



Separation amplifier 24 V AC/DC, 3-way separation input: 0-20 mA output: 4-20 mA screw terminal

|                                                                                                               |                                  |
|---------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>product brand name</b>                                                                                     | SIRIUS                           |
| <b>product category</b>                                                                                       | Signal converter                 |
| <b>product designation</b>                                                                                    | Single-range converters          |
| <b>design of the product</b>                                                                                  | active                           |
| <b>product type designation</b>                                                                               | 3RS70                            |
| <b>General technical data</b>                                                                                 |                                  |
| <b>display version LED</b>                                                                                    | Yes                              |
| <b>number of channels</b>                                                                                     | 1                                |
| <b>consumed active power</b>                                                                                  | 0.29 W                           |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | 50 V                             |
| <b>surge voltage resistance rated value</b>                                                                   | 2 500 V                          |
| <b>protection class IP</b>                                                                                    | IP20                             |
| shock resistance according to IEC 60068-2-27                                                                  | sinusoidal half-wave 15g / 11 ms |
| vibration resistance according to IEC 60068-2-6                                                               | 6 ... 150 Hz: 2 g                |
| <b>reference code according to IEC 81346-2</b>                                                                | T                                |
| <b>Substance Prohibitance (Date)</b>                                                                          | 03/25/2015                       |
| <b>Supply voltage</b>                                                                                         |                                  |
| <b>supply voltage at AC</b>                                                                                   |                                  |
| • at 50 Hz rated value                                                                                        | 24 V                             |
| • at 60 Hz rated value                                                                                        | 24 V                             |
| <b>supply voltage at DC rated value</b>                                                                       | 24 V                             |
| supply voltage frequency rated value                                                                          | 60 ... 50 Hz                     |
| <b>operating range factor supply voltage rated value</b>                                                      |                                  |
| • at AC at 50 Hz                                                                                              | 0.8 ... 1.1                      |
| • at AC at 60 Hz                                                                                              | 0.8 ... 1.1                      |
| • at DC                                                                                                       | 0.8 ... 1.1                      |
| <b>Precision</b>                                                                                              |                                  |
| <b>relative metering precision</b>                                                                            | 0.1 %                            |
| <b>relative linearity deviation</b>                                                                           | 0.05 %                           |
| <b>temperature drift per °C</b>                                                                               | 0.015 %/°C                       |
| <b>voltage ripple maximum</b>                                                                                 | 20 mV                            |
| <b>limit frequency</b>                                                                                        | 30 Hz                            |
| <b>settling time for 1 % deviation</b>                                                                        | 17 ms                            |
| <b>rise time</b>                                                                                              | 6 ms                             |
| <b>Main circuit</b>                                                                                           |                                  |
| <b>type of voltage</b>                                                                                        | AC/DC                            |
| <b>Inputs/ Outputs</b>                                                                                        |                                  |
| <b>input voltage</b>                                                                                          | 30 V                             |

|                                                                |                                             |
|----------------------------------------------------------------|---------------------------------------------|
| <b>property of the output short-circuit proof</b>              | Yes                                         |
| <b>type of signal at input</b>                                 | 0 ... 20 mA                                 |
| <b>type of signal at output</b>                                | 4 ... 20 mA                                 |
| <b>input impedance of current input maximum</b>                | 100 Ω                                       |
| <b>output load</b>                                             |                                             |
| • at the current output maximum                                | 500 Ω                                       |
| <b>Electromagnetic compatibility</b>                           |                                             |
| EMC emitted interference according to IEC 60947-1              | Environment B                               |
| EMC immunity according to IEC 60947-1                          | corresponds to degree of severity 3         |
| <b>conducted interference</b>                                  |                                             |
| • due to burst according to IEC 61000-4-4                      | 1 kV 5/50 ns                                |
| • due to conductor-conductor surge according to IEC 61000-4-5  | 1 kV                                        |
| <b>field-based interference according to IEC 61000-4-3</b>     | 10 V/m                                      |
| <b>electrostatic discharge according to IEC 61000-4-2</b>      | 6 kV contact discharge / 8 kV air discharge |
| <b>Galvanic isolation</b>                                      |                                             |
| <b>design of the electrical isolation</b>                      | 3 paths                                     |
| <b>galvanic isolation</b>                                      |                                             |
| • between input and output                                     | Yes                                         |
| • between the outputs                                          | No                                          |
| • between the inputs                                           | No                                          |
| • between the voltage supply and other circuits                | Yes                                         |
| <b>Connections/ Terminals</b>                                  |                                             |
| <b>type of electrical connection</b>                           | screw-type terminals                        |
| <b>type of connectable conductor cross-sections</b>            |                                             |
| • solid                                                        | 1x (0.25 ... 2.5 mm <sup>2</sup> )          |
| • finely stranded with core end processing                     | 1x (0.25 ... 1.5 mm <sup>2</sup> )          |
| • at AWG cables solid                                          | 1 x (20 ... 14)                             |
| <b>connectable conductor cross-section</b>                     |                                             |
| • solid                                                        | 0.25 ... 2.5 mm <sup>2</sup>                |
| • finely stranded with core end processing                     | 0.25 ... 1.5 mm <sup>2</sup>                |
| <b>AWG number as coded connectable conductor cross section</b> |                                             |
| • solid                                                        | 20 ... 14                                   |
| tightening torque with screw-type terminals                    | 0.5 ... 0.6 N·m                             |
| <b>Installation/ mounting/ dimensions</b>                      |                                             |
| <b>mounting position</b>                                       | any                                         |
| <b>fastening method</b>                                        | snap-on mounting                            |
| <b>height</b>                                                  | 93 mm                                       |
| <b>width</b>                                                   | 6.2 mm                                      |
| <b>depth</b>                                                   | 72.5 mm                                     |
| <b>required spacing</b>                                        |                                             |
| • with side-by-side mounting                                   |                                             |
| — forwards                                                     | 0 mm                                        |
| — backwards                                                    | 0 mm                                        |
| — upwards                                                      | 0 mm                                        |
| — downwards                                                    | 0 mm                                        |
| — at the side                                                  | 0 mm                                        |
| • for grounded parts                                           |                                             |
| — forwards                                                     | 0 mm                                        |
| — backwards                                                    | 0 mm                                        |
| — upwards                                                      | 0 mm                                        |
| — at the side                                                  | 0 mm                                        |
| — downwards                                                    | 0 mm                                        |
| • for live parts                                               |                                             |
| — forwards                                                     | 0 mm                                        |
| — backwards                                                    | 0 mm                                        |
| — upwards                                                      | 0 mm                                        |
| — downwards                                                    | 0 mm                                        |
| — at the side                                                  | 0 mm                                        |

| Ambient conditions                                      |                |
|---------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum | 2 000 m        |
| <b>ambient temperature</b>                              |                |
| • during operation                                      | -25 ... +60 °C |
| • during storage                                        | -40 ... +80 °C |
| • during transport                                      | -40 ... +80 °C |
| relative humidity during operation                      | 10 ... 95 %    |

| Certificates/ approvals  |                           |                   |
|--------------------------|---------------------------|-------------------|
| General Product Approval | Declaration of Conformity | Test Certificates |



[Confirmation](#)



[Type Test Certificates/Test Report](#)

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



[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=3RS7002-1DE00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7002-1DE00>

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

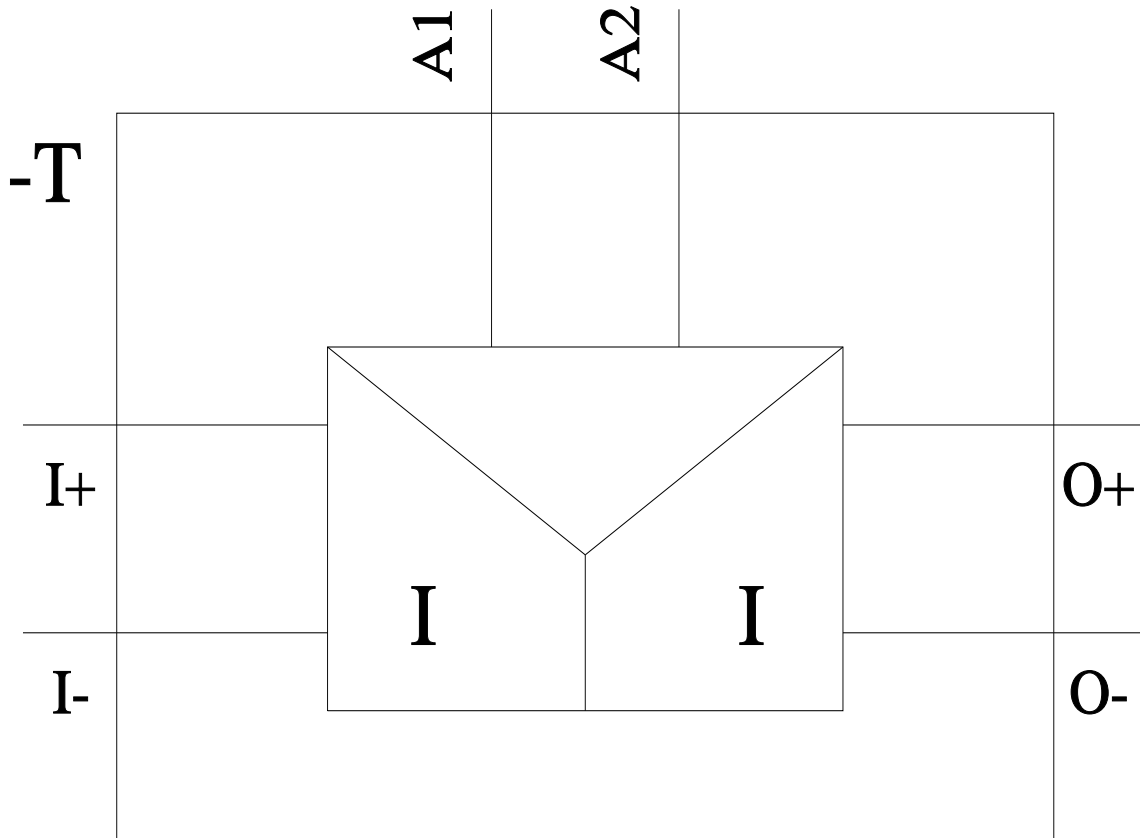
<https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-1DE00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RS7002-1DE00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7002-1DE00&lang=en)

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-1DE00/manual>



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