



\*\*\*phase-out type\*\*\* compact starter direct-on-line starter for IO-Link 690 V 24 V DC 0.1...0.4 A IP20 connection main circuit: screw terminal connection control circuit: screw terminal alternative 3RK1308 or 3RA8 requirement controller such as ET 200SP in use

|                                                                      |                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                   | SIRIUS                                                                                                                                                                                                                            |
| product designation                                                  | Compact starter for IO-Link                                                                                                                                                                                                       |
| design of the product                                                | direct starter                                                                                                                                                                                                                    |
| product type designation                                             | 3RA64                                                                                                                                                                                                                             |
| <b>General technical data</b>                                        |                                                                                                                                                                                                                                   |
| product function control circuit interface to parallel wiring        | No                                                                                                                                                                                                                                |
| product extension auxiliary switch                                   | Yes                                                                                                                                                                                                                               |
| <b>power loss [W] for rated value of the current</b>                 |                                                                                                                                                                                                                                   |
| • 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                                                                                                                                                                                                                             |
| <b>insulation voltage rated value</b>                                | 690 V                                                                                                                                                                                                                             |
| <b>degree of pollution</b>                                           | 3                                                                                                                                                                                                                                 |
| <b>surge voltage resistance rated value</b>                          | 6 000 V                                                                                                                                                                                                                           |
| <b>degree of protection NEMA rating</b>                              | other                                                                                                                                                                                                                             |
| <b>shock resistance</b>                                              | a=60 m/s <sup>2</sup> (6g) with 10 ms per 3 shocks in all axes                                                                                                                                                                    |
| <b>vibration resistance</b>                                          | f= 4 ... 5.8 Hz, d= 15 mm; f= 5.8 ... 500 Hz, a= 20 m/s <sup>2</sup> ; 10 cycles                                                                                                                                                  |
| <b>mechanical service life (operating cycles)</b>                    |                                                                                                                                                                                                                                   |
| • of the main contacts typical                                       | 10 000 000                                                                                                                                                                                                                        |
| • of auxiliary contacts typical                                      | 10 000 000                                                                                                                                                                                                                        |
| • of the signaling contacts typical                                  | 10 000 000                                                                                                                                                                                                                        |
| <b>electrical endurance (operating cycles) of auxiliary contacts</b> |                                                                                                                                                                                                                                   |
| • at DC-13 at 6 A at 24 V typical                                    | 30 000                                                                                                                                                                                                                            |
| • at AC-15 at 6 A at 230 V typical                                   | 200 000                                                                                                                                                                                                                           |
| <b>type of coordination</b>                                          | continuous operation according to IEC 60947-6-2                                                                                                                                                                                   |
| <b>reference code according to IEC 81346-2</b>                       | Q                                                                                                                                                                                                                                 |
| <b>Substance Prohibitance (Date)</b>                                 | 05/01/2012                                                                                                                                                                                                                        |
| <b>SVHC substance name</b>                                           | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7<br>Lead titanium zirconium oxide - 12626-81-2<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 |
| <b>Weight</b>                                                        | 1.471 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                                                     | -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>                                                                     | DC                                        |
| <b>control supply voltage 1 at DC rated value</b>                                          | 24 V                                      |
| <b>control supply voltage 1 at DC</b>                                                      | 24 ... 24 V                               |
| <b>holding power</b>                                                                       |                                           |
| • at DC maximum                                                                            | 2.9 W                                     |
| <b>Auxiliary circuit</b>                                                                   |                                           |
| <b>number of NC contacts for auxiliary contacts</b>                                        | 0                                         |
| <b>number of NO contacts for auxiliary contacts</b>                                        | 0                                         |
| number of NO contacts of instantaneous short-circuit trip unit for signaling contact       | 0                                         |
| number of CO contacts of the current-dependent overload release for signaling contact      | 0                                         |
| <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                |
| <b>operating short-circuit current breaking capacity (I<sub>cs</sub>)</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>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                          |
| <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                |

|                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| height                                                                                                                                                                                                                                                                                              | 170 mm                                                                                                                                                                                                                                                                                                    |
| width                                                                                                                                                                                                                                                                                               | 45 mm                                                                                                                                                                                                                                                                                                     |
| depth                                                                                                                                                                                                                                                                                               | 165 mm                                                                                                                                                                                                                                                                                                    |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                           |
| product component removable terminal for main circuit                                                                                                                                                                                                                                               | Yes                                                                                                                                                                                                                                                                                                       |
| product component removable terminal for auxiliary and control circuit                                                                                                                                                                                                                              | Yes                                                                                                                                                                                                                                                                                                       |
| type of electrical connection                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>                                                                                                                                                                               | screw-type terminals<br>screw-type terminals                                                                                                                                                                                                                                                              |
| type of connectable conductor cross-sections for main contacts                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> </ul>                                                                                                                                                                                           | 2x (1.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup><br>2x (1.5 ... 6 mm <sup>2</sup> )                                                                                                                                                                                                                 |
| type of connectable conductor cross-sections                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>solid</li> <li>finely stranded with core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>                                                    | 0.5 ... 4 mm <sup>2</sup> , 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>0.5 ... 2.5 mm <sup>2</sup> , 2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14)                                                                                                                                                        |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                           |
| proportion of dangerous failures                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>with high demand rate according to SN 31920</li> </ul>                                                                                                                                                                                                       | 50 %                                                                                                                                                                                                                                                                                                      |
| <b>B10 value with high demand rate according to SN 31920</b>                                                                                                                                                                                                                                        | 3 000 000                                                                                                                                                                                                                                                                                                 |
| <b>Electrical Safety</b>                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                           |
| protection class IP on the front according to IEC 60529                                                                                                                                                                                                                                             | IP20                                                                                                                                                                                                                                                                                                      |
| touch protection on the front according to IEC 60529                                                                                                                                                                                                                                                | finger-safe                                                                                                                                                                                                                                                                                               |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                           |
| product function bus communication                                                                                                                                                                                                                                                                  | Yes                                                                                                                                                                                                                                                                                                       |
| protocol is supported                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>AS-Interface protocol</li> <li>IO-Link protocol</li> </ul>                                                                                                                                                                                                   | No<br>Yes                                                                                                                                                                                                                                                                                                 |
| product function control circuit interface with IO link                                                                                                                                                                                                                                             | Yes                                                                                                                                                                                                                                                                                                       |
| <b>IO-Link transfer rate</b>                                                                                                                                                                                                                                                                        | COM2 (38,4 kBaud)                                                                                                                                                                                                                                                                                         |
| <b>point-to-point cycle time between master and IO-Link device minimum</b>                                                                                                                                                                                                                          | 2.5 ms                                                                                                                                                                                                                                                                                                    |
| <b>type of voltage supply via input/output link master</b>                                                                                                                                                                                                                                          | No                                                                                                                                                                                                                                                                                                        |
| <b>data volume</b>                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>of the address range of the inputs with cyclical transfer total</li> <li>of the address range of the outputs with cyclical transfer total</li> </ul>                                                                                                         | 2 byte<br>2 byte                                                                                                                                                                                                                                                                                          |
| <b>Electromagnetic compatibility</b>                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                           |
| conducted interference                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>due to burst according to IEC 61000-4-4</li> <li>due to conductor-earth surge according to IEC 61000-4-5</li> <li>due to conductor-conductor surge according to IEC 61000-4-5</li> <li>due to high-frequency radiation according to IEC 61000-4-6</li> </ul> | 4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device<br>4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection<br>2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection<br>0.15-80Mhz at 10V |
| <b>field-based interference according to IEC 61000-4-3</b>                                                                                                                                                                                                                                          | 80 ... 3000 MHz at 10V/m                                                                                                                                                                                                                                                                                  |
| <b>electrostatic discharge according to IEC 61000-4-2</b>                                                                                                                                                                                                                                           | 8 kV                                                                                                                                                                                                                                                                                                      |
| <b>conducted HF interference emissions according to CISPR11</b>                                                                                                                                                                                                                                     | 150 kHz ... 30 MHz Class A                                                                                                                                                                                                                                                                                |
| <b>field-bound HF interference emission according to CISPR11</b>                                                                                                                                                                                                                                    | 30 ... 1000 MHz Class A                                                                                                                                                                                                                                                                                   |
| <b>Supply voltage</b>                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                           |
| Supply voltage required Auxiliary voltage                                                                                                                                                                                                                                                           | Yes                                                                                                                                                                                                                                                                                                       |
| <b>Display</b>                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                           |
| number of LEDs                                                                                                                                                                                                                                                                                      | 3                                                                                                                                                                                                                                                                                                         |
| display version as status display of the input/output link device                                                                                                                                                                                                                                   | green/red dual LED                                                                                                                                                                                                                                                                                        |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                           |
| General Product Approval                                                                                                                                                                                                                                                                            | EMV                                                                                                                                                                                                                                                                                                       |



|                   |                   |       |                 |             |
|-------------------|-------------------|-------|-----------------|-------------|
| Functional Safety | Test Certificates | other | Dangerous goods | Environment |
|-------------------|-------------------|-------|-----------------|-------------|



[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Transport Information](#)

[Environmental Confirmations](#)

### 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=3RA6400-1AB42>

**Cax online generator**

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6400-1AB42>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1AB42>

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

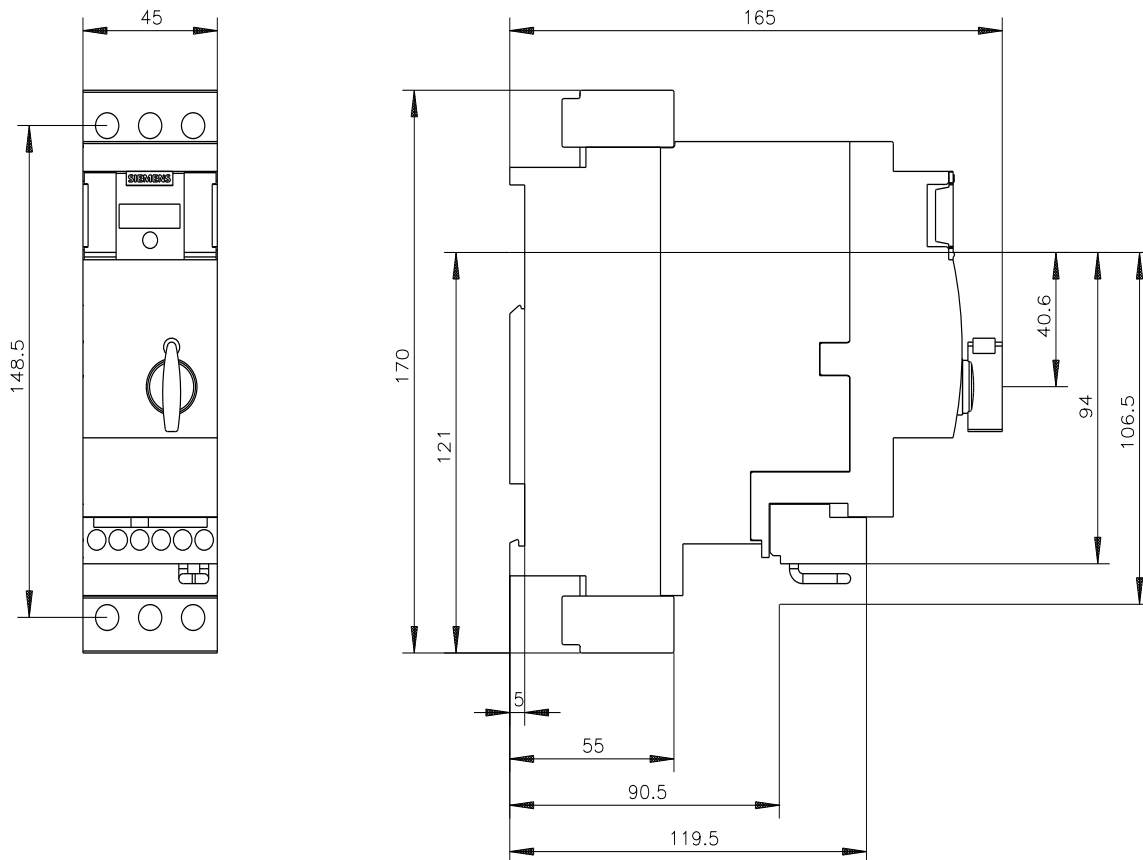
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6400-1AB42&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-1AB42&lang=en)

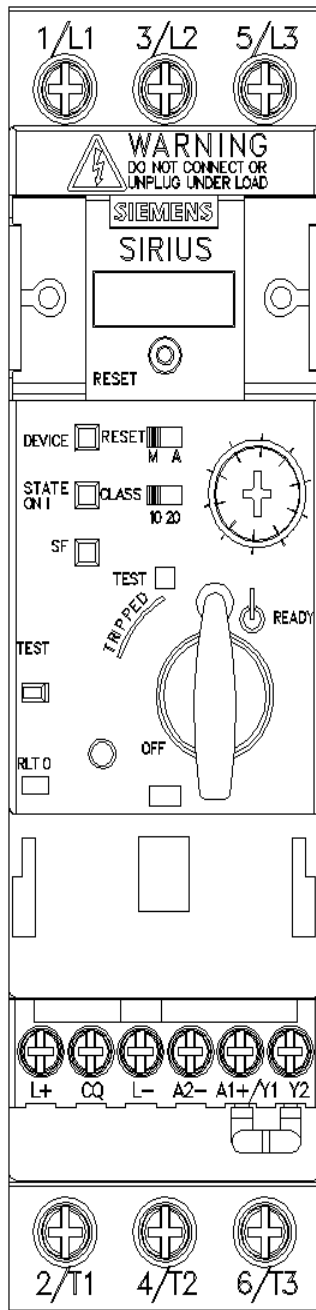
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1AB42/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA6400-1AB42&objecttype=14&gridview=view1>





last modified:

4/2/2025 