

Separation amplifier 24 V AC/DC, 3-way separation input: 4-20 mA  
output: 0-10 V screw terminal



Product brand name	SIRIUS
Product category	Signal converter
Product designation	Single-range converters
Design of the product	active
Product type designation	3RS70

General technical data	
Display version LED	Yes
Number of channels	1
Consumed active power	0.29 W
Insulation voltage	
<ul style="list-style-type: none"> <li>• for overvoltage category III according to IEC 60664</li> <li>— with degree of pollution 3 rated value</li> </ul>	50 V
Surge voltage resistance rated value	2 500 V
Protection class IP	IP20
Shock resistance	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>	sinusoidal half-wave 15g / 11 ms
Vibration resistance	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-6</li> </ul>	6 ... 150 Hz: 2 g

Reference code acc. to DIN EN 81346-2	T
<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
<b>Supply voltage frequency</b>	
• 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>	4 ... 20 mA
<b>Type of signal at output</b>	0 ... 10 V
<b>Input impedance of current input maximum</b>	100 Ω
<b>Outputs</b>	
<b>Load</b>	
• at voltage output minimum	2 kΩ
<b>Electromagnetic compatibility</b>	
<b>EMC emitted interference</b>	
• acc. to IEC 60947-1	Environment B
<b>EMI immunity</b>	
• acc. to IEC 60947-1	corresponds to degree of severity 3
<b>Conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	1 kV 5/50 ns
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV





Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
<b>Galvanic isolation</b>	
Design of the electrical isolation	3 paths
Galvanic isolation	
<ul style="list-style-type: none"> <li>• between entrance and outlet</li> <li>• between the outputs</li> <li>• between the inputs</li> <li>• between the voltage supply and other circuits</li> </ul>	<p>Yes</p> <p>No</p> <p>No</p> <p>Yes</p>
<b>Connections/ Terminals</b>	
Type of electrical connection	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> <li>• at AWG conductors solid</li> </ul>	<p>1x (0.25 ... 2.5 mm<sup>2</sup>)</p> <p>1x (0.25 ... 1.5 mm<sup>2</sup>)</p> <p>1 x (20 ... 14)</p>
Connectable conductor cross-section	
<ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded with core end processing</li> </ul>	<p>0.25 ... 2.5 mm<sup>2</sup></p> <p>0.25 ... 1.5 mm<sup>2</sup></p>
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> <li>• solid</li> </ul>	20 ... 14
Tightening torque	
<ul style="list-style-type: none"> <li>• with screw-type terminals</li> </ul>	0.5 ... 0.6 N·m
<b>Installation/ mounting/ dimensions</b>	
Mounting position	any
Mounting type	snap-on mounting
Height	93 mm
Width	6.2 mm
Depth	72.5 mm
Required spacing	
<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> </ul>	<p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p> <p>0 mm</p>

— 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

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

### Certificates/ approvals

General Product Approval	Declaration of Conformity	Test Certificates
 CSA	 UL	
	 EG-Konf.	<a href="#">Miscellaneous</a> <a href="#">Type Test Certificates/Test Report</a>

<b>Marine / Ship- ping</b>	<b>other</b>
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[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=3RS7003-1AE00>

**Cax online generator**

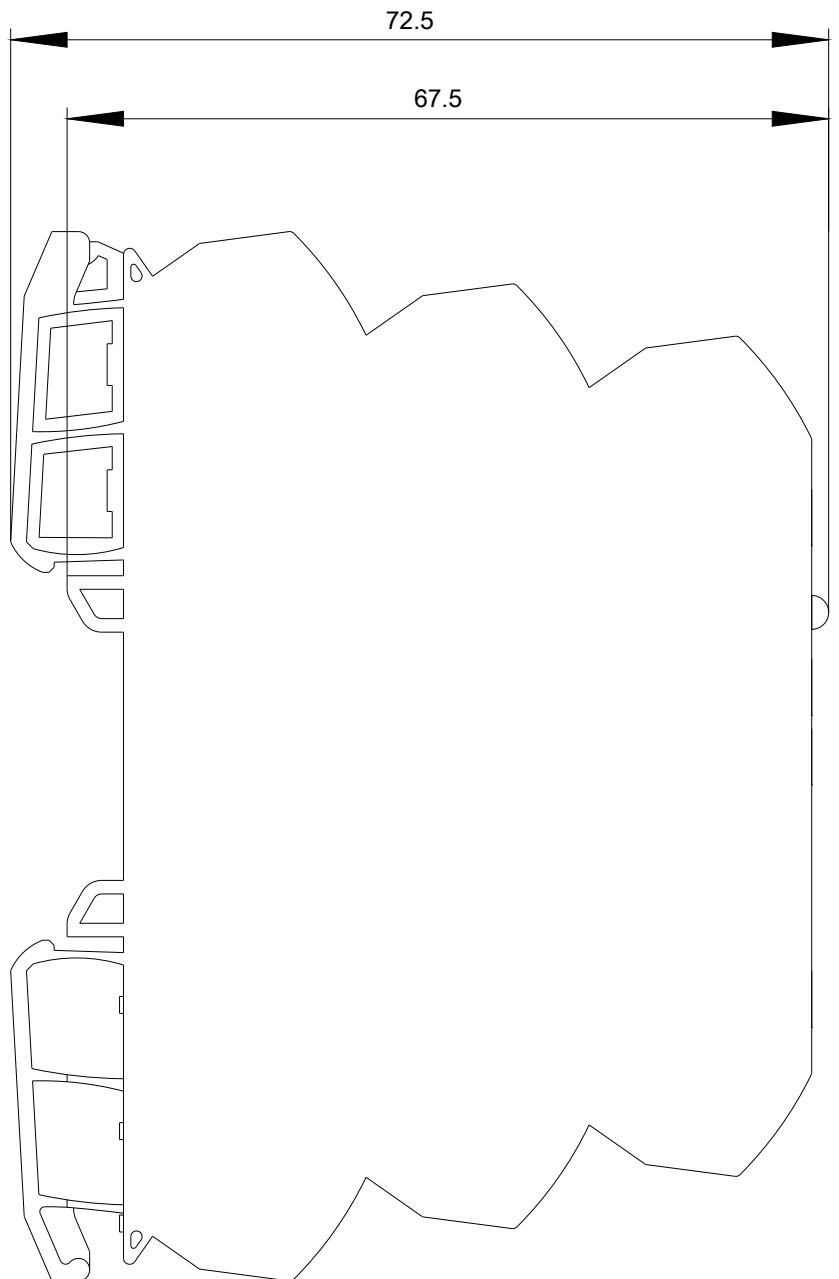
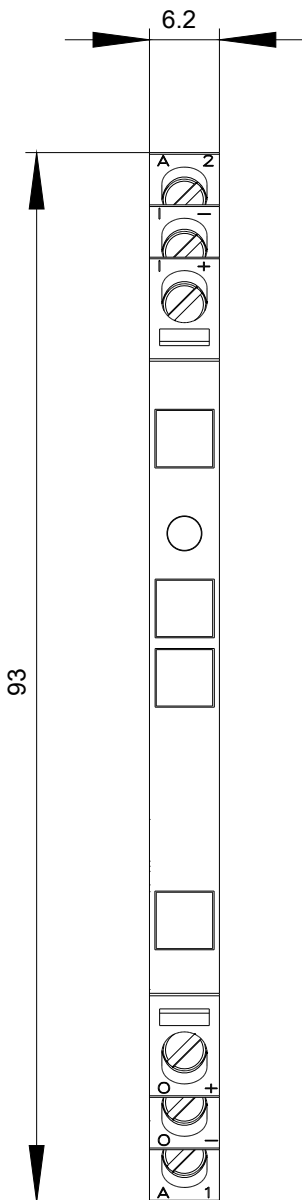
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7003-1AE00>

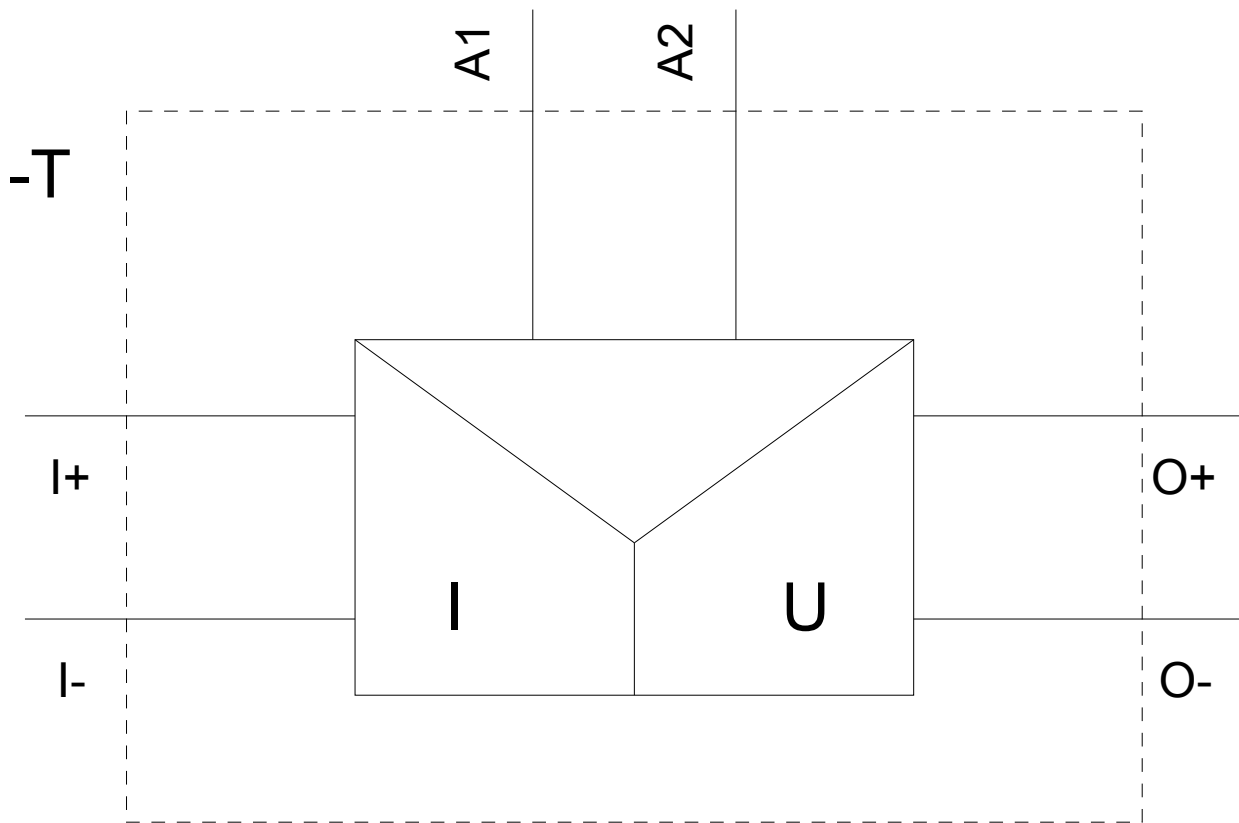
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RS7003-1AE00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RS7003-1AE00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7003-1AE00&lang=en)





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