SIEMENS

Data sheet

3RA6500-1EB43

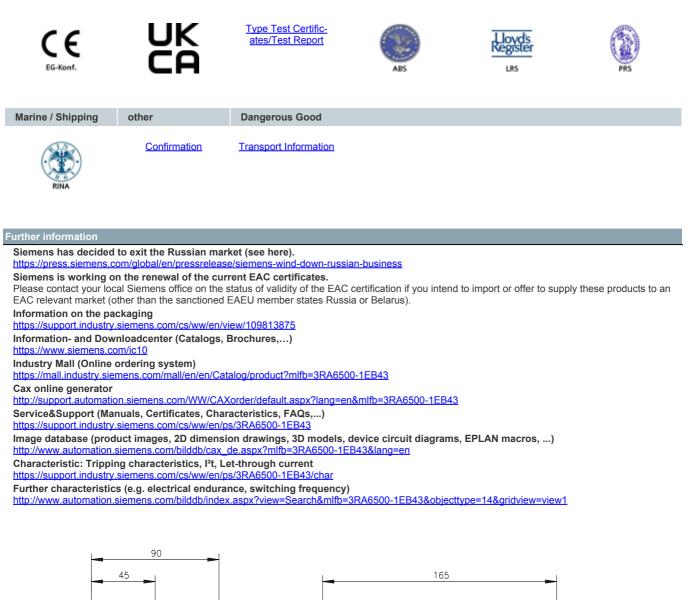


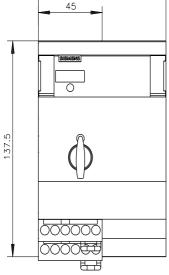
SIRIUS Compact load feeder Reversing starter for IO-Link 400 V 24 V DC 8...32 A IP20 Connection main circuit: plug-in, without terminals Connection control circuit: screw terminal

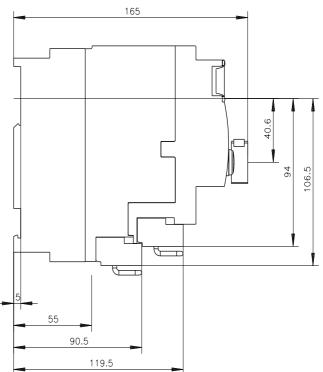
product brand name	SIRIUS
product designation	Compact starter for IO-Link
design of the product	reversing starter
product type designation	3RA65
General technical data	
product function control circuit interface to parallel wiring	No
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	5.4 W
 at AC in hot operating state per pole 	1.8 W
 without load current share typical 	3.4 W
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 000 V
degree of protection NEMA rating	other
shock resistance	a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes
vibration resistance	f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles
mechanical service life (operating cycles)	
 of the main contacts typical 	10 000 000
 of auxiliary contacts typical 	10 000 000
 of the signaling contacts typical 	10 000 000
electrical endurance (operating cycles) of auxiliary contacts	
 at DC-13 at 6 A at 24 V typical 	30 000
 at AC-15 at 6 A at 230 V typical 	200 000
type of assignment	continous operation according to IEC 60947-6-2
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-20 +60 °C
during storage	-55 +80 °C
during transport	-55 +80 °C
relative humidity during operation	10 90 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	8 32 A
formula for making capacity limit current	12 x le
formula for limit current breaking capacity	10 x le

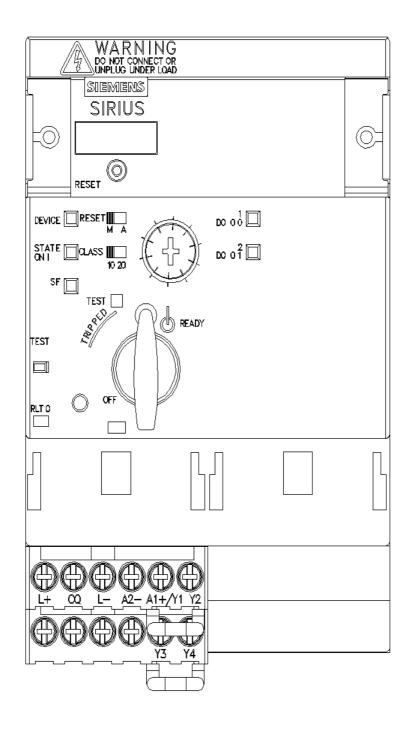
yielded mechanical performance for 4-pole AC motor	45 144
• at 400 V rated value	15 kW
operating voltage at AC-3 rated value maximum	400 V
operational current	
 at AC at 400 V rated value 	32 A
 at AC-3 at 400 V rated value 	32 A
• at AC-43	
— at 400 V rated value	29 A
operating power	
 at AC-3 at 400 V rated value 	15 kW
• at AC-43	
— at 400 V rated value	15 000 W
no-load switching frequency	3 600 1/h
operating frequency	
 at AC-41 according to IEC 60947-6-2 maximum 	750 1/h
 at AC-43 according to IEC 60947-6-2 maximum 	250 1/h
Control circuit/ Control	
type of voltage	DC
control supply voltage 1	
• at DC rated value	24 V
• at DC	24 24 V
holding power	
• at DC maximum	3.4 W
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of NO contacts of instantaneous short-circuit trip unit for	0
signaling contact	
number of CO contacts of the current-dependent overload release for signaling contact	0
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at DC-13 at 250 V	0.27 A
Protective and monitoring functions	
trip class	CLASS 10 and 20 adjustable
operating short-circuit current breaking capacity (Ics)	
• at 400 V	53 kA
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	32 A
yielded mechanical performance [hp] for 3-phase AC motor	
• at 200/208 V rated value	7.5 hp
• at 220/230 V rated value	10 hp
• at 460/480 V rated value	20 hp
Short-circuit protection	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
Installation/ mounting/ dimensions	
mounting position	any
recommended	vertical, on horizontal standard DIN rail
fastening method	screw and snap-on mounting
height	170 mm
width	90 mm
depth	165 mm
Connections/ Terminals	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
for main current circuit	plug-in without terminals

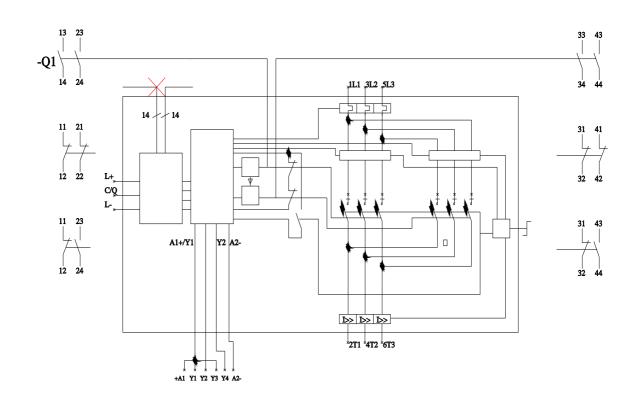
for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (2.5 6 mm²), 1x 10 mm²
finely stranded with core end processing	2x (2.5 6 mm²)
type of connectable conductor cross-sections	
 for auxiliary contacts 	
— solid	0.5 4 mm², 2x (0.5 2.5 mm²)
 finely stranded with core end processing 	0.5 2.5 mm², 2x (0.5 1.5 mm²)
 for AWG cables for auxiliary contacts 	2x (20 14)
Safety related data	
B10 value with high demand rate according to SN 31920	1 500 000
proportion of dangerous failures	
 with high demand rate according to SN 31920 	50 %
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe
Communication/ Protocol	
product function bus communication	Yes
protocol is supported	
AS-Interface protocol	No
IO-Link protocol	Yes
product function control circuit interface with IO link	Yes
IO-Link transfer rate	COM2 (38,4 kBaud)
point-to-point cycle time between master and IO-Link device minimum	2.5 ms
type of voltage supply via input/output link master	No
data volume	
 of the address range of the inputs with cyclical transfer total 	2 byte
 of the address range of the outputs with cyclical transfer total 	2 byte
Electromagnetic compatibility	
conducted interference	
 conducted interference due to burst according to IEC 61000-4-4 	4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV
	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage
• due to burst according to IEC 61000-4-4	 line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000- 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A
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• due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 Supply voltage Supply voltage required Auxiliary voltage	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A 30 1000 MHz Class A
• due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000- 4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 Supply voltage Supply voltage required Auxiliary voltage Display	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A 30 1000 MHz Class A Yes
• due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 Supply voltage Supply voltage required Auxiliary voltage Display number of LEDs	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A 30 1000 MHz Class A Yes 5
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 Supply voltage Supply voltage required Auxiliary voltage Display number of LEDs display version as status display of the input/output link device 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A 30 1000 MHz Class A Yes 5
 due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 due to conductor-conductor surge according to IEC 61000-4-5 due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 conducted HF interference emissions according to CISPR11 field-bound HF interference emission according to CISPR11 Supply voltage Supply voltage required Auxiliary voltage Display number of LEDs display version as status display of the input/output link device Certificates/ approvals 	line hand-held device 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 0.15-80Mhz at 10V 80 3000 MHz at 10V/m 8 kV 150 kHz 30 MHz Class A 30 1000 MHz Class A 30 1000 MHz Class A 5 green/red dual LED EMC Functional Safety/Safety of Ma-











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