

# Siemens 3RW4446-6BC44 Manual

|                |                     |
|----------------|---------------------|
| Brand          | Siemens             |
| Product Series | Siemens             |
| Product Type   | SIRIUS Soft Starter |

## Description

3RW4446-6BC44 | Siemens | SIRIUS Soft Starter

Manufacturer : Siemens

Product No. : 3RW4446-6BC44

Product Type : SIRIUS Soft Starter

Current : 617 A

Supply Voltage : 230 V AC

Mounting Walss : Screw terminals

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### General technical data

product brand name SIRIUS

product feature

- integrated bypass contact system Yes
- thyristors Yes

product function

- intrinsic device protection Yes
- motor overload protection Yes
- evaluation of thermistor motor protection Yes
- external reset Yes
- adjustable current limitation Yes
- inside-delta circuit Yes

product component motor brake output Yes

insulation voltage rated value V 690

degree of pollution 3, acc. to IEC 60947-4-2

reference code acc. to DIN EN 61346-2 Q

reference code acc. to DIN 40719 extended according  
to IEC 204-2 acc. to IEC 750

G

Power Electronics

product designation Soft starter

operational current

- at 40 °C rated value A 356
- at 50 °C rated value A 315
- at 60 °C rated value A 280

operational current for 3-phase motors at inside-delta circuit

- at 40 °C rated value A 617
- at 50 °C rated value A 546
- at 60 °C rated value A 485

yielded mechanical performance for 3-phase motors

- at 230 V
  - at standard circuit at 40 °C rated value W 110 000
  - at inside-delta circuit at 40 °C rated value W 200 000
- at 400 V
  - at standard circuit at 40 °C rated value W 200 000
  - at inside-delta circuit at 40 °C rated value W 355 000

yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value  
hp 100

operating frequency rated value Hz 50 ... 60

relative negative tolerance of the operating frequency % -10

relative positive tolerance of the operating frequency % 10

operating voltage at standard circuit rated value V 200 ... 460

relative negative tolerance of the operating voltage at standard circuit

% -15

relative positive tolerance of the operating voltage at standard circuit

% 10

operating voltage at inside-delta circuit rated value V 200 ... 460

relative negative tolerance of the operating voltage at inside-delta circuit

% -15

relative positive tolerance of the operating voltage at inside-delta circuit

% 10

minimum load [%] % 8

adjustable motor current for motor overload

protection minimum rated value

A 71

continuous operating current [% of  $I_e$ ] at 40 °C % 115

power loss [W] at operational current at 40 °C during operation typical

W 174

Control circuit/ Control

type of voltage of the control supply voltage AC

control supply voltage frequency 1 rated value Hz 50

control supply voltage frequency 2 rated value Hz 60

relative negative tolerance of the control supply voltage frequency

% -10

relative positive tolerance of the control supply voltage frequency

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% 10

control supply voltage 1 at AC

- at 50 Hz rated value V 230
- at 60 Hz rated value V 230

relative negative tolerance of the control supply

voltage at AC at 50 Hz

% -15

relative positive tolerance of the control supply

voltage at AC at 50 Hz

% 10

relative negative tolerance of the control supply

voltage at AC at 60 Hz

% -15

relative positive tolerance of the control supply

voltage at AC at 60 Hz

% 10

display version for fault signal Display

Mechanical data

width mm 210

height mm 230

depth mm 298

fastening method screw fixing

mounting position with vertical mounting surface +/-90° rotatable, with

vertical mounting surface +/- 22.5° tiltable to the front and

back

required spacing with side-by-side mounting

- upwards mm 100
- at the side mm 5
- downwards mm 75

wire length maximum m 500

number of poles for main current circuit 3

Connections/ Terminals

type of electrical connection

- for main current circuit busbar connection
- for auxiliary and control circuit screw-type terminals

number of NC contacts for auxiliary contacts 0

number of NO contacts for auxiliary contacts 3

number of CO contacts for auxiliary contacts 1

type of connectable conductor cross-sections for

main contacts for box terminal using the front

clamping point

- finely stranded with core end processing 70 ... 240 mm<sup>2</sup>
- finely stranded without core end processing 70 ... 240 mm<sup>2</sup>
- stranded 95 ... 300 mm<sup>2</sup>

type of connectable conductor cross-sections for

main contacts for box terminal using the back

clamping point

- finely stranded with core end processing 120 ... 185 mm<sup>2</sup>
- finely stranded without core end processing 120 ... 185 mm<sup>2</sup>

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- stranded 120 ... 240 mm<sup>2</sup>

type of connectable conductor cross-sections for  
main contacts for box terminal using both clamping  
points

- finely stranded with core end processing min. 2x 50 mm<sup>2</sup>, max. 2x 185 mm<sup>2</sup>
- finely stranded without core end processing min. 2x 50 mm<sup>2</sup>, max. 2x 185 mm<sup>2</sup>
- stranded max. 2x 70 mm<sup>2</sup>, max. 2x 240 mm<sup>2</sup>

type of connectable conductor cross-sections at AWG  
cables for main contacts for box terminal

- using the back clamping point 250 ... 500 kcmil
- using the front clamping point 3/0 ... 600 kcmil
- using both clamping points min. 2x 2/0, max. 2x 500 kcmil

type of connectable conductor cross-sections for DIN  
cable lug for main contacts

- finely stranded 50 ... 240 mm<sup>2</sup>
- stranded 70 ... 240 mm<sup>2</sup>

type of connectable conductor cross-sections for  
auxiliary contacts

- solid 2x (0.5 ... 2.5 mm<sup>2</sup>)
- finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>)

type of connectable conductor cross-sections at AWG  
cables

- for main contacts 2/0 ... 500 kcmil
- for auxiliary contacts 2x (20 ... 14)
- for auxiliary contacts finely stranded with core end

processing

2x (20 ... 16)

Ambient conditions

installation altitude at height above sea level m 5 000

environmental category

- during transport acc. to IEC 60721 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
- during storage acc. to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
- during operation acc. to IEC 60721 3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6

ambient temperature

- during operation °C 60
- during storage °C -25 ... +80

derating temperature °C 40

protection class IP on the front acc. to IEC 60529 IP00; IP20 with box terminal/cover

touch protection on the front acc. to IEC 60529 finger-safe, for vertical contact from the front with box terminal/cover

## Technical Specifications

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— at standard circuit at 40 °C rated value W 110 000

— at inside-delta c

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