

Separation amplifier 24 V AC/DC, 3-way separation input: 0-20 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
<ul style="list-style-type: none"> — 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
<ul style="list-style-type: none"> • Protection class IP 	IP20
Shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	sinusoidal half-wave 15g / 11 ms
Vibration resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-6 	6 ... 150 Hz: 2 g

Reference code acc. to DIN EN 81346-2	T
---------------------------------------	---

Supply voltage

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

Precision

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

Main circuit

type of voltage	AC/DC
------------------------	-------

Inputs/ Outputs

Input voltage	30 V
property of the output short-circuit proof	Yes
Type of signal at input	0 ... 20 mA
Type of signal at output	0 ... 10 V
Input impedance of current input maximum	100 Ω

Outputs

Load	
• at voltage output minimum	2 kΩ

Electromagnetic compatibility

EMC emitted interference	
• acc. to IEC 60947-1	Environment B
EMI immunity	
• acc. to IEC 60947-1	corresponds to degree of severity 3
Conducted interference	
• 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
---	---

Galvanic isolation

<ul style="list-style-type: none"> • design of the electrical isolation 	3 paths
<ul style="list-style-type: none"> • Galvanic isolation between entrance and outlet 	Yes
<ul style="list-style-type: none"> • galvanic isolation between the outputs 	No
<ul style="list-style-type: none"> • Galvanic isolation between the inputs 	No
<ul style="list-style-type: none"> • Galvanic isolation between the voltage supply and other circuits 	Yes

Connections/ Terminals

<ul style="list-style-type: none"> • type of electrical connection 	screw-type terminals
<ul style="list-style-type: none"> • type of connectable conductor cross-sections solid 	1x (0.25 ... 2.5 mm ²)
<ul style="list-style-type: none"> • Type of connectable conductor cross-sections finely stranded with core end processing 	1x (0.25 ... 1.5 mm ²)
<ul style="list-style-type: none"> • Type of connectable conductor cross-sections at AWG conductors solid 	1 x (20 ... 14)
<ul style="list-style-type: none"> • connectable conductor cross-section solid 	0.25 ... 2.5 mm ²
<ul style="list-style-type: none"> • connectable conductor cross-section finely stranded with core end processing 	0.25 ... 1.5 mm ²
AWG number as coded connectable conductor cross section	
<ul style="list-style-type: none"> • solid 	20 ... 14
Tightening torque	
<ul style="list-style-type: none"> • with screw-type terminals 	0.5 ... 0.6 N·m

Installation/ mounting/ dimensions





<ul style="list-style-type: none"> • 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"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	0 mm 0 mm 0 mm 0 mm 0 mm
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards 	0 mm 0 mm 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
Ambient temperature	
• 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
 CSA	 UL	 EAC
	 EG-Konf.	Miscellaneous Type Test Certificates/Test Report

Marine / Ship-ping	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=3RS7002-1AE00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7002-1AE00>

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

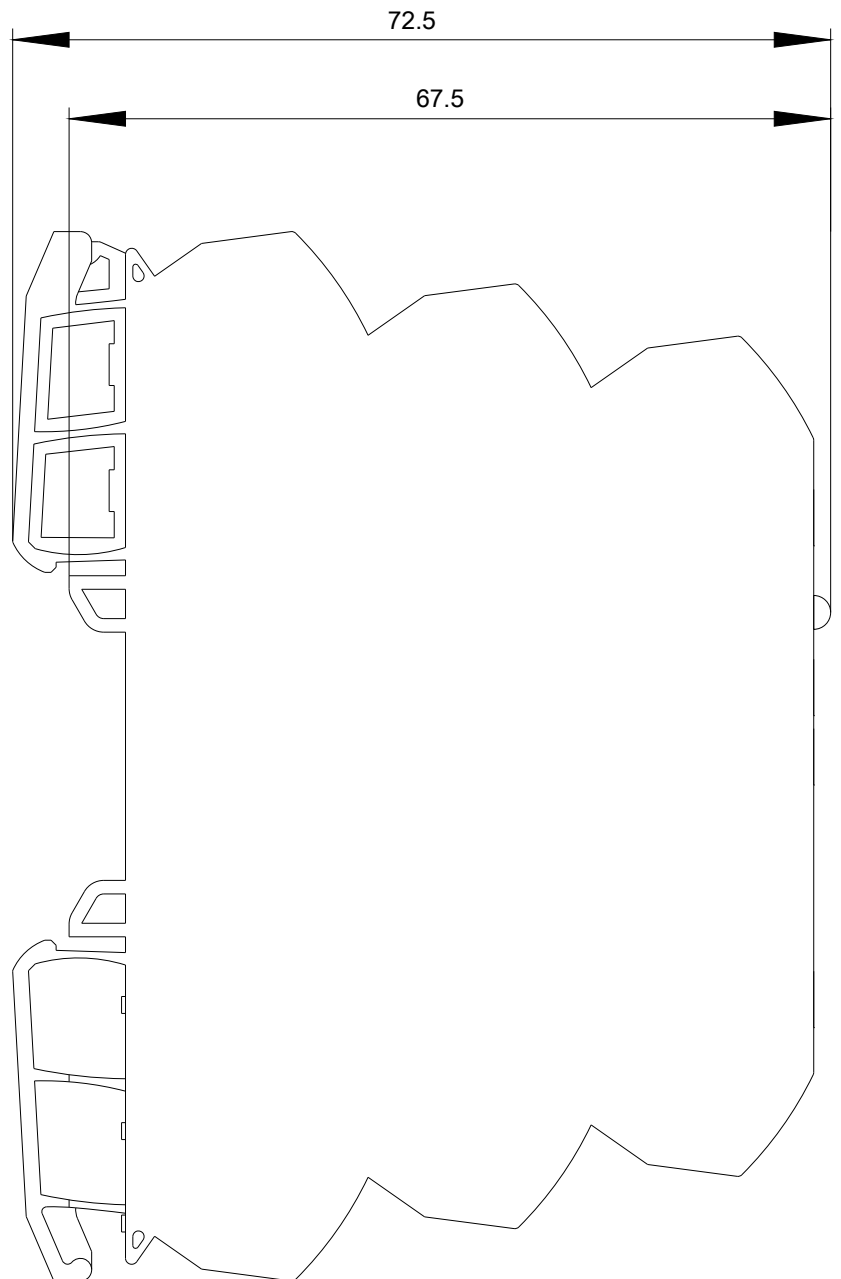
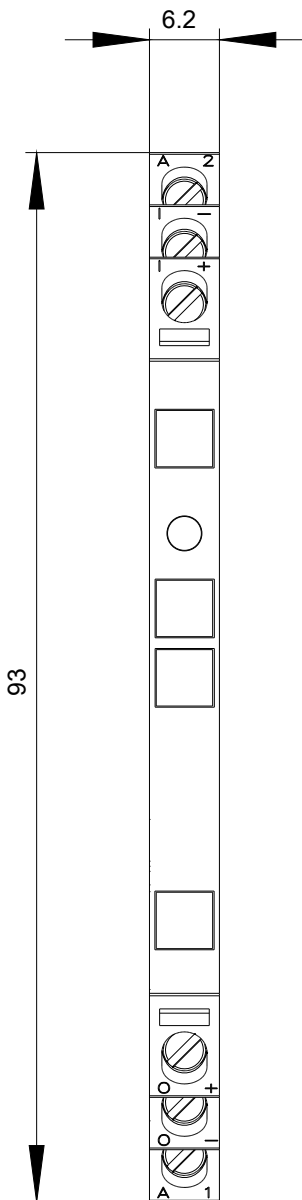
<https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-1AE00>

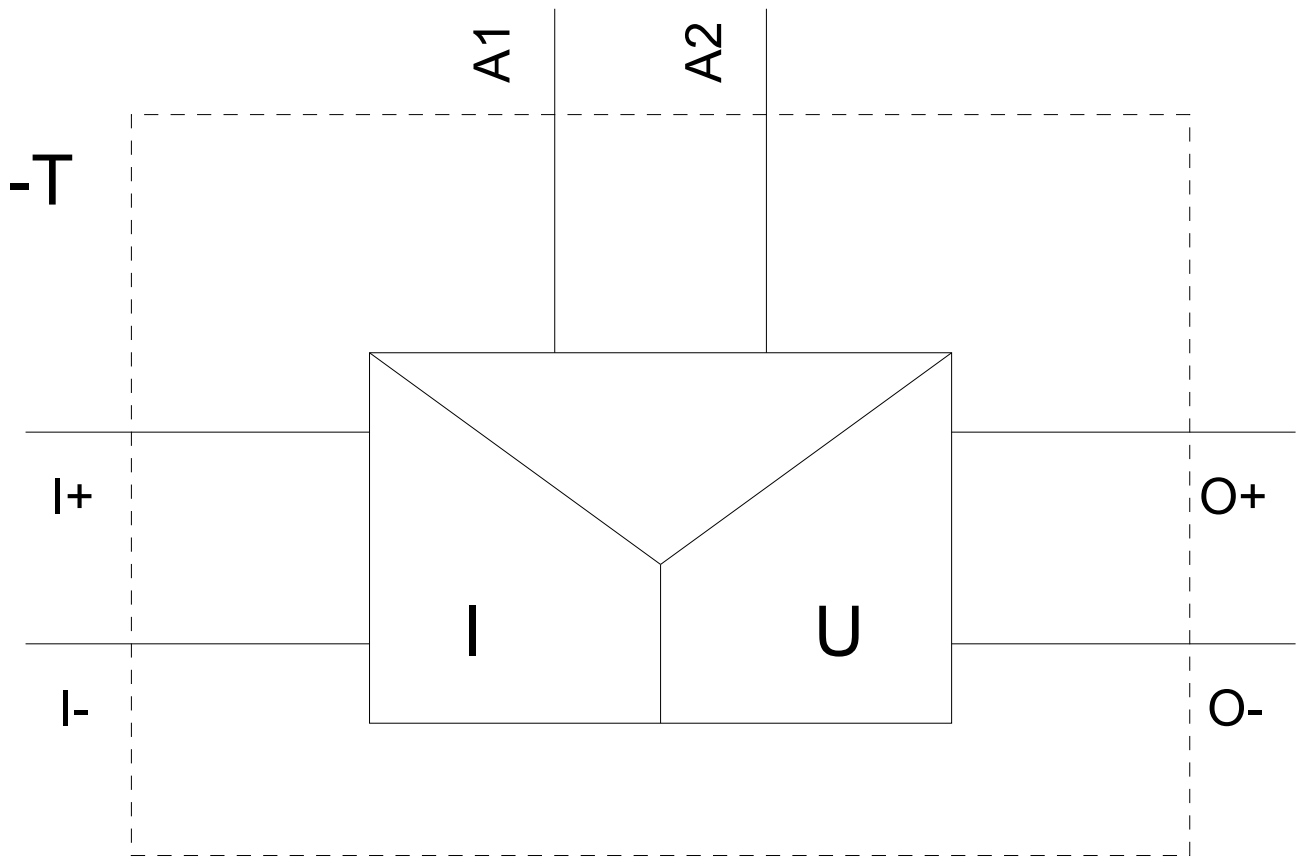
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7002-1AE00&lang=en

Characteristic: Derating

<https://support.industry.siemens.com/cs/ww/en/ps/3RS7002-1AE00/manual>





last modified:

08/14/2020