SIEMENS

Data sheet

3RA6120-1DB32



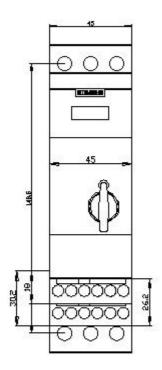
SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 3...12 A IP20 Connection main circuit: screw terminal Connection auxiliary circuit: screw terminal

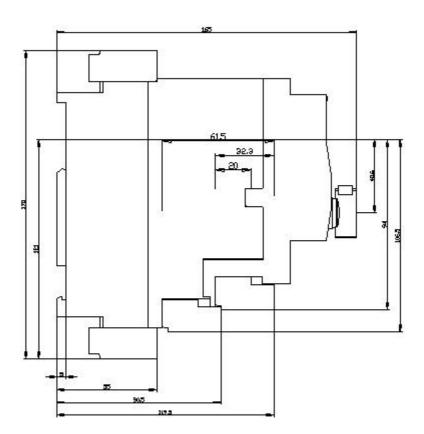
nuclust brand news	
product brand name	SIRIUS
product designation	_ compact starter
design of the product	direct starter
product type designation	3RA61
General technical data	
product function control circuit interface to parallel wiring	Yes
product extension auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	1.8 W
• per pole	0.6 W
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 safe isolation	
 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/s²; 10 cycles
mechanical service life (switching cycles)	
 of the main contacts typical 	10 000 000
 of auxiliary contacts typical 	10 000 000
 of the signaling contacts typical 	10 000 000
electrical endurance (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
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
 ambient temperature during transport 	-55 +80 °C
relative humidity during operation	_ 10 90 %
is a second standing opplication	

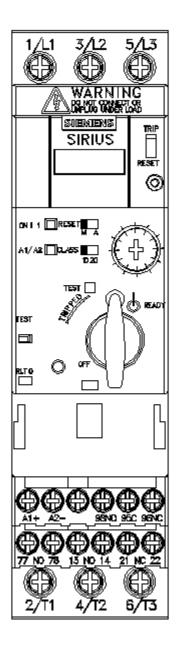
Main circuit					
number of poles for main current circuit	3				
adjustable current response value current of the	3 12 A				
current-dependent overload release					
formula for making capacity limit current	12 x le				
formula for breaking capacity limit current	10 x le				
yielded mechanical performance 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					
— at 400 V rated value	5 500 W				
— at 500 V rated value	5 500 W				
— at 690 V rated value	7 500 W				
no-load switching frequency	3 600 1/h				
operating frequency					
 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	AC/DC				
control supply voltage 1 at AC					
 at 50 Hz rated value 	24 V				
 at 60 Hz rated value 	24 V				
control supply voltage frequency					
 1 rated value 	50 Hz				
• 2 rated value	60 Hz				
control supply voltage 1					
at DC rated value	24 V				
holding power					
• at AC maximum	2.8 W				
• at DC maximum	2.9 W				
Auxiliary circuit					
number of NC contacts for auxiliary contacts	1				
number of NO contacts for auxiliary contacts	1				
number of NO contacts of instantaneous short-circuit trip	1				
unit for signaling contact					
number of CO contacts of the current-dependent overload release for signaling contact	1				
operational current of auxiliary contacts at AC-12 maximum	10 A				
operational current of auxiliary contacts at DC-13 at 250 V	0.27 A				
Protective and monitoring functions					
trip class	CLASS 10 and 20 adjustable				
breaking capacity operating short-circuit current (lcs)					
• at 400 V	53 kA				
• at 500 V rated value	3 kA				
• at 690 V rated value	3 kA				
UL/CSA ratings					
full-load current (FLA) for 3-phase AC motor					

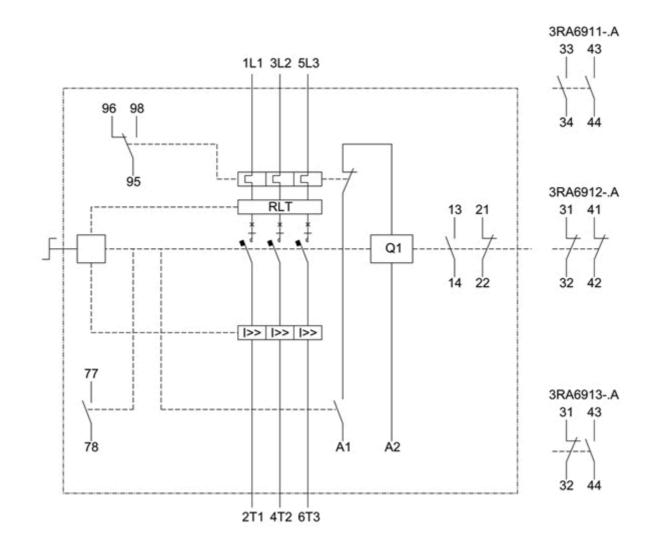
e at 490 V rated value	12 A
 at 480 V rated value at 600 V rated value 	12 A 12 A
yielded mechanical performance [hp] for 3-phase AC	IZ A
motor	
 at 200/208 V rated value 	3 hp
• at 220/230 V rated value	3 hp
• at 460/480 V rated value	7.5 hp
• at 575/600 V rated value	10 hp
contact rating of auxiliary contacts according to UL	contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300
Short-circuit protection	
product function short circuit protection	Yes
design of short-circuit protection	electromagnetic
design of the fuse link	
 for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 10 A
 for short-circuit protection of the signaling switch of the short-circuit release required 	6A gL/gG/400V
 for short-circuit protection of the signaling switch of the overload release required 	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	170 mm
width	45 mm
depth	165 mm
Connections/ Terminals	
product function	
removable terminal for main circuit	Yes
 removable terminal for auxiliary and control circuit 	Yes
type of electrical connection	
for main current circuit	screw-type terminals
 for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections	
for main contacts	
— solid	2x (1.5 6 mm²), 1x 10 mm²
 finely stranded with core end processing 	2x (1.5 6 mm ²)
at AWG cables for main contacts	2x (16 10), 1x 8
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	0.5 4 mm², 2x (0.5 2.5 mm²)
 finely stranded with core end processing 	0.5 2.5 mm ² , 2x (0.5 1.5 mm ²)
 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	
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	

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