

LOAD FEEDER FUSELESS DIRECT START, AC 400V, SZ S0, 17. . . 22A, DC 24V SCREW CONNECTION FOR RAIL-MOUNTING, 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

_	
	10,000,000
	<u>3RV2021-4CA10</u>
	<u>3RT2027-1BB40</u>
	3RA2921-1BA00
	mechanical
	bimetal
Α	17 22
	No
	No
	No
	No
	No
	3
	0
	3
V	690
Α	22
Α	15.5
Α	15.5
Α	15.5
W	7,500
	V A A A A

• at 400 V / rated value

• at 500 V / rated value

• at 690 V / rated value

Off-load operating frequency

Frequency of operation

• at AC-4 / at 400 V / rated value

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

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

W

W

W

W

1/h

1/h

1/h

7,500

11,000

18,500

7,500

1,500

1,000

1,000

* at AC-3 / according to IEC 60947-6-2 / maximum			
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
DC	• at AC-4 / according to IEC 60947-6-2 / maximum	1/h	300
DC			
Control supply voltage frequency   1/ rated value   Hz   0			
1			DC
Control supply voltage / 1  - for DC / rated value  V			
+ 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 Number of NO contacts / for auxiliary contacts 1 Number of change-over switches / for auxiliary contacts 0  Inputs/ Outputs:  Number of digital inputs 0  Short-circuit.  Product function / short circuit protection Yes Beaking capacity limit short-circuit current (Icu) A 25,000  - at 400 V / rated value A 25,000  - at 690 V / rated value A 2,000  Installation/mounting/dimensions:  Built in orientation Verification Mills of munting and a mounting rail  Width mm 45  Height mm 193.1  Depth mm 107  Distance, to be maintained, to the ranks assembly  - lonvards - backwards - downwards - downwards - downwards - downwards - didwards mm 30 - didwards - didwards mm 30 - didwards - didwards - mm 30 - mm 30 - didwards - mm 30 - didwards - mm 30	• 1 / rated value	Hz	0
Marian   M	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 change-over switches / for auxiliary contacts  Inputs/ Outputs:  Number of digital inputs  O  Short-circuit:  Product function / short circuit protection Pesign of the short-circuit protection Pesign of the short-circuit protection Pesign of the short-circuit current (lcu)  at 400 V / rated value A 25,000  at 500 V / rated value A 5,000  at 690 V / rated value A 2,000  Installation/mounting/dimensions:  Built in orientation  Type of mounting Type of mounting Width Installation/mounting/ mounting onto 35 mm standard mounting rail Width Height In mn 193.1  Depth Distance, to be maintained, to the ranks assembly Iosarces to be maintained, to the ranks assembly Iosarces to be maintained, to the ranks assembly Iosarces to be maintained and the control of the control o	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         107           Distance, to be maintained, to the ranks assembly         mm         10           • backwards         mm         0           • downwards         mm         30           • downwards         mm         30           • sidewards         mm         0	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 500 V / rated value - at 690 V / rated value  Number of digital inputs  A 25,000 A 2,000  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 - mm  30 - mm  30 - maintained, to the ranks assemble - mm  30 - mm	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       0         Short-circuit:         Product function / short circuit protection       Yes         Design of the short-circuit protection       Circuit-breakers         Breaking capacity limit short-circuit current (Icu)       4       25,000         • at 500 V / rated value       A       5,000       5,000         • at 690 V / rated value       A       2,000       Installation/mounting/dimensions:         Built in orientation       vertical         Type of mounting       screw and snap-on mounting onto 35 mm standard mounting rail         Width       mm       45         Height       mm       107         Depth       mm       107         Distance, to be maintained, to the ranks assembly       mm       10         • backwards       mm       0         • upwards       mm       30         • downwards       mm       30         • sidewards       mm       0	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               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	Short-circuit		
Design of the short-circuit protection  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  • at 690 V / rated value  Installation/mounting/dimensions:  Built in orientation  Type of mounting  Width  mm 45  Height  mm 193.1  Depth  Distance, to be maintained, to the ranks assembly • forwards • backwards • upwards • downwards • downwards • downwards • sidewards • sidewards • mm 0  circuit-breakers  A 25,000  A 2,000  Vertical  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  vertical  porticulty and the standard mounting rail  in the standard mounting			Von
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  Height  Depth  Distance, to be maintained, to the ranks assembly • backwards • upwards • downwards • didwards • didwards • didwards • sidewards • didwards • sidewards • didwards • didwards • didwards • at 400 V / rated value  A 25,000  A 2,000  Vertical  Vertical  Vertical  Screw and snap-on mounting onto 35 mm standard mounting rail  May 45  Wertical  Vertical  Screw and snap-on mounting onto 35 mm standard mounting rail  May 193.1  Depth  mm 107  Distance, to be maintained, to the ranks assembly  • forwards • mm 0  30  mm 30  output  mm 45  output  mm 45	<u> </u>		
<ul> <li>at 400 V / rated value</li> <li>at 500 V / rated value</li> <li>at 690 V / rated value</li> <li>A 25,000</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>193.1</li> </ul> Depth <ul> <li>mm</li> <li>107</li> </ul> Distance, to be maintained, to the ranks assembly <ul> <li>forwards</li> <li>backwards</li> <li>upwards</li> <li>upwards</li> <li>downwards</li> <li>sidewards</li> <li>mm</li> <li>30</li> </ul> • downwards <ul> <li>mm</li> <li>30</li> </ul> • downwards <ul> <li>mm</li> <li>30</li> </ul> • downwards <ul> <li>mm</li> <li>mm</li> <li>0</li> </ul> • downwards <ul> <li>mm</li> <li>o</li> </ul> • downwards <ul> <li>m</li></ul>			Circuit-breakers
* at 500 V / rated value     * at 690 V / rated value  Installation/mounting/dimensions:  Built in orientation  Type of mounting  Width  mm  45  Height  mm  193.1  Depth  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • downwards • sidewards  • sidewards  A 5,000  A 2,000  vertical  vertical  screw and snap-on mounting onto 35 mm standard mounting rail  vertical  porticula  vertical  porticula  vertical  porticula  vertical  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  vertical  porticula  vertical  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  porticula  vertical  porticula  vertical  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  porticula  vertical  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  porticula  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting onto 35 mm standard mounting rail  porticula  screw and snap-on mounting rail  porticula  screw and sna			05.000
Installation/mounting/dimensions:  Built in orientation vertical screw and snap-on mounting onto 35 mm standard mounting rail  Width mm 45 Height mm 193.1  Depth mm 107  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • downwards • sidewards • sidewards • sidewards • sidewards • mm 30 • mm 0			
Installation/mounting/dimensions:  Built in orientation vertical screw and snap-on mounting onto 35 mm standard mounting rail  Width mm 45  Height mm 193.1  Depth mm 107  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • downwards • sidewards • sidewards • mm 30  mm 0			
Built in orientationverticalType of mountingscrew and snap-on mounting onto 35 mm standard mounting railWidthmm45Heightmm193.1Depthmm107Distance, to be maintained, to the ranks assemblymm10• forwardsmm0• backwardsmm30• upwardsmm30• downwardsmm30• sidewardsmm0	at 690 V / rated value	А	2,000
Type of mounting  Width  mm 45  Height  mm 193.1  Depth  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • sidewards  mm 0  screw and snap-on mounting onto 35 mm standard mounting rail  ### 45  ### ### ### ### ### ### ### ### ### #	Installation/mounting/dimensions:		
Widthmm45Heightmm193.1Depthmm107Distance, to be maintained, to the ranks assembly • forwards • backwards • upwards • downwards • sidewardsmm10• downwards • sidewardsmm30• sidewardsmm30mm30mm30	Built in orientation		vertical
Height mm 193.1  Depth mm 107  Distance, to be maintained, to the ranks assembly  • forwards • backwards • upwards • downwards • sidewards • sidewards • mm 30  mm 30  mm 0	Type of mounting		
Depth mm 107  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	193.1
• forwards       mm       10         • backwards       mm       0         • upwards       mm       30         • downwards       mm       30         • sidewards       mm       0	Depth	mm	107
<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	30
	• sidewards	mm	

• forwards	mm	10
• backwards	mm	0
• upwards	mm	30
• downwards	mm	10
• sidewards	mm	9
Distance, to be maintained, conductive elements		
• forwards	mm	10
• backwards	mm	0
• upwards	mm	30
• downwards	mm	10
• sidewards	mm	9

Connections:	
Design of the electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control current circuit	screw-type terminals
Type of the connectable conductor cross-section	
• for main contacts	
• solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
• stranded	2x (1.0 2.5 mm2), 2x (2.5 10 mm2)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
• for AWG conductors / for main contacts	2 x (16 14), 2x (14 8)
for auxiliary contacts	
• solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• finely stranded	
<ul> <li>with conductor end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 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** 

**ROSTEST** 



 $\frac{\mathsf{DEKRA}\;\mathsf{EXAM},}{\mathsf{DMT}}$ 

Manufacturer

## **Shipping Approval**









Manufacturer other

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		
• with low demand rate / according to SN 31920	%	40
with high demand rate / according to SN 31920	%	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)

 $\underline{\text{http://www.siemens.com/industrial-controls/mall}}$ 

**CAx-Online-Generator** 

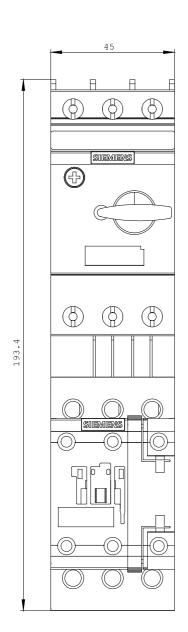
http://www.siemens.com/cax

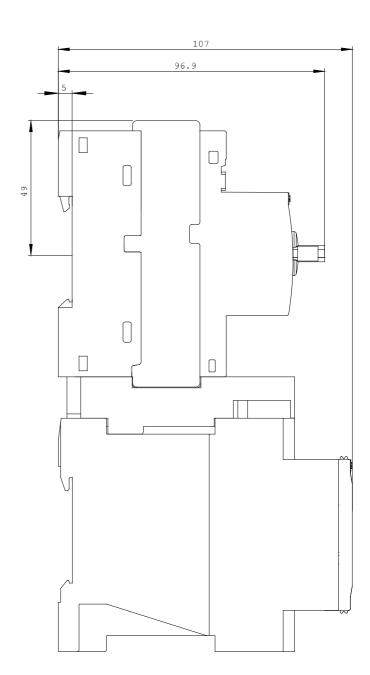
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

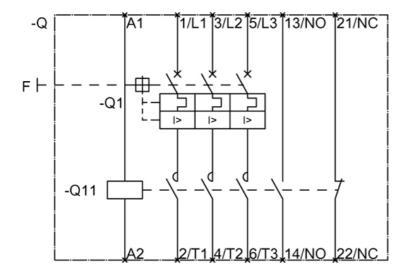
 $\underline{\text{http://support.automation.siemens.com/WW/view/en/3RA2120-4CA27-0BB4/all}}$ 

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

http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3RA2120-4CA27-0BB4







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