



SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 1...4 A  
IP20 Connection main circuit: screw terminal Connection auxiliary circuit: plug-in, without terminals

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	<ul style="list-style-type: none"> <li>• at AC in hot operating state 1 W</li> <li>• at AC in hot operating state per pole 0.33 W</li> <li>• without load current share typical 2.9 W</li> </ul>
insulation voltage rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 000 V
maximum permissible voltage for protective separation	<ul style="list-style-type: none"> <li>• between main and auxiliary circuit 400 V</li> <li>• between auxiliary and auxiliary circuit 250 V</li> <li>• between control and auxiliary circuit 300 V</li> </ul>
degree of protection NEMA rating	other
shock resistance	$a=60 \text{ m/s}^2$ (6g) with 10 ms per 3 shocks in all axes
vibration resistance	$f=4 \dots 5.8 \text{ Hz}$ , $d=15 \text{ mm}$ ; $f=5.8 \dots 500 \text{ Hz}$ , $a=20 \text{ m/s}^2$ ; 10 cycles
mechanical service life (operating cycles)	<ul style="list-style-type: none"> <li>• of the main contacts typical 10 000 000</li> <li>• of auxiliary contacts typical 10 000 000</li> <li>• of the signaling contacts typical 10 000 000</li> </ul>
electrical endurance (operating cycles) of auxiliary contacts	<ul style="list-style-type: none"> <li>• at DC-13 at 6 A at 24 V typical 30 000</li> <li>• at AC-15 at 6 A at 230 V typical 200 000</li> </ul>
type of coordination	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	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 6,6'-di-tert-butyl-2,2'-methylene-di-p-cresol - 119-47-1 Lead titanium zirconium oxide - 12626-81-2
Weight	1.461 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	<ul style="list-style-type: none"> <li>• during operation -20 ... +60 °C</li> </ul>

• 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	1 ... 4 A
formula for making capacity limit current	12 x $I_e$
formula for limit current breaking capacity	10 x $I_e$
yielded mechanical performance for 4-pole AC motor	
• at 400 V rated value	1.5 kW
• at 500 V rated value	2.2 kW
• at 690 V rated value	3 kW
operating voltage at AC-3 rated value maximum	690 V
<b>operational current</b>	
• at AC at 400 V rated value	4 A
• at AC-3 at 400 V rated value	4 A
• at AC-43	
— at 400 V rated value	3.6 A
— at 500 V rated value	3.9 A
— at 690 V rated value	3.8 A
<b>operating power</b>	
• at AC-3 at 400 V rated value	1.5 kW
• at AC-43	
— at 400 V rated value	1 500 W
— at 500 V rated value	2 200 W
— at 690 V rated value	3 000 W
no-load switching frequency	3 600 1/h
<b>operating frequency</b>	
• at AC-41 according to IEC 60947-6-2 maximum	750 1/h
• at AC-43 according to IEC 60947-6-2 maximum	250 1/h
<b>Control circuit/ Control</b>	
type of voltage	AC/DC
control supply voltage 1 at AC	
• at 50 Hz rated value	24 V
• at 50 Hz	24 ... 24 V
• at 60 Hz rated value	24 V
• at 60 Hz	24 V
control supply voltage frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
control supply voltage 1 at DC rated value	24 V
control supply voltage 1 at DC	24 ... 24 V
holding power	
• at AC maximum	2.8 W
• at DC maximum	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)	
• at 400 V rated value	53 kA
• at 500 V rated value	3 kA
• at 690 V rated value	3 kA

UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	4 A
• at 600 V rated value	4 A
yielded mechanical performance [hp] for 3-phase AC motor	
• at 200/208 V rated value	0.75 hp
• at 220/230 V rated value	0.75 hp
• at 460/480 V rated value	2 hp
• at 575/600 V rated value	3 hp
contact rating of 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
Short-circuit protection	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
• for short-circuit protection of the signaling switch of the short-circuit release required	6A gL/gG/400V
• for short-circuit protection of the signaling switch of the overload release required	4A gL/gG/400V
Installation/ mounting/ dimensions	
mounting position	any
mounting position recommended	vertical, on horizontal standard DIN rail
fastening method	screw and snap-on mounting
height	170 mm
width	45 mm
depth	165 mm
Connections/ Terminals	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	plug-in without terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• finely stranded with core end processing	2x (1.5 ... 6 mm <sup>2</sup> )
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 14)
Safety related data	
proportion of dangerous failures	
• with low demand rate according to SN 31920	40 %
• with high demand rate according to SN 31920	50 %
B10 value with high demand rate according to SN 31920	3 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
IEC 61508	
T1 value for proof test interval or service life according to IEC 61508	20 a
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe
Communication/ Protocol	
product function bus communication	No
protocol is supported	
• AS-Interface protocol	No
• IO-Link protocol	No
product function control circuit interface with IO link	No
Electromagnetic compatibility	

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



Functional Safety	Test Certificates	Maritime application	other	Dangerous goods
	<a href="#">Type Test Certificates/Test Report</a>			<a href="#">Confirmation</a> <a href="#">Transport Information</a>

Environment
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[Environmental Confirmations](#)

Further information
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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=3RA6120-1CB34>

Cax online generator

<http://support.automation.siemens.com/WW/CAOrder/default.aspx?lang=en&mlfb=3RA6120-1CB34>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-1CB34>

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

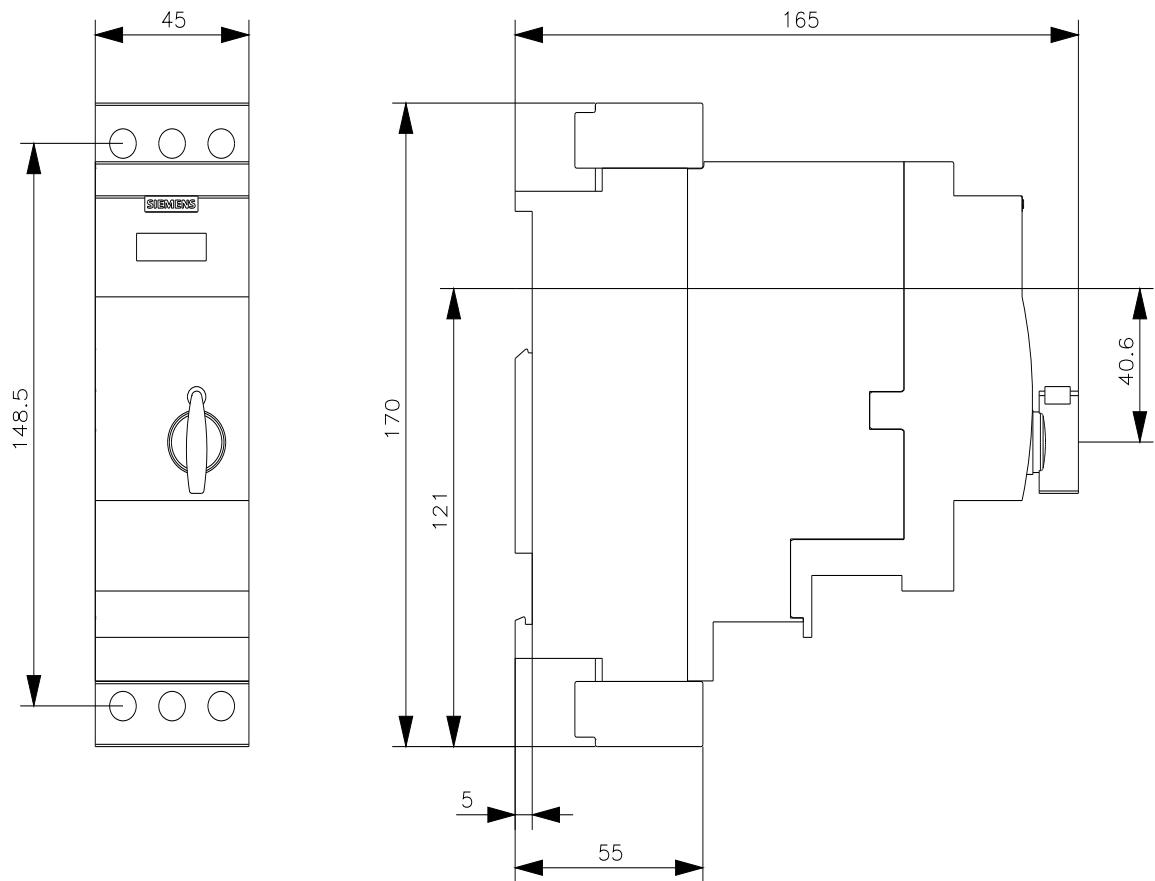
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6120-1CB34&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-1CB34&lang=en)

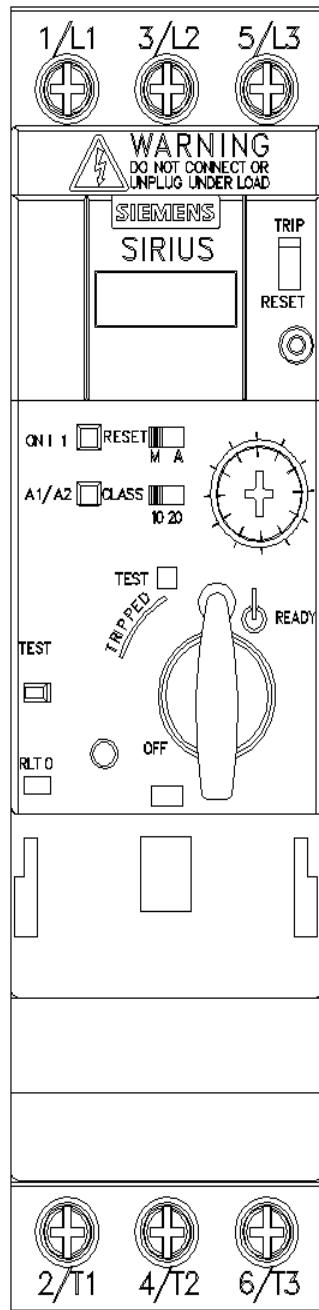
Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

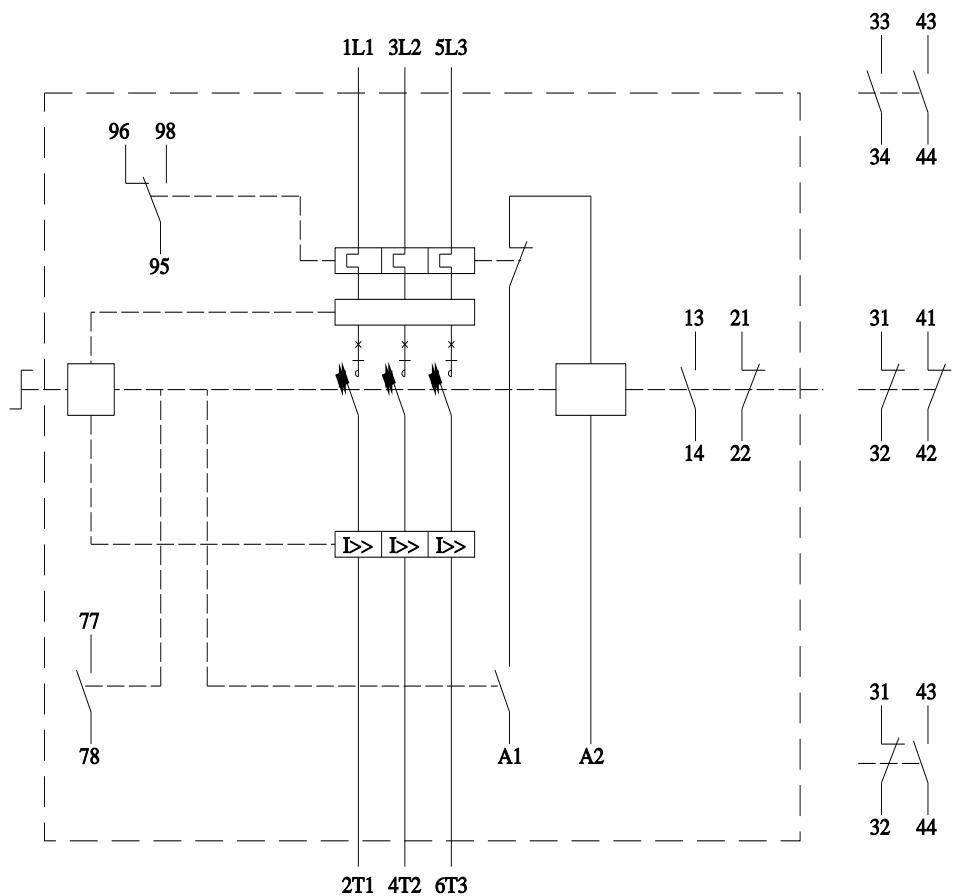
<https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-1CB34/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6120-1CB34&objecttype=14&gridview=view1>







last modified:

4/2/2025