

\*\*\*phase-out type\*\*\* compact starter direct-on-line starter for IO-Link 690 V 24 V DC 0.32...1.25 A IP20 connection main circuit: screw terminal connection control circuit: screw terminal alternative 3RK1308 or 3RA8 requirement controller such as ET 200SP in use

|                                                                                     |                                                                                                                                                                                                                                                                                                                                               |
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| 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                                                                                                                                                                                                                                                                                                                                           |
| power loss [W] for rated value of the current                                       |                                                                                                                                                                                                                                                                                                                                               |
| • at AC in hot operating state                                                      | 0.1 W                                                                                                                                                                                                                                                                                                                                         |
| • at AC in hot operating state per pole                                             | 0.03 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                                                                                                                                                                                                                                                                                                                                       |
| 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                                                                          | 1.437 kg                                                                                                                                                                                                                                                                                                                                      |
| <b>Ambient conditions</b>                                                           |                                                                                                                                                                                                                                                                                                                                               |
| installation altitude at height above sea level maximum                             | 2 000 m                                                                                                                                                                                                                                                                                                                                       |
| ambient temperature                                                                 |                                                                                                                                                                                                                                                                                                                                               |
| • 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>                                                                 |                                                                                                                                                                                                                                                                                                                                               |
| number of poles for main current circuit                                            | 3                                                                                                                                                                                                                                                                                                                                             |
| adjustable current response value current of the current-dependent overload release | 0.32 ... 1.25 A                                                                                                                                                                                                                                                                                                                               |
| formula for making capacity limit current                                           | 38.4 x I <sub>e</sub>                                                                                                                                                                                                                                                                                                                         |
| formula for limit current breaking capacity                                         | 32 x I <sub>e</sub>                                                                                                                                                                                                                                                                                                                           |
| yielded mechanical performance for 4-pole AC motor                                  |                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                 |                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                        | 0.37 kW<br>0.55 kW<br>0.75 kW               |
| operating voltage at AC-3 rated value maximum                                                                                                                                                                                                                                                                   | 690 V                                       |
| <b>operational current</b> <ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 1.25 A<br>1.25 A<br>1.1 A<br>1.2 A<br>1.1 A |
| <b>operating power</b> <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-43 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>                                           | 0.37 kW<br>370 W<br>550 W<br>750 W          |
| <b>no-load switching frequency</b>                                                                                                                                                                                                                                                                              | 3 600 1/h                                   |
| <b>operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-41 according to IEC 60947-6-2 maximum</li> <li>• at AC-43 according to IEC 60947-6-2 maximum</li> </ul>                                                                                                                               | 750 1/h<br>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 V                                        |
| <b>holding power</b> <ul style="list-style-type: none"> <li>• at DC maximum</li> </ul>                                                                                                                                                                                                                          | 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 (Ics)</b> <ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                                         | 53 kA<br>3 kA<br>3 kA                       |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                           |                                             |
| <b>full-load current (FLA) for 3-phase AC motor</b> <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>                                                                                                                                                    | 1.25 A<br>1.25 A                            |
| yielded mechanical performance [hp] for 3-phase AC motor <ul style="list-style-type: none"> <li>• at 460/480 V rated value</li> <li>• at 575/600 V rated value</li> </ul>                                                                                                                                       | 0.5 hp<br>0.5 hp                            |
| <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> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                | 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                  |
| <b>height</b>                                                                                                                                                                                                                                                                                                   | 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 mm²), 1x 10 mm²<br>2x (1.5 ... 6 mm²)                                                                                                                                                                                                                                                       |
| 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 mm², 2x (0.5 ... 2.5 mm²)<br>0.5 ... 2.5 mm², 2x (0.5 ... 1.5 mm²)<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 %                                                                                                                                                                                                                                                                                                      |
| B10 value with high demand rate according to SN 31920                                                                                                                                                                                                                                                                              | 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                                                                                                                                                                                                                                                                                                       |
| IO-Link transfer rate                                                                                                                                                                                                                                                                                                              | COM2 (38,4 kBaud)                                                                                                                                                                                                                                                                                         |
| point-to-point cycle time between master and IO-Link device minimum                                                                                                                                                                                                                                                                | 2.5 ms                                                                                                                                                                                                                                                                                                    |
| type of voltage supply via input/output link master                                                                                                                                                                                                                                                                                | No                                                                                                                                                                                                                                                                                                        |
| data volume <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 |
| field-based interference according to IEC 61000-4-3                                                                                                                                                                                                                                                                                | 80 ... 3000 MHz at 10V/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                                                                                                                                                                                                                                                                                   |
| <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>                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                           |
| Environment                                                                                                                                                                                                                                                                                                                        | General Product Approval                                                                                                                                                                                                                                                                                  |

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firmations](#)



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| EMV                                                                                      | Functional Safety                            | Test Certificates                                  | other                        |                              |                                                                                     |
|------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------|------------------------------|------------------------------|-------------------------------------------------------------------------------------|
| <br>RCM | <a href="#">Type Examination Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Confirmation</a> | <a href="#">Confirmation</a> |  |

#### Dangerous goods

[Transport Information](#)

#### 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=3RA6400-1BB42>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA6400-1BB42>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA6400-1BB42&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-1BB42&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA6400-1BB42>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>)

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