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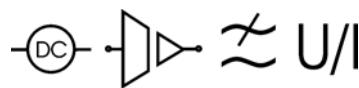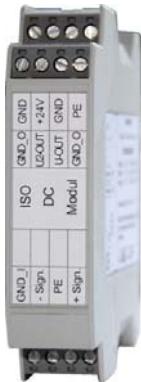
GHM-IMTRON

Product Information

**Analog Modules**

TSA-DC

Characteristics

The **TSA-DC Module** offers signal conditioning of Shunt sensors or other arbitrary DC and AC sources. Switchable standard ranges are 150 mV, 500 mV, 1 V and 10 V. The input is differential. Depending on the base configuration the module has voltage and current outputs.

Technical Data

Supply voltage	24 V DC ± 10 %
Power consumption at nominal voltage (without sensor / without load)	50 mA
Electrical isolation (3-way isolation)	1000 V DC
Accuracy	0.1 %
AC coupling at input	min. appr. 1 Hz
Cut-off frequency (standard / maximum)	5 kHz / 10 kHz
Linearity (typical)	0,02 %
Input Sensor Input resistance	DC or AC source 10 MΩ
Output – Voltage Output range (V1 / V2)	± 10 V / 0..10 V
Output – Current Output range (A1 / A2 / A3)	± 20 mA / 0..20 mA / 4..20 mA
Max. load current (U output)	± 12 mA
Residual ripple @ $f_g = 5$ kHz $f_g = 10$ kHz	Gain=1: typ. 2 mV$_{pp}$ typ. 5 mV$_{pp}$ Gain>500 3 mV$_{pp}$ x Gain/500
Measurement range / Gain	150 mV V = 66,66 500 mV V = 20 1,0 V V = 10 10 V V = 1 switchable
Environmental temperature	0..50 °C
Plug-in filter Standard frequencies in Hz	10, 30, 50, 100, 300, 500, 1 k, 3 k, 5 k, 10 k

Block Diagram

Differential input
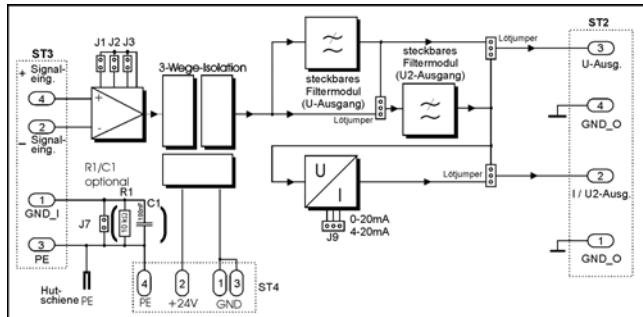
Optional AC coupling at input

Dimensions

Housing ME 22.5:
    22.5 x 99 x 114.5 mm (WxHxD)

Ordering Code

TSA-DC ☐ - ☐ - / - / - /

1.	Model	
	1	1 output
	2	2 outputs
2.	**Measuring ranges in V (switchable)**	
	VX	Enter calibrated value: 0.15, 0.5, 1. 10
		Enter non- standard value: 0.1..10
3.	**Output filter frequencies (Hz)**	
	XXX	Enter standard values:10, 30, 50, 100, 300, 500,1k, 3k, 5k, 10k
		Enter non- standard value: 1..30k
4.	**Filter characteristics**	
	BW	Butterworth 4th order
	BS	Bessel 4th order
	BW8	Butterworth 8th order (for 1 output only)
	BS8	Bessel 8th order (for 1 output only)
5.	**Output (not all combinations feasible)**	
	V1	± 10 V
	V2	0..10 V
	A1	± 20 mA
	A2	0..20 mA
	A3	4..20 mA

Example: TSA-DC1-10-3k-BS-V1

... professional Instruments "MADE IN GERMANY"