

LOAD FEEDER FUSELESS DIRECT START,
AC 400V, SZ S0, 27...32A,
DC 24V SPRING-LOADED CONNECTION FOR RAILMOUNTING,
TYPE OF COORDINATION 2,
IQ = 150KA (ALSO FULFILLS TYPE OF COORDINATION 1)
1NO+1NC (CONTACTOR)

General technical data:		
Product brand name		SIRIUS
product designation		non-fused load feeders 3RA2
Design of the product		direct starter
Size of the load feeder		S0
Protection class IP / on the front		IP20
Degree of pollution		3
Insulation voltage / rated value	V	690
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
during transport	°C	-55 80
during storage	°C	-55 80
during operating	°C	-20 60
Impulse voltage resistance / rated value	kV	6
Active power loss / per conductor / typical	W	4.3
Item designation		
<ul> <li>according to DIN 40719 extendable after IEC 204-2 / according to IEC 750</li> </ul>		Q
according to DIN EN 61346-2		Q
Type of assignement		2

typical  Manufacturer article number		
Manufacturer article number		10,000,000
• of the circuit-breakers included in the scope of supply		3RV2021-4EA20
of the contactor included in the scope of supply		3RT2027-2BB40
• of the link module included in the scope of supply		3RA2921-2AA00
Design of the switching contact		mechanical
Type of the motor protection		bimetal
Adjustable response current		
• of the current-dependent overload release	А	27 32
Communication:		
Product function / bus-communication		No
Protocol / will be supported		
AS interface protocol		No
PROFIBUS DP protocol		No
PROFINET protocol		No
Product extension / function module for communication		No
Main circuit:		
Number of poles / for main current circuit		3
Number of NC contacts / for main contacts		0
Number of NO contacts / for main contacts		3
	V	690
Operating voltage / at AC-3 / rated value / maximum		000
Operating voltage / at AC-3 / rated value / maximum  Operating current		
	A	32
Operating current	A A	
Operating current  • at AC-1 / at 400 V / rated value		32
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value	Α	32 29
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value	A A	32 29 29
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value  • at AC-4 / at 400 V / rated value	A A	32 29 29
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value  • at AC-4 / at 400 V / rated value  Service power	A A A	32 29 29 29
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value  • at AC-4 / at 400 V / rated value  Service power  • at AC-2 / at 400 V / rated value	A A A	32 29 29 29
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value  • at AC-4 / at 400 V / rated value  Service power  • at AC-2 / at 400 V / rated value  • at AC-3	A A A	32 29 29 29 15,000
Operating current  • at AC-1 / at 400 V / rated value  • at AC-2 / at 400 V / rated value  • at AC-3 / at 400 V / rated value  • at AC-4 / at 400 V / rated value  Service power  • at AC-2 / at 400 V / rated value  • at AC-3  • at 400 V / rated value	A A A W	32 29 29 29 15,000

Off-load operating frequency

• at AC-1 / according to IEC 60947-6-2 / maximum

• at AC-2 / according to IEC 60947-6-2 / maximum

Frequency of operation

1/h

1/h

1/h

10,000

1,000

1,000

- at AC-3 / according to IEC 60947-6-2 / maximum  - at AC-4 / according to IEC 60947-6-2 / maximum  Type of voltage / of the controlled supply voltage  Control supply voltage frequency - 1 / rated value  - 1 / rated value  Control supply voltage / 1 - 1 for D / rated value  V 24  Holding power / of the solenoid / for DC  W 5.9  Auxiliary circuit:  Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts  Number of NC contacts / for auxiliary contacts  Number of change-over switches / for auxiliary contacts  Inputs/ Outputs:  Number of digital inputs  Short-circuit:  Product function / short circuit protection Breaking capacity limit short-circuit current (fcu) - at 400 V / rated value - at 500 V / rated value - at 600 V / rated value			
Control circuit:  Type of voltage / of the controlled supply voltage Control supply voltage frequency - 1 / rated value	• at AC-3 / according to IEC 60947-6-2 / maximum	1/h	1,000
Type of voltage / of the controlled supply voltage Control supply voltage frequency  - 1 / rated value  - 1 / rated value  - 1 / rated value  - 1 / rot DC / rated value  - 1 / rot DC / rated value  - 1 / rot DC / rated value  - 2 / voltage / rot the solenoid / for DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot volt	• at AC-4 / according to IEC 60947-6-2 / maximum	1/h	300
Type of voltage / of the controlled supply voltage Control supply voltage frequency  - 1 / rated value  - 1 / rated value  - 1 / rated value  - 1 / rot DC / rated value  - 1 / rot DC / rated value  - 1 / rot DC / rated value  - 2 / voltage / rot the solenoid / for DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot the solenoid / rot DC  - 2 / voltage / rot volt	One (and administration		
Control supply voltage frequency			
1			DC
Control supply voltage / 1 • for DC / rated value			
+ for DC / rated value V 24 Holding power / of the solenoid / for DC W 5.9  Auxiliary circuit:  Product extension / auxiliary switch Yes Number of NC contacts / for auxiliary contacts 1 1 Number of NC contacts / for auxiliary contacts 1 1 Number of change-over switches / for auxiliary contacts 0 0  Inputs/ Outputs:  Number of digital inputs 0 0  Short-circuit:  Product function / short circuit protection	• 1 / rated value	Hz —	0
Mariang power / of the solenoid / for DC	Control supply voltage / 1		
Auxiliary circuit:  Product extension / auxiliary switch Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of NC contacts / for auxiliary contacts Number of thospe-over switches / for auxiliary contacts  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Product function / short circuit protection Design of the short-circuit protection  Breaking capacity limit short-circuit current (lcu) - at 400 V / rated value - at 690 V / rate	• for DC / rated value	V	24
Product extension / auxiliary switch         Yes           Number of NC contacts / for auxiliary contacts         1           Number of NO contacts / for auxiliary contacts         1           Number of change-over switches / for auxiliary contacts         0           Inputts/ Outputs:         Vos           Number of digital inputs         0           Short-circuit:           Product function / short circuit protection         Yes           Design of the short-circuit protection         Circuit-breakers           Breaking capacity limit short-circuit current (Icu)         A         25,000           • at 400 V / rated value         A         5,000           • at 690 V / rated value         A         2,000           Installation/mounting/dimensions:         Strew and snap-on mounting onto 35 mm standard mounting rail           Width         mm         45           Height         mm         242.6           Depth         mm         106.9           Distance, to be maintained, to the ranks assembly         mm         10           • backwards         mm         30           • downwards         mm         30           • clowards         mm         30           • clowards         mm         30	Holding power / of the solenoid / for DC	W	5.9
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Number of change-over switches / for auxiliary contacts  Inputs / Outputs:  Number of digital inputs  Short-circuit:  Product function / short circuit protection Design of the short-circuit protection Breaking capacity limit short-circuit current (Icu) - at 400 V / rated value - at 690 V / rated value - at 690 V / rated value  Number of digital inputs  Installation/mounting/dimensions:  Built in orientation Type of mounting  Width Height Depth Distance, to be maintained, to the ranks assembly - forwards - upwards - upwards - downwards - downwards - downwards - sidewards - mm  30 - mm  30 - mill and	Auxiliary circuit:		
Number of NO contacts / for auxiliary contacts Number of change-over switches / for auxiliary contacts    Number of change-over switches / for auxiliary contacts	Product extension / auxiliary switch		Yes
Number of change-over switches / for auxiliary contacts    Inputs / Outputs:	Number of NC contacts / for auxiliary contacts		1
Inputs/ Outputs:  Number of digital inputs    Product function / short circuit protection   Yes	Number of NO contacts / for auxiliary contacts		1
Number of digital inputs    Short-circuit:	Number of change-over switches / for auxiliary contacts		0
Number of digital inputs       0         Short-circuit:         Product function / short circuit protection       Yes         Design of the short-circuit protection       circuit-breakers         Breaking capacity limit short-circuit current (Icu)	Inputs/ Outputs:		
Product function / short circuit protection     Yes       Design of the short-circuit protection     circuit-breakers       Breaking capacity limit short-circuit current (Icu) <ul> <li>at 400 V / rated value</li> <li>at 500 V / rated value</li> <li>at 690 V / rated value</li> <li>A 2,000</li> </ul> Installation/mounting/dimensions:     Vertical       Built in orientation     vertical               Type of mounting             screw and snap-on mounting onto 35 mm standard mounting rail               Width             mm               Height             mm               Distance, to be maintained, to the ranks assembly               • forwards             mm               • backwards             mm             0               • upwards             mm             30               • downwards             mm             30               • sidewards             mm             0               • sidewards             mm             0               • sidewards             mm             0			0
Product function / short circuit protection     Yes       Design of the short-circuit protection     circuit-breakers       Breaking capacity limit short-circuit current (Icu) <ul> <li>at 400 V / rated value</li> <li>at 500 V / rated value</li> <li>at 690 V / rated value</li> <li>A 2,000</li> </ul> Installation/mounting/dimensions:     vertical       Built in orientation     vertical       Type of mounting     screw and snap-on mounting onto 35 mm standard mounting rail                     Width             mm                     Height                   mm                   242.6                     Depth             mm                   106.9                     Distance, to be maintained, to the ranks assembly                   mm                   0	Short-circuit:		
Breaking capacity limit short-circuit current (Icu)  • at 400 V / rated value • at 500 V / rated value • at 690 V / rated value • at 690 V / rated value  Built in orientation  Type of mounting  Width  Height  Midth  Height  Depth  Distance, to be maintained, to the ranks assembly • backwards • upwards • downwards • downwards • didwards • didwards • didwards • sidewards • didwards • at 25,000  A 25,000  A 2,000  Vertical  Vertical  Screw and snap-on mounting onto 35 mm standard mounting rail  Width  mm 45  Forwards  mm 106.9  106.9  106.9  107  108  109  109  109  109  109  109  109	Product function / short circuit protection		Yes
<ul> <li>at 400 V / rated value</li> <li>at 500 V / rated value</li> <li>at 690 V / rated value</li> <li>at 690 V / rated value</li> <li>A 2,000</li> </ul> Installation/mounting/dimensions: Built in orientation <ul> <li>vertical</li> </ul> Type of mounting <ul> <li>screw and snap-on mounting onto 35 mm standard mounting rail</li> </ul> Width <ul> <li>mm</li> <li>45</li> </ul> Height <ul> <li>mm</li> <li>242.6</li> </ul> Depth <ul> <li>mm</li> <li>106.9</li> </ul> Distance, to be maintained, to the ranks assembly   • forwards mm 10   • backwards mm 0   • upwards mm 30   • downwards mm 30   • sidewards mm 0	Design of the short-circuit protection	_	circuit-breakers
at 500 V / rated value  A 2,000  Installation/mounting/dimensions:  Built in orientation  Type of mounting  Width  Mm 45  Height  Depth  Distance, to be maintained, to the ranks assembly  • forwards • backwards • downwards • downwards • sidewards  • sidewards  • at 500 V / rated value  A 2,000  Vertical  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  vertical  pertical  vertical  pertical  vertical  pertical  pertical  vertical  pertical  pertica	Breaking capacity limit short-circuit current (Icu)		
Installation/mounting/dimensions:  Built in orientation vertical screw and snap-on mounting onto 35 mm standard mounting rail  Width mm 45 Height mm 242.6  Depth mm 106.9  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • downwards • sidewards • sidewards • sidewards • sidewards • mm 30 • mm 0	• at 400 V / rated value	Α	25,000
Installation/mounting/dimensions:  Built in orientation vertical screw and snap-on mounting onto 35 mm standard mounting rail  Width mm 45 Height mm 242.6  Depth mm 106.9  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • downwards • sidewards • sidewards • sidewards • sidewards • mm 30 • mm 0	• at 500 V / rated value	Α	5,000
Built in orientationverticalType of mountingscrew and snap-on mounting onto 35 mm standard mounting railWidthmm45Heightmm242.6Depthmm106.9Distance, to be maintained, to the ranks assemblymm10• forwardsmm0• backwardsmm30• upwardsmm30• downwardsmm30• sidewardsmm0	• at 690 V / rated value	Α	
Built in orientationverticalType of mountingscrew and snap-on mounting onto 35 mm standard mounting railWidthmm45Heightmm242.6Depthmm106.9Distance, to be maintained, to the ranks assemblymm10• forwardsmm0• backwardsmm30• upwardsmm30• downwardsmm30• sidewardsmm0	Installation/mounting/dimensions:		
Type of mounting  Width  mm 45  Height  mm 242.6  Depth  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • sidewards • sidewards • sidewards • sidewards • sidewards • sidewards  mm 0  screw and snap-on mounting onto 35 mm standard mounting rail  ### 45  ### 45  ### 45  ### 106.9  ### 10  ### 10  ### 30  ### 30  ### 30  ### 30  ### 30  ### 30  ### 30  ### 30  ### 30			vertical
Height mm 242.6  Depth mm 106.9  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • sidewards • sidewards • mm 30  mm 30  mm 30  mm 30	Type of mounting		
Depth mm 106.9  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • sidewards • sidewards • mm  0  mm  30  mm  0	Width	mm	45
Distance, to be maintained, to the ranks assembly  • forwards  • backwards  • upwards  • downwards  • sidewards  • mm  30  mm  30  mm  0	Height	mm	242.6
• forwards       mm       10         • backwards       mm       0         • upwards       mm       30         • downwards       mm       30         • sidewards       mm       0	Depth	mm	106.9
<ul> <li>backwards</li> <li>upwards</li> <li>downwards</li> <li>sidewards</li> <li>mm</li> <li>30</li> <li>mm</li> <li>30</li> <li>mm</li> <li>0</li> </ul>	Distance, to be maintained, to the ranks assembly		
• upwards       mm       30         • downwards       mm       30         • sidewards       mm       0	• forwards	mm	10
• downwards mm 30 • sidewards mm 0	backwards	mm	0
• downwards mm 30 • sidewards mm 0	• upwards	mm	30
• sidewards mm 0		mm	

mm	10
mm	0
mm	30
mm	10
mm	9
mm	10
mm	0
mm	30
mm	10
mm	9
	mm mm mm mm mm mm

Connections:				
Design of the electrical connection				
for main current circuit	spring-loaded terminals			
for auxiliary and control current circuit	spring-loaded terminals			
Type of the connectable conductor cross-section				
• for main contacts				
• solid	2x (1 10 mm²)			
• stranded	2x (1.0 10 mm2)			
• finely stranded				
<ul> <li>with conductor end processing</li> </ul>	2x (1 6 mm²)			
<ul> <li>without conductor final cutting</li> </ul>	2x (1 6 mm²)			
• for AWG conductors / for main contacts	2x (18 8)			
for auxiliary contacts				
• solid	2x (0.5 2.5 mm²)			
• finely stranded				
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5 mm²)			
<ul> <li>without conductor final cutting</li> </ul>	2x (0.5 1.5 mm²)			
• for AWG conductors / for auxiliary contacts	2x (20 14)			

Certificates/approvals:				
Verification of suitability		CE / UL / CSA / CCC		
Varification of suitability / ATEX		No		

General Product Approval	For use in hazardous locations	Test Certificates	Shipping Approval		
ROSTEST	DEKRA EXAM, DMT	Manufacturer	ABS	PRS	RINA

other

Manufacturer other

UL/CSA ratings			
yielded mechanical performance (hp)			
• for single-phase squirrel cage motors			
• at 230 V / rated value	hp	5	
• for three-phase squirrel cage motors			
• at 220/230 V / rated value	hp	10	
• at 460/480 V / rated value	hp	20	
• at 575/600 V / rated value	hp	25	
Operating current (FLA) / for three-phase squirrel cage motors			
• at 480 V / rated value	Α	14	
• at 600 V / rated value	Α	17	
Contact rating designation / for auxiliary contacts / according to UL		A600 / Q600	

Safety:		
B10 value / with high demand rate		
• according to SN 31920		1,000,000
Failure rate (FIT value) / with low demand rate		
according to SN 31920	FIT	150
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>	%	75
T1 value / for proof test interval or service life		
according to IEC 61508	а	10
Protection against electrical shock		finger-safe

## Further information:

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

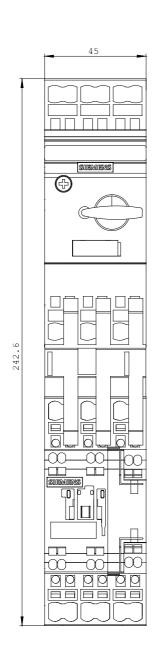
http://www.siemens.com/industrial-controls/mall

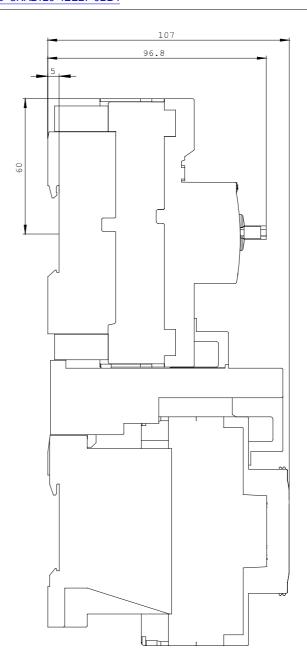
**CAx-Online-Generator** 

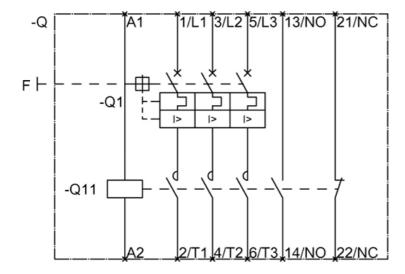
http://www.siemens.com/cax

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RA2120-4EE27-0BB4







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