



SIRIUS Compact load feeder DOL 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

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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 |
| General technical data | |
| 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 | 0.01 W |
| • per pole | 0.01 W |
| power loss [W] for rated value of the current 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 ² (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 ² ; 10 cycles |
| mechanical service life (switching 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 (switching 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 assignment | continuous operation according to IEC 60947-6-2 |
| reference code acc. to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 01.05.2012 00:00:00 |
| Ambient conditions | |
| installation altitude at height above sea level maximum | 2 000 m |
| • ambient temperature during operation | -20 ... +60 °C |
| • ambient temperature during storage | -55 ... +80 °C |
| • ambient temperature during transport | -55 ... +80 °C |
| relative humidity during operation | 10 ... 90 % |
| Main circuit | |
| number of poles for main current circuit | 3 |
| adjustable current response value current of the | 0.1 ... 0.4 A |

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| current-dependent overload release | |
| formula for making capacity limit current | 120 x I _e |
| formula for breaking capacity limit current | 100 x I _e |
| yielded mechanical performance for 4-pole AC motor | |
| • 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 |
| operational current | |
| • at AC 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 |
| operating power | |
| • at AC-3 at 400 V rated value | 90 W |
| • at AC-43 | |
| — at 400 V rated value | 90 W |
| — at 500 V rated value | 120 W |
| — at 690 V rated value | 180 W |
| no-load switching frequency | 3 600 1/h |
| operating frequency | |
| • at AC-41 acc. to IEC 60947-6-2 maximum | 750 1/h |
| • at AC-43 acc. to IEC 60947-6-2 maximum | 250 1/h |
| Control circuit/ Control | |
| type of voltage | DC |
| holding power | |
| • at DC maximum | 2.9 W |
| Auxiliary circuit | |
| number of NC contacts for auxiliary contacts | 0 |
| number of NO contacts for auxiliary contacts | 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 |
| operational current of auxiliary contacts at AC-12 maximum | 10 A |
| operational current of auxiliary contacts at DC-13 at 250 V | 0.27 A |
| Protective and monitoring functions | |
| trip class | CLASS 10 and 20 adjustable |
| breaking capacity operating short-circuit current (I_{cs}) | |
| • at 400 V | 53 kA |
| • at 500 V rated value | 3 kA |
| • at 690 V rated value | 3 kA |
| UL/CSA ratings | |
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 0.4 A |
| • at 600 V rated value | 0.4 A |
| Short-circuit protection | |
| product function short circuit protection | Yes |
| design of short-circuit protection | electromagnetic |
| design of the fuse link | |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A |
| Installation/ mounting/ dimensions | |
| mounting position | any |
| • recommended | vertical, on horizontal standard mounting rail |
| fastening method | screw and snap-on mounting |

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| height | 170 mm |
| width | 45 mm |
| depth | 165 mm |
| Connections/ Terminals | |
| product function | |
| <ul style="list-style-type: none"> removable terminal for main circuit | Yes |
| <ul style="list-style-type: none"> removable terminal for auxiliary and control circuit | Yes |
| type of electrical connection | |
| <ul style="list-style-type: none"> for main current circuit | screw-type terminals |
| <ul style="list-style-type: none"> for auxiliary and control circuit | screw-type terminals |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid | 2x (1.5 ... 6 mm ²), 1x 10 mm ² |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> finely stranded with core end processing | 2x (1.5 ... 6 mm ²) |
| <ul style="list-style-type: none"> at AWG cables for main contacts | 2x (16 ... 10), 1x 8 |
| type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> solid | 0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²) |
| <ul style="list-style-type: none"> <ul style="list-style-type: none"> finely stranded with core end processing | 0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²) |
| <ul style="list-style-type: none"> at AWG cables for auxiliary contacts | 2x (20 ... 14) |
| Safety related data | |
| B10 value with high demand rate acc. to SN 31920 | 3 000 000 |
| proportion of dangerous failures | |
| <ul style="list-style-type: none"> with high demand rate acc. to SN 31920 | 50 % |
| Communication/ Protocol | |
| product function bus communication | Yes |
| protocol is supported | |
| <ul style="list-style-type: none"> IO-Link protocol | 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"> of the address range of the inputs with cyclical transfer total | 2 byte |
| <ul style="list-style-type: none"> of the address range of the outputs with cyclical transfer total | 2 byte |
| Electromagnetic compatibility | |
| conducted interference | |
| <ul style="list-style-type: none"> due to burst acc. to IEC 61000-4-4 | 4 kV main circuits, 2 kV auxiliary circuits, 2 kV IO-Link, 2 kV limit switches, 2 kV line hand-held device |
| <ul style="list-style-type: none"> due to conductor-earth surge acc. to IEC 61000-4-5 | 4 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection |
| <ul style="list-style-type: none"> due to conductor-conductor surge acc. to IEC 61000-4-5 | 2 kV main circuits, 0.5 kV auxiliary voltage with upstream overvoltage protection |
| <ul style="list-style-type: none"> due to high-frequency radiation acc. to IEC 61000-4-6 | 0.15-80Mhz at 10V |
| field-based interference acc. to IEC 61000-4-3 | 80 ... 3000 MHz at 10V/m |
| electrostatic discharge acc. to IEC 61000-4-2 | 8 kV |
| conducted HF interference emissions acc. to CISPR11 | 150 kHz ... 30 MHz Class A |
| field-bound HF interference emission acc. to CISPR11 | 30 ... 1000 MHz Class A |
| Supply voltage | |
| Supply voltage required Auxiliary voltage | Yes |
| Display | |
| number of LEDs | 3 |
| display version as status display of the input/output link device | green/red dual LED |
| Certificates/ approvals | |

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| General Product Approval | EMC | Functional Safety/Safety of Machinery |
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| Declaration of Conformity | Test Certificates | Marine / Shipping |
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EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

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|-------------------|-------|
| Marine / Shipping | other |
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PRS



RINA



RMRS

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA6400-1AB42>

Cax online generator

<http://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, ...)

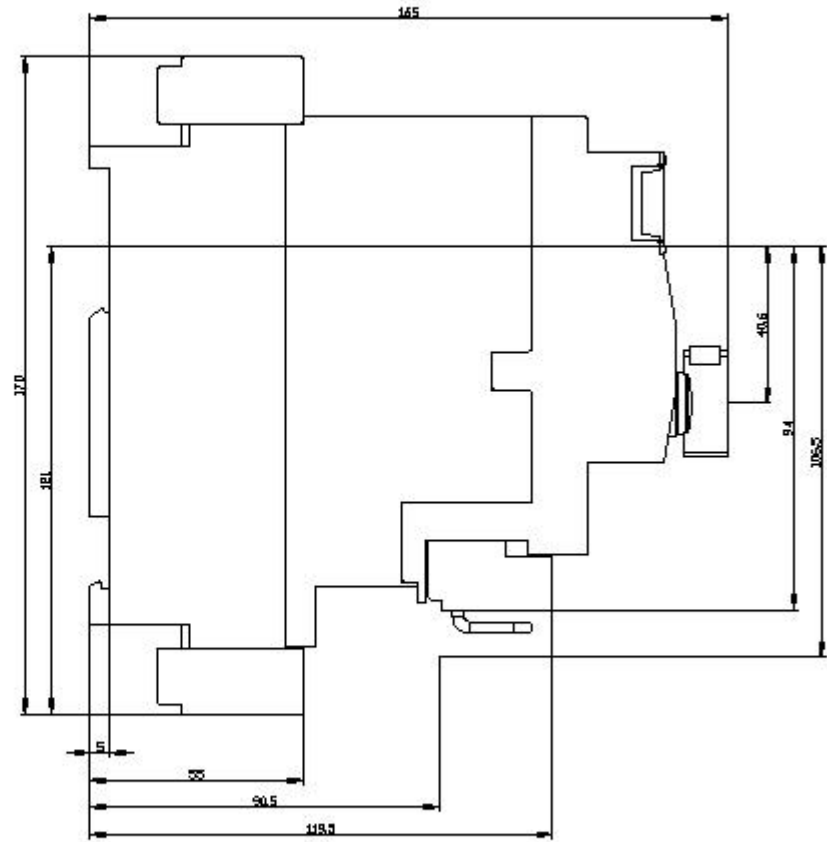
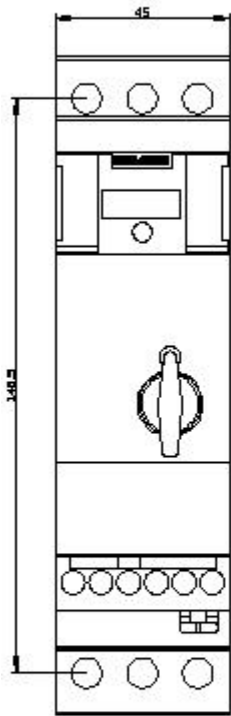
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA6400-1AB42&lang=en

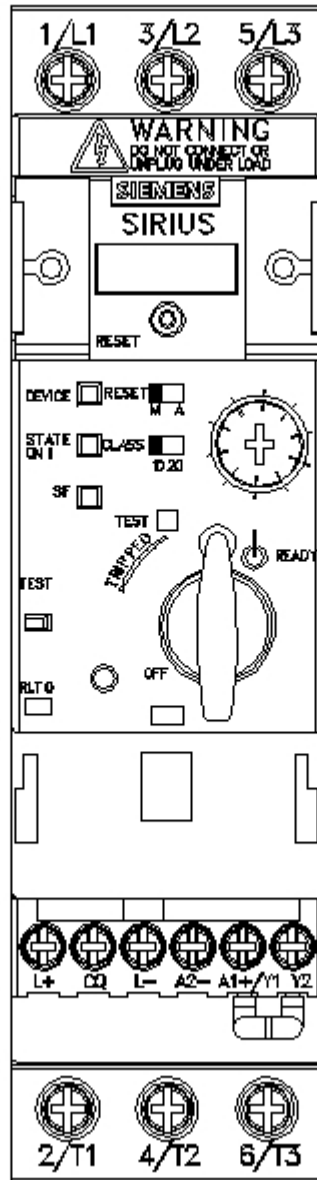
Characteristic: Tripping characteristics, I_t, Let-through current

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

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

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





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