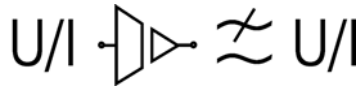


**Product Information**

**TSA-Fil**



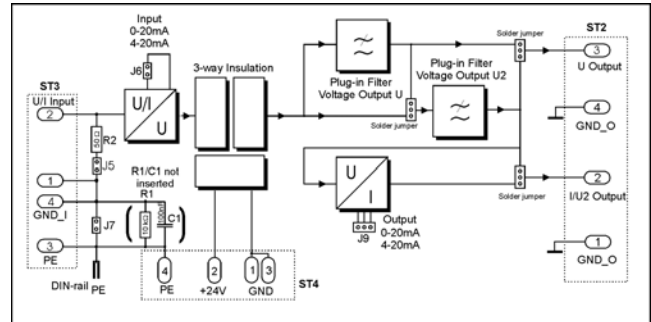
**Characteristics**

The **TSA-FIL Module** offers isolated signal conversion and filtering of voltage and current signals. Voltage and current inputs can be combined with voltage and current outputs. The desired configuration should be specified with order.

**Technical Data**

<b>Supply voltage</b>	24 V DC ± 10 %
<b>Power consumption at nominal voltage</b> (without sensor / without load)	40 mA
<b>Electrical isolation (3-way isolation)</b>	1000 V DC
<b>Accuracy</b>	0.1 %
<b>Cut-off frequency (standard / maximum)</b>	5 kHz / 10 kHz
<b>Linearity (typical)</b>	0.02 %
<b>Input – Voltage</b> Input range (V1 / V2) Input resistance	± 10 V / 0..10 V 10 MΩ
<b>Input – Current</b> Input range (A1 / A2 / A3) Input resistance	± 20 mA / 0..20 mA / 4..20 mA 50 Ω
<b>Output – Voltage</b> Output range (V1 / V2)	± 10 V / 0..10 V
<b>Output – Current</b> Output range (A1 / A2 / A3)	± 20 mA / 0..20 mA / 4..20 mA
<b>Max. load current (U output)</b>	± 10 mA
<b>Residual ripple @</b> f <sub>g</sub> = 5 kHz f <sub>g</sub> = 10 kHz	typical 2 mV <sub>pp</sub> typical 5 mV <sub>pp</sub>
<b>Environmental temperature</b>	0..50 °C
<b>Plug-in filter Standard frequencies in Hz</b>	10, 30, 50, 100, 300, 500, 1 k, 3 k, 5 k, 10 k

**Block Diagram**



**Dimensions**

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

**Ordering Code**

TSA-FIL  1.  2.  3.  4.  5.

<b>1. Model</b>	1 1 output
	2 2 outputs
<b>2. Input (not all combinations with output feasible)</b>	V1 ± 10 V
	V2 0..10 V
	A1 ± 20 mA
	A2 0..20 mA
	A3 4..20 mA
<b>3. Output filter frequencies (Hz)</b>	XXX Enter standard values: 10, 30, 50, 100, 300, 500, 1k, 3k, 5k, 10k
	Enter non- standard value: 1..30k
<b>4. Filter characteristics</b>	BW Butterworth 4th order
	BS Bessel 4th order
	BW8 Butterworth 8th order (for 1 output only)
	BS8 Bessel 8th order (for 1 output only)
<b>5. Output (not all combinations with input feasible)</b>	V1 ± 10 V
	V2 0..10 V
	A1 ± 20 mA
	A2 0..20 mA
	A3 4..20 mA

Example: TSA-FIL1-V1-5k-BW-V1