



Circuit breaker size S0 for motor protection, Class 10 A-release 0.35...0.5 A Short-circuit release 6.5 A Screw terminal Standard switching capacity

|   |                      |
|---|----------------------|
| product brand name  | SIRIUS               |
| product designation   | Circuit breaker      |
| design of the product   | For motor protection |
| product type designation  | 3RV2                 |
| <b>General technical data</b>                                   |                      |
| size of the circuit-breaker                                     | S0                   |
| size of contactor can be combined company-specific              | S00, S0              |
| product extension auxiliary switch                              | Yes                  |
| power loss [W] for rated value of the current                   |                      |
| • at AC in hot operating state                                  | 5.5 W                |
| • at AC in hot operating state per pole                         | 1.8 W                |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V                |
| surge voltage resistance rated value                            | 6 kV                 |
| shock resistance according to IEC 60068-2-27                    | 25g / 11 ms          |
| mechanical service life (operating cycles)                      |                      |
| • of the main contacts typical                                  | 100 000              |
| • of auxiliary contacts typical                                 | 100 000              |
| electrical endurance (operating cycles) typical                 | 100 000              |
| reference code according to IEC 81346-2                         | Q                    |
| Substance Prohibitance (Date)                                   | 10/01/2009           |
| SVHC substance name   | Lead - 7439-92-1     |
| Net Weight  | 0.286 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  | -50 ... +80 °C       |
| • during transport  | -50 ... +80 °C       |
| relative humidity during operation                              | 10 ... 95 %          |
| <b>Environmental footprint</b>                                  |                      |
| Environmental Product Declaration(EPD)                          | Yes                  |
| global warming potential [CO2 eq] total                         | 75.078 kg            |
| global warming potential [CO2 eq] during manufacturing          | 2.68 kg              |
| global warming potential [CO2 eq] during sales                  | 0.143 kg             |
| global warming potential [CO2 eq] during operation              | 72.7 kg              |
| global warming potential [CO2 eq] after end of life             | -0.445 kg            |

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| Siemens Eco Profile (SEP)   | Siemens EcoTech       |
| <b>Main circuit</b>   |                       |
| number of poles for main current circuit  | 3                     |
| adjustable current response value current of the current-dependent overload release | 0.35 ... 0.5 A        |
| type of voltage for main current circuit  | AC                    |
| operating voltage   |                       |
| • rated value   | 20 ... 690 V          |
| • at AC-3 rated value maximum   | 690 V                 |
| • at AC-3e rated value maximum  | 690 V                 |
| operating frequency rated value   | 50 ... 60 Hz          |
| operational current rated value   | 0.5 A                 |
| operational current   |                       |
| • at AC-3 at 400 V rated value  | 0.5 A                 |
| • at AC-3e at 400 V rated value   | 0.5 A                 |
| operating power   |                       |
| • at AC-3   |                       |
| — at 230 V rated value  | 0.1 kW                |
| — at 400 V rated value  | 0.1 kW                |
| — at 500 V rated value  | 0.1 kW                |
| — at 690 V rated value  | 0.2 kW                |
| • at AC-3e  |                       |
| — at 230 V rated value  | 0.1 kW                |
| — at 400 V rated value  | 0.1 kW                |
| — at 500 V rated value  | 0.1 kW                |
| — at 690 V rated value  | 0.2 kW                |
| operating frequency   |                       |
| • at AC-3 maximum   | 15 1/h                |
| • at AC-3e maximum  | 15 1/h                |
| <b>Auxiliary circuit</b>  |                       |
| type of voltage for auxiliary and control circuit                                   | AC/DC                 |
| number of NC contacts for auxiliary contacts  | 0                     |
| number of NO contacts for auxiliary contacts  | 0                     |
| number of CO contacts for auxiliary contacts  | 0                     |
| <b>Protective and monitoring functions</b>  |                       |
| product function  |                       |
| • ground fault detection  | No                    |
| • phase failure detection   | Yes                   |
| trip class  | CLASS 10              |
| design of the overload release  | thermal               |
| maximum short-circuit current breaking capacity (Icu)                               |                       |
| • at AC at 240 V rated value  | 100 kA                |
| • at AC at 400 V rated value  | 100 kA                |
| • at AC at 500 V rated value  | 100 kA                |
| • at AC at 690 V rated value  | 100 kA                |
| operating short-circuit current breaking capacity (Ics) at AC                       |                       |
| • at 240 V rated value  | 100 kA                |
| • at 400 V rated value  | 100 kA                |
| • at 500 V rated value  | 100 kA                |
| • at 690 V rated value  | 100 kA                |
| response value current of instantaneous short-circuit trip unit                     | 6.5 A                 |
| <b>UL/CSA ratings</b>   |                       |
| full-load current (FLA) for 3-phase AC motor  |                       |
| • at 480 V rated value  | 0.5 A                 |
| • at 600 V rated value  | 0.5 A                 |
| Category Control Number (CCN)   | E156943 (NKJH, NKJH7) |
| <b>Short-circuit protection</b>   |                       |
| product function short circuit protection   | Yes                   |
| design of the short-circuit trip  | magnetic              |

|   |   |
|---|---|
| design of the fuse link for IT network for short-circuit protection of the main circuit | gL/gG 4 A   |
| • at 690 V  |   |
| <b>Installation/ mounting/ dimensions</b>   |   |
| mounting position   | any   |
| fastening method  | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                |
| height  | 97 mm   |
| width   | 45 mm   |
| depth   | 97 mm   |
| required spacing  |   |
| • with side-by-side mounting at the side  | 0 mm  |
| • for grounded parts at 400 V   |   |
| — downwards   | 30 mm   |
| — upwards   | 30 mm   |
| — at the side   | 9 mm  |
| • for live parts at 400 V   |   |
| — downwards   | 30 mm   |
| — upwards   | 30 mm   |
| — at the side   | 9 mm  |
| • for grounded parts at 500 V   |   |
| — downwards   | 30 mm   |
| — upwards   | 30 mm   |
| — at the side   | 9 mm  |
| • for live parts at 500 V   |   |
| — downwards   | 30 mm   |
| — upwards   | 30 mm   |
| — at the side   | 9 mm  |
| • for grounded parts at 690 V   |   |
| — downwards   | 50 mm   |
| — upwards   | 50 mm   |
| — backwards   | 0 mm  |
| — at the side   | 30 mm   |
| — forwards  | 0 mm  |
| • for live parts at 690 V   |   |
| — downwards   | 50 mm   |
| — upwards   | 50 mm   |
| — backwards   | 0 mm  |
| — at the side   | 30 mm   |
| — forwards  | 0 mm  |
| <b>Connections/ Terminals</b>   |   |
| type of electrical connection   |   |
| • for main current circuit  | screw-type terminals  |
| arrangement of electrical connectors for main current circuit                           | Top and bottom  |
| type of connectable conductor cross-sections  |   |
| • for main contacts   |   |
| — solid or stranded   | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )                       |
| — finely stranded with core end processing  | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| • for AWG cables for main contacts  | 2x (16 ... 12), 2x (14 ... 8)   |
| tightening torque   |   |
| • for main contacts with screw-type terminals   | 2 ... 2.5 N·m   |
| design of screwdriver shaft   | Diameter 5 to 6 mm  |
| size of the screwdriver tip   | Pozidriv size 2   |
| design of the thread of the connection screw  |   |
| • for main contacts   | M4  |
| <b>Safety related data</b>  |   |
| product function suitable for safety function   | Yes   |
| suitability for use   |   |
| • safety-related switching on   | No  |

|  |  |
|--|--|
| • safety-related switching OFF                                       | Yes  |
| <b>service life maximum</b>  | 10 a   |
| <b>test wear-related service life necessary</b>                      | Yes  |
| <b>proportion of dangerous failures</b>                              |  |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 50 %   |
| <b>B10 value with high demand rate according to SN 31920</b>         | 5 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 50 FIT   |
| ISO 13849  |  |
| <b>device type according to ISO 13849-1</b>                          | 3  |
| <b>overdimensioning according to ISO 13849-2 necessary</b>           | Yes  |
| IEC 61508  |  |
| <b>safety device type according to IEC 61508-2</b>                   | Type A   |
| <b>T1 value</b>  |  |
| • for proof test interval or service life according to IEC 61508     | 10 a   |
| Electrical Safety  |  |
| <b>protection class IP on the front according to IEC 60529</b>       | IP20   |
| <b>touch protection on the front according to IEC 60529</b>          | finger-safe, for vertical contact from the front |
| <b>Display</b>   |  |
| display version for switching status                                 | Handle   |
| <b>Approvals Certificates</b>  |  |
| <b>General Product Approval</b>                                      |  |



| General Product Approval | For use in hazardous locations | Test Certificates |
|--------------------------|--------------------------------|-------------------|
| <b>AR</b>                |                                |                   |

| Maritime application |
|----------------------|
|                      |

| other | Railway |
|-------|---------|
|       |         |

| Environment |
|-------------|
|             |

| Further information                 |
|-------------------------------------|
| <b>Information on the packaging</b> |

<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=3RV2021-0FA10>

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

<https://support.industry.siemens.com/cs/ww/en/p/3RV2021-0FA10>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-0FA10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0FA10&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-0FA10>

Characteristic curves

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



