



phase-out type compact starter reversing starter for IO-Link 690 V 24 V DC
3...12 A IP20 connection main circuit: screw terminal connection control circuit:
screw terminal alternative 3RK1308 or 3RA8 requirement controller such as ET
200SP in use

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	1.8 W
• at AC in hot operating state per pole	0.6 W
• without load current share typical	2.9 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/s ² (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/s ² ; 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 coordination	continuous operation according to IEC 60947-6-2
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 Lead titanium zirconium oxide - 12626-81-2
Weight	2.559 kg
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	3 ... 12 A
formula for making capacity limit current	12 x I _e
formula for limit current breaking capacity	10 x I _e
yielded mechanical performance for 4-pole AC motor - at 400 V rated value - at 500 V rated value - at 690 V rated value	5.5 kW 5.5 kW 7.5 kW
operating voltage at AC-3 rated value maximum	690 V
operational current - at AC at 400 V rated value - at AC-3 at 400 V rated value - at AC-43 - at 400 V rated value - at 500 V rated value - at 690 V rated value	12 A 12 A 11.5 A 12.4 A 8.9 A
operating power - at AC-3 at 400 V rated value - at AC-43 - at 400 V rated value - at 500 V rated value - at 690 V rated value	5.5 kW 5 500 W 5 500 W 7 500 W
no-load switching frequency	3 600 1/h
operating frequency - at AC-41 according to IEC 60947-6-2 maximum - at AC-43 according to IEC 60947-6-2 maximum	750 1/h 250 1/h
Control circuit/ Control	
type of voltage	DC
control supply voltage 1 at DC rated value	24 V
control supply voltage 1 at DC	24 ... 24 V
holding power at DC maximum	2.9 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 signaling contact	0
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 (I _{cs}) - at 400 V rated value - at 500 V rated value - at 690 V rated value	53 kA 3 kA 3 kA
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor - at 480 V rated value - at 600 V rated value	12 A 12 A
yielded mechanical performance [hp] for 3-phase AC motor - at 200/208 V rated value - at 220/230 V rated value - at 460/480 V rated value - at 575/600 V rated value	3 hp 3 hp 7.5 hp 10 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
mounting position 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	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (1.5 ... 6 mm ²), 1x 10 mm ²
• finely stranded with core end processing	2x (1.5 ... 6 mm ²)
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
• for AWG cables for auxiliary contacts	2x (20 ... 14)
Safety related data	
proportion of dangerous failures	
• with high demand rate according to SN 31920	50 %
B10 value with high demand rate according to SN 31920	1 500 000
Electrical Safety	
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	
• 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
• due to conductor-earth surge according to IEC 61000-4-5	4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
• due to conductor-conductor surge according to IEC 61000-4-5	2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
• due to high-frequency radiation according to IEC 61000-4-6	0.15-80Mhz at 10V
field-based interference according to IEC 61000-4-3	80 ... 3000 MHz at 10V/m
electrostatic discharge according to IEC 61000-4-2	8 kV
conducted HF interference emissions according to CISPR11	150 kHz ... 30 MHz Class A
field-bound HF interference emission according to CISPR11	30 ... 1000 MHz Class A
Supply voltage	
Supply voltage required Auxiliary voltage	Yes
Display	

number of LEDs	5
display version as status display of the input/output link device	green/red dual LED

Approvals Certificates

General Product Approval	EMV
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Functional Safety	Test Certificates	other	Dangerous goods	Environment
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Transport Information](#)

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6500-1DB42>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6500-1DB42>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-1DB42>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6500-1DB42&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-1DB42/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6500-1DB42&objecttype=14&gridview=view1>





