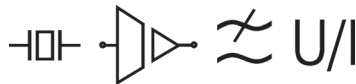
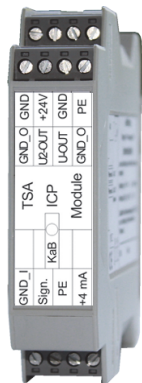


**Product Information**

**TSA-ICP**



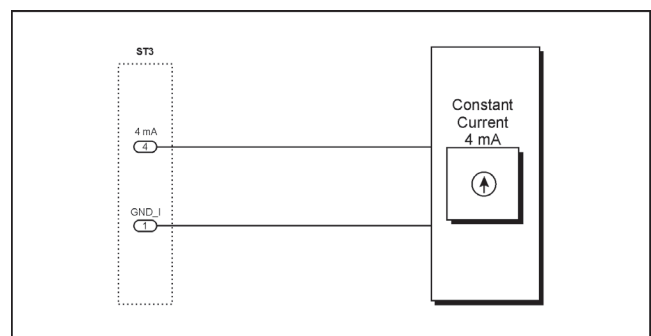
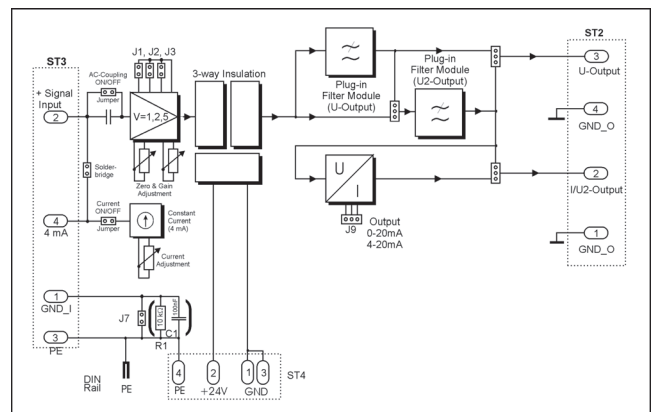
**Characteristics**

The **TSA-ICP Module** offers signal conditioning of piezoelectric sensors. Minimum input frequency (standard) is 2 Hz. Standard gains are 1, 2 and 5. Sensor supply with 4 mA constant current is isolated, provided by the module. A red LED at the front indicates a cable break or exceeding a sensor resistance of 6.5 kΩ. Depending on the base configuration the module has voltage and current outputs.

**Technical Data**

<b>Supply voltage</b>	24 V DC ± 10 %
<b>Power consumption at nominal voltage</b> (without sensor / without load)	50 mA
<b>Electrical isolation</b> (3-way isolation)	1000 V DC
<b>Accuracy</b>	0.1 %
<b>Cut-off frequency</b> (standard / maximum)	5 kHz / 32 kHz
<b>Linearity</b> (typical)	0.02 %
<b>Input</b>	
Sensor	Piezoelectric
Min. Input frequency	appr. 2 Hz
<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>	± 12 mA
<b>Residual ripple @</b> f <sub>g</sub> = 5 kHz f <sub>g</sub> = 10 kHz	Gain=1: typ. 2 mV <sub>pp</sub> typ. 5 mV <sub>pp</sub>
<b>Sensor supply</b> max. sensor resistance	Constant current 4 mA 5.5 kΩ
<b>Cable break</b> Sensitivity	Yes R <sub>sensor</sub> < 6.5 kΩ
<b>Input gain</b> (others on request)	V = 1 V = 2 V = 5 switchable
<b>Environmental temperature</b>	0..50 °C
<b>Plug-in filter</b> <b>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-ICP  1.  2.  3.  4.  5.

<b>1. Model</b>	
1	1 output
2	2 outputs
<b>2. Measuring ranges</b>	
G1	Gain 1
G2	Gain 2
G5	Gain 5
GX	Non-standard value
<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 feasible)</b>	
V1	± 10 V
V2	0..10 V
A1	± 20 mA
A2	0..20 mA
A3	4..20 mA

Example: TSA-ICP1-G2-10k-BW-V1