



Signal converter with Manual-Auto switch 24-240 V AC/DC, 3-way separation input: 0-10 V, 0/4-20 mA output: 0-10 V, 0/4-20 mA screw terminal

product brand name	SIRIUS
product category	Signal converter
product designation	multi-range converters
design of the product	active, switchable, with manual/automatic switching and setting potentiometer
product type designation	3RS70

### General technical data

display version LED	Yes
number of channels	1
consumed active power	0.5 W
insulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value	300 V
surge voltage resistance rated value	4 000 V
protection class IP	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
reference code according to IEC 81346-2	T
Substance Prohibitance (Date)	03/25/2015

### Supply voltage

supply voltage at AC	
• at 50 Hz rated value	24 ... 240 V
• at 60 Hz rated value	24 ... 240 V
supply voltage at DC rated value	24 ... 240 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
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### Inputs/ Outputs

input voltage	30 V
property of the output short-circuit proof	Yes

<b>type of signal at input</b>	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA
<b>type of signal at output</b>	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA
<b>input impedance of current input maximum</b>	100 Ω
<b>input impedance of voltage input minimum</b>	330 kΩ
<b>output load</b>	
• at voltage output minimum	2 kΩ
• 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>	17.5 mm
<b>depth</b>	75 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
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m

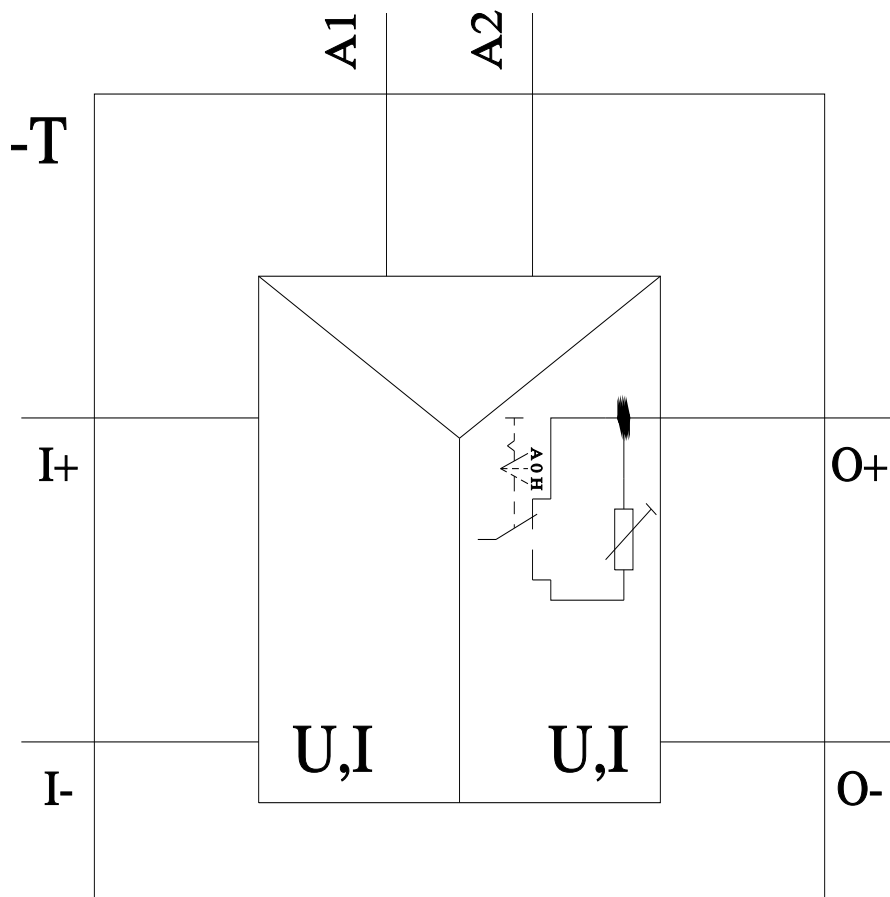
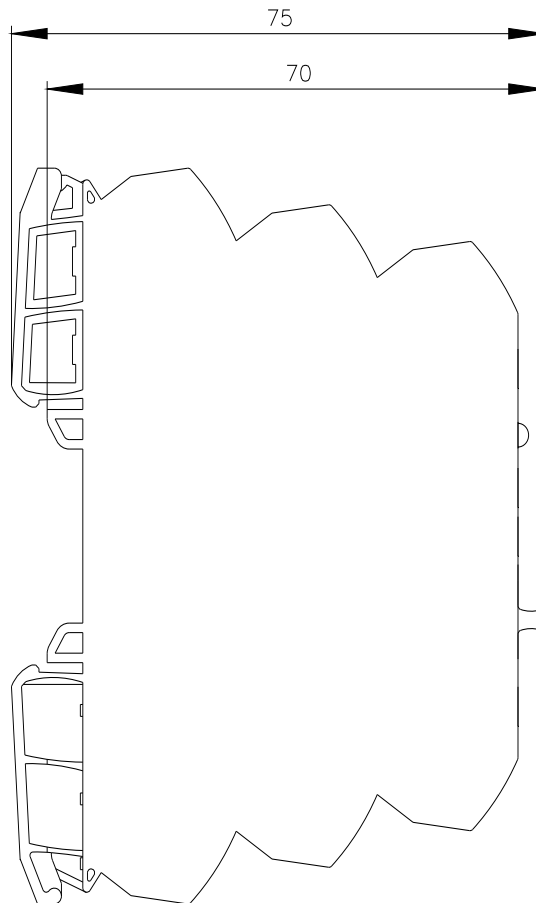
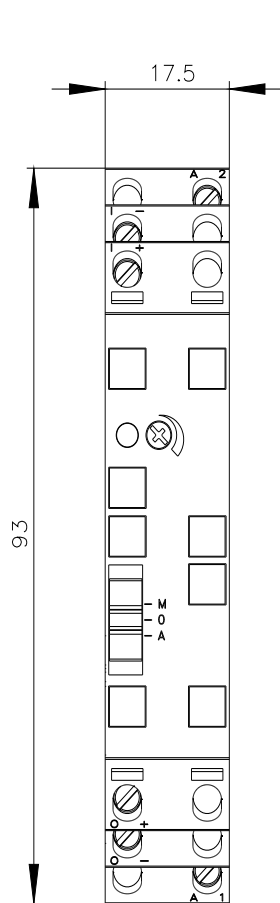
**ambient temperature**

- during operation
- during storage
- during transport

relative humidity during operation

-25 ... +60 °C  
-40 ... +80 °C  
-40 ... +80 °C  
10 ... 95 %

**Certificates/ approvals****General Product Approval****Declaration of Conformity**[Confirmation](#)**Test Certificates****Marine / Shipping****other**[Type Test Certificates/Test Report](#)[Confirmation](#)**Further information****Information on the packaging**<https://support.industry.siemens.com/cs/ww/en/view/109813875>**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=3RS7025-1FW00>**Cax online generator**<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7025-1FW00>**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**<https://support.industry.siemens.com/cs/ww/en/ps/3RS7025-1FW00>**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RS7025-1FW00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RS7025-1FW00&lang=en)**Characteristic: Derating**<https://support.industry.siemens.com/cs/ww/en/ps/3RS7025-1FW00/manual>



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