

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 brandname	SIRIUS
Product designation	compact starter
Design of the product	direct starter
General technical data	
Product function	
• Control circuit interface to parallel wiring	No
Product extension	
• Auxiliary switch	Yes
Insulation voltage	
• rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 000 V
Protection class IP	IP20
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 (switching 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 (switching cycles) of auxiliary contacts	
• at DC-13 at 6 A at 24 V typical	100 000
• at AC-15 at 6 A at 230 V typical	500 000
Type of assignment	continuous operation according to IEC 60947-6-2
Equipment marking	
• acc. to DIN EN 61346-2	Q
• acc. to DIN EN 81346-2	Q
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 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	
• at 400 V rated value	5.5 kW
• at 500 V rated value	5.5 kW
• at 690 V rated value	7.5 kW
Operating voltage	
• at AC-3 rated value maximum	690 V
Operating current	
• at AC at 400 V rated value	12 A
• at AC-43	
— at 400 V rated value	11.5 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
No-load switching frequency	3 600 1/h
Operating frequency	
• at AC-41 acc. to IEC 60947-6-2 maximum	750 1/h
• at AC-43 acc. to IEC 60947-6-2 maximum	250 1/h
Control circuit/ Control	
Type of voltage	AC
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
• of instantaneous short-circuit trip unit for signaling contact	0
Number of CO contacts	
• 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	
• 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)	
• at 400 V	53 kA
• at 500 V rated value	3 kA
• at 690 V rated value	3 kA

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	12 A
• at 600 V rated value	12 A
Yielded mechanical performance [hp]	
• for three-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	7.5 hp
— at 575/600 V rated value	10 hp

Short-circuit protection

Product function Short circuit protection	Yes
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 mounting rail

Mounting type	screw and snap-on mounting
Height	170 mm
Width	45 mm
Depth	165 mm

Connections/Terminals

Product function	
removable terminal for main circuit	Yes
removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control current 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)
at AWG conductors for main contacts	2x (16 ... 10), 1x 8
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)
at AWG conductors for auxiliary contacts	2x (20 ... 14)

Safety related data

B10 value	
with high demand rate acc. to SN 31920	3 000 000
Proportion of dangerous failures	
with high demand rate acc. to SN 31920	50 %

Communication/ Protocol

Product function Bus communication	Yes
Protocol is supported	
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	
of the address area of the inputs with cyclical transfer total	2 byte
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
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Display

Display version	
as status display of the input/output link device	green/red dual LED

Certificates/approvals

General Product Approval				EMC	Functional Safety/Safety of Machinery
 CCC	 CSA	 UL	 EAC	 C-Tick	 VDE

Declaration of Conformity	Test Certificates	Shipping Approval			
 EG-Konf.	Typprüfbescheinigung/Werkszeugnis	 BUREAU VERITAS	 LRS	 PRS	 RINA

Shipping Approval	other
 RMRS	Umweltbestätigung Bestätigungen

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?mlfb=3RA6400-1DB42>

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

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



