

SIRIUS, COMPACT STARTER, DIRECT STARTER . 690 V, 24 V DC, 3 ... 12 A, IP20, CONN. MAIN CIRCUIT: SCREW TERMINAL, CONN. CONTROL CIRCUIT: SCREW TERMINAL



Product brand name	SIRIUS
Product designation	compact starter
Design of the product	direct starter

General technical data

Product function	
<ul style="list-style-type: none"> Control circuit interface to parallel wiring 	No
Product extension	
<ul style="list-style-type: none"> Auxiliary switch 	Yes
Insulation voltage	
<ul style="list-style-type: none"> rated value 	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 000 V
Protection class IP	IP20
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 (switching cycles)	
<ul style="list-style-type: none"> of the main contacts typical 	10 000 000
<ul style="list-style-type: none"> of auxiliary contacts typical 	10 000 000
<ul style="list-style-type: none"> of the signaling contacts typical 	10 000 000

Electrical endurance (switching cycles) of auxiliary contacts	
<ul style="list-style-type: none"> • at DC-13 at 6 A at 24 V typical • at AC-15 at 6 A at 230 V typical 	<p>30 000</p> <p>200 000</p>
Type of assignment	continuous operation according to IEC 60947-6-2
Equipment marking	
<ul style="list-style-type: none"> • acc. to DIN EN 61346-2 • acc. to DIN EN 81346-2 	<p>Q</p> <p>Q</p>

Ambient conditions

Ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	<p>-20 ... +60 °C</p> <p>-55 ... +80 °C</p> <p>-55 ... +80 °C</p>

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	3 ... 12 A
Formula for making capacity limit current	12 x I _e
Formula for interruption capacity limit current	10 x I _e
Mechanical power output for 4-pole AC motor	
<ul style="list-style-type: none"> • at 400 V rated value • at 500 V rated value • at 690 V rated value 	<p>5.5 kW</p> <p>5.5 kW</p> <p>7.5 kW</p>
Operating voltage	
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating current	
<ul style="list-style-type: none"> • at AC at 400 V rated value • at AC-43 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value 	<p>12 A</p> <p>11.5 A</p> <p>12.4 A</p> <p>8.9 A</p>
No-load switching frequency	3 600 1/h
Operating frequency	
<ul style="list-style-type: none"> • at AC-41 acc. to IEC 60947-6-2 maximum • at AC-43 acc. to IEC 60947-6-2 maximum 	<p>750 1/h</p> <p>250 1/h</p>

Control circuit/ Control

Type of voltage	DC
Holding power	
<ul style="list-style-type: none"> • at DC maximum 	2.9 W

Auxiliary circuit

Number of NC contacts	
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<ul style="list-style-type: none"> • for auxiliary contacts 	0
Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit for signaling contact 	0
Number of CO contacts	
<ul style="list-style-type: none"> • of the current-dependent overload release for signaling contact 	0
Operating current of auxiliary contacts at AC-12 maximum	10 A
Operating current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 250 V 	0.27 A

Protective and monitoring functions

Trip class	CLASS 10 and 20 adjustable
Off-delay time	50 ms
Operational short-circuit current breaking capacity (Ics)	
<ul style="list-style-type: none"> • at 400 V 	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 three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value 	12 A
<ul style="list-style-type: none"> • at 600 V rated value 	12 A
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for three-phase AC motor <ul style="list-style-type: none"> — 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 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
<ul style="list-style-type: none"> • recommended 	vertical, on horizontal standard mounting rail
Mounting type	screw and snap-on mounting
Height	170 mm
Width	45 mm

Depth	165 mm
Connections/Terminals	
Product function	
<ul style="list-style-type: none"> removable terminal for main circuit 	Yes
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	Yes
Type of electrical connection	
<ul style="list-style-type: none"> for main current circuit 	screw-type terminals
<ul style="list-style-type: none"> for auxiliary and control current circuit 	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid 	2x (1.5 ... 6 mm ²), 1x 10 mm ²
<ul style="list-style-type: none"> — finely stranded with core end processing 	2x (1.5 ... 6 mm ²)
<ul style="list-style-type: none"> at AWG conductors for main contacts 	2x (16 ... 10), 1x 8
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid 	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> — finely stranded with core end processing 	0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> at AWG conductors for auxiliary contacts 	2x (20 ... 14)
Safety related data	
B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	3 000 000
Proportion of dangerous failures	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	50 %
Communication/ Protocol	
Product function Bus communication	Yes
Protocol is supported	
<ul style="list-style-type: none"> IO-Link protocol 	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
Amount of data	
<ul style="list-style-type: none"> of the address area of the inputs with cyclical transfer total 	2 byte
<ul style="list-style-type: none"> of the address area of the outputs with cyclical transfer total 	2 byte
Electromagnetic compatibility	
Field-bound parasitic coupling acc. to IEC 61000-4-3	80 ... 3000 MHz at 10V/m
Electrostatic discharge acc. to IEC 61000-4-2	8 kV

Conducted HF-interference emissions acc. to CISPR11	150 kHz ... 30 MHz Class A
Field-bound HF-interference emission acc. to CISPR11	30 ... 1000 MHz Class A

Supply voltage	
Supply voltage required Auxiliary voltage	Yes

Display	
Display version	green/red dual LED
<ul style="list-style-type: none"> as status display of the input/output link device 	

Certificates/approvals		
General Product Approval	EMC	Functional Safety/Safety of Machinery



Declaration of Conformity	Test Certificates	Marine / Shipping			
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[Type Test Certificates/Test Report](#)



Marine / Shipping	other				
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[Environmental Confirmations](#)

[Confirmation](#)

Further information

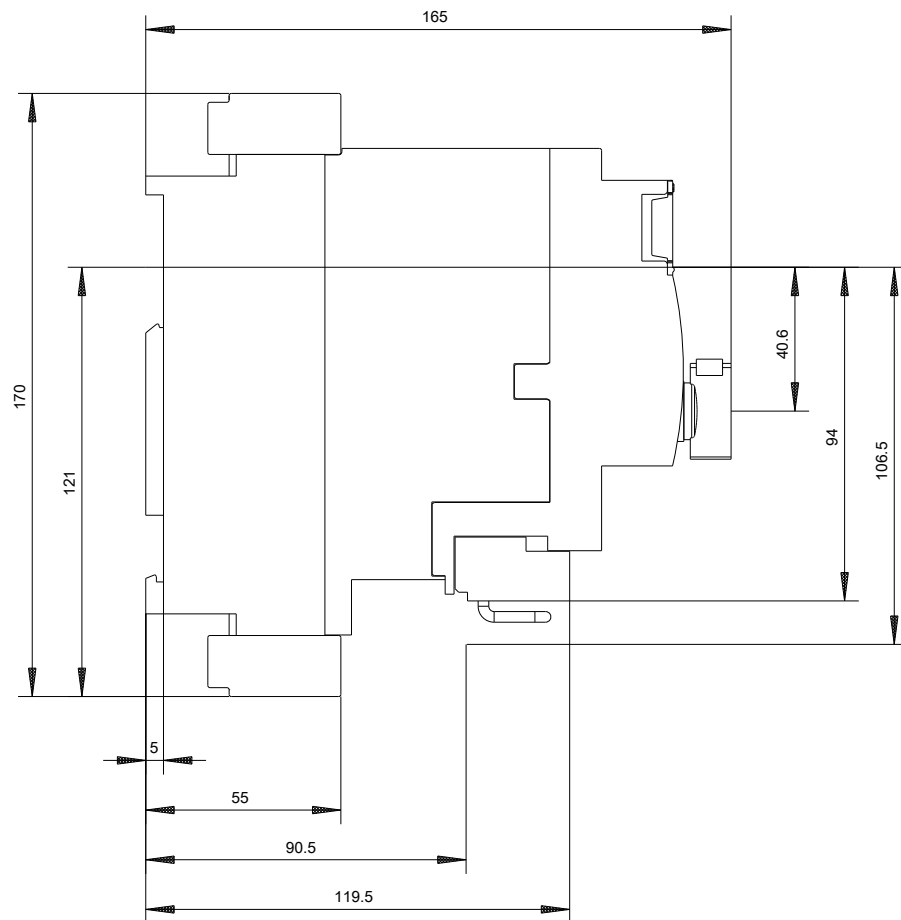
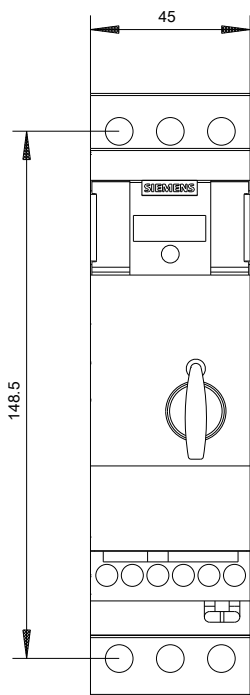
Information- and Downloadcenter (Catalogs, Brochures,...)
<http://www.siemens.com/industrial-controls/catalogs>

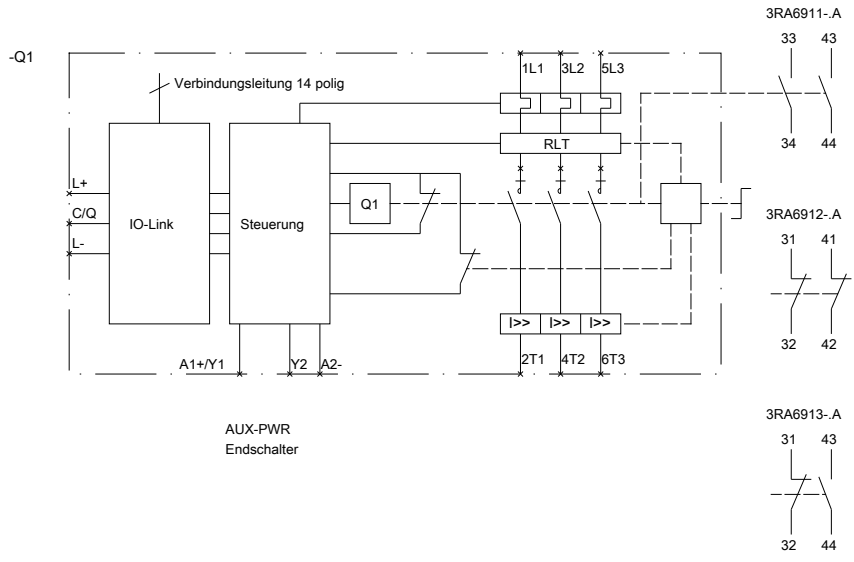
Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RA6400-1DB42>

Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RA6400-1DB42>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1DB42>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RA6400-1DB42&lang=en





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