

3RW40461BB14
Siemens soft starter

GENERAL SPECIFICATIONS

Specification	Value
product brand name	SIRIUS
product designation	Soft starter

PRODUCT FEATURE

Specification	Value
integrated bypass contact system	Yes
thyristors	Yes
intrinsic device protection	Yes
motor overload protection	Yes
evaluation of thermistor motor protection	No
external reset	Yes
adjustable current limitation	Yes

GENERAL TECHNICAL DATA

Specification	Value
inside-delta circuit	No
product component motor brake output	No
insulation voltage rated value	600 V
degree of pollution	3, acc. to IEC 60947-4-2
blocking voltage of the thyristor maximum	1 600 V
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

Specification	Value
operational current at 40 °C rated value	80 A
operational current at 50 °C rated value	73 A
operational current at 60 °C rated value	66 A
yielded mechanical performance for 3-phase motors at 230 V at standard circuit at 40 °C rated value	22 kW
yielded mechanical performance for 3-phase motors at 400 V at standard circuit at 40 °C rated value	45 kW
yielded mechanical performance [hp] for 3-phase AC motor at 200/208 V at standard circuit at 50 °C rated value	20 hp
operating frequency rated value	50 ... 60 Hz
relative negative tolerance of the operating frequency	-10 %
relative positive tolerance of the operating frequency	10 %
operating voltage at standard circuit rated value	200 ... 480 V
relative negative tolerance of the operating voltage at standard circuit	-15 %

POWER ELECTRONICS

Specification	Value
relative positive tolerance of the operating voltage at standard circuit	10 %
minimum load [%]	20 %
adjustable motor current for motor overload protection minimum rated value	43 A
continuous operating current [% of Ie] at 40 °C	115 %
power loss [W] at operational current at 40 °C during operation typical	12 W

CONTROL CIRCUIT/ CONTROL

Specification	Value
type of voltage of the control supply voltage	AC/DC
control supply voltage frequency 1 rated value	50 Hz
control supply voltage frequency 2 rated value	60 Hz
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	110 ... 230 V
control supply voltage 1 at AC at 60 Hz	110 ... 230 V
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 %
control supply voltage 1 at DC	110 ... 230 V
relative negative tolerance of the control supply voltage at DC	-15 %
relative positive tolerance of the control supply voltage at DC	10 %
display version for fault signal	red

MECHANICAL DATA

Specification	Value
size of engine control device	S3
width	70 mm
height	170 mm
depth	190 mm
fastening method	screw and snap-on mounting
mounting position	With additional fan: With vertical mounting surface +/- 90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back Without additional fan: With vertical mounting surface +/-10° rotatable, with vertical mounting surface +/- 10° t
required spacing with side-by-side mounting upwards	60 mm
required spacing with side-by-side mounting at the side	30 mm
required spacing with side-by-side mounting down-wards	40 mm
wire length maximum	300 m
number of poles for main current circuit	3

CONNECTIONS/ TERMINALS

Specification	Value
type of electrical connection for main current circuit	screw-type terminals
type of electrical connection for auxiliary and control circuit	screw-type terminals
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	2
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 solid	2x (2.5 ... 16 mm²)
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point finely stranded with core end processing	2.5 ... 35 mm²
type of connectable conductor cross-sections for main contacts for box terminal using the front clamping point stranded	4 ... 70 mm²
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point solid	2x (2.5 ... 16 mm²)
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point finely stranded with core end processing	2.5 ... 50 mm²
type of connectable conductor cross-sections for main contacts for box terminal using the back clamping point stranded	10 ... 70 mm²
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points solid	2x (2.5 ... 16 mm²)
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points finely stranded with core end processing	2x (2.5 ... 35 mm²)
type of connectable conductor cross-sections for main contacts for box terminal using both clamping points stranded	2x (10 ... 50 mm²)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal using the back clamping point	2x (10 ... 1/0)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal using the front clamping point	2x (10 ... 1/0)
type of connectable conductor cross-sections for AWG cables for main contacts for box terminal using both clamping points	10 ... 2/0
type of connectable conductor cross-sections for DIN cable lug for main contacts finely stranded	2 x (10 ... 50 mm²)
type of connectable conductor cross-sections for DIN cable lug for main contacts stranded	2x (10 ... 70 mm²)
type of connectable conductor cross-sections for auxiliary contacts solid	2x (0.5 ... 2.5 mm²)
type of connectable conductor cross-sections for auxiliary contacts finely stranded with core end processing	2x (0.5 ... 1.5 mm²)
type of connectable conductor cross-sections for AWG cables for main contacts	2x (7 ... 1/0)
type of connectable conductor cross-sections for AWG cables for auxiliary contacts	2x (20 ... 14)
type of connectable conductor cross-sections for AWG cables for auxiliary contacts finely stranded with core end processing	2x (20 ... 16)

AMBIENT CONDITIONS

Specification	Value
installation altitude at height above sea level	5 000 m
environmental category during transport according to IEC 60721	2K2, 2C1, 2S1, 2M2 (max. fall height 0.3 m)
environmental category during storage according to IEC 60721	1K6 (only occasional condensation), 1C2 (no salt mist), 1S2 (sand must not get inside the devices), 1M4
environmental category 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	-25 ... +60 °C
ambient temperature during storage	-40 ... +80 °C
derating temperature	40 °C
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front

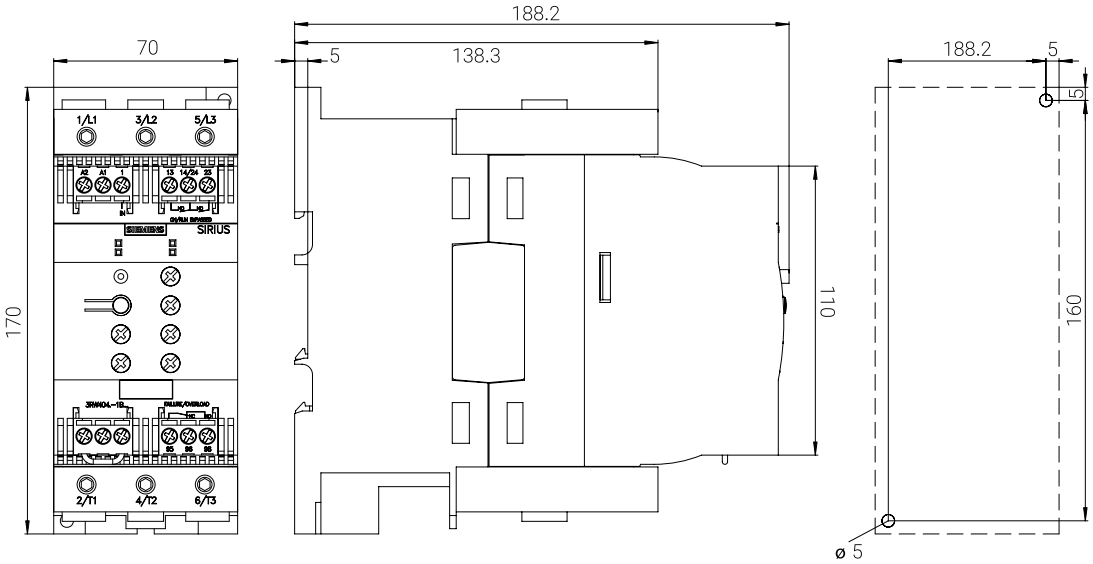
UL/CSA RATINGS

Specification	Value
yielded mechanical performance [hp] for 3-phase AC motor at 220/230 V at standard circuit at 50 °C rated value	25 hp
yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V at standard circuit at 50 °C rated value	50 hp
contact rating of auxiliary contacts according to UL	B300 / R300

ENVIRONMENTAL PRODUCT DECLARATION

Specification	Value
global warming potential [CO2 eq] / during manufacturing	23.7 kg
global warming potential [CO2 eq] / during sales	0.471 kg
global warming potential [CO2 eq] / during operation	158 kg
global warming potential [CO2 eq] / after end of life	-6.65 kg
global warming potential [CO2 eq] / total	175 kg

DIMENSIONAL DRAWING



WIRING CIRCUIT

