

AS-TG

Small-Sized Triaxial Acceleration Transducers

● 9,807 to 196,1 m/s² ● Simultaneous Measurement of Acceleration in X, Y and Z Directions



- TEDS-installed versions can be manufactured, Inquiries are welcome.

AS-TG series has three miniature acceleration transducers incorporated into a compact package for simultaneous measurement of acceleration in front-rear, left-right and up-down directions. Besides minimal interference between axes, built-in overload stopper allows safe operation against overload 10 times higher than rated capacity. Also, 100 million times repetitive measurement is possible with rated capacity.

Specifications

Performance

- Rated Capacity: See table below.
- Nonlinearity: Within $\pm 1\%$ RO
- Hysteresis: Within $\pm 1\%$ RO
- Rated Output: 0.5 mV/V (1000 $\mu\text{m/m}$) or more

Environmental Characteristics

- Safe Temperature Range: -10 to 60°C

Electrical Characteristics

- Safe Excitation Voltage: 6 VAC or DC
- Recommended Excitation Voltage: 1 to 3 VAC or DC
- Input Resistance: $121 \Omega \pm 1.7\%$
- Output Resistance: $121 \Omega \pm 1.7\%$

Cable: 4-conductor (0.08 mm²) vinyl shielded cable, 3.2 mm diameter by 5 m long, terminated with connector plug (Shield wire is not connected to mainframe.)

Mechanical Properties

- Safe Overload Rating: 1000% (with stopper)
- Frequency Response Range: See table below.
- Resonance Frequency: See table below.
- Transverse Sensitivity: $\pm 4\%$
- Damping Ratio: Approx. 0.64 (23°C)
- Weight: Approx. 110 g

Model	Rated Capacity (Reference Value)	Frequency Response (at 23°C)	Resonance Frequency (App.)
AS-1TG	$\pm 9,807 \text{ m/s}^2 (\pm 1 \text{ G})$	DC to 40 Hz, $\pm 5\%$	70 Hz
AS-2TG	$\pm 19,61 \text{ m/s}^2 (\pm 2 \text{ G})$	DC to 60 Hz, $\pm 5\%$	100 Hz
AS-5TG	$\pm 49.03 \text{ m/s}^2 (\pm 5 \text{ G})$	DC to 100 Hz, $\pm 5\%$	180 Hz
AS-10TG	$\pm 98.07 \text{ m/s}^2 (\pm 10 \text{ G})$	DC to 150 Hz, $\pm 5\%$	320 Hz
AS-20TG	$\pm 196.1 \text{ m/s}^2 (\pm 20 \text{ G})$	DC to 250 Hz, $\pm 5\%$	530 Hz

Notes: 1. Percentage in frequency response column is sensitivity deviation.
2. Resonance frequency measured by mounting to a shaker.

Dimensions

