## **SIEMENS**

## **Data sheet**

## 3RA2110-1HA16-1AK6



FUSELESS LOAD FEEDER DIRECT START, AC 400V, SZ. S00 5.5. . .8A, AC 110/120V 50/60HZ SCREW TERMINAL FOR RAIL MOUNTING, TYPE OF ASSIGNMENT 1,IQ = 150KA 1NO (CONTACTOR)

product brand name	SIRIUS
product designation	non-fused load feeders 3RA2
design of the product	direct starter
manufacturer's article number	
<ul> <li>of the supplied contactor</li> </ul>	3RT2016-1AK61
<ul> <li>of the supplied circuit-breakers</li> </ul>	3RV2011-1HA10
<ul> <li>of the supplied link module</li> </ul>	3RA1921-1DA00
General technical data	
size of the circuit-breaker	S00
size of load feeder	S00
product extension auxiliary switch	Yes
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	6g / 11 ms
mechanical service life (switching cycles) of contactor typical	30 000 000
type of assignment	1
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
ambient temperature	
<ul> <li>during operation</li> </ul>	-20 +60 °C
during storage	-50 +80 °C
<ul> <li>during transport</li> </ul>	-50 +80 °C
Main circuit	
number of poles for main current circuit	3
design of the switching contact	electromechanical
adjustable current response value current of the current-dependent overload release	5.5 8 A
operating voltage	
rated value	690 V
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
operating frequency rated value	50 60 Hz
operational current at AC-3 at 400 V rated value	6.5 A
operating power at AC-3	
-L	
• at 400 V rated value	3 000 W
	3 000 W 4 000 W
at 400 V rated value	

control supply voltage at AC	
• at 50 Hz rated value	110 V
at 60 Hz rated value	120 V
apparent holding power of magnet coil at AC	4.2 VA
Protective and monitoring functions	<u>,                                    </u>
trip class	CLASS 10
design of the overload release	thermal (bimetallic)
response value current of instantaneous short-circuit trip unit	104 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	7.6 A
at 600 V rated value	6.33 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— at 200/208 V rated value	2 hp
<ul> <li>at 220/230 V rated value</li> </ul>	2 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	5 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
conditional short-circuit current (Iq)	
<ul> <li>at 690 V according to IEC 60947-4-1 rated value</li> </ul>	4 000 A
<ul> <li>at 400 V according to IEC 60947-4-1 rated value</li> </ul>	153 000 A
<ul> <li>at 500 V according to IEC 60947-4-1 rated value</li> </ul>	42 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
mounting position fastening method	vertical screw and snap-on mounting onto 35 mm standard mounting rail
fastening method height width	screw and snap-on mounting onto 35 mm standard mounting rail
fastening method height	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm
fastening method height width	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm
fastening method height width depth	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm
fastening method height width depth required spacing • for grounded parts — forwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — backwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — upwards — upwards — upwards — upwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 10 mm 0 mm 10 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — upwards — downwards — downwards — forwards — hownwards — backwards — backwards — upwards — upwards — downwards	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — townwards — townwards — townwards — townwards — backwards — backwards — upwards — upwards — at the side	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 10 mm 0 mm 0 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side — downwards — forwards — forwards — backwards — backwards — upwards — at the side  Connections/ Terminals	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 10 mm 0 mm 10 mm 9 mm 10 mm 9 mm 10 mm 9 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — upwards — the side — downwards — the side — downwards — the side — the side — the side — the side Connections/ Terminals  type of electrical connection for main current circuit	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — backwards — at the side Connections/ Terminals  type of electrical connection for main current circuit type of connectable conductor cross-sections	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm 20 mm 9 mm screw-type terminals
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — backwards — torwards — torwards — backwards — upwards — at the side Connections/ Terminals  type of electrical connection for main current circuit  type of connectable conductor cross-sections • for main contacts stranded	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm comm comm comm comm comm comm comm c
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — upwards — backwards — upwards — the side — downwards — backwards — backwards — upwards — the side  Connections/ Terminals  type of electrical connection for main current circuit type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm 20 mm screw-type terminals  0.5 4 mm², 2x (0.75 2.5 mm²) 2x (20 16), only for contactor 2x (18 14), 2x 12
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — the side Connections/ Terminals  type of electrical connection for main current circuit type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts finely stranded with core end processing	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 0 mm comm comm comm comm comm comm comm c
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — backwards — upwards — towards — backwards — upwards — at the side  Connections/ Terminals  type of electrical connection for main current circuit  type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts  connectable conductor cross-section for main contacts	screw and snap-on mounting onto 35 mm standard mounting rail  167.2 mm  45 mm  97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 20 mm 9 mm  screw-type terminals  0.5 4 mm², 2x (0.75 2.5 mm²) 2x (20 16), only for contactor 2x (18 14), 2x 12
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — the side Connections/ Terminals  type of electrical connection for main current circuit type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts finely stranded with core end processing	screw and snap-on mounting onto 35 mm standard mounting rail  167.2 mm  45 mm  97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 20 mm 9 mm  screw-type terminals  0.5 4 mm², 2x (0.75 2.5 mm²) 2x (20 16), only for contactor 2x (18 14), 2x 12
fastening method height width depth required spacing  • for grounded parts — forwards — backwards — upwards — at the side — downwards  • for live parts — forwards — backwards — upwards — backwards — towards — backwards — at the side  Connections/ Terminals  type of electrical connection for main current circuit type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts connectable conductor cross-section for main contacts finely stranded with core end processing  Safety related data	screw and snap-on mounting onto 35 mm standard mounting rail  167.2 mm  45 mm  97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 20 mm 9 mm 10 mm 20 mm 20 mm 20 mm 10 mm 20 mm 10 mm 20 mm
fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — the side  Connections/ Terminals  type of electrical connection for main current circuit  type of connectable conductor cross-sections • for main contacts stranded • at AWG cables for main contacts connectable conductor cross-section for main contacts finely stranded with core end processing  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures with high demand rate	screw and snap-on mounting onto 35 mm standard mounting rail 167.2 mm 45 mm 97.1 mm  0 mm 0 mm 20 mm 9 mm 10 mm 0 mm 20 mm 9 mm 10 mm 20 mm 20 mm 20 mm 10 mm 20 mm 10 mm 20 mm 10 mm 20 mm 10 mm 9 mm

60529

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front

Certificates/ approvals

**General Product Approval** 

For use in hazardous locations **Declaration of Conformity** 



Confirmation



EAC





Declaration of Conformity

**Test Certificates** 

Marine / Shipping



Special Test Certificate

Type Test Certificates/Test Report







Marine / Shipping









Confirmation

other

Vibration and Shock

Railway

**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=3RA2110-1HA16-1AK6

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RA2110-1HA16-1AK6}}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2110-1HA16-1AK6

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

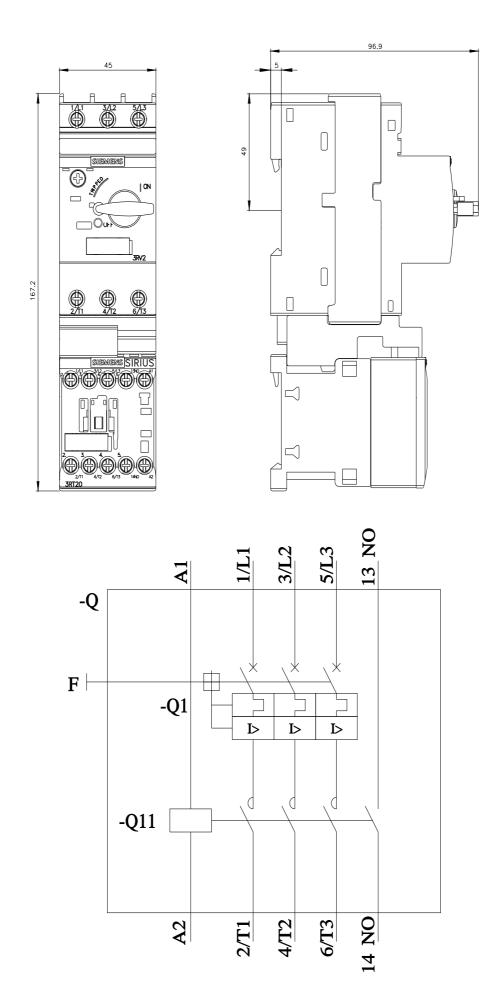
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2110-1HA16-1AK6&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RA2110-1HA16-1AK6/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2110-1HA16-1AK6&objecttype=14&gridview=view1



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