## **SIEMENS**

Data sheet 3RA6120-2DP33



SIRIUS Compact load feeder DOL starter 690 V 110...240 V AC/DC 50...60 Hz 3...12 A IP20 Connection main circuit: plug-in, without terminals Connection auxiliary circuit: Spring-type terminal

product designation compact starter  design of the product direct starter			
design of the product direct starter			
product type designation 3RA61			
General technical data			
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 1.8 W			
• at AC in hot operating state per pole 0.6 W			
• without load current share typical 6 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/s2 (6g) with 10 ms per 3 sl	hocks 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 continous operation according to IE	EC 60947-6-2		
reference code according to IEC 81346-2 Q			
Substance Prohibitance (Date) 05/01/2012			
Ambient conditions			
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 %			
Main circuit			
number of poles for main current circuit 3			

adjustable current response value current of the current- dependent overload release	3 12 A
formula for making capacity limit current	12 x le
formula for limit current breaking capacity	10 x le
yielded mechanical performance for 4-pole AC motor	
at 400 V rated value	5.5 kW
at 500 V rated value	5.5 kW
at 690 V rated value	7.5 kW
operating voltage at AC-3 rated value maximum	690 V
operational current	
at AC at 400 V rated value	12 A
at AC-3 at 400 V rated value	12 A
• at AC-43	
— at 400 V rated value	11.5 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
	0.5 A
operating power	5.5 kW
	5.5 KVV
• at AC-43	5 500 W
— at 400 V rated value	5 500 W
— at 500 V rated value	5 500 W
— at 690 V rated value	7 500 W
no-load switching frequency	3 600 1/h
operating frequency	
<ul> <li>at AC-41 according to IEC 60947-6-2 maximum</li> </ul>	750 1/h
at AC-43 according to IEC 60947-6-2 maximum	250 1/h
Control circuit/ Control	
type of voltage	AC/DC
control supply voltage 1 at AC	
at 50 Hz rated value	240 V
● at 50 Hz	110 240 V
● at 60 Hz	110 240 V
control supply voltage frequency	
1 rated value	50 Hz
• 2 rated value	60 Hz
control supply voltage 1	
at DC rated value	240 V
• at DC	110 240 V
holding power	
at AC maximum	6 W
at DC maximum	5.1 W
Auxiliary circuit	
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
Protective and monitoring functions	
trip class	CLASS 10 and 20 adjustable
operating short-circuit current breaking capacity (Ics)	
• at 400 V	53 kA
at 500 V     at 500 V rated value	3 kA
at 690 V rated value     at 690 V rated value	3 kA
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	10.0
at 480 V rated value	12 A
• at 600 V rated value	12 A
yielded mechanical performance [hp] for 3-phase AC motor	

<ul><li>at 200/208 V rated value</li></ul>	3 hp
<ul><li>at 220/230 V rated value</li></ul>	3 hp
<ul><li>at 460/480 V rated value</li></ul>	7.5 hp
• at 575/600 V rated value	10 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
<ul> <li>for short-circuit protection of the signaling switch of the overload release required</li> </ul>	4A gL/gG/400V
Installation/ mounting/ dimensions	
mounting position	any
• recommended	vertical, on horizontal standard DIN rail
fastening method	screw and snap-on mounting
height	191 mm
width	45 mm
depth	165 mm
Connections/ Terminals	
product component removable terminal for main circuit	Yes
product component removable terminal for auxiliary and	Yes
control circuit	
type of electrical connection	
for main current circuit	plug-in without terminals
for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (1.5 6 mm²), 1x 10 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1.5 6 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (1.5 6 mm²)
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	2x (0.25 1.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.25 1.5 mm²)
finely stranded without core end processing	2x (0.25 1.5 mm²)
for AWG cables for auxiliary contacts	2x (24 16)
Safety related data	
B10 value with high demand rate according to SN 31920	3 000 000
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with low demand rate according to SN 31920     with high demand rate according to SN 31920	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
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe
Communication/ Protocol	95. 54.0
product function bus communication	No
·	110
protocol is supported	No
AS-Interface protocol     IO Link protocol	No No
IO-Link protocol  Product function control circuit interface with IO link	No
product function control circuit interface with IO link	No
Electromagnetic compatibility	
conducted interference	
<ul> <li>due to burst according to IEC 61000-4-4</li> </ul>	4 kV main contacts, 2 kV auxiliary contacts
<ul> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	4 kV main contacts, 2 kV auxiliary contacts
<ul> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	2 kV main contacts, 1 kV auxiliary contacts
<ul> <li>due to high-frequency radiation according to IEC 61000-</li> </ul>	0.15-80Mhz at 10V

4-6			
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 Ma-



Confirmation







chinery

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping





Type Test Certificates/Test Report







Marine / Shipping

other

**Dangerous Good** 





Confirmation

**Transport 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=3RA6120-2DP33

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RA6120-2DP33}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2DP33

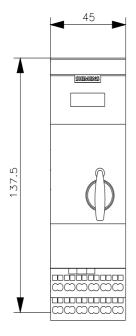
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

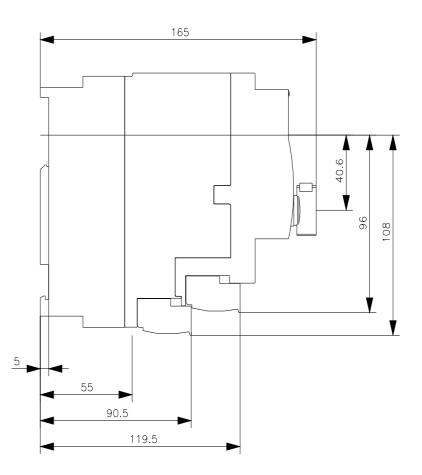
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA6120-2DP33&lang=en

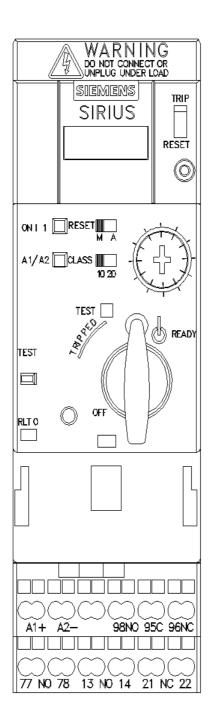
Characteristic: Tripping characteristics, I2t, Let-through current

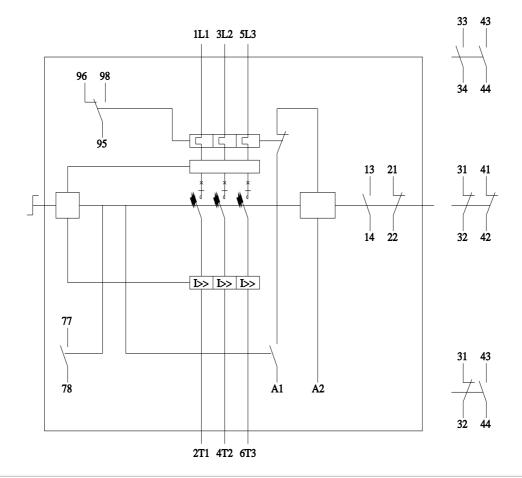
https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2DP33/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6120-2DP33&objecttype=14&gridview=view1









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