

Siemens 3RW4456-6BC44 Manual

Brand	Siemens
Product Series	Siemens
Product Type	is >>3RW5554-6HA14<<

Description

3RW4456-6BC44

SIRIUS soft starter Values at 400 V, 40 °C standard: 780 A, 450 kW

Inside-delta: 1351 A, 800 kW 200-460 V AC, 230 V AC Screw

terminals !!! Phased-out product !!! Successor is SIRIUS 3RW5,

Preferred successor type is >>3RW5554-6HA14<<

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 according to EN 61346-2 Q

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

G

Power Electronics

product designation Soft starter

operational current

- at 40 °C rated value A 780
- at 50 °C rated value A 693
- at 60 °C rated value A 615

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

- at 40 °C rated value A 1 351
- at 50 °C rated value A 1 200
- at 60 °C rated value A 1 065

yielded mechanical performance for 3-phase motors

- at 230 V

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— at standard circuit at 40 °C rated value kW 250
 — at inside-delta circuit at 40 °C rated value kW 450
 • at 400 V
 — at standard circuit at 40 °C rated value kW 450
 — at inside-delta circuit at 40 °C rated value kW 800
 yielded mechanical performance [hp] for 3-phase AC motor
 at 200/208 V at standard circuit at 50 °C rated value
 hp 200
 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

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minimum load [%] % 8
 adjustable motor current for motor overload protection
 minimum rated value
 A 156
 continuous operating current [% of I_e] at 40 °C % 115
 power loss [W] at operational current at 40 °C during
 operation typical
 W 214

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
 % 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 510

height mm 640

depth mm 290

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 DIN cable

lug for main contacts

- finely stranded 50 ... 240 mm²
- stranded 70 ... 240 mm²

type of connectable conductor cross-sections for auxiliary contacts

- solid 2x (0.5 ... 2.5 mm²)
- finely stranded with core end processing 2x (0.5 ... 1.5 mm²)

type of connectable conductor cross-sections for 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 according to IEC 60721 2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
- during storage according to IEC 60721 1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4

- during operation according 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 according to IEC 60529 IP00

UL/CSA ratings

yielded mechanical performance [hp] for 3-phase AC motor

- at 200/208 V
 - at inside-delta circuit at 50 °C rated value hp 450
 - at 220/230 V
 - at standard circuit at 50 °C rated value hp 250
 - at inside-delta circuit at 50 °C rated value hp 500
 - at 460/480 V
 - at standard circuit at 50 °C rated value hp 600
 - at inside-delta circuit at 50 °C rated value hp 1 050
- contact rating of auxiliary contacts according to UL B300 / R300

Technical Specifications

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yielded mechanical performance for 3-phase motors

- at 230 V

— at standard circuit at 40 °C rated value kW 250

— at

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