



SIRIUS, COMPACT STARTER,  
 DIRECT STARTER 690 V,  
 110 ... 240 V AC/DC, 50 ... 60 HZ,  
 0.1 ... 0.4 A, IP20,  
 CONNECTION MAIN CIRCUIT: PLUGGABLE,  
 WITHOUT TERMINALS,  
 CONNECTION AUXILIARY CIRCUIT: PLUGGABLE,  
 WITHOUT TERMINALS

General technical data:		
product brand name		SIRIUS
Product designation		compact starter
Design of the product		direct starter
Trip class		CLASS 10 and 20 adjustable
Product function		
<ul style="list-style-type: none"> <li>control circuit interface to parallel wiring</li> </ul>		Yes
<ul style="list-style-type: none"> <li>bus-communication</li> </ul>		No
<ul style="list-style-type: none"> <li>short circuit protection</li> </ul>		Yes
<ul style="list-style-type: none"> <li>control circuit interface with IO link</li> </ul>		No
Type of assignment		continuous operation according to IEC 60947-6-2
Protection class IP		IP20
Degree of pollution		3
mounting position / recommended		vertical, on horizontal standard mounting rail
Installation altitude / at a height over sea level		
<ul style="list-style-type: none"> <li>maximum</li> </ul>	m	2,000
Ambient temperature		
<ul style="list-style-type: none"> <li>during storage</li> </ul>	°C	-55 ... +80
<ul style="list-style-type: none"> <li>during operating</li> </ul>	°C	-20 ... +60
<ul style="list-style-type: none"> <li>during transport</li> </ul>	°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	0.1 ... 0.4
<b>Formula for making capacity limit current</b>		120 x I <sub>e</sub>
<b>Formula for interruption capacity limit current</b>		100 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	0.09 0.12 0.18
<b>Service power / at AC-3 / at 400 V / rated value</b>	W	90
<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	110
• final rated value	V	240
• at 50 Hz / for AC		
• initial rated value	V	110
• final rated value	V	240
• at 60 Hz / for AC		
• initial rated value	V	110
• final rated value	V	240
<b>Holding power</b>		
• for AC / maximum	W	6
• for DC / maximum	W	5.1
<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>		plug-in without terminals

### 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**



CCC



CSA



UL



C-TICK



VDE

**Test Certificates**

[Type Test  
Certificates/Test  
Report](#)

**Shipping Approval**



LRS



PRS



RINA



RMRS

**other**

[Declaration of  
Conformity](#)

[other](#)

[Environmental  
Confirmations](#)

**UL/CSA ratings:**

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

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

A

0.4

A

0.4

**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

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

%

40

**Protection against electrical shock**

finger-safe

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

FIT

100

**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:**

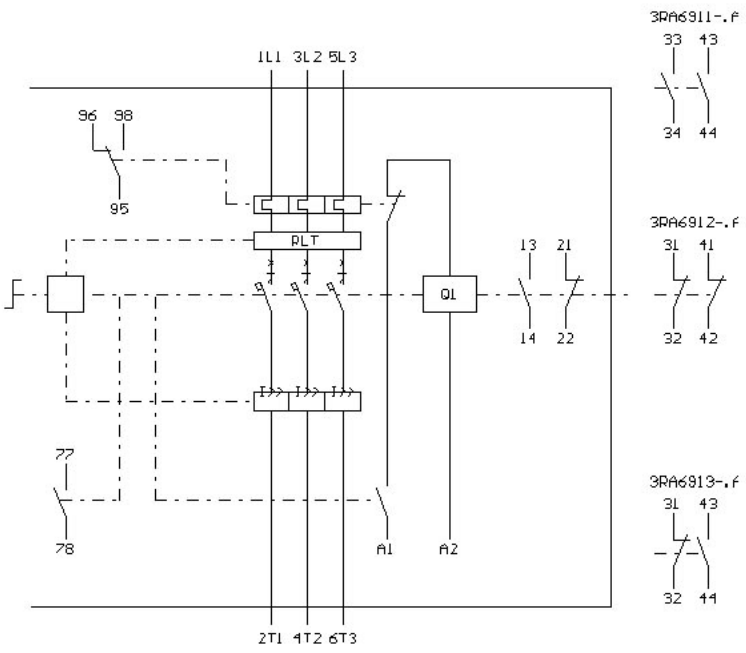
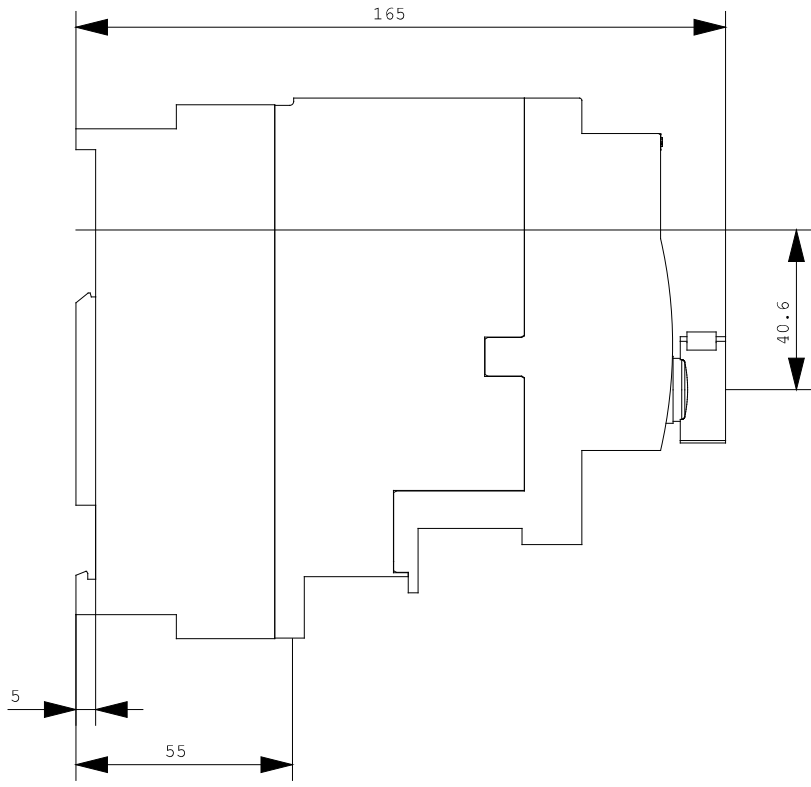
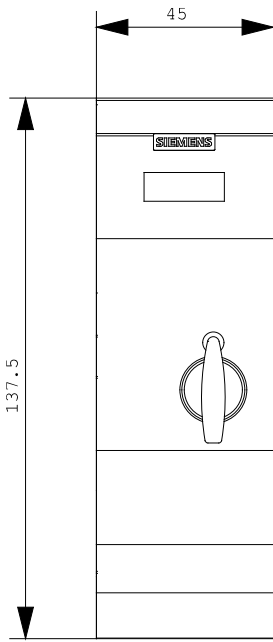
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RA6120-0AP30/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RA6120-0AP30](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA6120-0AP30)



last change:

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