>250</b>	--	215	--	--	150	<b>200</b>	B	3RW44 47-□BC□6	1	1 unit	131
313	--	160	200	<b>315</b>	--	280	--	--	200	<b>250</b>	C	3RW44 53-□BC□6	1	1 unit	131
356	--	200	250	<b>355</b>	--	315	--	--	250	<b>300</b>	C	3RW44 53-□BC□6	1	1 unit	131
432	--	250	315	<b>400</b>	--	385	--	--	300	<b>400</b>	C	3RW44 53-□BC□6	1	1 unit	131
551	--	315	355	<b>560</b>	--	494	--	--	400	<b>500</b>	C	3RW44 55-□BC□6	1	1 unit	131
615	--	355	400	<b>630</b>	--	551	--	--	450	<b>600</b>	C	3RW44 58-□BC□6	1	1 unit	131
693	--	400	500	<b>710</b>	--	615	--	--	500	<b>700</b>	C	3RW44 65-□BC□6	1	1 unit	131
780	--	450	560	<b>800</b>	--	693	--	--	600	<b>750</b>	C	3RW44 65-□BC□6	1	1 unit	131
880	--	500	630	<b>900</b>	--	780	--	--	700	<b>850</b>	C	3RW44 65-□BC□6	1	1 unit	131
--	--	--	--	--	--	850	--	--	750	<b>900</b>	C	3RW44 66-□BC□6	1	1 unit	131

**Order No. supplement for connection types**

- With spring-type terminals
- With screw terminals

**Order No. supplement for the rated control supply voltage  $U_s$ <sup>1)</sup>**

- 115 V AC
- 230 V AC

<sup>1)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 60
- Maximum starting current in % of motor current  $I_e$ : 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.



# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

SIRIUS 3RW44 for normal starting (CLASS 10) in inside-delta circuit



3RW44 2.					3RW44 3.					3RW44 4.					3RW44 5.					3RW44 6.																			
3RW ambient temperature 40 °C <sup>1)</sup>										3RW ambient temperature 50 °C <sup>1)</sup>										DT	Normal starting (CLASS 10) in inside-delta circuit			PU (UNIT, SET, M)	PS*	PG													
Rated values of induction motors										Rated values of induction motors										Order No.			Price per PU																
Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>																																
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V	A	hp	hp	hp	hp																								
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp																													
<b>Inside-delta circuit, rated operational voltage 200 ... 460 V<sup>2)</sup></b>																																							
50	15	22	--	--	--	45	10	15	30	--	▶	3RW44 22-□BC□4	1	1 unit	131																								
62	18.5	30	--	--	--	55	15	20	40	--	▶	3RW44 23-□BC□4	1	1 unit	131																								
81	22	45	--	--	--	73	20	25	50	--	▶	3RW44 24-□BC□4	1	1 unit	131																								
99	30	55	--	--	--	88	25	30	60	--	▶	3RW44 25-□BC□4	1	1 unit	131																								
133	37	75	--	--	--	118	30	40	75	--	▶	3RW44 26-□BC□4	1	1 unit	131																								
161	45	90	--	--	--	142	40	50	100	--	▶	3RW44 27-□BC□4	1	1 unit	131																								
<b>Order No. supplement for connection types</b>																																							
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																																							
196	55	110	--	--	--	173	50	60	125	--	B	3RW44 34-□BC□4	1	1 unit	131																								
232	75	132	--	--	--	203	60	75	150	--	B	3RW44 35-□BC□4	1	1 unit	131																								
281	90	160	--	--	--	251	75	100	200	--	B	3RW44 36-□BC□4	1	1 unit	131																								
352	110	200	--	--	--	312	100	125	250	--	B	3RW44 43-□BC□4	1	1 unit	131																								
433	132	250	--	--	--	372	125	150	300	--	B	3RW44 44-□BC□4	1	1 unit	131																								
542	160	315	--	--	--	485	150	200	400	--	B	3RW44 45-□BC□4	1	1 unit	131																								
617	200	355	--	--	--	546	150	200	450	--	B	3RW44 46-□BC□4	1	1 unit	131																								
748	250	400	--	--	--	667	200	250	600	--	B	3RW44 47-□BC□4	1	1 unit	131																								
954	315	560	--	--	--	856	300	350	750	--	C	3RW44 53-□BC□4	1	1 unit	131																								
1065	355	630	--	--	--	954	350	400	850	--	C	3RW44 54-□BC□4	1	1 unit	131																								
1200	400	710	--	--	--	1065	350	450	950	--	C	3RW44 55-□BC□4	1	1 unit	131																								
1351	450	800	--	--	--	1200	450	500	1050	--	C	3RW44 56-□BC□4	1	1 unit	131																								
1524	500	900	--	--	--	1351	450	600	1200	--	C	3RW44 57-□BC□4	1	1 unit	131																								
1680	560	1000	--	--	--	1472	550	650	1300	--	C	3RW44 58-□BC□4	1	1 unit	131																								
1864	630	1100	--	--	--	1680	650	750	1500	--	C	3RW44 65-□BC□4	1	1 unit	131																								
2103	710	1200	--	--	--	1864	700	850	1700	--	C	3RW44 66-□BC□4	1	1 unit	131																								
<b>Order No. supplement for connection types</b>																																							
<ul style="list-style-type: none"> <li>• With spring-type terminals</li> <li>• With screw terminals</li> </ul>																																							
<b>Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup></b>																																							
<ul style="list-style-type: none"> <li>• 115 V AC</li> <li>• 230 V AC</li> </ul>																																							

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> 3RW44 2. to 3RW44 4. soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 10
- Maximum starting current in % of motor current I<sub>e</sub>: 300
- Maximum number of starts per hour in 1/h: 5

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C <sup>1)</sup>						3RW ambient temperature 50 °C <sup>1)</sup>				DT	Normal starting (CLASS 10) in inside-delta circuit	PU (UNIT, SET, M)	PS*	PG		
Rated values of induction motors						Rated values of induction motors										
Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>				Order No.	Price per PU				
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V						
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp						
<b>Inside-delta circuit, rated operational voltage 400 ... 600 V<sup>2)</sup></b>																
50	--	22	<b>30</b>	--	--	45	--	--	30	<b>40</b>	A	<b>3RW44 22-□BC□5</b>	1	1 unit	131	
62	--	30	<b>37</b>	--	--	55	--	--	40	<b>50</b>	A	<b>3RW44 23-□BC□5</b>	1	1 unit	131	
81	--	45	<b>45</b>	--	--	73	--	--	50	<b>60</b>	A	<b>3RW44 24-□BC□5</b>	1	1 unit	131	
99	--	55	<b>55</b>	--	--	88	--	--	60	<b>75</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131	
133	--	75	<b>90</b>	--	--	118	--	--	75	<b>100</b>	A	<b>3RW44 26-□BC□5</b>	1	1 unit	131	
161	--	90	<b>110</b>	--	--	142	--	--	100	<b>125</b>	A	<b>3RW44 27-□BC□5</b>	1	1 unit	131	
<b>Order No. supplement for connection types</b>																
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																
196	--	110	<b>132</b>	--	--	173	--	--	125	<b>150</b>	B	<b>3RW44 34-□BC□5</b>	1	1 unit	131	
232	--	132	<b>160</b>	--	--	203	--	--	150	<b>200</b>	B	<b>3RW44 35-□BC□5</b>	1	1 unit	131	
281	--	160	<b>200</b>	--	--	251	--	--	200	<b>250</b>	B	<b>3RW44 36-□BC□5</b>	1	1 unit	131	
352	--	200	<b>250</b>	--	--	312	--	--	250	<b>300</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131	
433	--	250	<b>315</b>	--	--	372	--	--	300	<b>350</b>	B	<b>3RW44 44-□BC□5</b>	1	1 unit	131	
542	--	315	<b>355</b>	--	--	485	--	--	400	<b>500</b>	B	<b>3RW44 45-□BC□5</b>	1	1 unit	131	
617	--	355	<b>450</b>	--	--	546	--	--	450	<b>600</b>	B	<b>3RW44 46-□BC□5</b>	1	1 unit	131	
748	--	400	<b>500</b>	--	--	667	--	--	600	<b>750</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131	
954	--	560	<b>630</b>	--	--	856	--	--	750	<b>950</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131	
1 065	--	630	<b>710</b>	--	--	954	--	--	850	<b>1 050</b>	C	<b>3RW44 54-□BC□5</b>	1	1 unit	131	
1 200	--	710	<b>800</b>	--	--	1 065	--	--	950	<b>1 200</b>	C	<b>3RW44 55-□BC□5</b>	1	1 unit	131	
1 351	--	800	<b>900</b>	--	--	1 200	--	--	1 050	<b>1 350</b>	C	<b>3RW44 56-□BC□5</b>	1	1 unit	131	
1 524	--	900	<b>1 000</b>	--	--	1 351	--	--	1 200	<b>1 500</b>	C	<b>3RW44 57-□BC□5</b>	1	1 unit	131	
1 680	--	1 000	<b>1 200</b>	--	--	1 472	--	--	1 300	<b>1 650</b>	C	<b>3RW44 58-□BC□5</b>	1	1 unit	131	
1 864	--	1 100	<b>1 350</b>	--	--	1 680	--	--	1 500	<b>1 900</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131	
2 103	--	1 200	<b>1 500</b>	--	--	1 864	--	--	1 700	<b>2 100</b>	C	<b>3RW44 66-□BC□5</b>	1	1 unit	131	

**Order No. supplement for connection types**

- With spring-type terminals
- With screw terminals

**Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup>**

- 115 V AC
- 230 V AC

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> Soft starter with screw terminals: 3RW44 2. to 3RW44 4. Delivery time class A, 3RW44 5. to 3RW44 6. Delivery time class B.

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 10
- Maximum starting current in % of motor current I<sub>e</sub>: 300
- Maximum number of starts per hour in 1/h: 5

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

SIRIUS 3RW44 for heavy starting (CLASS 20) in inside-delta circuit



3RW44 2.						3RW44 3.				3RW44 4.				3RW44 5.		3RW44 6.		DT	Heavy starting (CLASS 20) in inside-delta circuit	PU (UNIT, SET, M)	PS*	PG
3RW ambient temperature 40 °C <sup>1)</sup>						3RW ambient temperature 50 °C <sup>1)</sup>																
Rated values of induction motors						Rated values of induction motors																
Operational current I <sub>e</sub>		Rating at operational voltage U <sub>e</sub>				Operational current I <sub>e</sub>		Rating at operational voltage U <sub>e</sub>														
		230 V	400 V	500 V	690 V	1000 V			200 V	230 V	460 V	575 V			Order No.	Price per PU						
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp												
<b>Inside-delta circuit, rated operational voltage 200 ... 460 V<sup>2)</sup></b>																						
50	15	<b>22</b>	--	--	--	45	10	15	<b>30</b>	--	▶	<b>3RW44 23-□BC□4</b>				1	1 unit	131				
62	18.5	<b>30</b>	--	--	--	55	15	20	<b>40</b>	--	▶	<b>3RW44 24-□BC□4</b>				1	1 unit	131				
81	22	<b>45</b>	--	--	--	73	20	25	<b>50</b>	--	▶	<b>3RW44 25-□BC□4</b>				1	1 unit	131				
99	30	<b>55</b>	--	--	--	88	25	30	<b>60</b>	--	▶	<b>3RW44 25-□BC□4</b>				1	1 unit	131				
133	37	<b>75</b>	--	--	--	118	30	40	<b>75</b>	--	▶	<b>3RW44 27-□BC□4</b>				1	1 unit	131				
<b>Order No. supplement for connection types</b>																						
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>																						
161	45	<b>90</b>	--	--	--	142	40	50	<b>100</b>	--	B	<b>3RW44 34-□BC□4</b>				1	1 unit	131				
196	55	<b>110</b>	--	--	--	173	50	60	<b>125</b>	--	B	<b>3RW44 35-□BC□4</b>				1	1 unit	131				
232	75	<b>132</b>	--	--	--	203	60	75	<b>150</b>	--	B	<b>3RW44 36-□BC□4</b>				1	1 unit	131				
281	90	<b>160</b>	--	--	--	251	75	100	<b>200</b>	--	B	<b>3RW44 43-□BC□4</b>				1	1 unit	131				
352	110	<b>200</b>	--	--	--	312	100	125	<b>250</b>	--	B	<b>3RW44 44-□BC□4</b>				1	1 unit	131				
433	132	<b>250</b>	--	--	--	372	125	150	<b>300</b>	--	B	<b>3RW44 45-□BC□4</b>				1	1 unit	131				
542	160	<b>315</b>	--	--	--	485	150	200	<b>400</b>	--	B	<b>3RW44 47-□BC□4</b>				1	1 unit	131				
617	200	<b>355</b>	--	--	--	546	150	200	<b>450</b>	--	B	<b>3RW44 47-□BC□4</b>				1	1 unit	131				
748	250	<b>400</b>	--	--	--	667	200	250	<b>600</b>	--	C	<b>3RW44 53-□BC□4</b>				1	1 unit	131				
954	315	<b>560</b>	--	--	--	856	300	350	<b>750</b>	--	C	<b>3RW44 53-□BC□4</b>				1	1 unit	131				
1065	355	<b>630</b>	--	--	--	954	350	400	<b>850</b>	--	C	<b>3RW44 55-□BC□4</b>				1	1 unit	131				
1200	400	<b>710</b>	--	--	--	1065	350	450	<b>950</b>	--	C	<b>3RW44 57-□BC□4</b>				1	1 unit	131				
1351	450	<b>800</b>	--	--	--	1200	450	500	<b>1050</b>	--	C	<b>3RW44 65-□BC□4</b>				1	1 unit	131				
1524	500	<b>900</b>	--	--	--	1351	450	600	<b>1200</b>	--	C	<b>3RW44 65-□BC□4</b>				1	1 unit	131				
1680	560	<b>1000</b>	--	--	--	1472	550	650	<b>1300</b>	--	C	<b>3RW44 65-□BC□4</b>				1	1 unit	131				
--	--	--	--	--	--	1680	650	750	<b>1500</b>	--	C	<b>3RW44 66-□BC□4</b>				1	1 unit	131				
<b>Order No. supplement for connection types</b>																						
<ul style="list-style-type: none"> <li>• With spring-type terminals</li> <li>• With screw terminals</li> </ul>																						
<b>Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup></b>																						
<ul style="list-style-type: none"> <li>• 115 V AC</li> <li>• 230 V AC</li> </ul>																						

1  
3

2  
6

3  
4

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> 3RW44 2. to 3RW44 4. soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 40
- Maximum starting current in % of motor current I<sub>e</sub>: 350

- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C <sup>1)</sup>					3RW ambient temperature 50 °C <sup>1)</sup>					DT	Heavy starting (CLASS 20) in inside-delta circuit	PU (UNIT, SET, M)	PS*	PG	
Rated values of induction motors					Rated values of induction motors										
Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Order No.	Price per PU		
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inside-delta circuit, rated operational voltage 400 ... 600 V<sup>2)</sup></b>															
50	--	22	<b>30</b>	--	--	45	--	--	30	<b>40</b>	A	<b>3RW44 23-□BC□5</b>	1	1 unit	131
62	--	30	<b>37</b>	--	--	55	--	--	40	<b>50</b>	A	<b>3RW44 24-□BC□5</b>	1	1 unit	131
81	--	45	<b>45</b>	--	--	73	--	--	50	<b>60</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
99	--	55	<b>55</b>	--	--	88	--	--	60	<b>75</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
133	--	75	<b>90</b>	--	--	118	--	--	75	<b>100</b>	A	<b>3RW44 27-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
161	--	90	<b>110</b>	--	--	142	--	--	100	<b>125</b>	B	<b>3RW44 34-□BC□5</b>	1	1 unit	131
196	--	110	<b>132</b>	--	--	173	--	--	125	<b>150</b>	B	<b>3RW44 35-□BC□5</b>	1	1 unit	131
232	--	132	<b>160</b>	--	--	203	--	--	150	<b>200</b>	B	<b>3RW44 36-□BC□5</b>	1	1 unit	131
281	--	160	<b>200</b>	--	--	251	--	--	200	<b>250</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131
352	--	200	<b>250</b>	--	--	312	--	--	250	<b>300</b>	B	<b>3RW44 44-□BC□5</b>	1	1 unit	131
433	--	250	<b>315</b>	--	--	372	--	--	300	<b>350</b>	B	<b>3RW44 45-□BC□5</b>	1	1 unit	131
542	--	315	<b>355</b>	--	--	485	--	--	400	<b>500</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131
617	--	355	<b>450</b>	--	--	546	--	--	450	<b>600</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131
748	--	400	<b>500</b>	--	--	667	--	--	600	<b>750</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
954	--	560	<b>630</b>	--	--	856	--	--	750	<b>950</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
1 065	--	630	<b>710</b>	--	--	954	--	--	850	<b>1 050</b>	C	<b>3RW44 55-□BC□5</b>	1	1 unit	131
1 200	--	710	<b>800</b>	--	--	1 065	--	--	950	<b>1 200</b>	C	<b>3RW44 57-□BC□5</b>	1	1 unit	131
1 351	--	800	<b>900</b>	--	--	1 200	--	--	1 050	<b>1 350</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
1 524	--	900	<b>1 000</b>	--	--	1 351	--	--	1 200	<b>1 500</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
1 680	--	1 000	<b>1 200</b>	--	--	1 472	--	--	1 300	<b>1 650</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
--	--	--	--	--	--	1 680	--	--	1 500	<b>1 900</b>	C	<b>3RW44 66-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With spring-type terminals</li> <li>• With screw terminals</li> </ul>															
<b>Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup></b>															
<ul style="list-style-type: none"> <li>• 115 V AC</li> <li>• 230 V AC</li> </ul>															

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> Soft starter with screw terminals: 3RW44 2. to 3RW44 4. Delivery time class A, 3RW44 5. to 3RW44 6. Delivery time class B.

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 40
- Maximum starting current in % of motor current I<sub>e</sub>: 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the de-signed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

**SIRIUS 3RW44 for very heavy starting (CLASS 30) in inside-delta circuit**



3RW44 2.      3RW44 3.      3RW44 4.      3RW44 5.      3RW44 6.

3RW ambient temperature 40 °C <sup>1)</sup>						3RW ambient temperature 50 °C <sup>1)</sup>				DT	Very heavy starting (CLASS 30) in inside-delta circuit	PU (UNIT, SET, M)	PS*	PG		
Rated values of induction motors						Rated values of induction motors										
Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>				Order No.	Price per PU				
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V						
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp						

Inside-delta circuit, rated operational voltage 200 ... 460 V <sup>2)</sup>															
50	15	<b>22</b>	--	--	--	45	10	15	<b>30</b>	--	▶	3RW44 23-□BC□4	1	1 unit	131
62	18.5	<b>30</b>	--	--	--	55	15	20	<b>40</b>	--	▶	3RW44 24-□BC□4	1	1 unit	131
81	22	<b>45</b>	--	--	--	73	20	25	<b>50</b>	--	▶	3RW44 25-□BC□4	1	1 unit	131
99	30	<b>55</b>	--	--	--	88	25	30	<b>60</b>	--	▶	3RW44 25-□BC□4	1	1 unit	131
133	37	<b>75</b>	--	--	--	118	30	40	<b>75</b>	--	▶	3RW44 27-□BC□4	1	1 unit	131

**Order No. supplement for connection types**

- With screw terminals
- With spring-type terminals

161	45	<b>90</b>	--	--	--	142	40	50	<b>100</b>	--	B	3RW44 35-□BC□4	1	1 unit	131
196	55	<b>110</b>	--	--	--	173	50	60	<b>125</b>	--	B	3RW44 36-□BC□4	1	1 unit	131
232	75	<b>132</b>	--	--	--	203	60	75	<b>150</b>	--	B	3RW44 43-□BC□4	1	1 unit	131
281	90	<b>160</b>	--	--	--	251	75	100	<b>200</b>	--	B	3RW44 43-□BC□4	1	1 unit	131
352	110	<b>200</b>	--	--	--	312	100	125	<b>250</b>	--	B	3RW44 45-□BC□4	1	1 unit	131
433	132	<b>250</b>	--	--	--	372	125	150	<b>300</b>	--	B	3RW44 47-□BC□4	1	1 unit	131
542	160	<b>315</b>	--	--	--	485	150	200	<b>400</b>	--	C	3RW44 53-□BC□4	1	1 unit	131
617	200	<b>355</b>	--	--	--	546	150	200	<b>450</b>	--	C	3RW44 53-□BC□4	1	1 unit	131
748	250	<b>400</b>	--	--	--	667	200	250	<b>600</b>	--	C	3RW44 53-□BC□4	1	1 unit	131
954	315	<b>560</b>	--	--	--	856	300	350	<b>750</b>	--	C	3RW44 55-□BC□4	1	1 unit	131
1065	355	<b>630</b>	--	--	--	954	350	400	<b>850</b>	--	C	3RW44 58-□BC□4	1	1 unit	131
1200	400	<b>710</b>	--	--	--	1065	350	450	<b>950</b>	--	C	3RW44 65-□BC□4	1	1 unit	131
1351	450	<b>800</b>	--	--	--	1200	450	500	<b>1050</b>	--	C	3RW44 65-□BC□4	1	1 unit	131
1524	500	<b>900</b>	--	--	--	1351	450	600	<b>1200</b>	--	C	3RW44 65-□BC□4	1	1 unit	131
--	--	--	--	--	--	1472	550	650	<b>1300</b>	--	C	3RW44 66-□BC□4	1	1 unit	131

**Order No. supplement for connection types**

- With spring-type terminals
- With screw terminals

**Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup>**

- 115 V AC
- 230 V AC

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> 3RW44 2..to 3RW44 4.. soft starters with screw terminals: delivery time class ▶ (preferred type).

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

**Note:**

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 60
- Maximum starting current in % of motor current I<sub>e</sub>: 350
- Maximum number of starts per hour in 1/h: 1

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

3RW ambient temperature 40 °C <sup>1)</sup>					3RW ambient temperature 50 °C <sup>1)</sup>				DT	Very heavy starting (CLASS 30) in inside-delta circuit	PU (UNIT, SET, M)	PS*	PG		
Rated values of induction motors					Rated values of induction motors										
Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>					Operational current I <sub>e</sub>	Rating at operational voltage U <sub>e</sub>				Order No.	Price per PU			
	230 V	400 V	500 V	690 V	1000 V		200 V	230 V	460 V	575 V					
A	kW	kW	kW	kW	kW	A	hp	hp	hp	hp					
<b>Inside-delta circuit, rated operational voltage 400 ... 600 V<sup>2)</sup></b>															
50	--	22	<b>30</b>	--	--	45	--	--	30	<b>40</b>	A	<b>3RW44 23-□BC□5</b>	1	1 unit	131
62	--	30	<b>37</b>	--	--	55	--	--	40	<b>50</b>	A	<b>3RW44 24-□BC□5</b>	1	1 unit	131
81	--	45	<b>45</b>	--	--	73	--	--	50	<b>60</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
99	--	55	<b>55</b>	--	--	88	--	--	60	<b>75</b>	A	<b>3RW44 25-□BC□5</b>	1	1 unit	131
133	--	75	<b>90</b>	--	--	118	--	--	75	<b>100</b>	A	<b>3RW44 27-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With screw terminals</li> <li>• With spring-type terminals</li> </ul>															
161	--	90	<b>110</b>	--	--	142	--	--	100	<b>125</b>	B	<b>3RW44 35-□BC□5</b>	1	1 unit	131
196	--	110	<b>132</b>	--	--	173	--	--	125	<b>150</b>	B	<b>3RW44 36-□BC□5</b>	1	1 unit	131
232	--	132	<b>160</b>	--	--	203	--	--	150	<b>200</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131
281	--	160	<b>200</b>	--	--	251	--	--	200	<b>250</b>	B	<b>3RW44 43-□BC□5</b>	1	1 unit	131
352	--	200	<b>250</b>	--	--	312	--	--	250	<b>300</b>	B	<b>3RW44 45-□BC□5</b>	1	1 unit	131
433	--	250	<b>315</b>	--	--	372	--	--	300	<b>350</b>	B	<b>3RW44 47-□BC□5</b>	1	1 unit	131
542	--	315	<b>355</b>	--	--	485	--	--	400	<b>500</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
617	--	355	<b>450</b>	--	--	546	--	--	450	<b>600</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
748	--	400	<b>500</b>	--	--	667	--	--	600	<b>750</b>	C	<b>3RW44 53-□BC□5</b>	1	1 unit	131
954	--	560	<b>630</b>	--	--	856	--	--	750	<b>950</b>	C	<b>3RW44 55-□BC□5</b>	1	1 unit	131
1 065	--	630	<b>710</b>	--	--	954	--	--	850	<b>1 050</b>	C	<b>3RW44 58-□BC□5</b>	1	1 unit	131
1 200	--	710	<b>800</b>	--	--	1 065	--	--	950	<b>1 200</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
1 351	--	800	<b>900</b>	--	--	1 200	--	--	1 050	<b>1 350</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
1 524	--	900	<b>1 000</b>	--	--	1 351	--	--	1 200	<b>1 500</b>	C	<b>3RW44 65-□BC□5</b>	1	1 unit	131
--	--	--	--	--	--	1 472	--	--	1 300	<b>1 650</b>	C	<b>3RW44 66-□BC□5</b>	1	1 unit	131
<b>Order No. supplement for connection types</b>															
<ul style="list-style-type: none"> <li>• With spring-type terminals</li> <li>• With screw terminals</li> </ul>															
<b>Order No. supplement for the rated control supply voltage U<sub>s</sub><sup>3)</sup></b>															
<ul style="list-style-type: none"> <li>• 115 V AC</li> <li>• 230 V AC</li> </ul>															

<sup>1)</sup> In the selection table, the unit rated current I<sub>e</sub> refers to the induction motor's rated operational current in the inside-delta circuit. The actual current of the device is approx. 58 % of this value.

<sup>2)</sup> Soft starter with screw terminals: 3RW44 2. to 3RW44 4. Delivery time class A, 3RW44 5. to 3RW44 6. Delivery time class B.

<sup>3)</sup> Control by way of the internal 24 V DC supply and direct control by means of PLC possible.

### Note:

The listed motor ratings are rough guide values. The soft starter should always be designed on the basis of the required rated operational current of the motor.

The SIRIUS 3RW44 solid-state soft starters are designed for easy starting conditions. The selection and ordering data were determined for the following boundary conditions (see also the notes on page 4/6):

- Maximum starting time in s: 60
- Maximum starting current in % of motor current I<sub>e</sub>: 350
- Maximum number of starts per hour in 1/h: 1

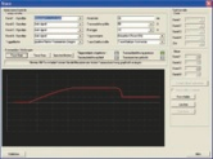

In the event of more exacting requirements, it may be necessary to choose a larger device. However, in some cases the designed-in safety reserves also permit the listed units to be used in boundary conditions which are slightly more demanding. Detailed technical information for a configuration which is tailored exactly to the application can be found in the manuals. Siemens recommends the use of the selection and simulation program Win-Soft Starter.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

### 3RW44

#### Accessories




Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
<b>Soft Starter ES 2007 PC communication program<sup>1)</sup></b>							
		<b>Soft Starter ES 2007 Basic</b>					
		Floating license for one user E-SW, software and documentation on CD, 3 languages (German/English/French), communication through system interface • License key on USB stick, Class A, including CD	B	<b>3ZS1 313-4CC10-0YA5</b>	1	1 unit	131
		<b>Soft Starter ES 2007 Standard</b>					
		Floating license for one user E-SW, software and documentation on CD, 3 languages (German/English/French), communication through system interface • License key on USB stick, Class A, including CD	B	<b>3ZS1 313-5CC10-0YA5</b>	1	1 unit	131
		<b>Soft Starter ES 2007 Premium</b>					
		Floating license for one user E-SW, software and documentation on CD, 3 languages (German/English/French), communication through system interface or PROFIBUS • License key on USB stick, Class A, including CD	B	<b>3ZS1 313-6CC10-0YA5</b>	1	1 unit	131
<b>SIRIUS 3RW44 Soft Starter Function Block Library for SIMATIC PCS 7<sup>1)</sup></b>							
		Scope of supply: AS modules and faceplates for integrating SIRIUS 3RW44 into the PCS 7 process control system, for PCS 7, version V 6.1/V 7.0					
		<b>Engineering software</b> for one engineering station (single license) including run- time software for execution of the AS module in an automation system (single license), German/English/French, Type of delivery: on CD incl. electronic documentation in German/English/Portuguese	▶	<b>3ZS1 633-1XX00-0YA0</b>	1	1 unit	131
		<b>Runtime software</b> for execution of the AS module in an automation system (single license), Type of delivery: License without software and documentation	▶	<b>3ZS1 633-2XX00-0YB0</b>	1	1 unit	131

<sup>1)</sup> For detailed information about the Soft Starter ES software program and about the SIRIUS 3RW44 Soft Starter Function Block Library for SIMATIC PCS 7 see Chapter 12 "Planning, Configuration and Visualizing for SIRIUS".

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44



Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
<b>PC cables</b>							
		<b>For PC/PG communication with SIRIUS 3RW44 soft starters</b>	A	<b>3UF7 940-0AA00-0</b>	1	1 unit	131
		Through the system interface, for connecting to the serial interface of the PC/PG					
3UF7 940-0AA00-0							
<b>USB/serial adapters</b>							
		<b>For connecting the PC cable to the USB interface of a PC</b>	B	<b>3UF7 946-0AA00-0</b>	1	1 unit	131
		We recommend, in conjunction with 3RW44 soft starter, using SIMOCODE pro 3UF7, 3RK3 modular safety system, ET 200S/ECOFAS/ET 200pro motor starters, AS-i safety monitor, AS-i analyzer					
<b>PROFIBUS communication modules</b>							
		Modules can be plugged into the soft starters for integrating the starters in the PROFIBUS network with DPV1 slave functionality. On Y-link the soft starter has only DPV0 slave functionality.	A	<b>3RW49 00-0KC00</b>	1	1 unit	131
3RW49 00-0KC00							
<b>External display and operator modules</b>							
		For indicating and operating the functions provided by the soft starter using an externally mounted display and operator module in degree of protection IP54 (e. g. in the control cabinet door)	▶	<b>3RW49 00-0AC00</b>	1	1 unit	131
3RW49 00-0AC00							
		<b>Connection cable</b>					
		From the device interface (serial) of the 3RW44 soft starter to the external display and operator module					
		• Length 0.5 m, flat	A	<b>3UF7 932-0AA00-0</b>	1	1 unit	131
		• Length 0.5 m, round	A	<b>3UF7 932-0BA00-0</b>	1	1 unit	131
		• Length 1.0 m, round	A	<b>3UF7 937-0BA00-0</b>	1	1 unit	131
		• Length 2.5 m, round	A	<b>3UF7 933-0BA00-0</b>	1	1 unit	131



# SIRIUS 3RW Soft Starters


## 3RW44 for High-Feature Applications

### 3RW44

	For soft starters	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Box terminal blocks for soft starters</b>								
 3RT19	<b>Box terminal blocks</b> (2 units are required for each device)							
	3RW44 2.	Included in the scope of supply						
	3RW44 3.	<ul style="list-style-type: none"> <li>Up to 70 mm<sup>2</sup></li> <li>Up to 120 mm<sup>2</sup></li> </ul>	▶	<b>3RT19 55-4G</b>		1	1 unit	101
		<b>Auxiliary conductor connection for box terminals</b>	B	▶	<b>3RT19 56-4G</b>		1	1 unit
	3RW44 4.	<ul style="list-style-type: none"> <li>Up to 240 mm<sup>2</sup> (with auxiliary conductor connection)</li> </ul>	▶	<b>3RT19 66-4G</b>		1	1 unit	101
<b>Covers for soft starters</b>								
<b>Terminal covers for box terminals</b>								
Additional touch protection to be fitted at the box terminals (2 units required per device)								
	3RW44 2. and 3RW44 3.		▶	<b>3RT19 56-4EA2</b>		1	1 unit	101
	3RW44 4.		▶	<b>3RT19 66-4EA2</b>		1	1 unit	101
 3RT19.6-4EA1	<b>Terminal covers for cable lugs and busbar connections</b>							
	3RW44 2. and 3RW44 3.	For complying with the phase clearances and as touch protection (2 units required per contactor)	▶	<b>3RT19 56-4EA1</b>		1	1 unit	101
	3RW44 4.	Also fits on mounted box terminals.	▶	<b>3RT19 66-4EA1</b>		1	1 unit	101
<b>Manuals 3RW44<sup>1)</sup></b>								
	3RW44			<b>3ZX10 12-0RW44-1AB1</b>				
<b>Operating instructions<sup>1)</sup></b>								
	3RW44			<b>3ZX10 12-0RW44-0AA0</b>				

<sup>1)</sup> The operating instructions are included in the scope of supply of the soft starter or are available – like the manual – as a PDF download from the Service&Support portal at [www.siemens.com/industrial-controls/support](http://www.siemens.com/industrial-controls/support) --> Controls --> Soft Starters and Solid-State Switching Devices --> SIRIUS 3RW Soft Starters.

### Spare parts

	For soft starters	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Fans</b>								
 3RW49	<b>Fans</b>							
	3RW44 2. and 3RW44 3.	115 V AC 230 V AC	▶	<b>3RW49 36-8VX30</b>		1	1 unit	131
			▶	<b>3RW49 36-8VX40</b>		1	1 unit	131
	3RW44 4.	115 V AC 230 V AC	▶	<b>3RW49 47-8VX30</b>		1	1 unit	131
			▶	<b>3RW49 47-8VX40</b>		1	1 unit	131
	3RW44 5. and 3RW44 6. <sup>1)</sup>	115 V AC 230 V AC	▶	<b>3RW49 57-8VX30</b>		1	1 unit	131
			▶	<b>3RW49 57-8VX40</b>		1	1 unit	131
	3RW44 6. <sup>2)</sup>	115 V AC 230 V AC	▶	<b>3RW49 66-8VX30</b>		1	1 unit	131
		▶	<b>3RW49 66-8VX40</b>		1	1 unit	131	

<sup>1)</sup> 3RW44 6. mounting on output side.

<sup>2)</sup> For mounting on front side.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### More information

#### Application examples for normal starting (CLASS 10)

**Normal starting CLASS 10** (up to 20 s with 350 %  $I_{n \text{ motor}}$ )

The soft starter rating can be selected to be as high as the rating of the motor used

Application		Conveyor belt	Roller conveyor	Compressor	Small fan <sup>1)</sup>	Pump	Hydraulic pump
<b>Starting parameters</b>							
• Voltage ramp and current limiting							
- Starting voltage	%	70	60	50	30	30	30
- Starting time	s	10	10	10	10	10	10
- Current limit value		Deactivated	Deactivated	$4 \times I_M$	$4 \times I_M$	Deactivated	Deactivated
• Torque ramp							
- Starting torque		60	50	40	20	10	10
- End torque		150	150	150	150	150	150
- Starting time		10	10	10	10	10	10
• Breakaway pulse							
		Deactivated (0 ms)	Deactivated (0 ms)	Deactivated (0 ms)	Deactivated (0 ms)	Deactivated (0 ms)	Deactivated (0 ms)
<b>Ramp-down mode</b>							
		Smooth ramp-down	Smooth ramp-down	Free ramp-down	Free ramp-down	Pump ramp-down	Free ramp-down

#### Application examples for heavy starting (CLASS 20)

**Heavy starting CLASS 20** (up to 40 s with 350 %  $I_{n \text{ motor}}$ )

The soft starter has to be selected one performance class higher than the motor used

Application		Stirrer	Centrifuge	Milling machines
<b>Starting parameters</b>				
• Voltage ramp and current limiting				
- Starting voltage	%	30	30	30
- Starting time	s	30	30	30
- Current limit value		$4 \times I_M$	$4 \times I_M$	$4 \times I_M$
• Torque ramp				
- Starting torque		30	30	30
- End torque		150	150	150
- Starting time		30	30	30
• Breakaway pulse				
		Deactivated (0 ms)	Deactivated (0 ms)	Deactivated (0 ms)
<b>Ramp-down mode</b>				
		Free ramp-down	Free ramp-down	Free ramp-down or DC braking

#### Application examples for very heavy starting (CLASS 30)

**Very heavy starting CLASS 30** (up to 60 s with 350 %  $I_{n \text{ motor}}$ )

The soft starter has to be selected two performance classes higher than the motor used

Application		Large fans <sup>2)</sup>	Mills	Breakers	Circular saws/bandsaws
<b>Starting parameters</b>					
• Voltage ramp and current limiting					
- Starting voltage	%	30	50	50	30
- Starting time	s	60	60	60	60
- Current limit value		$4 \times I_M$	$4 \times I_M$	$4 \times I_M$	$4 \times I_M$
• Torque ramp					
- Starting torque		20	50	50	20
- End torque		150	150	150	150
- Starting time		60	60	60	60
• Breakaway pulse					
		Deactivated (0 ms)	80 %; 300 ms	80 %; 300 ms	Deactivated (0 ms)
<b>Ramp-down mode</b>					
		Free ramp-down	Free ramp-down	Free ramp-down	Free ramp-down

<sup>1)</sup> The mass inertia of the fan is <10 times the mass inertia of the motor.

<sup>2)</sup> The mass inertia of the fan is ≥10 times the mass inertia of the motor.

#### Note:

These tables present sample set values and device sizes. They are intended only for the purposes of information and are not binding. The set values depend on the application in question and must be optimized during commissioning. The soft starter dimensions should be checked where necessary with the Win-Soft Starter software or with the help of Technical Assistance.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

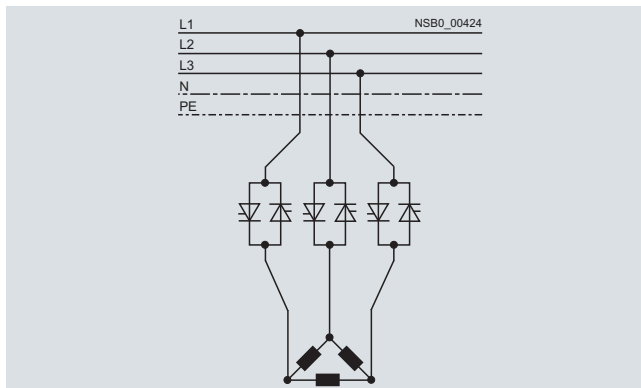
### 3RW44

#### Circuit concept

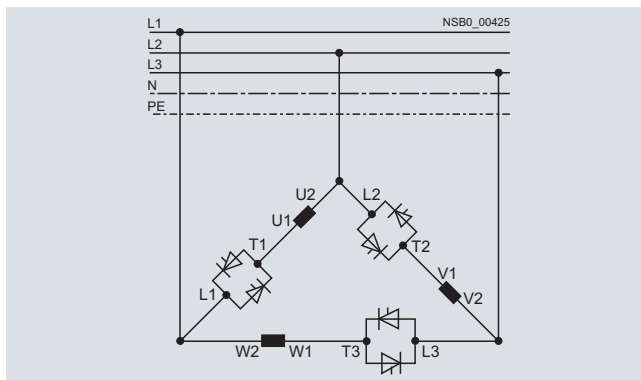
The SIRIUS 3RW44 soft starters can be operated in two different types of circuit.

- **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 cables.
- **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  $I_n$ ,  
3 cables to the motor



Inside-delta circuit:  
Rated current  $I_e$  corresponds to approx. 58 % of the rated motor current  $I_n$ , 6 cables to the motor (as with 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. With the inside-delta circuit there is double the wiring complexity but a smaller size of device can be used at 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.

#### Configuration

The 3RW44 solid-state soft starters are designed for normal starting. In case of heavy starting or increased starting frequency, a larger device must be selected.

For long starting times it is recommended to have a PTC sensor in the motor. This also applies for the ramp-down modes smooth ramp-down, pump ramp-down 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 starting, following the local short-circuit conditions. Fuses, controls and overload relays must be ordered separately.

A bypass contact system and solid-state overload relay are already integrated in the 3RW44 soft starter and therefore do not have to 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).

#### Note:

*When induction motors are switched on, voltage drops occur as a rule on starters of all types (direct 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.*

#### Device interface, PROFIBUS DP communication module, Soft Starter ES parameterizing and operating software

The 3RW44 electronic soft starters have a PC interface for communicating with the Soft Starter ES software or for connecting the external display and operator module. If the optional PROFIBUS communication module is used, the 3RW44 soft starter can be integrated in the PROFIBUS network and communicate using the GSD file or Soft Starter ES Premium software.

#### SIRIUS 3RW44 Soft Starter Function Block Library for SIMATIC PCS 7

The SIRIUS 3RW44 soft starter PCS 7 function block library can be used for simple and easy integration of SIRIUS 3RW44 soft starters into the SIMATIC PCS 7 process control system. The SIRIUS 3RW44 soft starter PCS 7 function block library contains the diagnostics and driver blocks corresponding with the SIMATIC PCS 7 diagnostics and driver concept as well as the elements (symbols and faceplates) required for operator control and process monitoring.

# SIRIUS 3RW Soft Starters

## 3RW44 for High-Feature Applications

3RW44

### **Manual for SIRIUS 3RW44**

Besides containing all important information on configuring, commissioning and servicing, the manual also contains example circuits and the technical specifications for all devices.

### **Win-Soft Starter selection and simulation program**

With this software, you can simulate and select all Siemens soft starters, taking into account various parameters such as mains properties, motor and load data, and special application requirements.

The software is a valuable tool, which makes complicated, lengthy manual calculations for determining the required soft starters superfluous.

The Win-Soft Starter selection and simulation program can be downloaded from:

[www.siemens.com/softstarter](http://www.siemens.com/softstarter) --> Software

You can find more information about soft starters on the Internet likewise at:

[www.siemens.com/softstarter](http://www.siemens.com/softstarter)

### **Training course for SIRIUS soft starters (SD-SIRIUSO)**

Siemens offers a 2-day training course on the SIRIUS solid-state soft starters to keep customers and own personnel up-to-date on configuring, commissioning and maintenance issues.

You can find more information on our SITRAIN website:

[www.siemens.com/sitrain](http://www.siemens.com/sitrain)

--> For course name select "SD-SIRIUSO"

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