SIEMENS

Data sheet 3RS7003-1AE00



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 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 15 g / 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 (day/month/year)	03/25/2015
Net Weight	0.048 kg
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 maximum	30 V

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property of the output short-circuit proof	Yes
type of signal at input	4 ... 20 mA
type of signal at output	0 ... 10 V
input impedance of current input maximum	100 Ω
output load	
● at voltage output minimum	2 kΩ
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	Environment B
EMC immunity according to IEC 60947-1	corresponds to degree of severity 3
conducted interference	
● 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
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge
Galvanic isolation	
design of the electrical isolation	3 paths
galvanic isolation	
● between input and output	Yes
● between the outputs	No
● between the inputs	No
● between the voltage supply and other circuits	Yes
Connections/ Terminals	
type of electrical connection	screw terminal
type of connectable conductor cross-sections	
● solid	1x (0.25 ... 2.5 mm²)
● finely stranded with core end processing	1x (0.25 ... 1.5 mm²)
● for AWG cables solid	1x (20 ... 14)
connectable conductor cross-section	
● solid	0.25 ... 2.5 mm²
● finely stranded with core end processing	0.25 ... 1.5 mm²
AWG number as coded connectable conductor cross section	
● solid	20 ... 14
tightening torque with screw-type terminals	0.5 ... 0.6 N·m
Installation/ mounting/ dimensions	
mounting position	any
fastening method	snap-on mounting
height	93 mm
width	6.2 mm
depth	72.5 mm
required spacing	
● 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

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— 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 %

Approvals Certificates

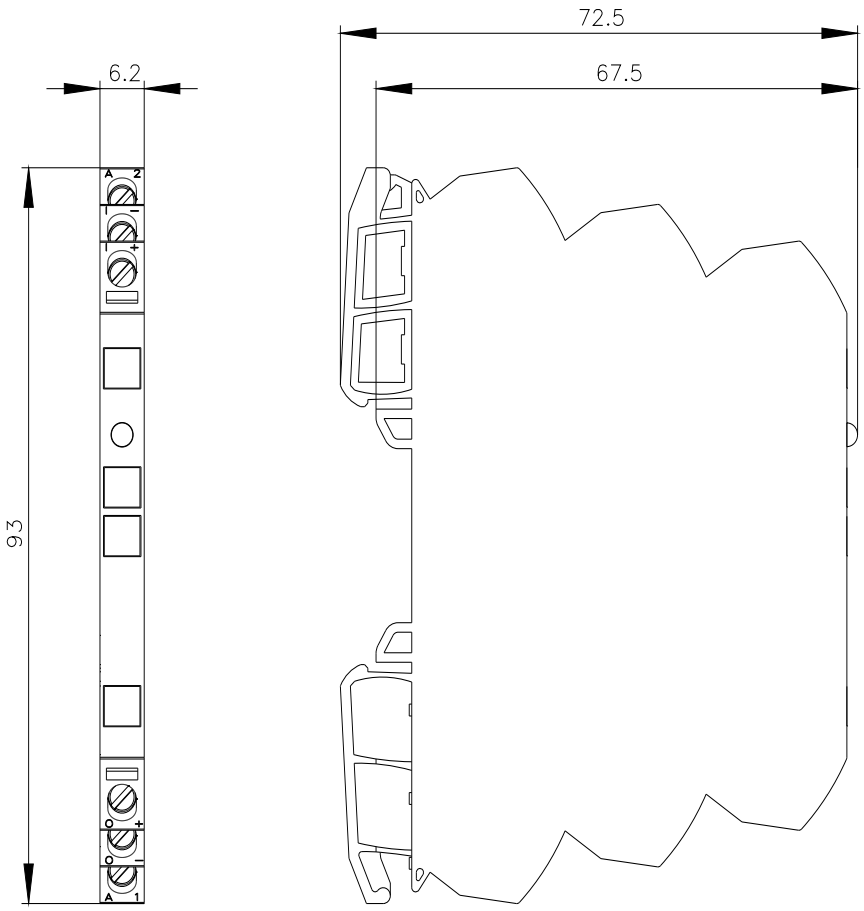
Environment	General Product Approval				EMV
Environmental Confirmations	CSA	cULus	EAC	CE EG-Konf.	KC

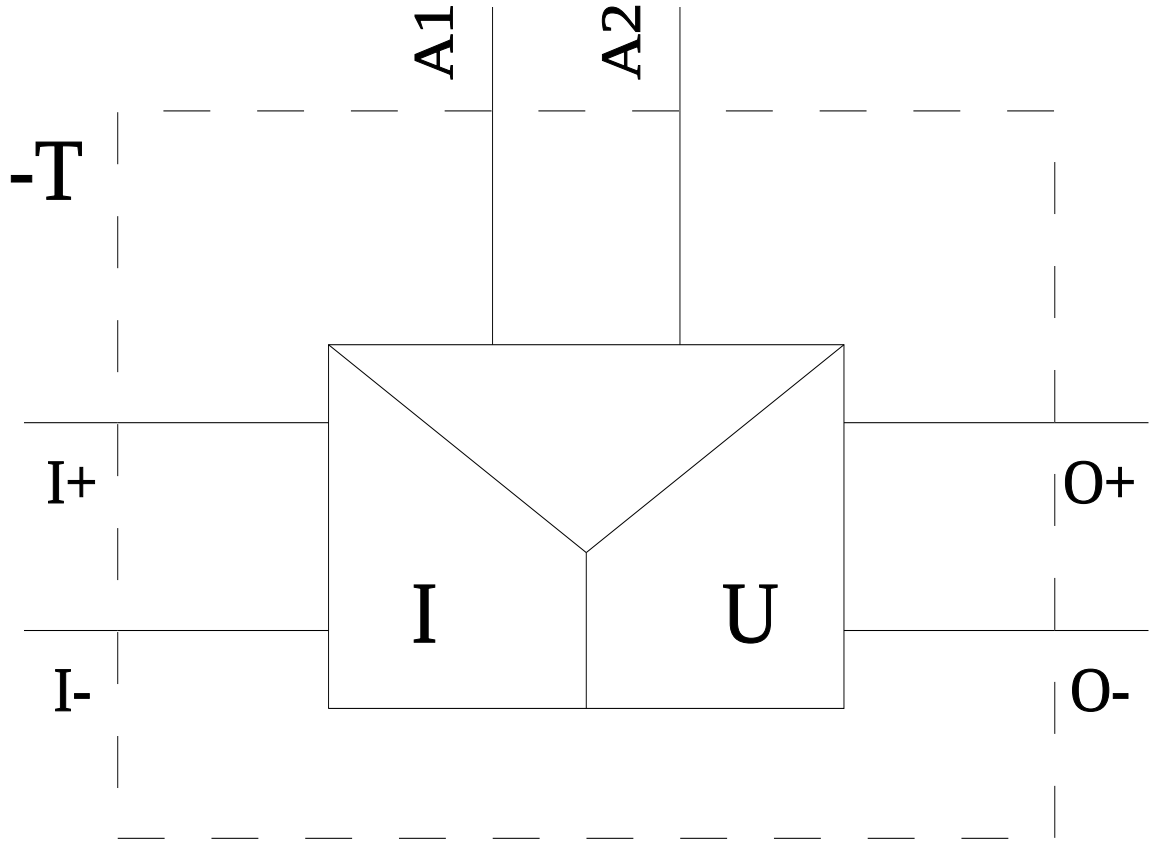
Test Certificates	Maritime application	other	
Type Test Certificates/Test Report	DNV	Confirmation	产品合格 QC PASS

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=3RS7003-1AE00
Cax online generator
https://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, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7003-1AE00&lang=en

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