

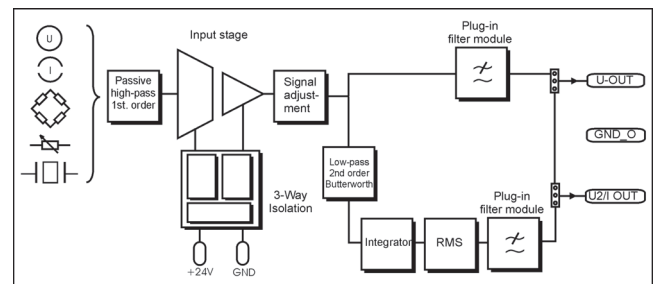
TSA-RMS



$$\left(\frac{U}{I/R} \right) \rightarrow \text{RMS} \approx U/U$$

Block Diagram

Schematic for various applications



Dimensions

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

Ordering Code

TSA-RMS - 1. - 2. / - 3. /

Characteristics

The **TSA-XX-RMS Modules** offer signal conditioning of FIL, DMS (strain gauge), Poti, DC, and ICP® applications with parallel (True) RMS processing of the output signal. Matching sensor supply is provided by the module. It has two voltage outputs (signal ± 10 V and RMS 0..7.07 V).

Technical Data

Supply voltage	24 V DC ± 10 %
Power consumption at nominal voltage (without sensor / without load)	55 mA
Electrical isolation (3-way isolation)	1000 V DC
Accuracy	
U1 (Signal)	0.1 %
U2 (RMS value)	2 %
Cut-off frequency (standard / maximum)	5 kHz / 20 kHz
Linearity (typical)	0.02 %
Input	
Sensor	Sensor with U output, piezoelectric
Min. Input frequency (HP)	10 Hz
Output – Voltage	
U1 (Signal)	± 10 V
U2 (RMS value)	0..7.07 V
Max. load current (U output)	± 12 mA
Residual ripple @	
f _g = 5 kHz	Gain=1: typ. 2 mV _{pp}
f _g = 10 kHz	typ. 5 mV _{pp}
Sensor supply (others on request)	5 V DC, 4 mA
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

1. Model	
FIL2	Filter
DMS2	Strain gauge
POTI2	Potentiometer
DC2	DC Voltage
ICP2	ICP, IEPE sensors
2. Output filter frequencies (Hz)	
XXX	Enter standard values: 10, 30, 50, 100, 300, 500, 1k, 3k, 5k, 10k
	Enter non- standard value: 1..20k
3. Filter characteristics	
BW	Butterworth 4th order
BS	Bessel 4th order

Example: TSA-RMS-DC2-10k/10k BS