

phase-out type compact starter reversing starter for IO-Link 690 V 24 V DC
 0.1...0.4 A IP20 connection main circuit: plug-in, without terminals connection
 control circuit: spring-loaded 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	0.01 W
• at AC in hot operating state per pole	0.01 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 (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) CAS-No. 3147-75-9 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1
Net Weight	2.446 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	0.1 ... 0.4 A
formula for making capacity limit current	120 x I _e
formula for limit current breaking capacity	100 x I _e
yielded mechanical performance for 4-pole AC motor	

<ul style="list-style-type: none"> • at 400 V rated value 	0.09 kW
<ul style="list-style-type: none"> • at 500 V rated value 	0.12 kW
<ul style="list-style-type: none"> • at 690 V rated value 	0.18 kW
operating voltage at AC-3 rated value maximum	690 V
operational current	
<ul style="list-style-type: none"> • at AC at 400 V rated value 	0.4 A
<ul style="list-style-type: none"> • at AC-3 at 400 V rated value 	0.4 A
<ul style="list-style-type: none"> • at AC-43 <ul style="list-style-type: none"> — at 400 V rated value 	0.3 A
<ul style="list-style-type: none"> — at 500 V rated value 	0.32 A
<ul style="list-style-type: none"> — at 690 V rated value 	0.35 A
operating power	
<ul style="list-style-type: none"> • at AC-3 at 400 V rated value 	0.09 kW
<ul style="list-style-type: none"> • at AC-43 <ul style="list-style-type: none"> — at 400 V rated value 	90 W
<ul style="list-style-type: none"> — at 500 V rated value 	120 W
<ul style="list-style-type: none"> — at 690 V rated value 	180 W
no-load switching frequency	3 600 1/h
operating frequency	
<ul style="list-style-type: none"> • at AC-41 according to IEC 60947-6-2 maximum 	750 1/h
<ul style="list-style-type: none"> • 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
control supply voltage 1 at DC	24 V
holding power	
<ul style="list-style-type: none"> • 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 (Ics)	
<ul style="list-style-type: none"> • at 400 V rated value 	53 kA
<ul style="list-style-type: none"> • at 500 V rated value 	3 kA
<ul style="list-style-type: none"> • at 690 V rated value 	3 kA
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value 	0.4 A
<ul style="list-style-type: none"> • at 600 V rated value 	0.4 A
Short-circuit protection	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	
<ul style="list-style-type: none"> • 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	191 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	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	plug-in without terminals spring-loaded terminals
type of connectable conductor cross-sections for main contacts	
<ul style="list-style-type: none"> • solid • finely stranded with core end processing • finely stranded without core end processing 	2x (1.5 ... 6 mm ²), 1x 10 mm ² 2x (1.5 ... 6 mm ²) 2x (1.5 ... 6 mm ²)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing — finely stranded without core end processing • for AWG cables for auxiliary contacts 	2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (0.25 ... 1.5 mm ²) 2x (24 ... 16)
Safety related data	
proportion of dangerous failures	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • AS-Interface protocol • IO-Link protocol 	No 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	
<ul style="list-style-type: none"> • of the address range of the inputs with cyclical transfer total • of the address range of the outputs with cyclical transfer total 	2 byte 2 byte
Electromagnetic compatibility	
conducted interference	
<ul style="list-style-type: none"> • 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 	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 protection 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection 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	
Environment	General Product Approval

[Environmental Confirmations](#)



EMV	Functional Safety	Test Certificates	other	
	Type Examination Certificate	Type Test Certificates/Test Report	Confirmation	
				Confirmation

Dangerous goods

[Transport Information](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RA6500-2AB43>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6500-2AB43>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6500-2AB43&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6500-2AB43>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)

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