



intelligent load feeder direct starter high feature 3.5-32 A up to 690 V AC type of coordination 2 frame size S0 for ET 200SP system consisting of 3RC7140-4EE11, 3RV2321-4EC20, 3RT2027-2BB40

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Intelligent load feeder
<b>design of the product</b>	High Feature direct starter
<b>product type designation</b>	3RA8
<b>manufacturer's article number</b>	
<ul style="list-style-type: none"> <li>of the supplied contactor</li> <li>of the supplied circuit-breakers</li> <li>of the supplied link module</li> </ul>	<a href="#">3RT2027-2BB40</a> <a href="#">3RV2321-4EC20</a> <a href="#">3RC7140-4EE11</a>
<b>General technical data</b>	
<b>number of monitored phases</b>	3
<b>suitability for use</b>	
<ul style="list-style-type: none"> <li>direct starter</li> <li>reversing starter</li> <li>star-delta starter</li> </ul>	Yes No No
<b>product function external reset</b>	Yes
<b>product component RESET button</b>	Yes
<b>design of the overcurrent release</b>	electronic
<b>size of the circuit-breaker</b>	S0
<b>size of load feeder</b>	S0
<b>size of contactor can be combined company-specific</b>	S0
<b>product function</b>	
<ul style="list-style-type: none"> <li>remote firmware update</li> <li>disconnecter functionality</li> <li>for power supply reverse polarity protection</li> </ul>	Yes Yes Yes
<b>power loss [W] for rated value of the current at AC in hot operating state per pole</b>	6.7 W
<b>insulation voltage</b>	
<ul style="list-style-type: none"> <li>rated value</li> <li>for overvoltage category III according to IEC 60664 with degree of pollution 2 rated value</li> </ul>	690 V 690 V
<b>degree of pollution</b>	3
<b>overvoltage category</b>	3
<b>surge voltage resistance rated value</b>	6 kV
<b>protection class IP</b>	
<ul style="list-style-type: none"> <li>on the front</li> <li>of the terminal</li> </ul>	IP20 IP20
<b>shock resistance according to IEC 60068-2-27</b>	6g / 11,0 ms (3 shocks); 10g / 6,0 ms (1000 shocks)
<b>vibration resistance</b>	5-8,4 Hz, 3,5 mm; 8,4-150 Hz, 1 g; 10 cycles / 10-60 Hz, 0,35 mm; 60-500 Hz, 5 g; 10 cycles
<b>type of coordination</b>	2
<b>reference code according to IEC 81346-2</b>	Q

reference code according to IEC 81346-2:2019	Q
continuous current rated value	32 A
Substance Prohibitance (Date)	06/21/2024
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 Silicic acid, lead salt - 11120-22-2 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7 Lead titanium zirconium oxide - 12626-81-2
Weight	1.518 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-20 ... +60 °C
• during storage	-40 ... +80 °C
• during transport	-40 ... +80 °C
• with upper limit without restrictions	40 °C
environmental category during operation according to IEC 60721	3C3 (without salt spray)
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
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	3.5 ... 32 A
type of the motor protection	solid-state
type of voltage for main current circuit	AC
utilization category according to IEC 60947-4-1	AC-3e
<b>operating voltage</b>	
• rated value	690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	32 A
<b>operational current</b>	
• at AC-3	
— at 400 V rated value	32 A
— at 440 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	32 A
— at 440 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
<b>operating power</b>	
• at AC-3	
— at 400 V rated value	15 000 W
— at 500 V rated value	15 000 W
— at 690 V rated value	18 500 W
• at AC-3e	
— at 400 V rated value	15 000 W
— at 500 V rated value	15 000 W
— at 690 V rated value	18 500 W
<b>Control circuit/ Control</b>	
type of voltage of the control supply voltage	DC
closing delay at DC	50 ... 170 ms
opening delay at DC	30 ... 50 ms
<b>Auxiliary circuit</b>	
product component auxiliary switch	No
product extension auxiliary switch	Yes
type of voltage for auxiliary and control circuit	DC
auxiliary voltage at DC rated value	24 V

<b>auxiliary voltage at DC rated value</b>	20.4 ... 28.8 V
<b>inrush current peak for auxiliary voltage at DC at 24 V</b>	2.5 A
<b>duration of inrush current peak for auxiliary voltage at DC at 24 V</b>	1 ms
<b>power loss [W] at the auxiliary voltage in holding operation at DC at 24 V</b>	1.3 W
<b>Protective and monitoring functions</b>	
<b>type of protection function of the overcurrent release</b>	electronic
<b>product function</b>	
<ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> <li>• phase sequence recognition</li> <li>• overcurrent detection 1 phase</li> <li>• undercurrent detection 3 phases</li> <li>• undercurrent monitoring</li> <li>• overcurrent and undercurrent monitoring</li> <li>• undercurrent detection 1 phase</li> <li>• overcurrent detection 3 phase</li> <li>• overload protection</li> <li>• overload warning</li> <li>• temperature-compensated overload protection</li> <li>• motor protection</li> <li>• active current monitoring</li> <li>• main switches with supply disconnect function and EM-STOP switches</li> <li>• operating hours counter</li> </ul>	<ul style="list-style-type: none"> <li>No</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>No</li> <li>Yes</li> </ul>
<b>trip class</b>	CLASS 10E / CLASS 20E
<b>design of the overload release</b>	electronic
response value current of instantaneous short-circuit trip unit	400 A
<b>UL/CSA ratings</b>	
<b>conditional short-circuit current (I<sub>q</sub>) with type of coordination 1</b>	
<ul style="list-style-type: none"> <li>• at 480 AC Y/277 V rated value</li> <li>• at AC 600 Y/347 V rated value</li> </ul>	<ul style="list-style-type: none"> <li>50 000 A</li> <li>30 000 A</li> </ul>
<b>operating voltage</b>	
<ul style="list-style-type: none"> <li>• according to UL 60947 rated value</li> <li>• at AC at 60 Hz according to CSA and UL rated value</li> </ul>	<ul style="list-style-type: none"> <li>480 V</li> <li>480 V</li> </ul>
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic
<b>conditional short-circuit current (I<sub>q</sub>)</b>	
<ul style="list-style-type: none"> <li>• at 690 V according to IEC 60947-4-1 rated value</li> <li>• at 400 V according to IEC 60947-4-1 rated value</li> <li>• at 440 V according to IEC 60947-4-1 rated value</li> <li>• at 500 V according to IEC 60947-4-1 rated value</li> </ul>	<ul style="list-style-type: none"> <li>1 000 A</li> <li>150 000 A</li> <li>100 000 A</li> <li>70 000 A</li> </ul>
<b>conditional short-circuit current (I<sub>q</sub>) with type of coordination 2</b>	
<ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> </ul>	<ul style="list-style-type: none"> <li>150 000 A</li> <li>150 000 A</li> </ul>
certificate of suitability ATEX	No
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	vertical, on horizontal standard mounting rail
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail
<ul style="list-style-type: none"> <li>• mounting rail</li> </ul>	Yes
<b>height</b>	243 mm
<b>width</b>	45 mm
<b>depth</b>	150 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>10 mm</li> <li>30 mm</li> <li>0 mm</li> </ul>

— at the side	9 mm
— forwards	0 mm
● for live parts at 400 V	
— downwards	10 mm
— upwards	30 mm
— backwards	0 mm
— at the side	9 mm
— forwards	0 mm
● for grounded parts at 500 V	
— downwards	10 mm
— upwards	30 mm
— backwards	0 mm
— at the side	20 mm
— forwards	0 mm
● for live parts at 500 V	
— downwards	10 mm
— upwards	30 mm
— backwards	0 mm
— at the side	20 mm
— forwards	0 mm
● for grounded parts at 690 V	
— downwards	10 mm
— upwards	80 mm
— at the side	20 mm
— forwards	0 mm
● for live parts at 690 V	
— downwards	10 mm
— upwards	80 mm
— at the side	20 mm
— forwards	0 mm

#### Connections/ Terminals

<b>product component removable terminal for auxiliary and control circuit</b>	No
<b>type of electrical connection</b>	
● for main current circuit	spring-loaded terminals
● for auxiliary and control circuit	spring-loaded terminals (push-in)
type of electrical connection for supply voltage line-side	spring-loaded terminals (push-in)
<b>type of connectable conductor cross-sections</b>	
● for main contacts	
— solid	2x (1 ... 10 mm <sup>2</sup> )
— stranded	2x (1 ... 10 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 6 mm <sup>2</sup> )
● for AWG cables for main contacts	2x 18 ... 8
<b>connectable conductor cross-section for main contacts</b>	
● solid	1 ... 10 mm <sup>2</sup>
● stranded	1 ... 10 mm <sup>2</sup>
● finely stranded with core end processing	1 ... 6 mm <sup>2</sup>
<b>type of connectable conductor cross-sections at the inputs for supply voltage</b>	
● solid	0.2 ... 1.5 mm <sup>2</sup>
● finely stranded without core end processing	0.2 ... 1.5 mm <sup>2</sup>
● finely stranded with core end processing	0.2 ... 1.0 mm <sup>2</sup>
type of connectable conductor cross-sections at the inputs for supply voltage for AWG cables solid	24 ... 16
<b>Electrical Safety</b>	
<b>touch protection against electrical shock</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe
<b>Communication/ Protocol</b>	
protocol is supported other protocols	Yes
<b>product function bus communication</b>	Yes
product function control circuit interface with IO link	No

product function control circuit interface with AS-interface	No
<b>data volume</b>	
<ul style="list-style-type: none"> <li>of the address range of the inputs with cyclical transfer total</li> </ul>	16 byte
<ul style="list-style-type: none"> <li>of the address range of the outputs with cyclical transfer total</li> </ul>	2 byte
<b>address space memory of address range</b>	
<ul style="list-style-type: none"> <li>of the inputs</li> </ul>	16 byte
<ul style="list-style-type: none"> <li>of the outputs</li> </ul>	2 byte
type of electrical connection of the communication interface	RJ45

### Electromagnetic compatibility

<b>conducted interference</b>	
<ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>due to conductor-earth surge according to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> </ul>	1 kV
<ul style="list-style-type: none"> <li>due to high-frequency radiation according to IEC 61000-4-6</li> </ul>	10 V
<b>field-based interference according to IEC 61000-4-3</b>	10 V/m
<b>electrostatic discharge according to IEC 61000-4-2</b>	8 kV air discharge
<b>conducted HF interference emissions according to CISPR11</b>	Class A for industrial environment
<b>field-bound HF interference emission according to CISPR11</b>	Class A for industrial environment

### Supply voltage

<b>type of voltage of the supply voltage</b>	DC
<b>supply voltage 1 at DC rated value</b>	
<ul style="list-style-type: none"> <li>minimum permissible</li> </ul>	19.2 V
<ul style="list-style-type: none"> <li>maximum permissible</li> </ul>	28.8 V
<b>auxiliary voltage at DC rated value</b>	20.4 ... 28.8 V
<b>supply voltage at DC rated value</b>	24 V
<b>inrush current peak with supply voltage at DC at 24 V</b>	1.25 A
<b>duration of inrush current peak with supply voltage at DC at 24 V</b>	5 ms
<b>power loss [W] at supply voltage at DC at 24 V</b>	0.5 W

### Approvals Certificates

General Product Approval	EMV	Test Certificates	other
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[Type Test Certificates/Test Report](#)

[Confirmation](#)

other	Environment
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[Environmental Conformations](#)

### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RA8422-4EE10>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA8422-4EE10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA8422-4EE10>

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

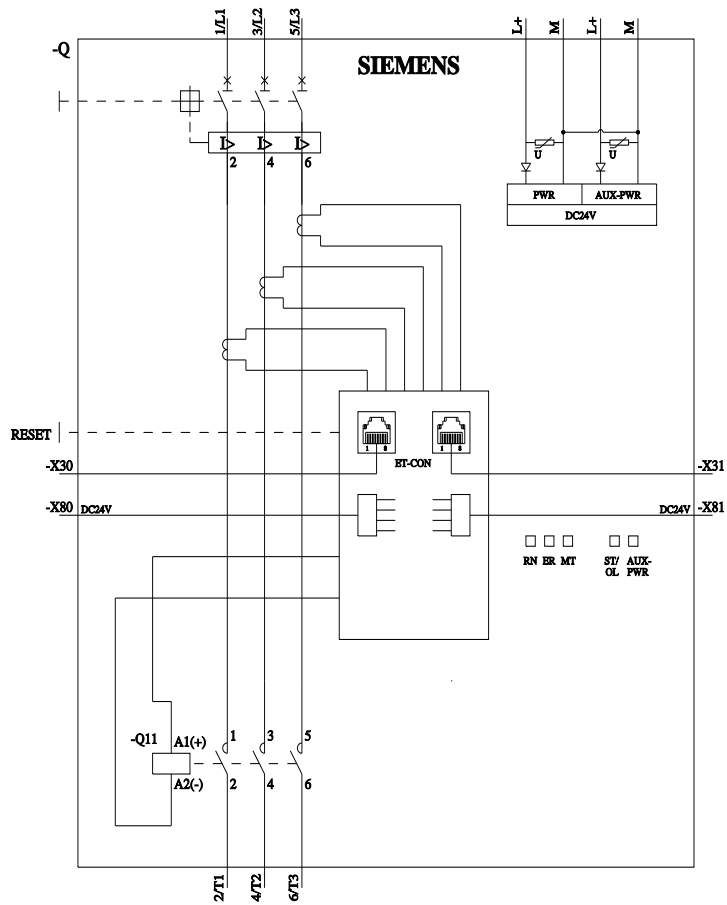
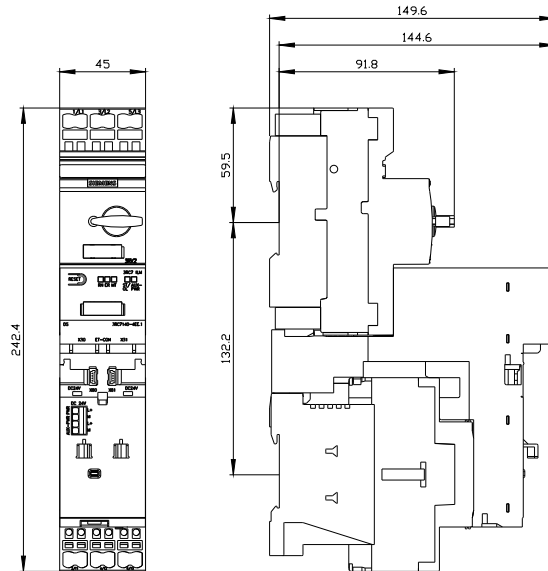
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA8422-4EE10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA8422-4EE10&lang=en)

Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA8422-4EE10/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA8422-4EE10&objecttype=14&gridview=view1>



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