



SIRIUS, COMPACT STARTER,  
 DIRECT STARTER 690 V,  
 42 ... 70 V AC/DC, 50 ... 60 HZ,  
 0.32 ... 1.25 A, IP20,  
 CONNECTION MAIN CIRCUIT: PLUGGABLE,  
 WITHOUT TERMINALS,  
 CONNECTION AUXILIARY CIRCUIT: SCREW TERMINAL

General technical data:		
<b>product brand name</b>		SIRIUS
<b>Product designation</b>		compact starter
<b>Design of the product</b>		direct starter
<b>Trip class</b>		CLASS 10 and 20 adjustable
<b>Product function</b>		
• control circuit interface to parallel wiring		Yes
• bus-communication		No
• short circuit protection		Yes
• control circuit interface with IO link		No
<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		10 V/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 contacts, 2 kV auxiliary contacts
<b>Conductor-bound parasitic coupling conductor-conductor SURGE</b> • according to IEC 61000-4-5		2 kV main contacts, 1 kV auxiliary contacts
<b>Conductor-bound parasitic coupling BURST</b> • according to IEC 61000-4-4		4 kV main contacts, 2 kV auxiliary contacts
<b>Maximum permissible voltage for safe disconnection</b> • between main circuit and auxiliary circuit • between control and auxiliary circuit • between auxiliary circuit and auxiliary circuit	V V V	400 300 250
<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>Control supply voltage / 1</b>		
• for DC		
• initial rated value	V	42
• final rated value	V	70
• at 50 Hz / for AC		
• initial rated value	V	42
• final rated value	V	70
• at 60 Hz / for AC		
• initial rated value	V	42
• final rated value	V	70
<b>Holding power</b>		
• for AC / maximum	W	3.1
• for DC / maximum	W	2.2
<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		1
<b>Number of NO contacts</b>		
• for auxiliary contacts		1
• of the non-delayed short-circuit release / for alarm contact		1
<b>Number of changeover contacts / of the current-dependent overload release / for alarm contact</b>		1
<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

<b>Electrical switching cycle as operating time / of the signal contacts</b>		
<ul style="list-style-type: none"> <li>• at AC-15 / at 6 A / at 230 V / typical</li> </ul>		500,000
<ul style="list-style-type: none"> <li>• at DC-13 / at 6 A / at 24 V / typical</li> </ul>		100,000

### Short-circuit:

<b>Design of the fuse link / for short-circuit protection of the auxiliary switch</b>		
<ul style="list-style-type: none"> <li>• required</li> </ul>		fuse gL/gG: 10 A

### Installation/mounting/dimensions:

<b>Mounting type</b>		screw and snap-on mounting
<b>Width</b>	mm	45
<b>Height</b>	mm	170
<b>Depth</b>	mm	165
<b>mounting position</b>		any

### Connections:

<b>Product function</b>		
<ul style="list-style-type: none"> <li>• removable terminal for main circuit</li> </ul>		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> </ul>		plug-in without terminals
<ul style="list-style-type: none"> <li>• for auxiliary and control current circuit</li> </ul>		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> </ul> </li> </ul>		2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul>		2x (1.5 ... 6 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• solid</li> </ul> </li> </ul>		0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> </ul> </li> </ul>		0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• for AWG conductors <ul style="list-style-type: none"> <li>• for main contacts</li> </ul> </li> </ul>		2x (16 ... 10), 1x 8
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>		2x (20 ... 14)

### Certificates/approvals:

<b>Verification of suitability</b>		IEC / EN 60947-6-2
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**General Product Approval**

**EMC**

**Functional Safety /  
Safety of  
Machinery**



**Test Certificates**

[Type Test  
Certificates/Test  
Report](#)

**Shipping Approval**



**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

**Contact rating designation / for auxiliary contacts / according to UL**

contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300

**Reliability figures:**

**B10 value**

3,000,000

**Proportion of dangerous failures**

%	50
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**Proportion of dangerous failures / with low demand rate / according to SN 31920**

%	40
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**Protection against electrical shock**

finger-safe

**Failure rate [FIT] / with low demand rate / according to SN 31920**

FIT	100
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**Further information:**

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

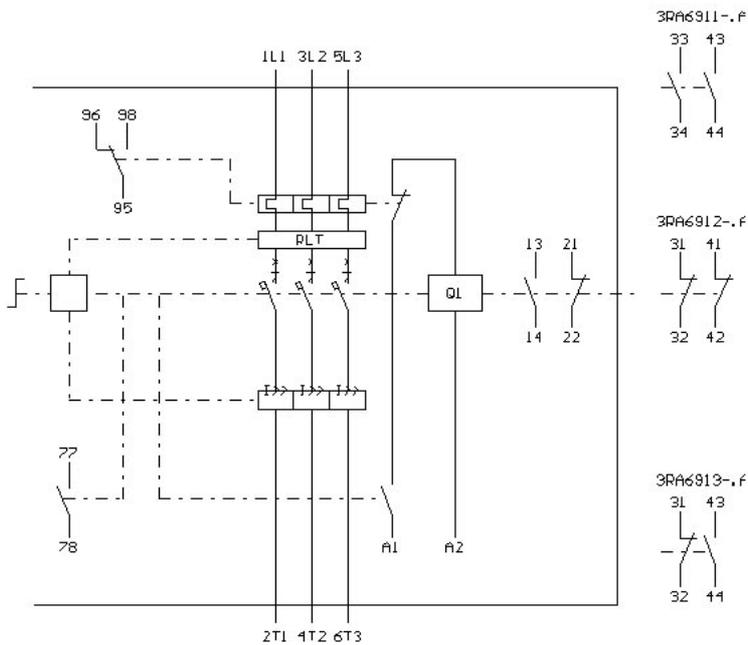
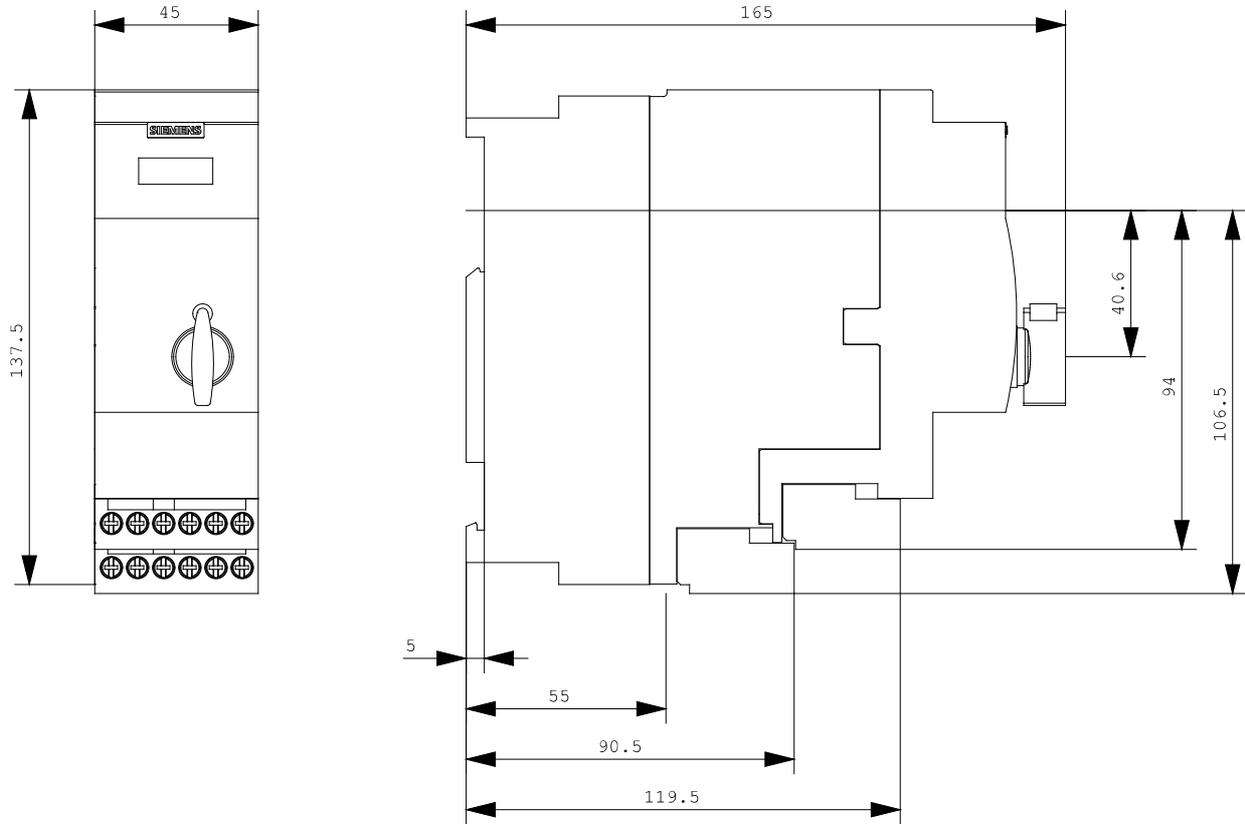
<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

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

**Cax online generator:**

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



last change:

Jun 16, 2014