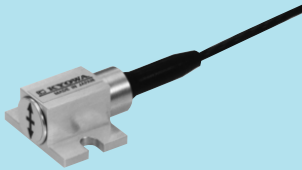
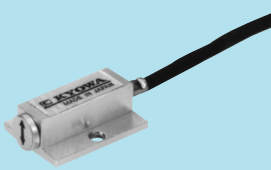
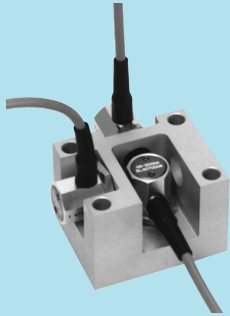
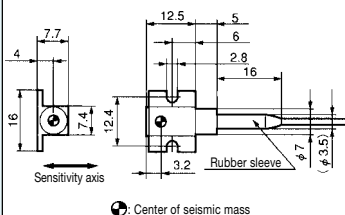
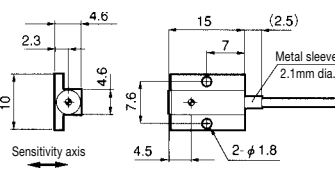
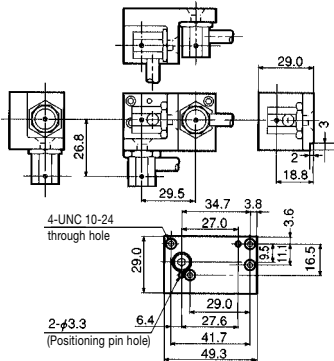
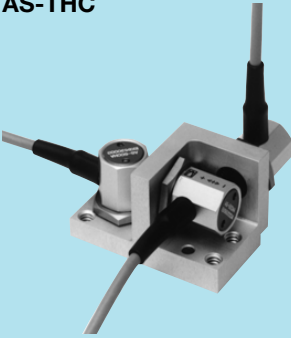

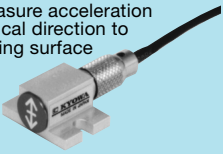

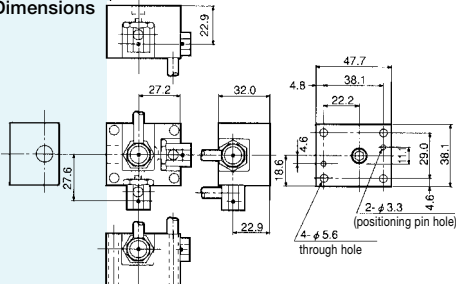
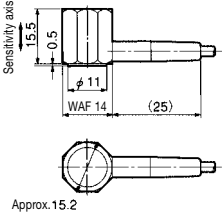
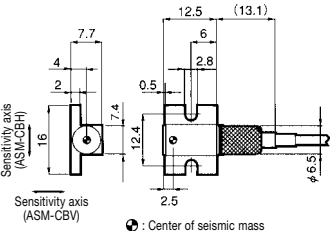


Acceleration Transducers Applicable to Hybrid II & III Dummies or Side Impact Dummy SID

Mounted to the head, thorax and pelvis of Hybrid II and III dummies or side impact dummy SID, KYOWA strain-gage acceleration transducers measure impact-initiated acceleration applied to these sites in X, Y and Z directions.

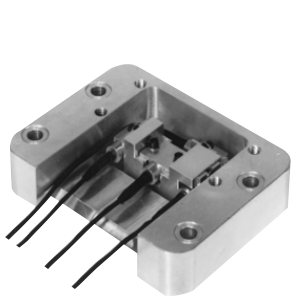
Description	Miniature Acceleration Transducer ASM-200FA	Miniature Acceleration Transducer ASM-200BA	Cephalic Acceleration Transducer AS-THH
			
Rated Capacity (Reference Value)	$\pm 1961\text{m/s}^2 (\pm 200\text{G})$	$\pm 1961\text{m/s}^2 (\pm 200\text{G})$	AS-200THH: $\pm 1961\text{m/s}^2 (\pm 200\text{G})$ in each of X, Y and Z directions AS-500THH: $\pm 4903\text{m/s}^2 (\pm 500\text{G})$ in each of X, Y and Z direction
Safe Overload Rating	500%	500%	300%
Rated Output	0.25mV/V min. (500×10^{-6} strain)	1.3mV/V min. (2600×10^{-6} strain)	0.5mV/V $\pm 20\%$ (1000×10^{-6} strain)
Non-linearity	$\pm 1\% \text{RO}$ ($\pm 0.5\%$ optionally available)	$\pm 1\% \text{RO}$	$\pm 1\% \text{RO}$
Hysteresis	$\pm 1.5\% \text{RO}$	$\pm 1\% \text{RO}$	$\pm 1\% \text{RO}$
Recommended Excitation Voltage	2V ac or dc*	2V ac or dc*	1 to 3V ac or dc
Input Resistance	$140\Omega \pm 10\%$	$120\Omega \pm 20\%$	$120\Omega \pm 10\%$
Output Resistance	$140\Omega \pm 10\%$	$120\Omega \pm 20\%$	$120\Omega \pm 10\%$
Compensated Temperature Range	5 to 40°C	5 to 40°C	-15 to 65°C (safe temperature range)
Frequency Response (at 23°C)	DC to 3.3kHz (sensitivity deviation $\pm 5\%$)	DC to 3.5kHz (sensitivity deviation $\pm 5\%$)	Single unit of AS-200HAM40 DC to 3.5kHz (sens.deviation $\pm 5\%$) Single unit of AS-500HAM40 DC to 5kHz (sens. deviation $\pm 10\%$)
Transverse Sensitivity	$\pm 3\%$ ($\pm 1\%$ optionally available)	$\pm 3\%$ ($\pm 1\%$ optionally available)	$\pm 2\%$
Mass	4g (excluding cable)	1.2g (excluding cable)	540g (acceleration transducer proper 13.5g x 3, cable 135g x 3, bracket 94g)
Cables	4-conductor shielded cable, 1.7mm dia. x 7m long; terminated with R05-PB5M connector plug	4-conductor shielded cable, 1.7mm dia. x 7m long; terminated with R05-PB5M connector plug	4-conductor vinyl shielded cable, 3.2mm dia. x 9m long, soldered at the tip
Remarks	*Calibration made by applying 2Vdc • Tapped holes required: M2.5, M2.6 No. 2-56UNF • Tightening torque: 2.7 to 3kgf·cm (0.26 to 0.3N·m) • Mount to install the transducer to the dummy is available.	*Calibration made by applying 2Vdc • Tapped holes required: M1.6 No. 0-80UNF • Tightening torque: 0.3 to 1kgf·cm (0.08 to 0.1N·m) • Mount to install the transducer to the dummy is available.	Composition: • Acceleration transducer AS-200 or 500HAM40 (3 pcs.) • Dedicated bracket DH-3A (1 pc.) • Hexagon socket head countersunk screw, M5 x 8 (8 pcs.) Each of these units is separately available on request.
Dimensions			

Description	Thoracic Acceleration Transducer AS-THC 	Pelvic Acceleration Transducer AS-HA-R 	Miniature Acceleration Transducers ASM-1KCBV To measure acceleration in vertical direction to mounting surface  ASM-1KCBH To measure acceleration in horizontal direction to mounting surface 
Rated Capacity (Reference Value)	AS-200THC: $\pm 1961 \text{m/s}^2$ ($\pm 200\text{G}$) in each of X, Y and Z directions AS-500THC: $\pm 4903 \text{m/s}^2$ ($\pm 500\text{G}$) in each of X, Y and Z direction	AS-100HA-R: $\pm 980.7 \text{m/s}^2$ ($\pm 100\text{G}$) AS-200HA-R: $\pm 1961 \text{m/s}^2$ ($\pm 200\text{G}$) AS-500HA-R: $\pm 4903 \text{m/s}^2$ ($\pm 500\text{G}$) AS-1000HA-R: $\pm 9807 \text{m/s}^2$ ($\pm 1000\text{G}$)	9807m/s^2 ($\pm 1000\text{G}$)
Safe Overload Rating	300%	300%	120%
Rated Output	0.5mV/V $\pm 20\%$ (1000×10^{-6} strain)	0.5mV/V $\pm 20\%$ (1000×10^{-6} strain)	1.5mV/V min. (3000×10^{-6} strain)
Non-linearity	$\pm 1\%$ RO	$\pm 1\%$ RO	$\pm 1\%$ RO ($\pm 0.5\%$ optionally available)
Hysteresis	$\pm 1\%$ RO	$\pm 1\%$ RO	$\pm 1\%$ RO
Recommended Excitation Voltage	1 to 3V ac or dc	1 to 3V ac or dc	2Vdc
Input Resistance	$120\Omega \pm 10\%$	$120\Omega \pm 8.3\%$	$120\Omega \pm 20\%$
Output Resistance	$120\Omega \pm 10\%$	$120\Omega \pm 8.3\%$	$120\Omega \pm 20\%$
Safe Temperature Range	-5 to 65°C	-5 to 65°C	-20 to 60°C
Frequency Response (at 23°C)	Single unit of AS-200HAM40 DC to 3.5kHz (sens. deviation $\pm 5\%$) Single unit of AS-500HAM40 DC to 5kHz (sens. deviation $\pm 10\%$)	AS-100HA-R DC to 2kHz (sens. deviation $\pm 5\%$) AS-200HA-R DC to 3.5kHz (sens. deviation $\pm 5\%$) AS-500HA-R DC to 5kHz (sens. deviation $\pm 10\%$) AS-1000HA-R DC to 7kHz (sens. deviation $\pm 10\%$)	DC to 3.5kHz (sens. deviation $\pm 5\%$)
Transverse Sensitivity	$\pm 2\%$	$\pm 2\%$	$\pm 3\%$ ($\pm 1\%$ optionally available)
Mass	492g (acceleration transducer proper 13.5g x 3, cable 135g x 3, bracket 46g)	6.5g (excluding cable)	4.3g $\pm 0.5\text{g}$ (including connector)
Cables	4-conductor vinyl shielded cable, 3.2mm dia. x 9m long; soldered at the tip	4-conductor vinyl shielded cable, 3.2mm dia. x 5m long; terminated with R05-PB5M connector plug	4-conductor shielded cable, 1.7mm dia. x 7m long; terminated with R05-PB5M connector plug
Remarks	Composition: <ul style="list-style-type: none"> Acceleration transducer AS-200 or 500HAM40 (3 pcs.) Dedicated bracket DC-3A (1 pc.) Hexagon socket head countersunk screw, M5 x 8 (8 pcs.) Each of these units is separately available on request.		Plus/minus sensitivity difference: 1.5% max. Temperature effect on zero balance: $\pm 2\%$ RO/ $^{\circ}\text{C}$ Temperature effect on output: -0.25 to 0%/ $^{\circ}\text{C}$ Compensated temperature range: 5 to 40°C
Dimensions			

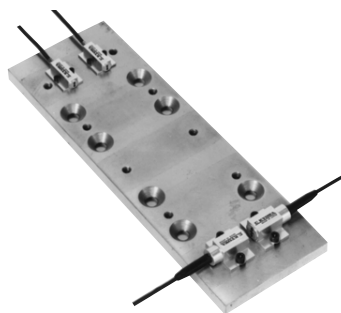
Mounts to install acceleration transducers to respective sites of dummy

Installation Site	Description	Applicable Acceleration Transducer		
		ASM-BA	ASM-CA	ASM-FA
Cephalic	Cephalic Acceleration Transducer Mount	SID10A	SID11A	SID11A
Superior Spine	T1 Acceleration Transducer Plate	SID20A	SID20A	SID20A
	T1 Acceleration Transducer Mount	SID21A	SID22A	SID22A
Inferior Spine	T12 Acceleration Transducer Cover	SID23A	—	SID25A
	T12 Acceleration Transducer Mount	SID24A	—	SID26A
Costae	Costal Acceleration Transducer Mount	SID27A	SID28A	SID28A
Pelvic Region	Pelvic Mount	SID30A	SID30A	SID30A
	Pelvic Acceleration Transducer Mount	SID31A	SID32A	SID32A

For the superior spinal acceleration transducer, the plate and mount are used in combination; for the inferior spinal acceleration transducer, the cover and mount are used in combination. For the pelvic acceleration transducer, SID30A and SID31A or SID32A are used in combination.



T1 mount

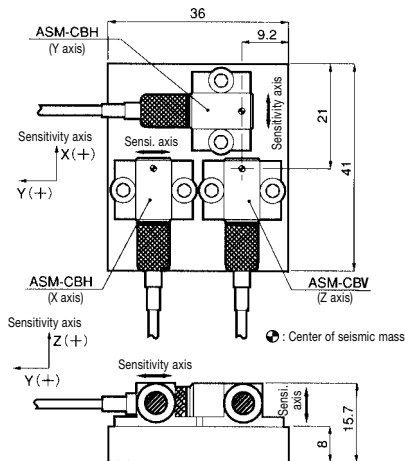


Costal acceleration transducer mount



Pelvic mount

ASM-CBV/CBH mounted to triaxial measurement base



NOTE: Export control products are the strategic commodities to which the Foreign Exchange and Foreign Trade Control Act applies. The necessary legal procedures should therefore be taken with the Government of Japan if these products are to be taken abroad.