## **SIEMENS**

Data sheet 3RA6120-1DB32



SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 3...12 A IP20 Connection main circuit: screw terminal Connection auxiliary circuit: screw terminal

product designation         compact starter           design of the product type designation         3RA61           Ceneral technical data         7ex           product function control circuit interface to parallel wiring product extension auxiliary switch         Yes           power loss [W] for rated value of the current at AC in hot operating state         0.6 W           power loss [W] for rated value of the current without load current share typical insulation voltage rated value         690 V           degree of pollution         3           surge voltage resistance rated value         6000 V           maximum permissible voltage for safe isolation         6 between main and auxiliary circuit         400 V           between ontrol and auxiliary circuit         300 V         300 V           degree of protection NEMA rating         660 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           wibration resistance         a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes           mechanical service life (switching cycles)         10 000 000           of auxiliary contacts typical         10 000 000           of the signaling contacts typical         10 000 000           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 brand name	SIRIUS		
product type designation  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  • per pole  • per pole  power loss [W] for rated value of the current without load current share typical  insulation voltage rated value  • gen pole  • gen pole  fegree of pollution  surge voltage resistance rated value  • between main and auxiliary circuit  • between auxiliary and auxiliary circuit  • between enorthol and auxiliary circuit  • between control and auxiliary circuit  • of the main contacts typical  • of the main contacts typical  • of the signaling contacts typical  • at DC-13 at 6 A at 24 V typical  • at DC-13 at 6 A at 24 V typical  • at DC-13 at 6 A at 22 V typical  • at DC-13 at 6 A at 230 V typical  • at DC-13 at 6 A at 230 V typical  • at DC-13 at 6 A at 24 V typica	product designation	compact starter		
product function control circuit interface to parallel wiring product extension auxiliary switch Yes power loss [W] for rated value of the current at AC in hot operating state	design of the product	direct starter		
product function control circuit interface to parallel wiring product extension auxillary switch power loss [W] for rated value of the current at AC in hot operating state • per pole power loss [W] for rated value of the current without load current share typical insulation voltage rated value degree of pollution surge voltage resistance rated value • between main and auxillary circuit • between main and auxillary circuit • between control and auxillary circuit • alou of the signaling contacts typical • of the main contacts typical • of the signaling conta	product type designation	3RA61		
product extension auxillary switch power loss [W] for rated value of the current at AC in hot operating state	General technical data			
power loss [W] for rated value of the current at AC in hot operating state  • per pole  • per pole  power loss [W] for rated value of the current without load current share typical insulation voltage rated value  degree of pollution  • between ratin and auxiliary circuit  • between main and auxiliary circuit  • between control and auxiliary circuit  • bother  shock resistance  a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes  f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles  mechanical service life (switching cycles)  • of the main contacts typical  • of auxiliary contacts typical  • of auxiliary contacts typical  electrical endurance (switching 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  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 240 V typical  • at AC-15 at 6 A at 250 V typical  • at AC-15 at 6 A at 250 V typical  • at AC-15 at 6 A at 250 V	product function control circuit interface to parallel wiring	Yes		
operating state  • per pole  power loss [W] for rated value of the current without load current share typical  insulation voltage rated value  degree of pollution  surge voltage resistance rated value  maximum permissible voltage for safe isolation  • between main and auxiliary circuit  • between main and auxiliary circuit  • between control and auxiliary circuit  • bothwer auxiliary contects In	product extension auxiliary switch	Yes		
power loss [W] for rated value of the current without load current share typical insulation voltage rated value degree of pollution surge voltage resistance rated value  • between main and auxiliary circuit • between auxiliary and auxiliary circuit • between auxiliary and auxiliary circuit • between control and surviliary circuit • other shock resistance  s		1.8 W		
insulation voltage rated value degree of pollution surge voltage resistance rated value maximum permissible voltage for safe isolation	• per pole	0.6 W		
degree of pollution surge voltage resistance rated value 6 000 V  maximum permissible voltage for safe isolation • 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 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 (switching cycles) • of the main contacts typical • of auxiliary contacts typical • of the signalling contacts typical • of the signalling contacts typical  electrical endurance (switching 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 • of assignment continous operation according to IEC 60947-6-2  reference code acc. to IEC 81346-2  Quoton Substance Prohibitance (Date)  installation altitude at height above sea level maximum ambient temperature • during operation  -20 +60 °C		2.9 W		
surge voltage resistance rated value  maximum permissible voltage for safe isolation  • between main and auxiliary circuit  • between auxiliary and auxiliary circuit  • between control and auxiliary circuit  degree of protection NEMA rating  shock resistance  shock resistance  vibration resistance  mechanical service life (switching cycles)  • of the main 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 DC-13 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  • at AC-15 at 6 A at 230 V typical  • at AC-15 at 6 A at 246-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  6 000 V  400	insulation voltage rated value	690 V		
maximum permissible voltage for safe isolation  • 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  • between control and auxiliary circuit  • other • shock resistance • a=60 m/s2 (6g) with 10 ms per 3 shocks in all axes  f= 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles  mechanical service life (switching 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 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 •	degree of pollution	3		
between main and auxiliary circuit     between auxiliary and auxiliary circuit     between control and auxiliary circuit     between control and auxiliary circuit     shock resistance     shock resistance     in 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles      mechanical service life (switching 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 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     of assignment     reference code acc. to IEC 81346-2     Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     oduring operation  -20 +60 °C	surge voltage resistance rated value	6 000 V		
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 (switching 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     of at DC-13 at 6 A at 24 V typical     of at AC-15 at 6 A at 230 V typical     of at AC-15 at 6 A at 230 V typical     other  continous operation according to IEC 60947-6-2  reference code acc. to IEC 81346-2     Q  Substance Prohibitance (Date)  O1.05.2012 00:00:00  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     oduring operation  -20 +60 °C	maximum permissible voltage for safe isolation			
between control and auxiliary circuit      degree of protection NEMA rating     shock resistance     shock resistance     vibration resistance     fe 4 5.8 Hz, d= 15 mm; f= 5.8 500 Hz, a= 20 m/s²; 10 cycles      mechanical service life (switching cycles)     of the main contacts typical     of auxiliary contacts typical     of the signaling contacts     of the signaling contacts typical     of the signaling cycles) of auxiliary contacts     of the signaling contacts     of the signaling contacts typical	<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 (switching cycles) of the main contacts typical of the signaling	<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 (switching cycles)  of the main contacts typical of the signaling contacts typical of the main contacts typi	between control and auxiliary circuit	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 (switching cycles)  of the main contacts typical of the signaling contacts typical of the main condact typical of the signaling contacts typical of the main contacts ty	degree of protection NEMA rating	other		
mechanical service life (switching cycles)	shock resistance			
of the main contacts typical     of auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical     of the signaling contacts typical     one contacts     one at DC-13 at 6 A at 24 V typical     one at AC-15 at 6 A at 230 V typical     one at AC-15 at 6 A at 230 V typical     one continuous operation according to IEC 60947-6-2      reference code acc. to IEC 81346-2     Substance Prohibitance (Date)      Ambient conditions     installation altitude at height above sea level maximum      ambient temperature     oduring operation      during operation      10 000 000      10 000 000      30 000      continous operation according to IEC 60947-6-2      Q      01.05.2012 00:00:00      ambient conditions     installation altitude at height above sea level maximum      ambient temperature     oduring operation      -20 +60 °C	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 auxiliary contacts typical     of the signaling contacts typical     of the signaling contacts typical     of the signaling contacts typical     old the signaling contacts typical     old the signaling contacts      old the signaling contacts typical     old the signaling contacts typical      ond the signaling conta	mechanical service life (switching cycles)			
of the signaling contacts typical  electrical endurance (switching 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 acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  during operation  continous operation  2 000 m  2 000 m  -20 +60 °C	<ul> <li>of the main contacts typical</li> </ul>	10 000 000		
electrical endurance (switching 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 acc. to IEC 81346-2  Q  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  -20 +60 °C	<ul> <li>of auxiliary contacts typical</li> </ul>	10 000 000		
e 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  installation altitude at height above sea level maximum 2 000 m  ambient temperature  ■ during operation -20 +60 °C	of the signaling contacts typical	10 000 000		
● at AC-15 at 6 A at 230 V typical  type of assignment  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  ● during operation  200 000  continous operation according to IEC 60947-6-2  Q  01.05.2012 00:00:00  2 000 m  ambient temperature  -20 +60 °C	` ,			
type of assignment  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  continous operation according to IEC 60947-6-2  Q  01.05.2012 00:00:00  2 000 m  -20 +60 °C	<ul><li>at DC-13 at 6 A at 24 V typical</li></ul>	30 000		
reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  Q  01.05.2012 00:00:00  2 000 m  -20 +60 °C	• 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  01.05.2012 00:00:00  2 000 m  -20 +60 °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	reference code acc. to IEC 81346-2	Q		
installation altitude at height above sea level maximum  ambient temperature  ● during operation  -20 +60 °C	Substance Prohibitance (Date)	01.05.2012 00:00:00		
ambient temperature  ● during operation  -20 +60 °C	Ambient conditions			
• during operation -20 +60 °C	installation altitude at height above sea level maximum	2 000 m		
	ambient temperature			
◆ during storage     −55 +80 °C	<ul><li>during operation</li></ul>	-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 breaking capacity limit current	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-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
operating power	
at AC-3 at 400 V rated value	5.5 kW
• at AC-43	S.S RVV
— at 400 V rated value	5 500 W
— at 500 V rated value	5 500 W
— at 690 V rated value	7 500 W 3 600 1/h
no-load switching frequency	3 600 1/11
operating frequency  • at AC-41 acc. to IEC 60947-6-2 maximum	750.4%
	750 1/h
• at AC-43 acc. to IEC 60947-6-2 maximum	250 1/h
Control circuit/ Control	
type of voltage	AC/DC
control supply voltage 1 at AC	
control supply voltage 1 at AC  • at 50 Hz rated value	24 V
control supply voltage 1 at AC  • at 50 Hz rated value  • at 60 Hz rated value	
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  holding power	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 2.8 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	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  holding power  • at AC maximum	24 V 24 V 50 Hz 60 Hz 24 V 2.8 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  Auxiliary circuit  number of NC contacts for auxiliary contacts	24 V 24 V 50 Hz 60 Hz 24 V 2.8 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  Auxiliary circuit	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 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  Auxiliary circuit  number of NC contacts for auxiliary contacts	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 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  Auxiliary circuit  number of NC contacts for auxiliary contacts  number of NO contacts of instantaneous short-circuit trip	24 V 24 V  50 Hz 60 Hz  24 V  2.8 W 2.9 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  Auxiliary circuit  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	24 V 24 V  50 Hz 60 Hz  24 V  2.8 W 2.9 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  Auxiliary circuit  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	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 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  Auxiliary circuit  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 2.8 W 2.9 W  1 1 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 AC maximum  • at DC maximum  Auxiliary circuit  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	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 W  1 1 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 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	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 W 1 1 1 1 1 0 A 0.27 A
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  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	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 W 1 1 1 1 1 0 A 0.27 A
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  Auxiliary circuit  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  breaking capacity operating short-circuit current (Ics)	24 V 24 V  50 Hz 60 Hz  24 V  2.8 W 2.9 W  1 1 1 1 1 CLASS 10 and 20 adjustable
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  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 (Ics)  • at 400 V	24 V 24 V  50 Hz 60 Hz  24 V  2.8 W 2.9 W  1 1 1 1 1 CLASS 10 and 20 adjustable  53 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  control supply voltage 1  • at DC rated value  holding power  • 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  breaking capacity operating short-circuit current (Ics)  • at 400 V  • at 500 V rated value	24 V 24 V 50 Hz 60 Hz 24 V 2.8 W 2.9 W 1 1 1 1 1 CLASS 10 and 20 adjustable 53 kA 3 kA

full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	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
<ul> <li>at 575/600 V rated value</li> </ul>	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	
<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
<ul><li>recommended</li></ul>	vertical, on horizontal standard mounting 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
<ul> <li>removable terminal for auxiliary and control circuit</li> </ul>	Yes
type of electrical connection	
for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type 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)
at AWG cables for main contacts	2x (16 10), 1x 8
type of connectable conductor cross-sections	2. (10 m 10), 1. C
for auxiliary contacts	
— solid	0.5 4 mm², 2x (0.5 2.5 mm²)
finely stranded with core end processing	0.5 2.5 mm², 2x (0.5 1.5 mm²)
at AWG cables for auxiliary contacts	2x (20 14)
Safety related data	
B10 value with high demand rate acc. to SN 31920	3 000 000
proportion of dangerous failures	
with low demand rate acc. to SN 31920	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	20 y
IEC 61508	
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe
Communication/ Protocol	
product function bus communication	No
protocol is supported	
AS-Interface protocol	No

<ul> <li>IO-Link protocol</li> </ul>	No				
product function control circuit interface with IO link	No				
Electromagnetic compatibility					
conducted interference					
<ul><li>due to burst acc. to IEC 61000-4-4</li></ul>	4 kV main contacts, 2 kV auxiliary contacts				
<ul> <li>due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	4 kV main contacts, 2 kV auxiliary contacts				
<ul> <li>due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	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 61000-4-2	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		













Declaration of Conformity

**Test Certificates** 

Marine / Shipping



Type Test Certificates/Test Report









Marine / Shipping

other







Confirmation

## Further information

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=3RA6120-1DB32

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6120-1DB32

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-1DB32

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

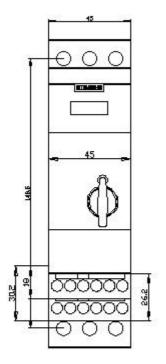
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA6120-1DB32\&lang=en}}$ 

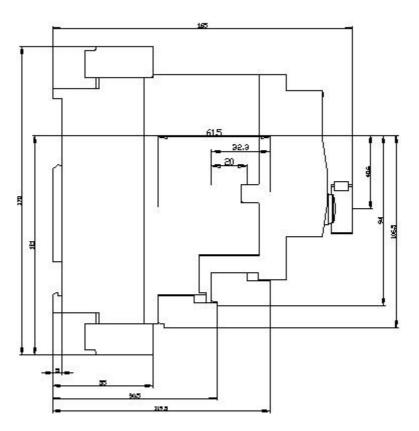
Characteristic: Tripping characteristics, I2t, Let-through current

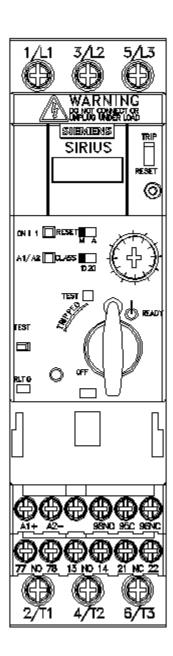
https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-1DB32/char

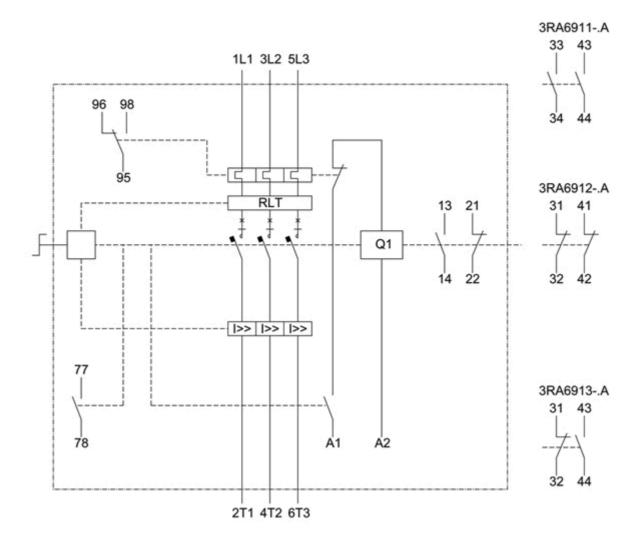
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6120-1DB32&objecttype=14&gridview=view1









last modified: 1/20/2021 **C**