## **SIEMENS**

Data sheet 3RA6120-2BB33



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 designation design of the product direct starter  design of the product produc	product brand name	SIRIUS
product type designation  General technical data  product function control circuit interface to parallel wiring product function control circuit interface to parallel wiring product function control circuit interface to parallel wiring product extension auxiliary switch Yes  powor loss IWJ for rated value of the current  • at AC in hot operating state per pole • at AC in hot operating state per pole • without load current share typical insulation voltage rated value  690 V  degree of pollution 3 surgo voltage resistance rated value • between main and auxiliary circuit • between auxiliary and auxiliary circuit • between auxiliary and auxiliary circuit • between control and auxiliary circuit • between control and auxiliary circuit  400 V  degree of protection NEMA rating shock resistance  a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes  vibration resistance  in the main contacts typical • of the signaling contacts with a contacts typical • of the signaling contacts typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical  • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical  • at AC-15 at 6 A at 24 V typical  • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 24 V typical • at AC-15 at 6 A at 2	product designation	compact starter
General technical data product function control circuit interface to parallel wiring product extension auxiliary switch power loss [W] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical   0.1 W  • without load current share typical   0.9 W	design of the product	direct starter
product function control circuit interface to parallel wiring product extension auxiliary switch power loss [W] for rated value of the current  * at AC in hot operating state * at AC in hot operating state per pole * without load current share typical * of the control of the current share typical * of the control of the current share typical * of the control of the current share typical * of the control of the current share typical * of the control of the current share typical * of the control of the current share typical * of the main control and auxiliary circuit * of the main contacts typical * of the signaling contacts typical * of the signaling contacts typical * of auxiliary contacts typical * of the signaling contacts typical * of the signaling contacts typical * of the signaling contacts typical * of alt AC-15 at 6 A at 24 V typical * of At 230 V typical * of the control of the contacts * at DC-13 at 6 A at 230 V typical * of the control of the control of the contacts * at DC-15 at 6 A at 24 V typical * of the control	product type designation	3RA61
product extension auxiliary switch 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   6000 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   0ther   shock resistance   a=60 ms2 (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/s²; 10 cycles   mechanical service life (operating 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   10 000 000   • of the signaling contacts typical   10 000 000   • of the signaling contacts typical   10 000 000   • of the signaling contacts typical   200 000   • of the signaling contacts typical   200 000   • of auxiliary contacts typical   200 000   • of the signaling contacts typical   200 000   • of the signaling contacts typical   200 000   • of the continuous operation according to IEC 60947-6-2   Terference code according to IEC 81346-2   Q   Substance Prohibitance (Date)   05/01/2012    Ambient conditions   Installation altitude at height above sea level maximum   2000 m   ambient temperature   0 uring operation   -20 +60 °C   • during transport   -55 +80 °C   relative humidity during operation   10 90 %	General technical data	
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 6000 V  maximum permissible voltage for protective separation • between main and auxiliary circuit 400 V • between auxiliary and auxiliary circuit 250 V • between auxiliary and auxiliary circuit 300 V  degree of protection NEMA rating 50 other 50 other control and auxiliary circuit 400 V  **Shock resistance 1 = 4 5.8 Hz., d= 15 mm; f= 5.8 500 Hz., a= 20 m/s²; 10 cycles 10 000 000  • of auxiliary contacts typical 10 000 000 • of auxiliary contacts typical 10 000 000 • of the main contacts typical 10 000 000 • of the signaling contacts typical 10 000 000 • of the signaling contacts typical 10 000 000 • of the signaling contacts typical 200 000  electrical endurance (operating cycles) of auxiliary contacts • at DC-13 at 6 A at 24 V typical 200 000  type of assignment 50 onlineus operation according to IEC 60947-6-2  Preference code according to IEC 81346-2 Q  Substance Prohibitance (Date) 55/01/2012  Ambient conditions  installation altitude at height above sea level maximum 2 000 m  ambient temperature 4 during operation 2 000 m  ambient temperature 4 during operation 2 000 m  during storage 55 +80 °C  relative humidity during operation 10 90 %  Main circuit	product function control circuit interface to parallel wiring	Yes
at AC in hot operating state per pole  without load current share typical  insulation voltage rated value  degree of pollution  surge voltage resistance rated value  abelieven auxiliary circuit  between auxiliary and auxiliary circuit  between auxiliary and auxiliary circuit  between control and auxiliary circuit  between control and auxiliary circuit  between control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and there is a control and auxiliary circuit  circuit and auxiliary and aux	product extension auxiliary switch	Yes
at AC in hot operating state per pole  without load current share typical insulation voltage rated value degree of pollution  surge voltage resistance rated value between main and auxiliary circuit between nuxiliary and auxiliary circuit between control and auxiliary contacts (bg) with 10 ms per 3 shocks in all axes between control and auxiliary contacts (bg) with 10 ms per 3 shocks in all axes between control and auxiliary contacts in a control and auxiliary contacts in a contact stypical between contacts typical between contacts typical between contacts typical and a contact stypical and auxiliary contacts between contacts typical and auxiliary contacts between contacts and auxiliary contacts between contacts and auxiliary contacts between control and auxiliary contac	power loss [W] for rated value of the current	
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   250 V     between control and auxiliary circuit   300 V     degree of protection NEMA rating   0ther     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/s²; 10 cycles     of the main contacts typical   10 000 000     of auxiliary contacts typical   10 000 000     of the signaling 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 IEC 60947-6-2     Substance Prohibitance (Date)   05/01/2012     Ambient conditions   installation altitude at height above sea level maximum   2 000 m     ambient temperature   during storage   -55 +80 °C     during storage   -45 +80 °C     relative humidity during operation   10 90 %     Main circuit   1000 000   1000 000     discount of the signal operation   10 90 %     Main circuit   1000 000   1000 000     discount of the signal	<ul> <li>at AC in hot operating state</li> </ul>	0.1 W
insulation voltage rated value  degree of pollution  surge voltage resistance rated value  6 000 V  maximum permissible voltage for protective separation  • between main and auxiliary circuit  • between auxiliary and auxiliary circuit  • between control and auxiliary circuit  • between control and auxiliary circuit  • between control and auxiliary circuit  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/s²; 10 cycles  mechanical service life (operating cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  • of the signaling contacts typical  • of the Ac 13 at 6 A at 24 V typical  • at AC-15 at 6 A at 23 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  volume assignment  continous operation according to IEC 60947-6-2  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  relative humicity during operation  10 90 %  Main circuit	<ul> <li>at AC in hot operating state per pole</li> </ul>	0.03 W
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 300 V degree of protection NEMA rating other a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes vibration 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/s²; 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 • of the signaling contacts typical 10 000 000 • of the signaling contacts typical 200 000 electrical endurance (operating cycles) of auxiliary contacts • at DC-13 at 6 A at 24 V typical 200 000  type of assignment continous operation according to IEC 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 operation20 +60 °C • during torage55 +80 °C • during transport - 55 +80 °C relative humidity during operation 10 90 %  Main circuit	without load current share typical	2.9 W
surge voltage resistance rated value  maximum permissible voltage for protective separation  • between amin and auxiliary circuit  • between auxiliary and auxiliary circuit  • between control and auxiliary circuit  shock resistance  • a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes  • vibration resistance  mechanical service life (operating cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  • of the signaling contacts typical  • of the signaling contacts typical  • of the signaling contacts typical  • at DC-13 at 6 A at 24 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • osono  • at AC-15 at 6 A at 230 V typical  • osono  • other osignment  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  relative humidity during operation  10 90 %  Main circuit	insulation voltage rated value	690 V
maximum permissible voltage for protective separation  • between main and auxiliary circuit • between auxiliary and auxiliary circuit • between control and auxiliary circuit • 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/s², 10 cycles  mechanical service life (operating cycles) • of the main contacts typical • of the signaling contacts typical • at DC-13 at 6 A at 24 V typical • at AC-15 at 6 A at 230 V typical • at AC-15 at 6 A at 230 V typical • other of assignment continous operation according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature • during operation • during storage • during transport -55 +80 °C relative humidity during operation  10 90 %  Main circuit	degree of pollution	3
between main and auxiliary circuit between control and auxiliary circuit between control and auxiliary circuit  other shock resistance  ribration resistance  ref 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles  mechanical service life (operating cycles) of the main contacts typical of auxiliary contacts typical of the signaling contacts typical of the main condections of the main contacts typical	surge voltage resistance rated value	6 000 V
between auxiliary and auxiliary circuit     between control and auxiliary circuit     other     shock resistance     degree of protection NEMA rating     shock resistance     deforming of the main contacts typical     of the main contacts typical     of auxiliary contacts typical     of auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical     of auxiliary contacts typical     of auxiliary contacts typical     of auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical     of auxiliary contacts     of the A at 24 V typical     output of assignment     continous operation according to IEC 60947-6-2  Substance Prohibitance (Date)  Anbient conditions  installation altitude at height above sea level maximum     output of a continue type of a c	maximum permissible voltage for protective separation	
between control and auxiliary circuit  degree of protection NEMA rating shock resistance vibration resistance vibration resistance  echanical service life (operating cycles)     of the main contacts typical     of auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical electrical endurance (operating cycles) of auxiliary contacts     at DC-13 at 6 A at 24 V typical     at AC-15 at 6 A at 230 V typical     verification of the signaling to lEC 81346-2  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature     during operation     during storage     during transport relative humidity during operation  10 000 000  10 000 000  10 000 000  10 000 00	<ul> <li>between main and auxiliary circuit</li> </ul>	400 V
degree of protection NEMA rating 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/s²; 10 cycles mechanical service life (operating cycles) of the main contacts typical of auxiliary contacts typical of the signaling contacts typical of the signaling contacts typical lou 000 000 of the signaling contacts typical of the conditions at AC-15 at 6 A at 24 V typical on the conditions installation altitude at height above sea level maximum ambient temperature of during operation other during storage other other as 60 m/s2 (6g) with 10 ms per 3 shocks in all axes a 60 m/s2 (6g) with 10 ms per 3 shocks in all axes a 60 m/s2 (6g) with 10 ms per 3 shocks in all axes a 60 m/s2 (6g) with 10 ms per 3 shocks in all axes because in the specific or shocks in all axes books in all axes book	<ul> <li>between auxiliary and auxiliary circuit</li> </ul>	250 V
shock resistance  vibration resistance  f = 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles  mechanical service life (operating cycles)  of the main contacts typical of the signaling contacts t	<ul> <li>between control and auxiliary circuit</li> </ul>	300 V
vibration resistance       f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles         mechanical service life (operating 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       10 000 000         electrical endurance (operating cycles) of auxiliary contacts       30 000         • at DC-13 at 6 A at 24 V typical       200 000         • at AC-15 at 6 A at 230 V typical       200 000         type of assignment       continous operation according to IEC 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	degree of protection NEMA rating	other
mechanical service life (operating cycles)  of the main contacts typical of auxiliary contacts typical of the signaling contacts the top the open contacts of the signaling contacts the top the open contacts of the signaling contacts the of the open contacts of the signaling contacts contacts	shock resistance	a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes
of the main contacts typical of auxilliary contacts typical of the signaling contacts of the signaling contac	vibration resistance	f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles
of auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical      electrical endurance (operating cycles) of auxiliary contacts     o at DC-13 at 6 A at 24 V typical     o at AC-15 at 6 A at 230 V typical     o at AC-15 at 6 A at 230 V typical      type of assignment  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     o during operation     o during storage     o during transport     relative humidity during operation  Main circuit  10 000 000  10 000 000  10 000 000  10 000 00	mechanical service life (operating cycles)	
of the signaling contacts typical     electrical endurance (operating cycles) of auxiliary contacts         • at DC-13 at 6 A at 24 V typical         • at AC-15 at 6 A at 230 V typical         • at AC-15 at 6 A at 230 V typical             • continous operation according to IEC 60947-6-2              reference code according to IEC 81346-2	<ul> <li>of the main contacts typical</li> </ul>	10 000 000
electrical endurance (operating cycles) of auxiliary contacts  • at DC-13 at 6 A at 24 V typical  • at AC-15 at 6 A at 230 V typical  type of assignment  continous operation according to IEC 60947-6-2  reference code according to IEC 81346-2  Q Substance Prohibitance (Date)  O5/01/2012  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  -20 +60 °C  • during storage  • during transport  -55 +80 °C  relative humidity during operation  10 90 %  Main circuit	<ul> <li>of auxiliary contacts typical</li> </ul>	10 000 000
<ul> <li>at DC-13 at 6 A at 24 V typical</li> <li>at AC-15 at 6 A at 230 V typical</li> <li>200 000</li> <li>type of assignment</li> <li>continous operation according to IEC 60947-6-2</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>05/01/2012</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>during operation</li> <li>-20 +60 °C</li> <li>during storage</li> <li>-55 +80 °C</li> <li>relative humidity during operation</li> <li>10 90 %</li> <li>Main circuit</li> </ul>	of the signaling contacts typical	10 000 000
at AC-15 at 6 A at 230 V typical  type of assignment  continous operation according to IEC 60947-6-2  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  during operation  during storage  during storage  during transport  relative humidity during operation  Main circuit  200 000  200 m  200 m  -20 +60 °C  -55 +80 °C  -55 +80 °C  -55 +80 °C  -55 +80 °C	electrical endurance (operating cycles) of auxiliary contacts	
type of assignment  reference code according to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  relative humidity during operation  Main circuit  continous operation according to IEC 60947-6-2  Q  Q  05/01/2012  Ambient conditions  installation altitude at height above sea level maximum  2 000 m  -20 +60 °C  -55 +80 °C  -55 +80 °C  relative humidity during operation  10 90 %  Main circuit	• at DC-13 at 6 A at 24 V typical	30 000
reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  -20 +60 °C  • during transport  -55 +80 °C  relative humidity during operation  10 90 %  Main circuit	• at AC-15 at 6 A at 230 V typical	200 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  • during storage  • during transport  -55 +80 °C  relative humidity during operation  10 90 %  Main circuit	type of assignment	continous operation according to IEC 60947-6-2
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport  -55 +80 °C  relative humidity during operation  Main circuit  2 000 m  2 000 m  -20 +60 °C  -55 +80 °C  -55 +80 °C  10 90 %	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage • during transport • during transport • during transport • 10 90 %  Main circuit	Substance Prohibitance (Date)	05/01/2012
ambient temperature  • during operation  • during storage  • during transport  • during transport  -55 +80 °C  relative humidity during operation  10 90 %  Main circuit	Ambient conditions	
<ul> <li>during operation</li> <li>during storage</li> <li>55 +80 °C</li> <li>during transport</li> <li>55 +80 °C</li> <li>relative humidity during operation</li> <li>Main circuit</li> </ul>	installation altitude at height above sea level maximum	2 000 m
◆ during storage     ←55 +80 °C     ◆ during transport     ←55 +80 °C     relative humidity during operation	ambient temperature	
◆ during transport -55 +80 °C relative humidity during operation 10 90 %  Main circuit	<ul> <li>during operation</li> </ul>	-20 +60 °C
relative humidity during operation 10 90 %  Main circuit	during storage	-55 +80 °C
Main circuit	during transport	-55 +80 °C
	relative humidity during operation	10 90 %
number of poles for main current circuit 3	Main circuit	
	number of poles for main current circuit	3

adjustable current response value current of the current-	0.32 1.25 A
dependent overload release	
formula for making capacity limit current	38.4 x le
formula for limit current breaking capacity	32 x le
yielded mechanical performance for 4-pole AC motor	
• at 400 V rated value	0.37 kW
• at 500 V rated value	0.55 kW
at 690 V rated value	0.75 kW
operating voltage at AC-3 rated value maximum	690 V
operational current	
<ul> <li>at AC at 400 V rated value</li> </ul>	1.25 A
<ul> <li>at AC-3 at 400 V rated value</li> </ul>	1.25 A
• at AC-43	
— at 400 V rated value	1.1 A
— at 500 V rated value	1.2 A
— at 690 V rated value	1.1 A
operating power	0.071111
at AC-3 at 400 V rated value	0.37 kW
• at AC-43	
— at 400 V rated value	370 W
— at 500 V rated value	550 W
— at 690 V rated value	750 W
no-load switching frequency	3 600 1/h
operating frequency	
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
Control circuit/ Control	AO/DO
type of voltage	AC/DC
control supply voltage 1 at AC  • at 50 Hz rated value	24 V
	24 v 24 24 V
at 50 Hz     at 60 Hz rated value	24 24 V
• at 60 Hz	24 V
control supply voltage frequency	Z4 V
• 1 rated value	50 Hz
• 2 rated value	60 Hz
control supply voltage 1	00112
at DC rated value	24 V
• at DC	24 24 V
holding power	
holding power  • at AC maximum	2.8 W
	2.8 W 2.9 W
• at AC maximum	
at AC maximum     at DC maximum	
at AC maximum     at DC maximum  Auxiliary circuit	2.9 W
at AC maximum     at DC maximum  Auxiliary circuit  number of NC contacts for auxiliary contacts	2.9 W
at AC maximum     at DC maximum  Auxiliary circuit  number of NC contacts for auxiliary contacts number of NO contacts for auxiliary contacts	2.9 W
at AC 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	2.9 W  1 1 1 1
at AC 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	2.9 W  1 1 1 1 1 1 1 10 A
at AC 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	2.9 W  1 1 1 1
at AC 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	2.9 W  1 1 1 1 1 1 0 A 0.27 A
at AC 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	2.9 W  1 1 1 1 1 1 1 1 10 A
at AC 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  operating short-circuit current breaking capacity (Ics)	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable
at AC 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  operating short-circuit current breaking capacity (Ics)  at 400 V	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable  53 kA
at AC 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  operating short-circuit current breaking capacity (Ics)  at 400 V  at 500 V rated value	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable  53 kA 3 kA
at AC 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  operating short-circuit current breaking capacity (Ics)  at 400 V  at 500 V rated value  at 690 V rated value	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable  53 kA
at AC 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 operating short-circuit current breaking capacity (Ics)  at 400 V  at 500 V rated value  at 690 V rated value  ULI/CSA ratings	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable  53 kA 3 kA
at AC 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  operating short-circuit current breaking capacity (Ics)  at 400 V  at 500 V rated value  at 690 V rated value  IUL/CSA ratings  full-load current (FLA) for 3-phase AC motor	1
at AC 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 operating short-circuit current breaking capacity (Ics)  at 400 V  at 500 V rated value  at 690 V rated value  ULI/CSA ratings	2.9 W  1 1 1 1 1 1 CLASS 10 and 20 adjustable  53 kA 3 kA

yielded mechanical performance [hp] for 3-phase AC motor	
• at 460/480 V rated value	0.5 hp
at 575/600 V rated value	0.5 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	Contacts 93-90-96 R3007 D300
product function short circuit protection	Yes
<u> </u>	
design of the fuee link	electromagnetic
design of the fuse link	fund at /aC: 10 A
<ul> <li>for short-circuit protection of the auxiliary switch required</li> <li>for short-circuit protection of the signaling switch of the</li> </ul>	fuse gL/gG: 10 A
short-circuit protection of the signaling switch of the	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)
finely stranded without core end processing	2x (1.5 6 mm²)
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>for AWG cables for auxiliary contacts</li> </ul>	2x (24 16)
Safety related data	
B10 value with high demand rate according to SN 31920	3 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	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	
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	4 kV main contacts 2 kV auxilians contacts
due to burst according to IEC 61000-4-4      due to conductor conth curso according to IEC 61000 4.5.	4 kV main contacts, 2 kV auxiliary contacts
due to conductor-earth surge according to IEC 61000-4-5      due to conductor conductor according to IEC.	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- 4-6</li> </ul>	0.15-80Mhz at 10V
<del>-</del>	

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





Type Test Certificates/Test Report







Marine / Shipping

other

**Dangerous Good** 





Confirmation

**Transport Information** 

## 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,...)

 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BB33}}$ 

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

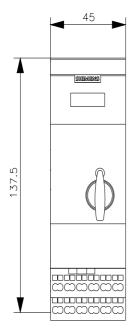
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA6120-2BB33&lang=en

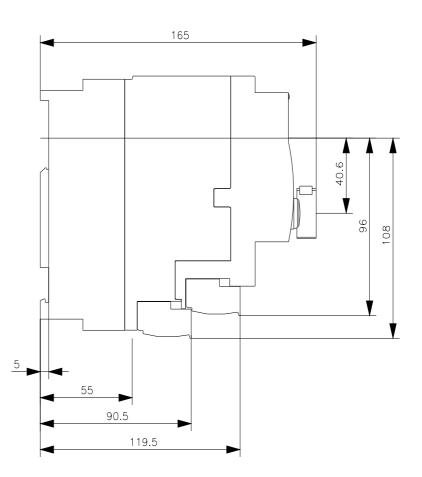
Characteristic: Tripping characteristics, I²t, Let-through current

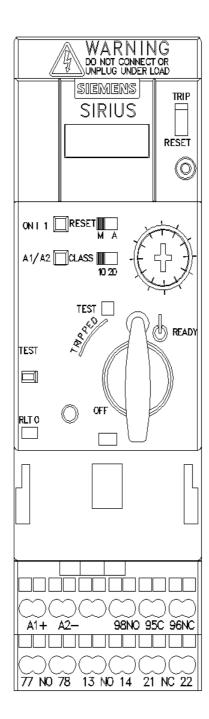
https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2BB33/char

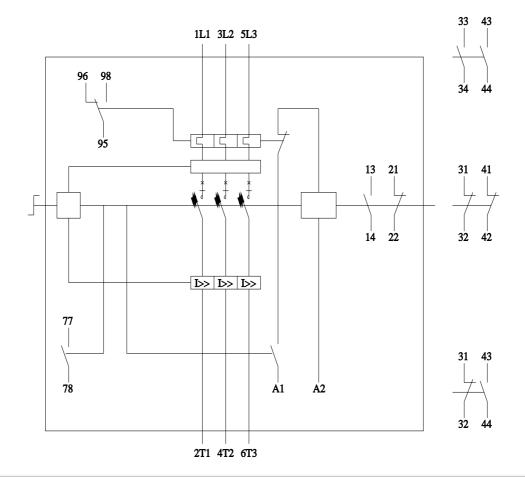
Further characteristics (e.g. electrical endurance, switching frequency)

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









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