



Separation amplifier 24 V AC/DC, 3-way separation input: 4-20 mA output: 4-20 mA Spring-type terminal (push-in)

|   |                                  |
|---|----------------------------------|
| product brand name  | SIRIUS                           |
| product category  | Signal converter                 |
| product designation   | Single-range converters          |
| design of the product   | active                           |
| product type designation  | 3RS70                            |
| <b>General technical data</b>   |                                  |
| display version LED   | Yes                              |
| number of channels  | 1                                |
| consumed active power   | 0.29 W                           |
| insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value | 50 V                             |
| surge voltage resistance rated value  | 2 500 V                          |
| 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                |
| reference code according to IEC 81346-2   | T                                |
| Substance Prohibitance (Date)   | 03/25/2015                       |
| Weight  | 0.047 kg                         |
| <b>Supply voltage</b>   |                                  |
| supply voltage at AC  |                                  |
| • at 50 Hz rated value  | 24 V                             |
| • at 60 Hz rated value  | 24 V                             |
| supply voltage at DC rated value  | 24 V                             |
| supply voltage frequency rated value  | 60 ... 50 Hz                     |
| operating range factor supply voltage rated value   |                                  |
| • 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>  |                                  |
| relative metering precision   | 0.1 %                            |
| relative linearity deviation  | 0.05 %                           |
| temperature drift per °C  | 0.015 %/°C                       |
| voltage ripple maximum  | 20 mV                            |
| limit frequency   | 30 Hz                            |
| settling time for 1 % deviation   | 17 ms                            |
| rise time   | 6 ms                             |
| <b>Main circuit</b>   |                                  |
| type of voltage   | AC/DC                            |
| <b>Inputs/ Outputs</b>  |                                  |
| input voltage maximum   | 30 V                             |
| property of the output short-circuit proof  | Yes                              |

|  |   |
|--|---|
| <b>type of signal at input</b>                                 | 4 ... 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>                           | spring-loaded terminal (push-in)            |
| <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> )          |
| • finely stranded without core end processing                  | 1x (0.25 ... 2.5 mm <sup>2</sup> )          |
| • for AWG cables solid   | 1x (20 ... 14)                              |
| • for AWG cables stranded                                      | 1x (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>                |
| • finely stranded without core end processing                  | 0.25 ... 2.5 mm <sup>2</sup>                |
| <b>AWG number as coded connectable conductor cross section</b> |   |
| • solid  | 20 ... 14                                   |
| • stranded   | 20 ... 14                                   |
| <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 %    |

#### Approvals Certificates

General Product Approval

EMV



EG-Konf.



UL



[KC](#)

Test Certificates

Maritime application

other

Environment

[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RS7003-2DE00>

Cax online generator

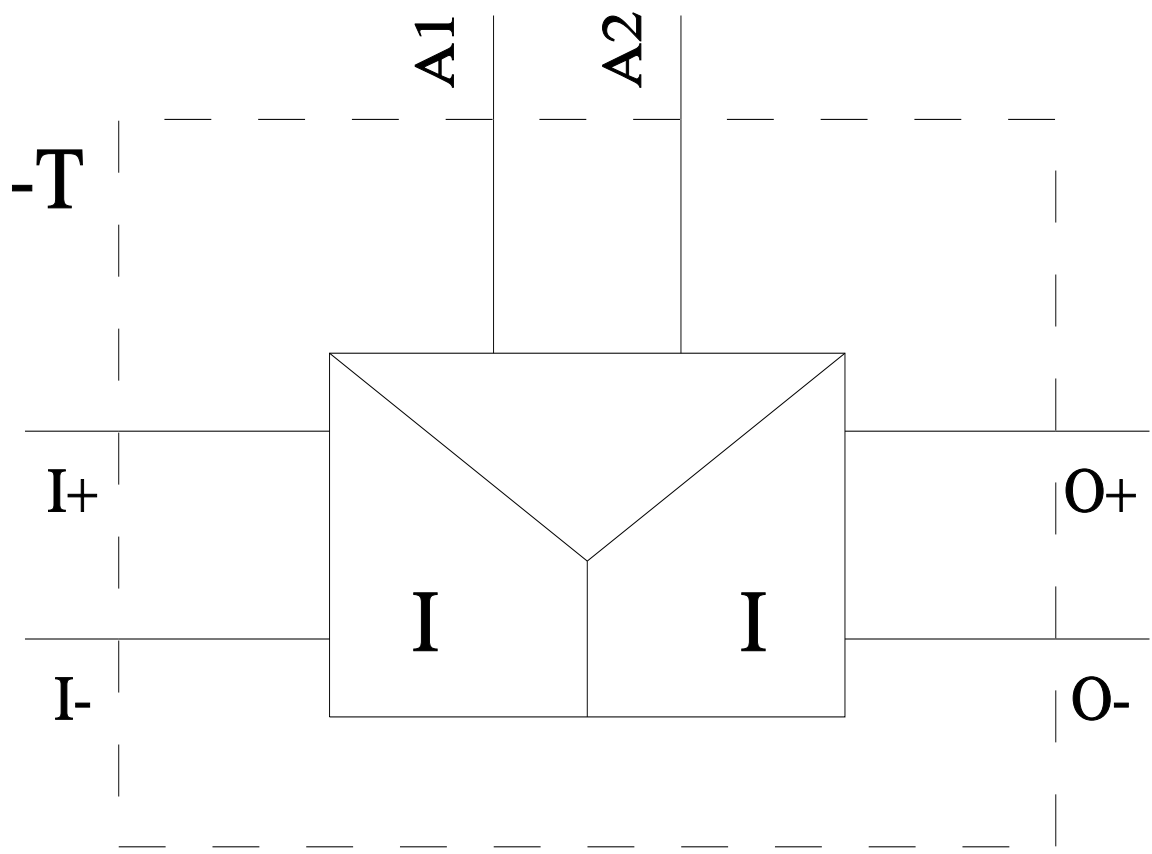
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7003-2DE00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RS7003-2DE00>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RS7003-2DE00&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7003-2DE00&lang=en)



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