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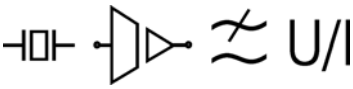
TSA-ICP



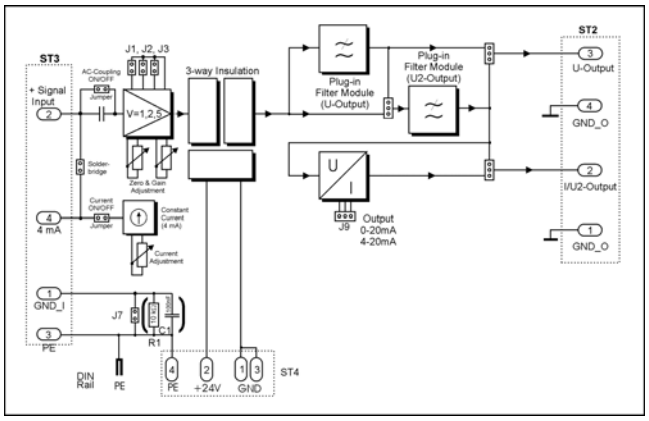
Characteristics

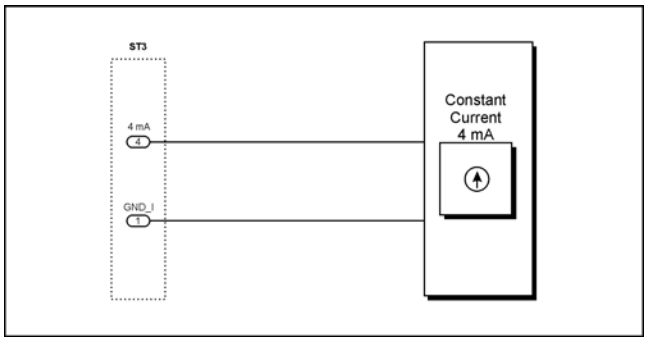
The ***TSA-ICP Module*** offers signal conditioning of piezoelectric sensors. Minimum input frequency (standard) is 2 Hz. Standard gains are 1, 2 and 5. Sensor supply with 4 mA constant current is isolated, provided by the module. A red LED at the front indicates a cable break or exceeding a sensor resistance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

Technical Data

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 %
Cut-off frequency (standard / maximum)	5 kHz / 32 kHz
Linearity (typical)	0.02 %
Input Sensor Min. Input frequency	 Piezoelectric appr. 2 Hz
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}
Sensor supply max. sensor resistance	Constant current 4 mA 5.5 kΩ
Cable break Sensitivity	Yes R_{sensor} < 6.5 kΩ
Input gain (others on request)	V = 1 V = 2 V = 5 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





Dimensions

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

Ordering Code

TSA-ICP 1. [ ] - 2. [ ] - 3. [/] - 4. [/] - 5. [/]

1.	**Model**	
	1	1 output
	2	2 outputs
2.	**Measuring ranges**	
	G1	Gain 1
	G2	Gain 2
	G5	Gain 5
	GX	Non-standard value
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-ICP1-G2-10k-BW-V1