

Signal converter with Manual-Auto switch 24 V AC/DC, 3-way separation input: 0-10 V, 0/4-20 mA output: 0-10 V, 0/4-20 mA Spring-type terminal (push-in)



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	50 V
• for overvoltage category III according to IEC 60664	
— with degree of pollution 3 rated value	
Surge voltage resistance rated value	4 000 V
Protection class IP	IP20
Shock resistance	sinusoidal half-wave 15g / 11 ms
• acc. to IEC 60068-2-27	
Vibration resistance	

• acc. to IEC 60068-2-6	6 ... 150 Hz: 2 g
Reference code acc. to DIN EN 81346-2	T
Reference code acc. to DIN EN 61346-2	K

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
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Inputs/ Outputs

Input voltage	30 V
Property of the output Short-circuit proof	Yes
Type of signal at input	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA
Type of signal at output	0 ... 10 V, 0 ... 20 mA, 4 ... 20 mA
Input impedance of current input maximum	100 Ω
Input impedance of voltage input minimum	330 kΩ

Outputs

Load	
• at voltage output minimum	2 kΩ
• at the current output maximum	500 Ω

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

Design of the electrical isolation	3 paths
Galvanic isolation	
• between entrance and outlet	Yes
• between the outputs	No
• between the inputs	No
• between the voltage supply and other circuits	Yes

Connections/ Terminals

Type of electrical connection	spring-loaded terminals
Type of connectable conductor cross-sections	
• solid	1x (0.25 ... 2.5 mm ²)
• finely stranded with core end processing	1x (0.25 ... 1.5 mm ²)
• finely stranded without core end processing	1x (0.25 ... 2.5 mm ²)
• at AWG conductors solid	1 x (20 ... 14)
• at AWG conductors stranded	1x (20 ... 14)
Connectable conductor cross-section	
• solid	0.25 ... 2.5 mm ²
• finely stranded with core end processing	0.25 ... 1.5 mm ²
• finely stranded without core end processing	0.25 ... 2.5 mm ²
AWG number as coded connectable conductor cross section	
• solid	20 ... 14
• stranded	20 ... 14

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	snap-on mounting
Height	93 mm
Width	17.5 mm
Depth	75 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
— at the side	0 mm

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
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
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[Confirmation](#)

Further information

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

www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)

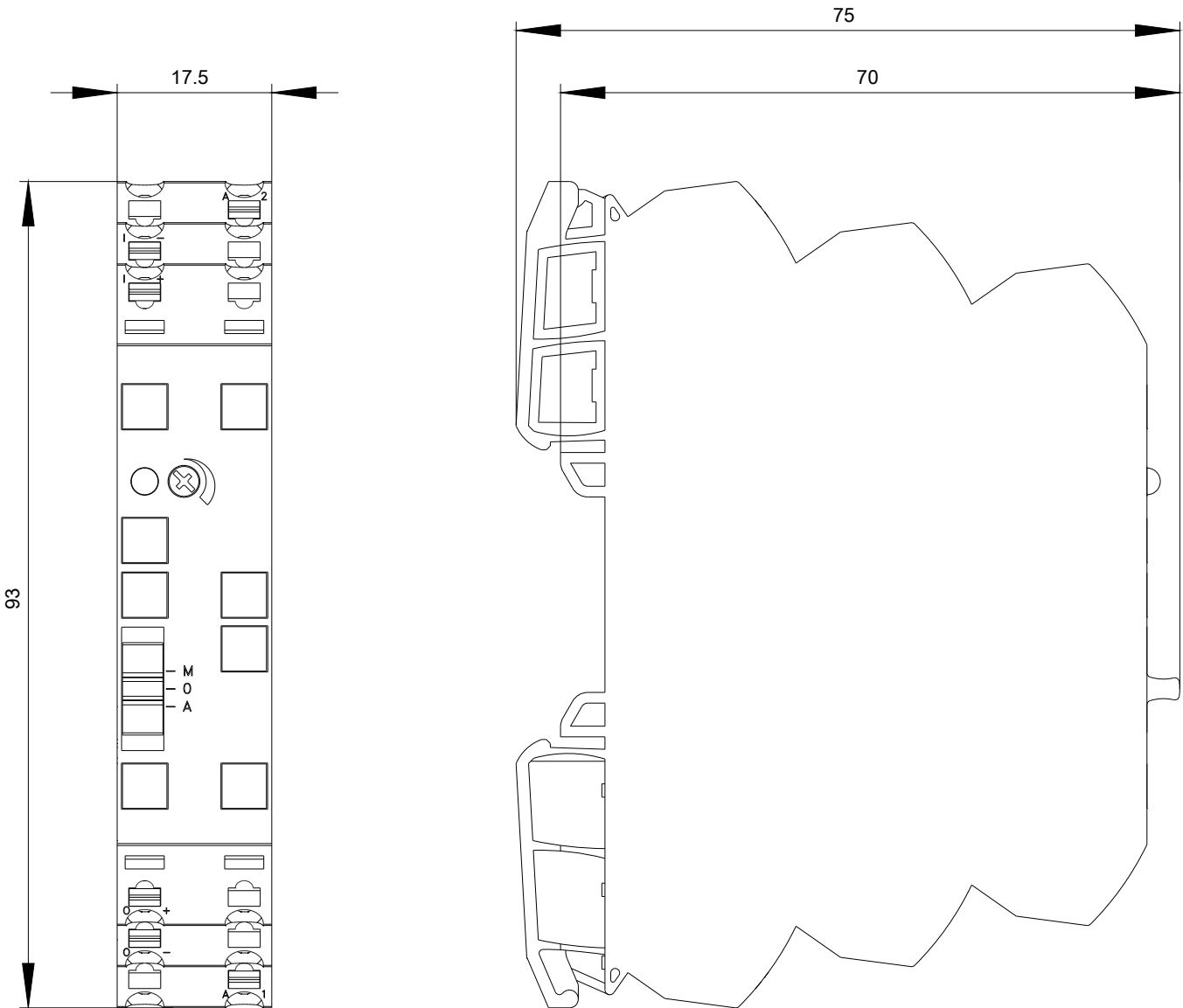
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RS7025-2FE00>

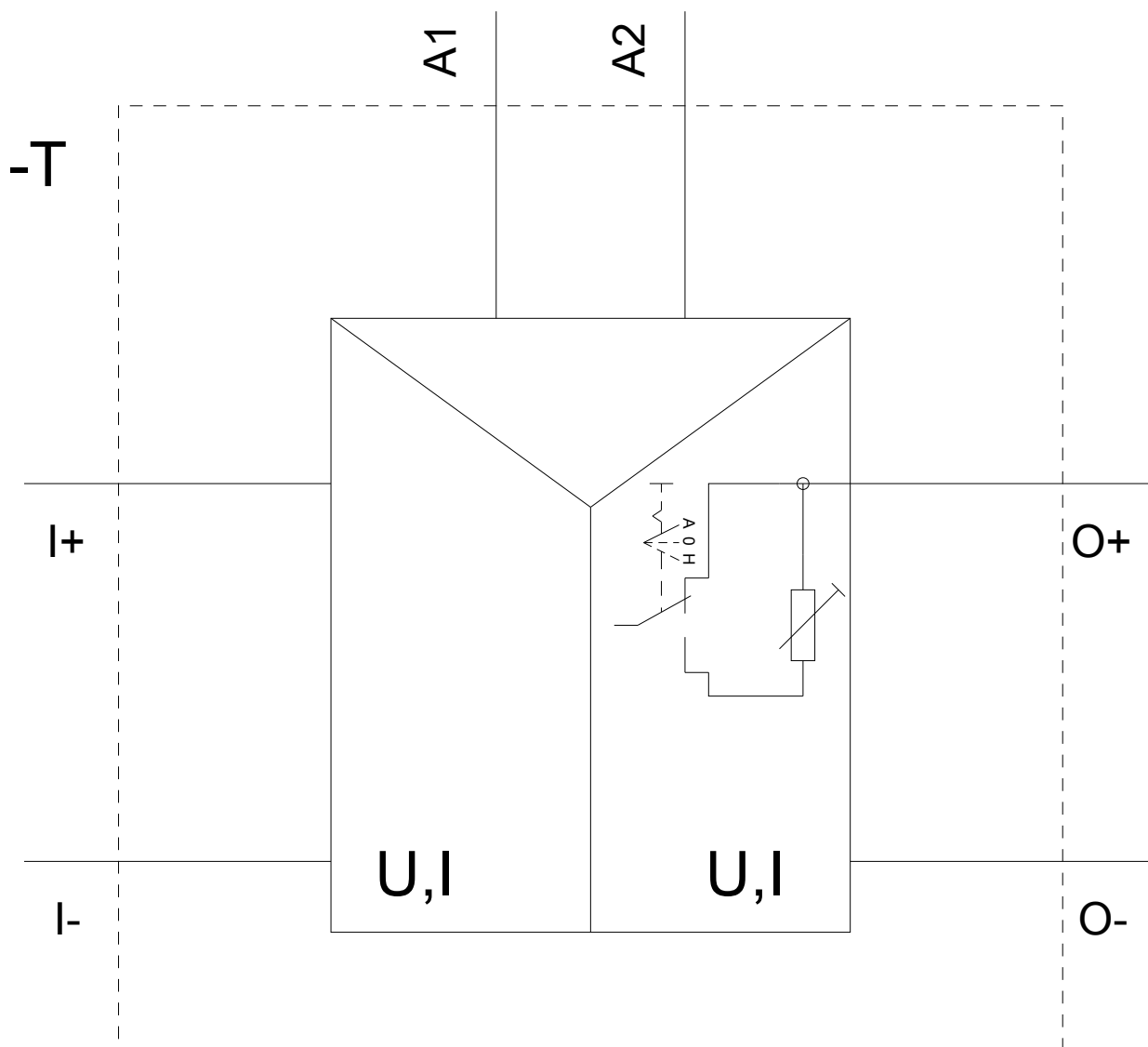
Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RS7025-2FE00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RS7025-2FE00>





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