



SIRIUS, COMPACT STARTER,  
REVERSING STARTER . 690 V, 24 V DC,  
0.32 ... 1.25 A, IP20,  
CONN. MAIN CIRCUIT: SCREW TERMINAL,  
CONN. CONTROL CIRCUIT: SCREW TERMINAL

General technical data:		
<b>product brand name</b>		SIRIUS
<b>Product designation</b>		compact starter
<b>Design of the product</b>		reversing feeder
<b>Trip class</b>		CLASS 10 and 20 adjustable
<b>Product function</b>		
• control circuit interface to parallel wiring		No
• bus-communication		Yes
• short circuit protection		Yes
• control circuit interface with IO link		Yes
<b>Type of assignment</b>		continous operation according to IEC 60947-6-2
<b>Protection class IP</b>		IP20
<b>Degree of pollution</b>		3
<b>mounting position / recommended</b>		vertical, on horizontal standard mounting rail
<b>Installation altitude / at a height over sea level</b>		
• maximum	m	2,000
<b>Ambient temperature</b>		
• during storage	°C	-55 ... +80
• during operating	°C	-20 ... +60
• during transport	°C	-55 ... +80

<b>Relative humidity</b> • during operating phase	%	10 ... 90
<b>Resistance against shock</b>		a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes
<b>Resistance against vibration</b>		f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles
<b>Impulse voltage resistance / rated value</b>	V	6,000
<b>Field-bound parasitic coupling</b> • according to IEC 61000-4-3		80 ... 3000 MHz at 10V/m
<b>Insulation voltage / rated value</b>	V	690
<b>Conductor-bound parasitic coupling conductor-earth SURGE</b> • according to IEC 61000-4-5		4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
<b>Conductor-bound parasitic coupling conductor-conductor SURGE</b> • according to IEC 61000-4-5		2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection
<b>Conductor-bound parasitic coupling BURST</b> • 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
<b>Reference code</b> • according to DIN 40719 extended according to IEC 204-2 / according to IEC 750 • according to DIN EN 61346-2		Q Q

#### Main circuit:

<b>Operating voltage / at AC-3 / rated value</b> • maximum	V	690
<b>Number of poles / for main current circuit</b>		3
<b>Adjustable response current</b> • of the current-dependent overload release	A	0.32 ... 1.25
<b>Formula for making capacity limit current</b>		38.4 x I <sub>e</sub>
<b>Formula for interruption capacity limit current</b>		32 x I <sub>e</sub>
<b>Emitted mechanical power / for 4-pole three-phase motor</b> • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value	kW kW kW	0.37 0.55 0.75
<b>Service power / at AC-3 / at 400 V / rated value</b>	W	370
<b>Frequency of operation / at AC-41 / according to IEC 60947-6-2 / maximum</b>	1/h	750
<b>Frequency of operation / at AC-43 / according to IEC 60947-6-2 / maximum</b>	1/h	250
<b>Off-load operating frequency</b>	1/h	3,600
<b>Mechanical operating cycles as operating time</b>		

• of the main contacts / typical		10,000,000
• of the auxiliary contacts / typical		10,000,000
• of the signal contacts / typical		10,000,000

#### Control circuit:

<b>Type of voltage</b>		AC
<b>Holding power</b>		
• for DC / maximum	W	2.9
<b>Switch-off delay time</b>	ms	50
<b>Start-up delay time</b>	ms	70

#### Auxiliary circuit:

<b>Product extension</b>		
• auxiliary switch		Yes
<b>Number of NC contacts</b>		
• for auxiliary contacts		0
<b>Number of NO contacts</b>		
• for auxiliary contacts		0
• of the non-delayed short-circuit release / for alarm contact		0
<b>Number of changeover contacts / of the current-dependent overload release / for alarm contact</b>		0
<b>Operating current / of the auxiliary contacts / at AC-12</b>		
• maximum	A	10
<b>Electrical switching cycle as operating time / of the auxiliary contacts</b>		
• at AC-15 / at 6 A / at 230 V / typical		500,000
• at DC-13 / at 6 A / at 24 V / typical		100,000

#### Short-circuit:

<b>Design of the fuse link / for short-circuit protection of the auxiliary switch</b>		
• required		fuse gL/gG: 10 A

#### Installation/mounting/dimensions:

<b>Mounting type</b>		screw and snap-on mounting
<b>Width</b>	mm	90
<b>Height</b>	mm	170
<b>Depth</b>	mm	165
<b>mounting position</b>		any

#### Connections:

<b>Product function</b>		
• removable terminal for main circuit		Yes

<ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>		Yes
<b>Design of the electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul>		screw-type terminals screw-type terminals
<b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded <ul style="list-style-type: none"> <li>with conductor end processing</li> </ul> </li> </ul> </li> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded <ul style="list-style-type: none"> <li>with conductor end processing</li> </ul> </li> </ul> </li> <li>for AWG conductors <ul style="list-style-type: none"> <li>for main contacts</li> <li>for auxiliary contacts</li> </ul> </li> </ul>		2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (1.5 ... 6 mm <sup>2</sup> ) 0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> ) 0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (16 ... 10), 1x 8 2x (20 ... 14)

#### Certificates/approvals:

##### Verification of suitability

IEC / EN 60947-6-2

##### General Product Approval

##### EMC

##### Functional Safety / Safety of Machinery



##### Test Certificates

##### Shipping Approval

[Type Test  
Certificates/Test  
Report](#)



##### other

[Declaration of  
Conformity](#)

[other](#)

[Environmental  
Confirmations](#)

#### UL/CSA ratings:

##### yielded mechanical performance (hp) / for three-phase squirrel cage motors

- at 460/480 V / rated value
- at 575/600 V / rated value

hp 0.5  
hp 0.5

##### Full-load current (FLA) / for 3-phase motor

- at 480 V / rated value
- at 600 V / rated value

A 1.25  
A 1.25

### Reliability figures:

<b>B10 value</b>		1,500,000
<b>Proportion of dangerous failures</b>	%	50
<b>Protection against electrical shock</b>		finger-safe

### Further information:

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

<http://www.siemens.com/industrial-controls/catalogs>

#### Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

#### Cax online generator:

<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RA6500-1BB42/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RA6500-1BB42](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA6500-1BB42)



