



SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 0.32...1.25 A IP20 Connection main circuit: plug-in, without terminals Connection auxiliary circuit: Spring-type terminal

product brand name	SIRIUS
product designation	compact starter
design of the product	direct starter
product type designation	3RA61
<b>General technical data</b>	
product function control circuit interface to parallel wiring	Yes
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	0.1 W
• at AC in hot operating state per pole	0.03 W
• without load current share typical	2.9 W
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 000 V
maximum permissible voltage for protective separation	
• between main and auxiliary circuit	400 V
• between auxiliary and auxiliary circuit	250 V
• between control and auxiliary circuit	300 V
degree of protection NEMA rating	other
shock resistance	a=60 m/s <sup>2</sup> (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 <sup>2</sup> ; 10 cycles
mechanical service life (operating 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 (operating cycles) of auxiliary contacts	
• at DC-13 at 6 A at 24 V typical	30 000
• at AC-15 at 6 A at 230 V typical	200 000
type of assignment	continuous operation according to IEC 60947-6-2
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8 Bleitanzirkonoxid - 12626-81-2 2,2',6,6'-Tetrabrom-4,4'-isopropylidendi - 79-94-7
<b>Ambient conditions</b>	
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 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	0.32 ... 1.25 A
formula for making capacity limit current	$38.4 \times I_e$
formula for limit current breaking capacity	$32 \times I_e$
yielded mechanical performance for 4-pole AC motor <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	0.37 kW 0.55 kW 0.75 kW
operating voltage at AC-3 rated value maximum	690 V
operational current <ul style="list-style-type: none"> <li>at AC at 400 V rated value</li> <li>at AC-3 at 400 V rated value</li> <li>at AC-43 <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> </ul>	1.25 A 1.25 A 1.1 A 1.2 A 1.1 A
operating power <ul style="list-style-type: none"> <li>at AC-3 at 400 V rated value</li> <li>at AC-43 <ul style="list-style-type: none"> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul> </li> </ul>	0.37 kW 370 W 550 W 750 W
no-load switching frequency	3 600 1/h
operating frequency <ul style="list-style-type: none"> <li>at AC-41 according to IEC 60947-6-2 maximum</li> <li>at AC-43 according to IEC 60947-6-2 maximum</li> </ul>	750 1/h 250 1/h
<b>Control circuit/ Control</b>	
type of voltage	AC/DC
control supply voltage 1 at AC <ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 50 Hz</li> <li>at 60 Hz rated value</li> <li>at 60 Hz</li> </ul>	24 V 24 ... 24 V 24 V 24 V
control supply voltage frequency <ul style="list-style-type: none"> <li>1 rated value</li> <li>2 rated value</li> </ul>	50 Hz 60 Hz
control supply voltage 1 <ul style="list-style-type: none"> <li>at DC rated value</li> <li>at DC</li> </ul>	24 V 24 ... 24 V
holding power <ul style="list-style-type: none"> <li>at AC maximum</li> <li>at DC maximum</li> </ul>	2.8 W 2.9 W
<b>Auxiliary circuit</b>	
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
number of NO contacts of instantaneous short-circuit trip unit for signaling contact	1
number of CO contacts of the current-dependent overload release for signaling contact	1
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at DC-13 at 250 V	0.27 A
<b>Protective and monitoring functions</b>	
trip class	CLASS 10 and 20 adjustable
operating short-circuit current breaking capacity (Ics) <ul style="list-style-type: none"> <li>at 400 V</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	53 kA 3 kA 3 kA
<b>UL/CSA ratings</b>	

<b>full-load current (FLA) for 3-phase AC motor</b> <ul style="list-style-type: none"> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	1.25 A
	1.25 A
yielded mechanical performance [hp] for 3-phase AC motor <ul style="list-style-type: none"> <li>at 460/480 V rated value</li> <li>at 575/600 V rated value</li> </ul>	0.5 hp
	0.5 hp
<b>contact rating of auxiliary contacts according to UL</b>	contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	Yes
<b>design of short-circuit protection</b>	electromagnetic
<b>design of the fuse link</b> <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> <li>for short-circuit protection of the signaling switch of the short-circuit release required</li> <li>for short-circuit protection of the signaling switch of the overload release required</li> </ul>	fuse gL/gG: 10 A 6A gL/gG/400V 4A gL/gG/400V
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b> <ul style="list-style-type: none"> <li>recommended</li> </ul>	any vertical, on horizontal standard DIN rail
<b>fastening method</b>	screw and snap-on mounting
<b>height</b>	191 mm
<b>width</b>	45 mm
<b>depth</b>	165 mm
<b>Connections/ Terminals</b>	
<b>product component removable terminal for main circuit</b>	Yes
<b>product component removable terminal for auxiliary and control circuit</b>	Yes
<b>type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>	plug-in without terminals spring-loaded terminals
type of connectable conductor cross-sections for main contacts <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (1.5 ... 6 mm <sup>2</sup> ) 2x (1.5 ... 6 mm <sup>2</sup> )
<b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (0.25 ... 1.5 mm <sup>2</sup> ) 2x (24 ... 16)
<b>Safety related data</b>	
B10 value with high demand rate according to SN 31920	3 000 000
<b>proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> </ul>	40 % 50 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe
<b>Communication/ Protocol</b>	
<b>product function bus communication</b>	No
<b>protocol is supported</b> <ul style="list-style-type: none"> <li>AS-Interface protocol</li> <li>IO-Link protocol</li> </ul>	No No
product function control circuit interface with IO link	No
<b>Electromagnetic compatibility</b>	
<b>conducted interference</b> <ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC</li> </ul>	4 kV main contacts, 2 kV auxiliary contacts 4 kV main contacts, 2 kV auxiliary contacts 2 kV main contacts, 1 kV auxiliary contacts

61000-4-5		
• due to high-frequency radiation according to IEC 61000-4-6	0.15-80Mhz at 10V	
field-based interference according to IEC 61000-4-3	10 V/m	
electrostatic discharge according to IEC 61000-4-2	8 kV	
conducted HF interference emissions according to CISPR11	150 kHz ... 30 MHz Class A	
field-bound HF interference emission according to CISPR11	30 ... 1000 MHz Class A	
Supply voltage		
Supply voltage required Auxiliary voltage	No	
Display		
number of LEDs	2	
Certificates/ approvals		
General Product Approval	EMC	Functional Safety/Safety of Machinery



[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
UK CA	CE EG-Konf.	<a href="#">Type Test Certificates/Test Report</a>
		ABS
		DNV
		Lloyd's Register

Marine / Shipping	other	Dangerous Good
PRS	RINA	<a href="#">Confirmation</a>
		<a href="#">Transport Information</a>

#### Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-2BB33>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-2BB33>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BB33>

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

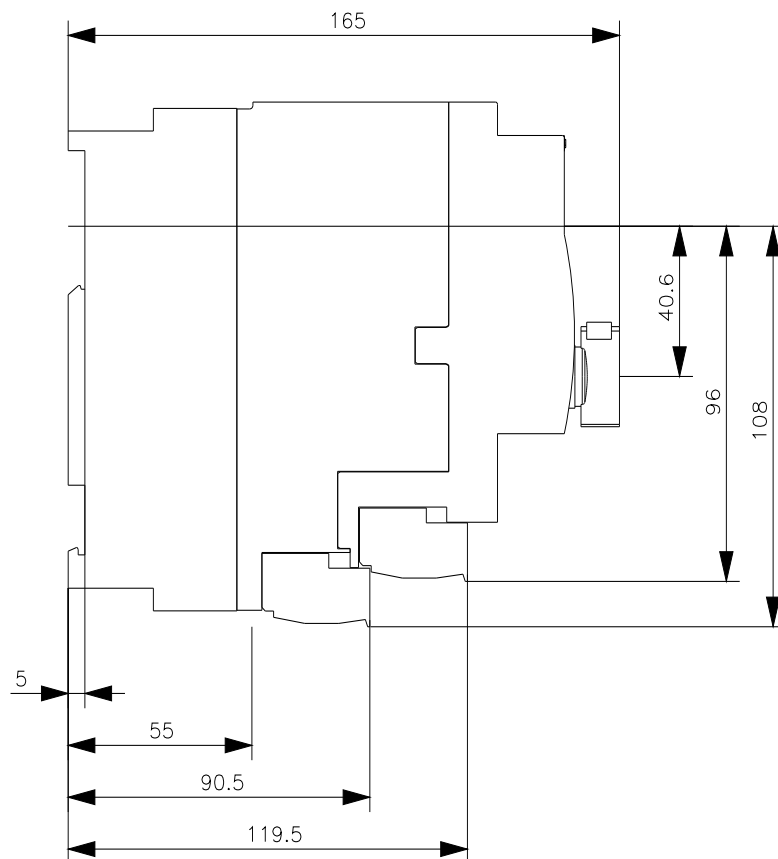
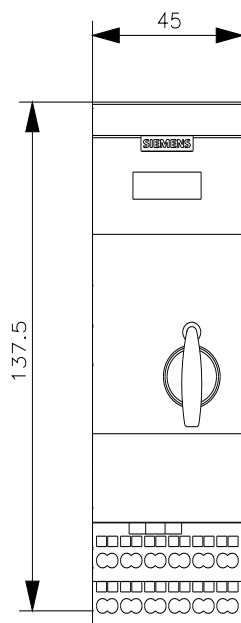
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6120-2BB33&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2BB33&lang=en)

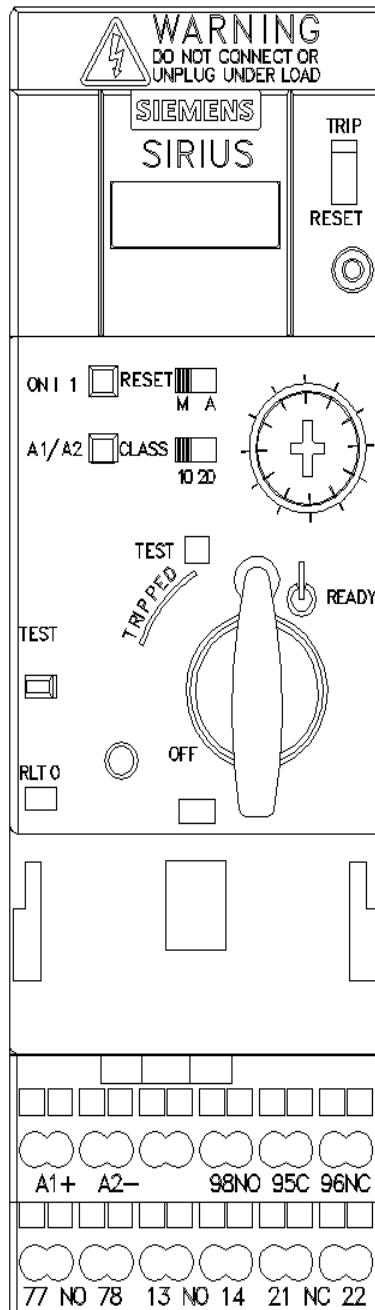
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BB33/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6120-2BB33&objecttype=14&gridview=view1>







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