



SIRIUS Compact load feeder DOL starter 690 V 24 V AC/DC 50...60 Hz 0.1...0.4 A  
IP20 Connection main circuit: plug-in, without terminals Connection auxiliary circuit:  
Spring-type terminal

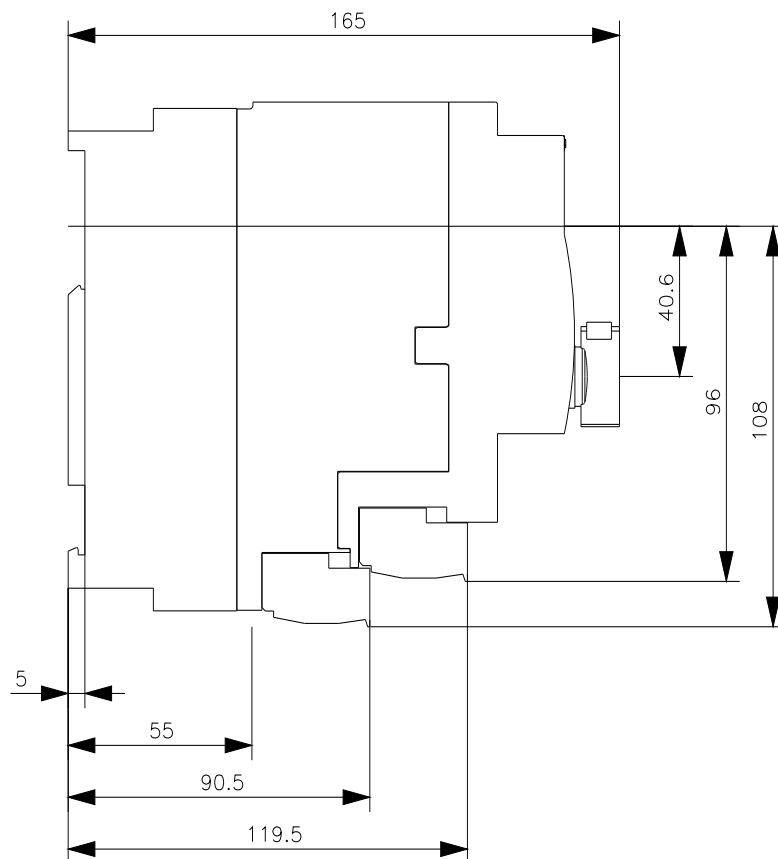
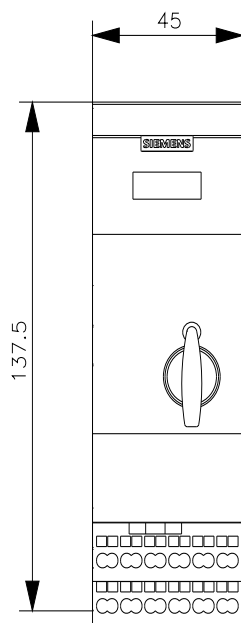
|                                                               |                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                            | SIRIUS                                                                                                                                                                                                                                                                                                                                        |
| product designation                                           | compact starter                                                                                                                                                                                                                                                                                                                               |
| design of the product                                         | direct starter                                                                                                                                                                                                                                                                                                                                |
| product type designation                                      | 3RA61                                                                                                                                                                                                                                                                                                                                         |
| <b>General technical data</b>                                 |                                                                                                                                                                                                                                                                                                                                               |
| 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                                | 0.01 W                                                                                                                                                                                                                                                                                                                                        |
| • at AC in hot operating state per pole                       | 0.01 W                                                                                                                                                                                                                                                                                                                                        |
| • 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 protective separation         |                                                                                                                                                                                                                                                                                                                                               |
| • 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/s <sup>2</sup> (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/s <sup>2</sup> ; 10 cycles                                                                                                                                                                                                                                                          |
| mechanical service life (operating 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 (operating 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 coordination                                          | continuous operation according to IEC 60947-6-2                                                                                                                                                                                                                                                                                               |
| reference code according to IEC 81346-2                       | Q                                                                                                                                                                                                                                                                                                                                             |
| Substance Prohibitance (day/month/year)                       | 05/01/2012                                                                                                                                                                                                                                                                                                                                    |
| SVHC substance name                                           | Lead CAS-No. 7439-92-1<br>Lead monoxide (lead oxide) CAS-No. 1317-36-8<br>2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) CAS-No. 3147-75-9<br>2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5<br>Melamine CAS-No. 108-78-1<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol CAS-No. 119-47-1 |
| Net Weight                                                    | 1.382 kg                                                                                                                                                                                                                                                                                                                                      |
| <b>Ambient conditions</b>                                     |                                                                                                                                                                                                                                                                                                                                               |

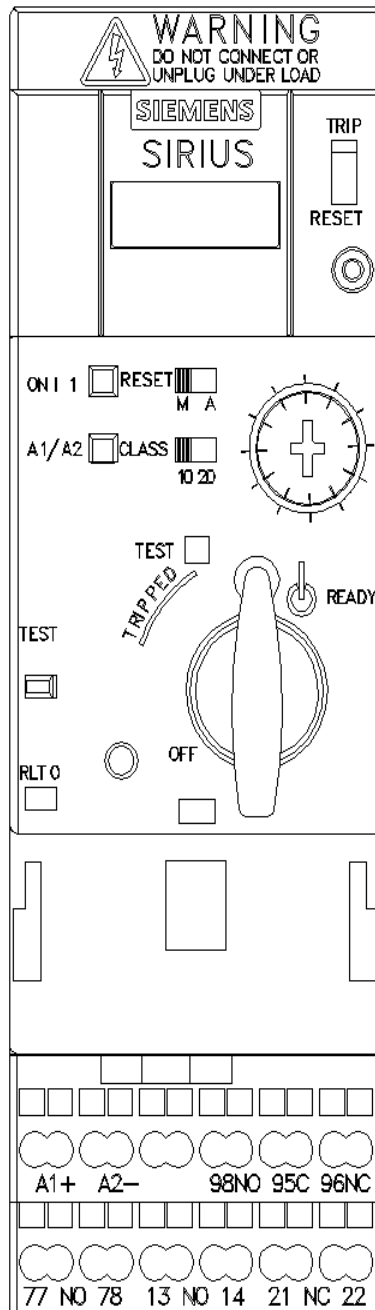
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|--------------------------------------------------------------------------------------------|----------------------------|
| installation altitude at height above sea level maximum                                    | 2 000 m                    |
| <b>ambient temperature</b>                                                                 |                            |
| • during operation                                                                         | -20 ... +60 °C             |
| • during storage                                                                           | -55 ... +80 °C             |
| • during transport                                                                         | -55 ... +80 °C             |
| relative humidity during operation                                                         | 10 ... 90 %                |
| <b>Main circuit</b>                                                                        |                            |
| <b>number of poles for main current circuit</b>                                            | 3                          |
| <b>adjustable current response value current of the current-dependent overload release</b> | 0.1 ... 0.4 A              |
| <b>formula for making capacity limit current</b>                                           | 120 x I <sub>e</sub>       |
| <b>formula for limit current breaking capacity</b>                                         | 100 x I <sub>e</sub>       |
| <b>yielded mechanical performance for 4-pole AC motor</b>                                  |                            |
| • at 400 V rated value                                                                     | 0.09 kW                    |
| • at 500 V rated value                                                                     | 0.12 kW                    |
| • at 690 V rated value                                                                     | 0.18 kW                    |
| operating voltage at AC-3 rated value maximum                                              | 690 V                      |
| <b>operational current</b>                                                                 |                            |
| • at AC at 400 V rated value                                                               | 0.4 A                      |
| • at AC-3 at 400 V rated value                                                             | 0.4 A                      |
| • at AC-43                                                                                 |                            |
| — at 400 V rated value                                                                     | 0.3 A                      |
| — at 500 V rated value                                                                     | 0.32 A                     |
| — at 690 V rated value                                                                     | 0.35 A                     |
| <b>operating power</b>                                                                     |                            |
| • at AC-3 at 400 V rated value                                                             | 0.09 kW                    |
| • at AC-43                                                                                 |                            |
| — at 400 V rated value                                                                     | 90 W                       |
| — at 500 V rated value                                                                     | 120 W                      |
| — at 690 V rated value                                                                     | 180 W                      |
| <b>no-load switching frequency</b>                                                         | 3 600 1/h                  |
| <b>operating frequency</b>                                                                 |                            |
| • at AC-41 according to IEC 60947-6-2 maximum                                              | 750 1/h                    |
| • at AC-43 according to IEC 60947-6-2 maximum                                              | 250 1/h                    |
| <b>Control circuit/ Control</b>                                                            |                            |
| <b>type of voltage</b>                                                                     | AC/DC                      |
| <b>control supply voltage 1 at AC</b>                                                      |                            |
| • at 50 Hz rated value                                                                     | 24 V                       |
| • at 50 Hz                                                                                 | 24 V                       |
| • at 60 Hz rated value                                                                     | 24 V                       |
| • at 60 Hz                                                                                 | 24 V                       |
| <b>control supply voltage frequency</b>                                                    |                            |
| • 1 rated value                                                                            | 50 Hz                      |
| • 2 rated value                                                                            | 60 Hz                      |
| <b>control supply voltage 1 at DC rated value</b>                                          | 24 V                       |
| <b>control supply voltage 1 at DC</b>                                                      | 24 V                       |
| <b>holding power</b>                                                                       |                            |
| • at AC maximum                                                                            | 2.8 W                      |
| • at DC maximum                                                                            | 2.9 W                      |
| <b>Auxiliary circuit</b>                                                                   |                            |
| <b>number of NC contacts for auxiliary contacts</b>                                        | 1                          |
| <b>number of NO contacts for auxiliary contacts</b>                                        | 1                          |
| number of NO contacts of instantaneous short-circuit trip unit for signaling contact       | 1                          |
| number of CO contacts of the current-dependent overload release for signaling contact      | 1                          |
| <b>operational current of auxiliary contacts at AC-12 maximum</b>                          | 10 A                       |
| operational current of auxiliary contacts at DC-13 at 250 V                                | 0.27 A                     |
| <b>Protective and monitoring functions</b>                                                 |                            |
| <b>trip class</b>                                                                          | CLASS 10 and 20 adjustable |

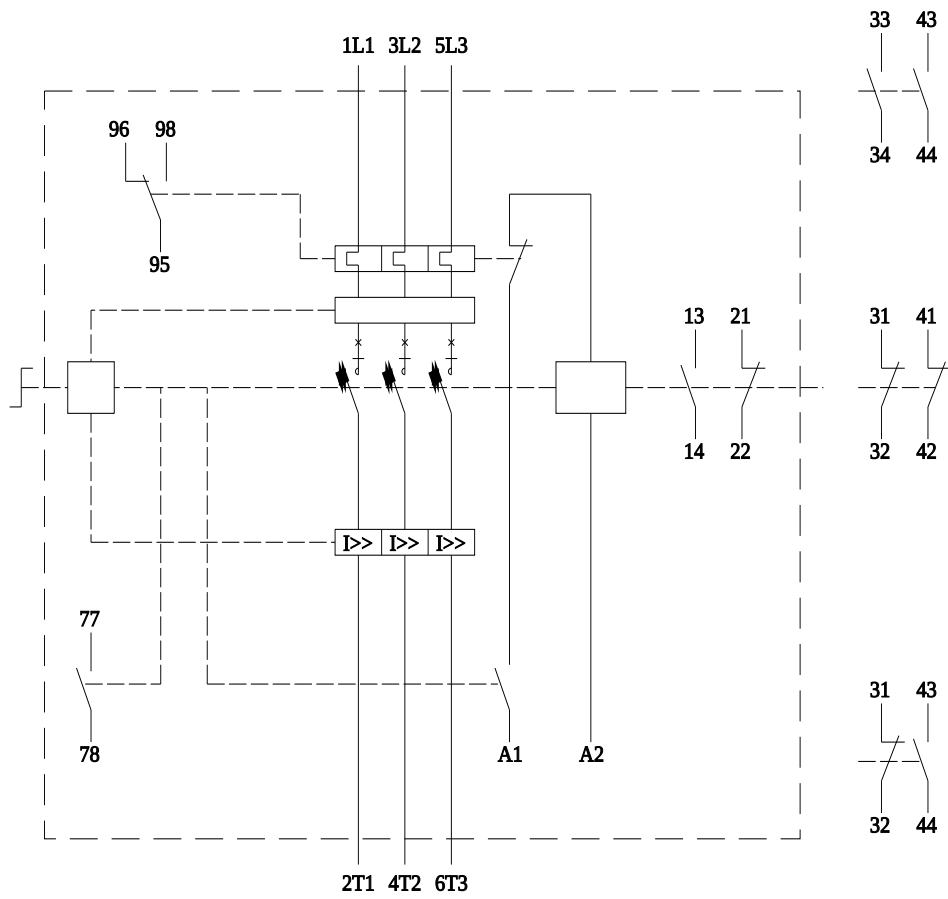
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| <b>operating short-circuit current breaking capacity (Ics)</b>                               |                                                                                                     |
| • at 400 V rated value                                                                       | 53 kA                                                                                               |
| • at 500 V rated value                                                                       | 3 kA                                                                                                |
| • at 690 V rated value                                                                       | 3 kA                                                                                                |
| <b>UL/CSA ratings</b>                                                                        |                                                                                                     |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                          |                                                                                                     |
| • at 480 V rated value                                                                       | 0.4 A                                                                                               |
| • at 600 V rated value                                                                       | 0.4 A                                                                                               |
| <b>contact rating of auxiliary contacts according to UL</b>                                  | contacts 21-22, 13-14, 43-44 Q600 / A600, contacts 77-78 R300 / B300, contacts 95-96-98 R300 / D300 |
| <b>Short-circuit protection</b>                                                              |                                                                                                     |
| <b>product function short circuit protection</b>                                             | Yes                                                                                                 |
| <b>design of short-circuit protection</b>                                                    | electromagnetic                                                                                     |
| <b>design of the fuse link</b>                                                               |                                                                                                     |
| • 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                                                                                       |
| <b>Installation/ mounting/ dimensions</b>                                                    |                                                                                                     |
| <b>mounting position</b>                                                                     | any                                                                                                 |
| <b>mounting position recommended</b>                                                         | vertical, on horizontal standard DIN rail                                                           |
| <b>fastening method</b>                                                                      | screw and snap-on mounting                                                                          |
| <b>height</b>                                                                                | 191 mm                                                                                              |
| <b>width</b>                                                                                 | 45 mm                                                                                               |
| <b>depth</b>                                                                                 | 165 mm                                                                                              |
| <b>Connections/ Terminals</b>                                                                |                                                                                                     |
| <b>product component removable terminal for main circuit</b>                                 | Yes                                                                                                 |
| <b>product component removable terminal for auxiliary and control circuit</b>                | Yes                                                                                                 |
| <b>type of electrical connection</b>                                                         |                                                                                                     |
| • for main current circuit                                                                   | plug-in without terminals                                                                           |
| • for auxiliary and control circuit                                                          | spring-loaded terminals                                                                             |
| <b>type of connectable conductor cross-sections for main contacts</b>                        |                                                                                                     |
| • solid                                                                                      | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>                                              |
| • finely stranded with core end processing                                                   | 2x (1.5 ... 6 mm <sup>2</sup> )                                                                     |
| • finely stranded without core end processing                                                | 2x (1.5 ... 6 mm <sup>2</sup> )                                                                     |
| <b>type of connectable conductor cross-sections</b>                                          |                                                                                                     |
| • for auxiliary contacts                                                                     |                                                                                                     |
| — solid                                                                                      | 2x (0.25 ... 1.5 mm <sup>2</sup> )                                                                  |
| — finely stranded with core end processing                                                   | 2x (0.25 ... 1.5 mm <sup>2</sup> )                                                                  |
| — finely stranded without core end processing                                                | 2x (0.25 ... 1.5 mm <sup>2</sup> )                                                                  |
| • for AWG cables for auxiliary contacts                                                      | 2x (24 ... 16)                                                                                      |
| <b>Safety related data</b>                                                                   |                                                                                                     |
| <b>proportion of dangerous failures</b>                                                      |                                                                                                     |
| • with low demand rate according to SN 31920                                                 | 40 %                                                                                                |
| • with high demand rate according to SN 31920                                                | 50 %                                                                                                |
| <b>B10 value with high demand rate according to SN 31920</b>                                 | 3 000 000                                                                                           |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                         | 100 FIT                                                                                             |
| <b>IEC 61508</b>                                                                             |                                                                                                     |
| T1 value for proof test interval or service life according to IEC 61508                      | 20 a                                                                                                |
| <b>Electrical Safety</b>                                                                     |                                                                                                     |
| <b>protection class IP on the front according to IEC 60529</b>                               | IP20                                                                                                |
| <b>touch protection on the front according to IEC 60529</b>                                  | finger-safe                                                                                         |
| <b>Communication/ Protocol</b>                                                               |                                                                                                     |
| <b>product function bus communication</b>                                                    | No                                                                                                  |
| <b>protocol is supported</b>                                                                 |                                                                                                     |
| • AS-Interface protocol                                                                      | No                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |                                              |                                                    |                                                                                       |                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------|
| • IO-Link protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | No                                                                                  |                                              |                                                    |                                                                                       |                              |
| product function control circuit interface with IO link                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                                                                  |                                              |                                                    |                                                                                       |                              |
| Electromagnetic compatibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |                                              |                                                    |                                                                                       |                              |
| conducted interference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |                                              |                                                    |                                                                                       |                              |
| • due to burst according to IEC 61000-4-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4 kV main contacts, 2 kV auxiliary contacts                                         |                                              |                                                    |                                                                                       |                              |
| • due to conductor-earth surge according to IEC 61000-4-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4 kV main contacts, 2 kV auxiliary contacts                                         |                                              |                                                    |                                                                                       |                              |
| • due to conductor-conductor surge according to IEC 61000-4-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2 kV main contacts, 1 kV auxiliary contacts                                         |                                              |                                                    |                                                                                       |                              |
| • due to high-frequency radiation according to IEC 61000-4-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.15-80Mhz at 10V                                                                   |                                              |                                                    |                                                                                       |                              |
| field-based interference according to IEC 61000-4-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10 V/m                                                                              |                                              |                                                    |                                                                                       |                              |
| electrostatic discharge according to IEC 61000-4-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 8 kV                                                                                |                                              |                                                    |                                                                                       |                              |
| conducted HF interference emissions according to CISPR11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 150 kHz ... 30 MHz Class A                                                          |                                              |                                                    |                                                                                       |                              |
| field-bound HF interference emission according to CISPR11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30 ... 1000 MHz Class A                                                             |                                              |                                                    |                                                                                       |                              |
| Supply voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |                                              |                                                    |                                                                                       |                              |
| Supply voltage required Auxiliary voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                  |                                              |                                                    |                                                                                       |                              |
| Display                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |                                              |                                                    |                                                                                       |                              |
| number of LEDs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2                                                                                   |                                              |                                                    |                                                                                       |                              |
| Approvals Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |                                              |                                                    |                                                                                       |                              |
| Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | General Product Approval                                                            |                                              |                                                    |                                                                                       |                              |
| <div><div><a href="#">Environmental Conformations</a></div><div></div><div></div><div></div><div></div><div></div></div> |                                                                                     |                                              |                                                    |                                                                                       |                              |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EMV                                                                                 | Functional Safety                            | Test Certificates                                  | Maritime application                                                                  | other                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | <a href="#">Type Examination Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> |  | <a href="#">Confirmation</a> |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Dangerous goods                                                                     |                                              |                                                    |                                                                                       |                              |
| <a href="#">Confirmation</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <div><div>产品合格</div><div>QC PASS</div></div>                                        |                                              |                                                    |                                                                                       |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <a href="#">Transport Information</a>                                               |                                              |                                                    |                                                                                       |                              |

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| <b>Further information</b>                                                                                                                                                                                                                                                                                      |  |
| <b>Information on the packaging</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>                                                                                                                                  |  |
| <b>Information for data generation and storage</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a>                                                                                                                   |  |
| <b>Information- and Downloadcenter (Catalogs, Brochures,...)</b><br><a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a>                                                                                                                                                                     |  |
| <b>Industry Mall (Online ordering system)</b><br><a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-2AB33">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6120-2AB33</a>                                                                                  |  |
| <b>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)</b><br><a href="https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2AB33">https://support.industry.siemens.com/cs/ww/en/ps/3RA6120-2AB33</a>                                                                                    |  |
| <b>Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)</b><br><a href="https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2AB33&amp;lang=en">https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6120-2AB33&amp;lang=en</a> |  |
| <b>Cax online generator</b><br><a href="https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RA6120-2AB33">https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RA6120-2AB33</a>                                                                      |  |
| <b>Characteristic curves</b><br><a href='https://curves.simaris.siemens.com/curves/&lt;mmp_prod_noCOMP="HAUPT"&gt;&lt;/mmp_prod_no&gt;'>https://curves.simaris.siemens.com/curves/&lt;mmp_prod_noCOMP="HAUPT"&gt;&lt;/mmp_prod_no&gt;</a>                                                                       |  |







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