## SIEMENS

## Data sheet

## 3RA6120-2EB33



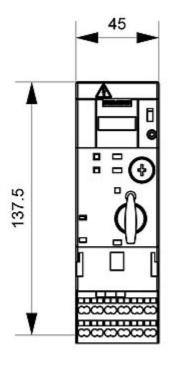
SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 8...32 A IP20 Connection main circuit: plug-in, without terminals Connection auxiliary circuit: Spring-type terminal

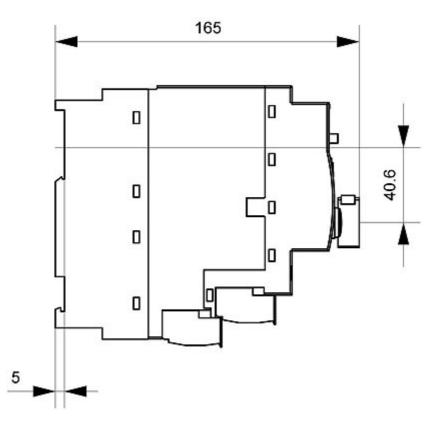
product brand name         SIRUS           product design of the product         compact starter           design of the product         direct starter           product type designation         3RA61           General technical data         product function control circuit interface to parallel wiring         Yes           product textension auxiliary switch         Yes         Yes           power loss [W] for rated value of the current at AC in hot operating state         5.4 W           operating state         5.8 W           operating state         6.80 V           degree of pollution         3           surge voltage resistance rated value         6.800 V           degrees of pollution         3           surge voltage resistance rated value         6.000 V           between main and auxiliary circuit         250 V           obetween main and auxiliary circuit         250 V           obetween control and auxiliary circuit         250 V           obetween control and auxiliary circuit         250 V           obetween control and auxiliary circuit         250 V           of the main contacts typical         10 000 000           of the signaling contacts typical         10 000 000           of the signaling contacts typical         10 000 000				
design of the product     direct starter       product type designation     37A61       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     5.4 W       • per pole     1.8 W       acd current share typical     650 V       insulation voltage rated value     650 V       degree of pollution     3       surge voltage resistance rated value     600 V       • between main and auxiliary circuit     400 V       • between control and auxiliary circuit     300 V       • of the resistance     a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes       • of the main contacts typical     10 000 000       • of the signaling contacts typical     10 000 000       • of the signaling contacts typical     200 000       • at DC-13 at 6 A at 22 V typical     20 000       • at AC-15 at 6 A at 23 V typical     200 000       • at DC-13 at 6 A at 23 V typical     200 000       • at AC-15 at 6 A at 23 V typical     200 000       • at AC-15 at 6 A at 230 V typical <td< th=""><th>product brand name</th><th>SIRIUS</th></td<>	product brand name	SIRIUS		
product type designation         3RA61           General technical data	product designation	compact starter		
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       5.4 W         • per pole       1.8 W         power loss [W] for rated value of the current without load current share typical       3.5 W         insulation voltage rated value       690 V         degree of pollution       3         • between auxiliary and auxiliary circuit       260 V         • between auxiliary and auxiliary circuit       300 V         • between auxiliary and auxiliary circuit       300 V         • between control and auxiliary circuit       300 V         • between auxiliary and auxiliary circuit       300 V         • between auxiliary and auxiliary circuit       300 V         • between auxiliary circuit       300 V         • degree of protection NEMA rating       other         • shock 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 (switching cycles)       other         • of auxiliary contacts typical       10 000 000         • of the signaling contacts typical       10 000 000         • of the signaling contacts typical       2000 m         • at AC-15 at 6 A	design of the product	direct starter		
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         5.4 W           • per pole         1.8 W           node current share typical         3.5 W           insulation voltage rated value         690 V           degree of pollution         3           • between resistance rated value         690 V           degree of pollution         3           • between auxiliary circuit         250 V           • between auxiliary and auxiliary circuit         300 V           degree of protection NEMA rating         other           shock resistance         re 4 5.8 Hz, de 15 mm; f= 5.8 500 Hz, a= 20 m/s*, 10 cycles           rechanical service life (switching cycles)         10 000 000           • of the main contacts typical         10 000 000           • of the signaling contacts typical         200 000           • at DC-13 at 6 A at 24 V typical         200 000           • at AC-15 at 6 A at 230 V typical         200 000	product type designation	3RA61		
product extension auxiliary switch       Yes         power loss [W] for rated value of the current at AC in hot operating state       5.4 W         • per pole       1.8 W         power loss [W] for rated value of the current without load current share typical       3.5 W         insulation voltage rated value       690 V         degree of pollution       3         surge voltage resistance rated value       690 V         maximum permissible voltage for safe isolation       600 V         maximum permissible voltage for safe isolation       400 V         • between main and auxiliary circuit       250 V         • between control 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 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 (switching cycles)       10 000 000         • of the main contacts typical       10 000 000         • of auxiliary contacts typical       10 000 000         • of the signaling contacts typical       200 000         (type of assignment       continuous operation according to IEC 60947-6-2         (perference code ac	General technical data			
power loss [W] for rated value of the current at AC in hot operating state       5.4 W         • per pole       1.8 W         power loss [W] for rated value of the current without load current share typical       3.5 W         insulation voltage rated value       690 V         degree of pollution       3         surge voltage resistance rated value       6 000 V         maximum permissible voltage for safe isolation       6 000 V         • between main and auxiliary circuit       250 V         • between control 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 shocks in all axes         vibration resistance       fe 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles         mechanical service life (switching cycles)       10 000 000         • of the main contacts typical       10 000 000         • of the signaling contacts typical       10 000 000         • of the signaling contacts typical       200 000         • at DC-13 at 6 A at 24 V typical       200 000         • at AC-15 at 6 A at 24 V typical       200 000         • at AC-15 at 6 A at 230 V typical       200 000         type of assignment       continous	product function control circuit interface to parallel wiring	Yes		
operating stateI.8 W• per pole1.8 Wlinsulation voltage rated value of the current without load current share typical500 Vdegree of pollution3surge voltage resistance rated value600 Vmaximum permissible voltage for safe isolation400 V• between main and auxiliary circuit400 V• between control and auxiliary circuit300 Vdegree of protection NEMA ratingothershock resistancea=60 m/s2 (6g) with 10 ms per 3 shocks in all axesvibration resistancef 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles• of the main contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical30 000• at DC-13 at 6 A at 24 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-16 A tief A at 240 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at AC-16 A tief A threight above sea level maximum200 m• installation altitude at height above sea le	product extension auxiliary switch	Yes		
power loss [W] for rated value of the current without load current share typical         3.5 W           insulation voltage rated value         690 V           degree of pollution         3           surge voltage resistance rated value         6 000 V           maximum permissible voltage for safe isolation         6 000 V           • between main and auxiliary circuit         400 V           • between nain 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 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 (switching cycles)         10 000 000           • of the main contacts typical         10 000 000           • of the signaling contacts typical         10 000 000           • of the signaling contacts typical         200 000           e at DC-13 at 6 A at 24 V typical         30 000           • at DC-13 at 6 A at 230 V typical         200 000           type of assignment         continous operation according to IEC 60947-6-2           reference code acc. to IEC 81346-2         Q           Substance Prohibitance (Date)         01.05.2012 00:00:00		5.4 W		
load current share typical90 Vinsulation voltage rated value690 Vdegree of pollution3surge voltage resistance rated value6000 Vmaximum permissible voltage for safe isolation400 V• between main and auxiliary circuit400 V• between control and auxiliary circuit250 V• between control and auxiliary circuit300 Vdegree of protection NEMA ratingothershock resistancea=60 m/s2 (6g) with 10 ms per 3 shocks in all axesvibration resistancef = 4 5.8 Hz, d = 15 mm; f = 5.8 500 Hz, a= 20 m/s²; 10 cyclesmechanical service life (switching cycles)10 000 000• of the main contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical30 000• at DC-13 at 6 A at 24 V typical30 000• at DC-13 at 6 A at 230 V typical200 000• at DC-13 at 6 A at 230 V typical200 000• at DC-13 at 6 A at 230 V typical200 000• at DC-15 at 6 A at 230 V typical200 000• at DC-15 at 6 A at 230 V typical200 000• at DC-16 at 6 hat 240 V typical30 000• at DC-15 at 6 A at 230 V typical200 000• at DC-16 at 6 hat 250 V typical200 000• at DC-16 at 6 hat 250 V typical30 000• at DC-16 at 6 hat 250 V typical200 000• at DC-16 at 6 hat 250 V typical502• at DC-16 at 6 hat 250 V typical200 000• at DC-16 at 6 hat 250 V typical502• at	• per pole	1.8 W		
degree of pollution       3         surge voltage resistance rated value       6 000 V         maximum permissible voltage for safe isolation       6 000 V         • 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 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         • of the main contacts typical       10 000 000         • of the main contacts typical       10 000 000         • of the signaling contacts typical       10 000 000         • of the durance (switching cycles) of auxiliary contacts       30 000         • at DC-13 at 6 A at 24 V typical       30 000         • at DC-13 at 6 A at 230 V typical       200 000         • at DC-13 at 6 A at 230 V typical       continous operation according to IEC 60947-6-2         reference code acc. to IEC 81346-2       Q         Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient temperature during operation       -20 +60 °C         • ambient temperature during operation       -20 +60 °C         • ambient temperature		3.5 W		
surge voltage resistance rated value       6 000 V         maximum permissible voltage for safe isolation       400 V         • between main and auxiliary circuit       250 V         • between auxiliary and auxiliary circuit       250 V         • between control 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 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 (switching cycles)       0 000 000         • of the main contacts typical       10 000 000         • of the signaling contacts typical       10 000 000         • of the signaling contacts typical       10 000 000         • at DC-13 at 6 A at 24 V typical       30 000         • at DC-13 at 6 A at 230 V typical       200 000         • at DC-13 at 6 A at 230 V typical       continous operation according to IEC 60947-6-2         reference code acc. to IEC 81346-2       Q         Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient temperature during operation       -20 +60 °C         • ambient temperature during operation       -20 +60 °C         • ambien	insulation voltage rated value	690 V		
maximum permissible voltage for safe isolation• between main and auxiliary circuit400 V• between auxiliary and auxiliary circuit250 V• between control and auxiliary circuit300 Vdegree of protection NEMA ratingothershock resistancea=60 m/s2 (6g) with 10 ms per 3 shocks in all axesvibration resistancef= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cyclesmechanical service life (switching cycles)10 000 000• of the main contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical30 000• at DC-13 at 6 A at 24 V typical30 000• at AC-15 at 6 A at 230 V typical200 000type of assignmentcontinous operation according to IEC 60947-6-2reference code acc. to IEC 81346-2QSubstance Prohibitance (Date)01.05.2012 00:00:00Ambient temperature during operation-20 +60 °C• ambient temperature during operation-20 +60 °C• ambient temperature during storage-55 +80 °C	degree of pollution	3		
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degree of protection NEMA ratingothershock resistancea=60 m/s2 (6g) with 10 ms per 3 shocks in all axesvibration resistancef= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cyclesmechanical service life (switching cycles)10 000 000• of the main contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical10 000 000• of the signaling contacts typical10 000 000• at DC-13 at 6 A at 24 V typical30 000• at DC-13 at 6 A at 230 V typical200 000• at AC-15 at 6 A at 230 V typical200 000• at Continous operation according to IEC 60947-6-2reference code acc. to IEC 81346-2QSubstance Prohibitance (Date)01.05.2012 00:00:00Ambient conditions2 000 m• ambient temperature during operation-20 +60 °C• ambient temperature during storage-55 +80 °C	<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	250 V		
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vibration resistancef= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cyclesmechanical service life (switching cycles)i 0 000 000• of the main contacts typical10 000 000• of auxiliary contacts typical10 000 000• of the signaling contacts typical10 000 000electrical endurance (switching cycles) of auxiliary contacts30 000• at DC-13 at 6 A at 24 V typical30 000• at AC-15 at 6 A at 230 V typical200 000type of assignment reference code acc. to IEC 81346-2QSubstance Prohibitance (Date)01.05.2012 00:00:00Ambient conditions2 000 m• ambient temperature during operation • ambient temperature during storage-20 +60 °C -55 +80 °C	degree of protection NEMA rating	other		
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• of auxiliary contacts typical10 000 000• of the signaling contacts typical10 000 000electrical endurance (switching cycles) of auxiliary contacts	mechanical service life (switching cycles)			
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electrical endurance (switching 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 IEC 60947-6-2         reference code acc. to IEC 81346-2       Q         Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient conditions       2 000 m         • ambient temperature during operation       -20 +60 °C         • ambient temperature during storage       -55 +80 °C	<ul> <li>of auxiliary contacts typical</li> </ul>	10 000 000		
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• at AC-15 at 6 A at 230 V typical       200 000         type of assignment       continous operation according to IEC 60947-6-2         reference code acc. to IEC 81346-2       Q         Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient conditions       2000 m         • ambient temperature during operation       -20 +60 °C         • ambient temperature during storage       -55 +80 °C				
type of assignmentcontinous operation according to IEC 60947-6-2reference code acc. to IEC 81346-2QSubstance Prohibitance (Date)01.05.2012 00:00:00Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 m• ambient temperature during operation • ambient temperature during storage-20 +60 °C -55 +80 °C	<ul> <li>at DC-13 at 6 A at 24 V typical</li> </ul>	30 000		
reference code acc. to IEC 81346-2       Q         Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         • ambient temperature during operation       -20 +60 °C         • ambient temperature during storage       -55 +80 °C	<ul> <li>at AC-15 at 6 A at 230 V typical</li> </ul>	200 000		
Substance Prohibitance (Date)       01.05.2012 00:00:00         Ambient conditions       2000 m         installation altitude at height above sea level maximum       2 000 m         • ambient temperature during operation       -20 +60 °C         • ambient temperature during storage       -55 +80 °C	type of assignment	continous operation according to IEC 60947-6-2		
Ambient conditions         installation altitude at height above sea level maximum       2 000 m         • ambient temperature during operation       -20 +60 °C         • ambient temperature during storage       -55 +80 °C	reference code acc. to IEC 81346-2	Q		
installation altitude at height above sea level maximum2 000 m• ambient temperature during operation-20 +60 °C• ambient temperature during storage-55 +80 °C	Substance Prohibitance (Date)	01.05.2012 00:00:00		
ambient temperature during storage     -20 +60 °C     -55 +80 °C	Ambient conditions			
• ambient temperature during storage -55 +80 °C	installation altitude at height above sea level maximum	2 000 m		
• ambient temperature during storage -55 +80 °C	<ul> <li>ambient temperature during operation</li> </ul>	-20 +60 °C		
		-55 +80 °C		
	<ul> <li>ambient temperature during transport</li> </ul>	-55 +80 °C		

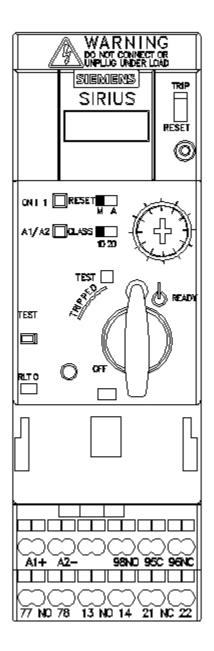
relative humidity during operation	10 90 %	
Main circuit		
number of poles for main current circuit	3	
adjustable current response value current of the	5 8 32 A	
current-dependent overload release	0 J2 A	
formula for making capacity limit current	12 x le	
formula for breaking capacity limit current	10 x le	
yielded mechanical performance for 4-pole AC motor		
<ul> <li>at 400 V rated value</li> </ul>	15 kW	
• at 500 V rated value	11 kW	
• at 690 V rated value	11 kW	
<ul> <li>operating voltage at AC-3 rated value maximum</li> </ul>	690 V	
operational current		
<ul> <li>at AC at 400 V rated value</li> </ul>	32 A	
• at AC-43		
— at 400 V rated value	29 A	
— at 500 V rated value	17.6 A	
— at 690 V rated value	12.8 A	
operating power		
• at AC-3 at 400 V rated value	15 kW	
• at AC-43		
— at 400 V rated value	15 000 W	
— at 500 V rated value	11 000 W	
— at 690 V rated value	11 000 W	
no-load switching frequency	3 600 1/h	
operating frequency		
• at AC-41 acc. to IEC 60947-6-2 maximum	750 1/h	
• at AC-43 acc. to IEC 60947-6-2 maximum	250 1/h	
Control circuit/ Control		
type of voltage		
type of voltage	AC/DC	
control supply voltage 1 at AC		
• at 50 Hz rated value	24 V	
<ul> <li>control supply voltage 1 at AC</li> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul>		
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency	24 V 24 V	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value	24 V 24 V 50 Hz	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value	24 V 24 V	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage 1	24 V 24 V 50 Hz 60 Hz	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage 1 • at DC rated value	24 V 24 V 50 Hz	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value	24 V 24 V 50 Hz 60 Hz 24 V	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage 1 • at DC rated value holding power • at AC maximum	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value            • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum	24 V 24 V 50 Hz 60 Hz 24 V	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage 1 • at DC rated value holding power • at AC maximum • at DC maximum • at DC contacts for auxiliary contacts	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at AC maximum         • at DC rated value	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at AC maximum         • at DC rated value	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         number of CO contacts of the current-dependent overload release for signaling contact	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         number of CO contacts of the current-dependent overload release for signaling contact	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip         unit for signaling contact         number of CO contacts of the current-dependent overload         release for signaling contact         operational current of auxiliary contacts at AC-12         maximum	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1	
control supply voltage 1 at AC <td a="" b="" end="" of="" stat<="" state="" td="" the="" to=""><td>24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1</td></td>	<td>24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1</td>	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         control supply voltage 1         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         number of CO contacts of the current-dependent overload release for signaling contact         operational current of auxiliary contacts at AC-12 maximum         operational current of auxiliary contacts at DC-13 at 250 V         Protective and monitoring functions	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 2 2 4 V	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         • at DC rated value         holding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         number of CO contacts of the current-dependent overload release for signaling contact         operational current of auxiliary contacts at AC-12 maximum         operational current of auxiliary contacts at DC-13 at 250 V         Protective and monitoring functions         trip class	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1	
control supply voltage 1 at AC <td a="" end="" of="" state="" state<="" td="" term="" the="" to=""><td>24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 2 1 2</td></td>	<td>24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 2 1 2</td>	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 2 1 2
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         • at DC rated value         bolding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         operational current of auxiliary contacts at AC-12 maximum         operational current of auxiliary contacts at DC-13 at 250 V         Protective and monitoring functions         trip class         breaking capacity operating short-circuit current (lcs)         • at 400 V	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 2 4 V 2 3.5 W 3.1 W 2 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 1 2	
control supply voltage 1 at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value • 2 rated value • 2 rated value control supply voltage 1 • at DC rated value holding power • at AC maximum • at DC maximum • at DC maximum Auxiliary circuit number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts number of NO contacts of instantaneous short-circuit trip unit for signaling contact number of CO contacts of the current-dependent overload release for signaling contact operational current of auxiliary contacts at AC-12 maximum operational current of auxiliary contacts at DC-13 at 250 V Protective and monitoring functions trip class breaking capacity operating short-circuit current (lcs) • at 400 V • at 500 V rated value	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 2 CLASS 10 and 20 adjustable 53 kA 1 kA	
control supply voltage 1 at AC         • at 50 Hz rated value         • at 60 Hz rated value         control supply voltage frequency         • 1 rated value         • 2 rated value         • at DC rated value         bolding power         • at DC maximum         • at DC maximum         • at DC contacts for auxiliary contacts         number of NC contacts for auxiliary contacts         number of NO contacts for auxiliary contacts         number of NO contacts of instantaneous short-circuit trip unit for signaling contact         operational current of auxiliary contacts at AC-12 maximum         operational current of auxiliary contacts at DC-13 at 250 V         Protective and monitoring functions         trip class         breaking capacity operating short-circuit current (lcs)         • at 400 V	24 V 24 V 50 Hz 60 Hz 24 V 3.5 W 3.1 W 1 1 1 1 1 1 1 1 1 1 1 2 1 2 4 V 3.5 W 3.1 W	

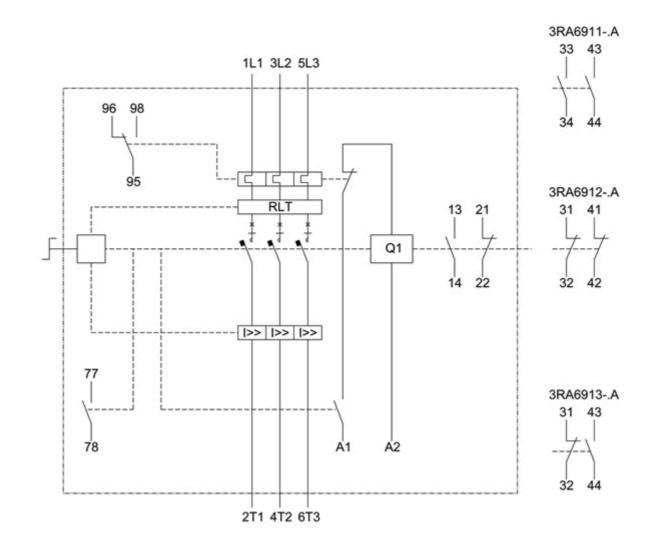
full-load current (FLA) for 3-phase AC motor			
at 480 V rated value	32 A		
yielded mechanical performance [hp] for 3-phase AC motor			
at 200/208 V rated value	7.5 hp		
• at 220/230 V rated value	10 hp		
<ul> <li>at 460/480 V rated value</li> </ul>	20 hp		
contact rating of auxiliary contacts according 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			
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse gL/gG: 10 A		
<ul> <li>for short-circuit protection of the signaling switch of the short-circuit release required</li> </ul>	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 mounting rail		
fastening method	screw and snap-on mounting		
height	191 mm		
width	45 mm		
depth	165 mm		
Connections/ Terminals			
product function			
<ul> <li>removable terminal for main circuit</li> </ul>	Yes		
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>	Yes		
type of electrical connection			
<ul> <li>for main current circuit</li> </ul>	plug-in without terminals		
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals		
type of connectable conductor cross-sections			
<ul> <li>for main contacts</li> </ul>			
— solid	2x (2.5 6 mm²), 1x 10 mm²		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 6 mm²)		
<ul> <li>finely stranded without core end processing</li> </ul>	2x (2.5 6 mm²)		
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (14 10), 1x 8		
type of connectable conductor cross-sections			
<ul> <li>for auxiliary contacts</li> </ul>			
— solid	2x (0.25 1.5 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.25 1.5 mm²)		
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.25 1.5 mm²)		
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (24 16)		
Safety related data			
B10 value with high demand rate acc. to SN 31920	2 000 000		
proportion of dangerous failures			
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	40 %		
with high demand rate acc. to SN 31920	50 %		
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT		
T1 value for proof test interval or service life acc. to IEC 61508	20 у		
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						
conducted interference						
• due to burst acc. to IEC 61000-4-4		4 kV main contacts, 2 kV a	auxiliary contacts			
<ul> <li>due to burst acc. to IEC 61000-4-4</li> <li>due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>						
<ul> <li>due to conductor-conductor surge acc. to IEC 01000-4-5</li> <li>due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>		4 kV main contacts, 2 kV auxiliary contacts 2 kV main contacts, 1 kV auxiliary contacts				
<ul> <li>due to high-frequency radiation acc. to IEC 61000- 4-6</li> </ul>		0.15-80Mhz at 10V				
field-based interference acc. to IEC 61000-	4-3	10 V/m				
electrostatic discharge acc. to IEC 61000-4	1-2	8 kV				
conducted HF interference emissions acc.	to CISPR11	150 kHz 30 MHz Class	A			
field-bound HF interference emission acc.	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		
	UL u	EHC	RCM	UDE VDE		
Declaration of Conformity Test Certificates Marine / Shipping						
Miscellaneous EG-Konf.	<u>Type Test</u> <u>Certificates/Te</u> <u>Report</u>	st ABS	BUREAU VERITAS	Lloyd's Register urs		
Marine / Shipping			other			
PRS RINA	RMRS RMRS	DNV-GL	Confirmation			
Further information Information- and Downloadcenter (Catalog	is Brochures	)				
https://www.siemens.com/ic10 Industry Mall (Online ordering system)						
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-2EB33						
Cax online generator						
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-2EB33 Service&Support (Manuals, Certificates, Characteristics, FAQs,)						
Service&Support (Manuals, Certificates, C https://support.industry.siemens.com/cs/ww/e						
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2EB33⟨=en						
Characteristic: Tripping characteristics, I <sup>2</sup> t, Let-through current						
https://support.industry.siemens.com/cs/ww/e	n/ps/3RA6120-2F	EB33/char				
Further characteristics (e.g. electrical end http://www.automation.siemens.com/bilddb/in	urance, switchin	g frequency)	333&objecttype=14&grid	dview=view1		









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