Siemens □□□ Series Service Manual

3RW4424-1BC44

1. Description

3RW4424-1BC44

3. Product Information

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3RW4424-1BC44

SIRIUS SOFT STARTER, VALUES WITH 400 V,

40 DEG., STANDARD: 47A, 22KW,

INSIDE-DELTA CIRCUIT 3: 81A, 45KW,

200-460 V AC, 230 V AC, SCREW TERMINALS

General details:

product brand name SIRIUS

Product equipment

integrated bridging contact system Yes

thyristors Yes

Product function

intrinsic device protection Yes

motor overload protection Yes

evaluation of thermal resistor motor protection Yes

reset external Yes

adjustable current limitation Yes

inside-delta circuit Yes

Product component / outlet for enine brake Yes

Item designation

according to DIN EN 61346-2 Q

according to DIN 40719 extendable after IEC 204-2 / according

to IEC 750

G

Power Electronics:

Product designation soft starters for high feature applications

Operating current

at 40 °C / rated value A 47

at 50 °C / rated value A 42

at 60 °C / rated value A 37

for three-phase servomotors / at 3-phase root switching

at 40 °C / rated value A 81

at 50 °C / rated value A 73

at 60 °C / rated value A 64

Emitted mechanical power / for three-phase servomotors

at 230 V / at standard switching / at 40 °C

rated value W 11,000

at 400 V / at standard switching / at 40 °C

rated value W 22,000

at 230 V / at 3-phase root switching / at 40 °C

rated value W 22,000

at 400 V / at 3-phase root switching / at 40 °C

rated value W 45,000

yielded mechanical performance (hp) / for three-phase squirrel

cage motors / at 200/208 V / at standard circuit / at 50 °C / rated

value

hp 10

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 / with standard circuit / rated value V 200 ... 460

Relative negative tolerance / of the operating voltage / with

standard circuit

% -15

Relative positive tolerance / of the operating voltage / with

standard circuit

% 10

Operating voltage / at 3-phase root switching / rated value V 200 ... 460

Relative negative tolerance / of the operating voltage / with

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inside-delta circuit

% -15

Relative positive tolerance / of the operating voltage / with

inside-delta circuit

% 10

Minimum load in % of I_M % 8

Adjustable rated current / of the motor / for motor overload

protection / minimum

A 9

Continuous operating current in % of I_e / at 40°C % 115

Active power loss / at operating current / at 40°C / during

operating phase / typical

W 32

Control electronics:

Type of voltage / of the controlled 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 50 Hz / for AC V 230

at 60 Hz / for AC V 230

Relative negative tolerance / of the control supply voltage / at 60

Hz / for AC

% -15

Relative positive tolerance / of the control supply voltage / at 60

Hz / for AC

% 10

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Type of display / for fault signal Display

Mechanical design:

Width mm 170

Height mm 192

Depth mm 270

Type of mounting screw fixing

mounting position bei senkrechter Montageebene +/-90° drehbar, bei

senkrechter Montageebene +/- 22,5° nach vorne und

hinten kippbar

Distance, to be maintained, to the ranks assembly

upwards mm 100

sidewards mm 5

downwards mm 75

Installation altitude / at a height over sea level m 5,000

Cable length / maximum m 500

Number of poles / for main current circuit 3

Electrical connections:

Design of the electrical connection

for main current circuit box terminals

for auxiliary and control current circuit screw-type terminals

Number of NC contacts / for auxiliary contacts 0

Number of NO contacts / for auxiliary contacts 3

Number of changeover contacts / for auxiliary contacts 1

Type of the connectable conductor cross-section / for main

contacts / for box terminal / when using the front clamping point

solid 2.5 ... 16 mm2

finely stranded / with conductor end processing 2.5 ... 35 mm²

finely stranded / without conductor end processing 4 ... 50 mm²

stranded 4 ... 70 mm2

Type of the connectable conductor cross-section / for main contacts / for box terminal / when using the back clamping point

solid 2,5 ... 16 mm2

finely stranded / with conductor end processing 2.5 ... 50 mm²

without conductor final cutting / without conductor end processing

10 ... 50 mm²

stranded 10 ... 70 mm2

Type of the connectable conductor cross-section / for main contacts / for box terminal / when using both clamping points

solid 2x (2.5 ... 16 mm2)

finely stranded / with conductor end processing 2x (2.5 ... 35 mm²)

without conductor final cutting / without conductor end processing

2x (4 ... 35 mm²)

stranded 2x (4 ... 50 mm2)

Type of the connectable conductor cross-section / for AWG conductors / for main contacts / for box terminal

when using the back cl 10 ... 2/0

when using the front c 10 ... 2/0

when using both clampi 2x (10 ... 1/0)

Type of the connectable conductor cross-section for auxiliary contacts

solid 2x (0.5 ... 2.5 mm²)

finely stranded / with conductor end processing 2x (0.5 ... 1.5 mm²)

for AWG conductors / for auxiliary contacts 2x (20 ... 14)

finely stranded / with wire end proc 2x (20 ... 16)

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Ambient conditions:

Ambient temperature

during operating / °C 60

during storage °C -25 ... +80

Derating temperature °C 40

Protection class IP IP00

Certificates/approvals:

UL/CSA ratings

yielded mechanical performance (hp) / for three-phase squirrel cage motors

at 220/230 V / at standard circuit

at 50 °C / rated value hp 15

at 460/480 V / at standard circuit

at 50 °C / rated value hp 25

at 200/208 V / at inside-delta circuit / at 50 °C / rated value hp 20

at 220/230 V / at inside-delta circuit / at 50 °C / rated value hp 25

at 460/480 V / at inside-delta circuit / at 50 °C / rated value hp 50

Contact rating designation / for auxiliary contacts / according to UL

B300 / R300