

TEAC

Piezoelectric Accelerometers

600 SERIES






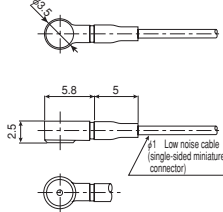
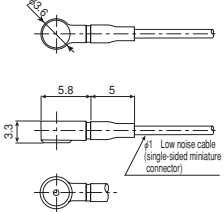
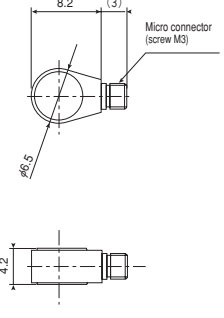
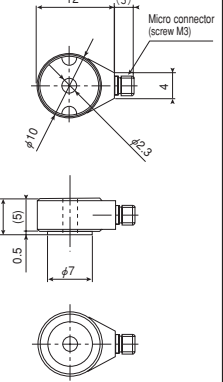
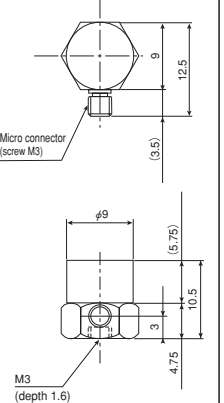
Charge-coupled type

700 SERIES

IEPE-type








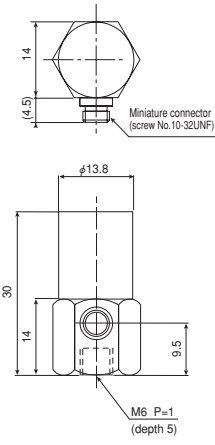
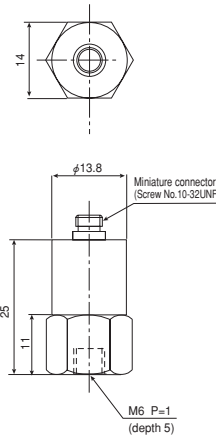
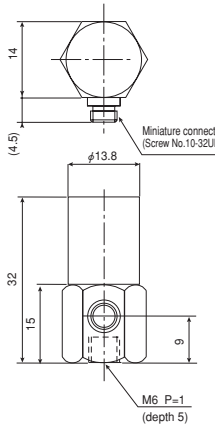
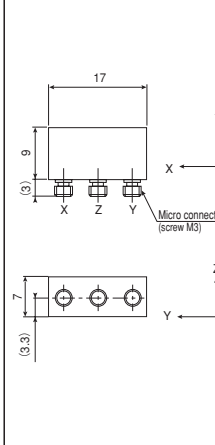
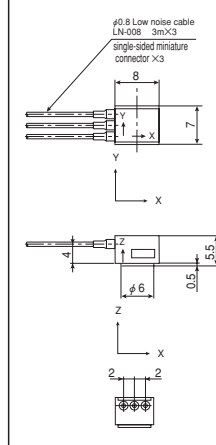
600 SERIES

					
	611	611W	612	613	601
Sensitivity (pC/m/s ²)	0.035±20%	0.0459±15%	0.17±20%	0.35±20%	0.3±20%
Transverse sensitivity (max)	5%	5%	5%	5%	5%
Capacitance (pF)	580±20%	580±20%	640±20%	700±20%	1,000±20%
Operating temperature range	-50~160°C	-50~160°C	-50~160°C	-50~160°C	-20~80°C
Frequency response (±3dB) ※	fc~20,000Hz	fc~20,000Hz	fc~18,000Hz	fc~15,000Hz	fc~30,000Hz
Resonant frequency (approx.)	60kHz	60kHz	40kHz	35kHz	60kHz
Peak operating (m/s ²)	±100,000	±10,000	±10,000	±10,000	±100,000
Shock survivability (peak) (m/s ²)	100,000	50,000	100,000	100,000	200,000
Grounding	Case ground	Case ground	Case ground	Case ground	Case ground
Cable	3m	3m	Optional	Optional	Optional
Connector	Miniature connector (10-32 UNF screw)	Miniature connector (10-32 UNF screw)	Micro connector (M3 screw)	Micro connector (M3 screw)	Micro connector (M3 screw)
Case	Titanium	Titanium	Titanium	Titanium	Titanium
Weight (approx.)	0.2g	0.2g	0.8g	2.3g	2.7g
Size (mm) (excluding connector)	φ 3.5×2.5H	φ 3.6×3.3H	φ 6.5×4.2H	φ 10.0×5.5H	9HEX×10.5H
Dimensions (mm)					

Resisting Pressure:
6kg/cm² (0.59MPa)

※fc depends on the time constant of the connected amplifier. fc=1/2 π RC

Charge-coupled type

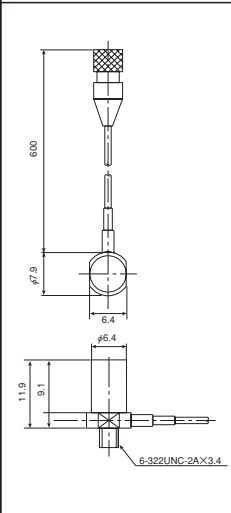
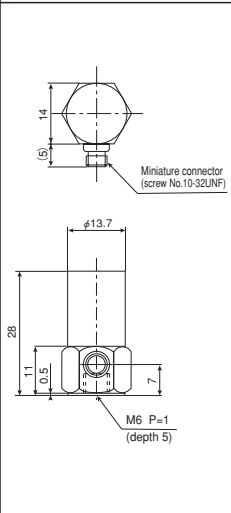
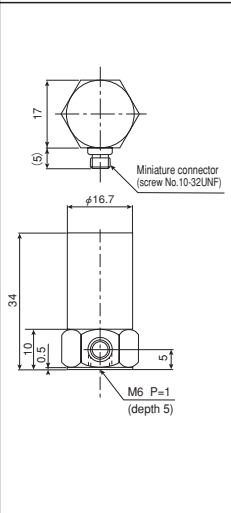
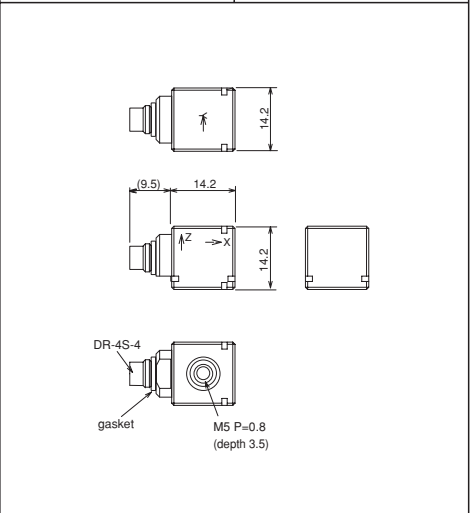
				 Triaxial	 Triaxial
	608/608T	608LF	607	612ZS	611ZS
Sensitivity (pC/m/s²)	5±10%	5±20%	10±10%	0.16±20%	0.04±20%
Transverse sensitivity (max)	5%	5%	5%	5%	5%
Capacitance (pF)	1,000±20%	1,000±20%	1,000±20%	700±20%	560±20%
Operating temperature range	-20~140°C	-20~120°C	-20~140°C	-20~160°C	-50~160°C
Frequency response (±3dB)	fc~12,000Hz	fc~11,000Hz	fc~8,000Hz	fc~20,000Hz	fc~20,000Hz
Resonant frequency (approx.)	30kHz	25kHz	20kHz	40kHz	60kHz
Peak operating (m/s²)	±16,000	±5,000	±10,000	±10,000	±25,000
Shock survivability (peak) (m/s²)	32,000	10,000	20,000	20,000	50,000
Grounding	Case ground	Case ground	Case ground	Case ground	Case ground
Cable	Optional	Optional	Optional	Optional	3m
Connector	Miniature connector (10-32 UNF screw)	Miniature connector (10-32 UNF screw)	Miniature connector (10-32 UNF screw)	Micro connector (M3 screw)	Miniature connector (10-32 UNF screw)
Case	SUS303	SUS303	SUS303	Titanium	Titanium
Weight (approx.)	29g (608) 25g (608T)	23g	43g	3.2g	1.2g
Size (mm) (excluding connector)	14HEX×30H (608) 14HEX×25H (608T)	14HEX×25H	14HEX×32H	17W×7H×9D	8W×5.5H×7D
Dimensions (mm)	<p>608T : TOP CONNECTOR</p> 				

700 SERIES

IEPE-type

				
FB : Flat Base ST : Stud Base			Triaxial 724ZT : TEDS capable	Triaxial 7240ZT : TEDS capable
702FB/ST	708	707	724Z/724ZT	7240Z/7240ZT

Sensitivity (mV/m/s²)	1.0±10%	1.0±15%	10±15%	10±10%	1±10%
Transverse sensitivity (max)	5%	5%	5%	5%	5%
Noise floor (max)	20μ Vrms	20μ Vrms	20μ Vrms	40μ Vrms	40μ Vrms
Operating temperature range	-50~105°C	-40~110°C	-40~110°C	-50~110°C	-50~110°C
Frequency response (±3dB)	2~20,000Hz	3~23,000Hz	3~14,000Hz	1~8,000Hz	1~8,000Hz
Resonant frequency (approx.)	60kHz	40kHz	30kHz	35kHz	35kHz
Peak operating (m/s²)	±3,600	±1,500	±150	±400	±4,000
Shock survivability (peak) (m/s²)	100,000	10,000	10,000	30,000	30,000
Output impedance (approx.)	100Ω or less	300Ω	300Ω	1kΩ	1kΩ
Grounding	Case ground	Case ground	Case ground	Case ground	Case ground
Cable	φ 1.0 Low noise cable 60cm	Optional	Optional	Optional	Optional
Connector	Miniature connector (10-32 UNF screw)	Miniature connector (10-32 UNF screw)	Miniature connector (10-32 UNF screw)	DR-4S-4	DR-4S-4
Case	Titanium	SUS303	SUS303	Titanium	Titanium
Weight (approx.)	2g	21g	46g	11.1g	11.1g
Size (mm) (excluding connector)	φ 7.9×11.9H	14HEX×28H	17HEX×34H	14.2W×14.2H×14.2D	14.2W×14.2H×14.2D

Dimensions (mm)	 <p>600 φ7.9 6.4 11.9 9.1 6-322UNC-2A×3.4</p>	 <p>14 15 φ13.7 28 0.5 1.1 7 M6 P=1 (depth 5)</p>	 <p>17 16 φ16.7 34 1.0 0.5 5 M6 P=1 (depth 5)</p>	 <p>14.2 9.5 14.2 14.2 DR-4S-4 gasket M5 P=0.8 (depth 3.5)</p>
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Selection Chart

600 Series (Charge Coupled Type)

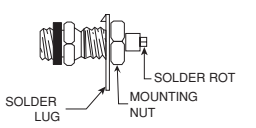
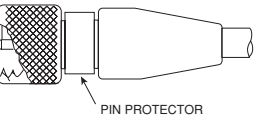

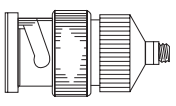
Feature	Model	Sensing Structure	Peak Operating \pm (m/s ²)	Sensitivity Approx. (pC/m/s ²)	Frequency Response (Hz) \pm 3dB
Miniature	611	Shear	100,000	0.035	fc~20,000
Water Proof	611W		10,000	0.0459	fc~20,000
Miniature	612		10,000	0.17	fc~18,000
Miniature	613		10,000	0.35	fc~15,000
Miniature	601		100,000	0.3	fc~30,000
General Purpose	608/608T		16,000	5	fc~12,000
Low Frequency	608LF		5,000	5	fc~11,000
High Sensitivity	607	Compression	10,000	10	fc~8,000
Miniature, Triaxial	612ZS	Shear	10,000	0.16	fc~20,000
	611ZS		25,000	0.04	fc~20,000

700 Series (IEPE Type)

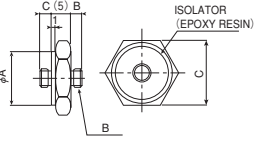
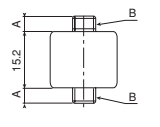
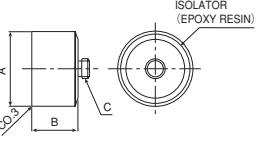
Feature	Model	Sensing Structure	Peak Operating \pm (m/s ²)	Sensitivity Approx. (mV/m/s ²)	Frequency Response (Hz) \pm 3dB	Constant Current	Voltage
Small Size	702FB/ST	Compression	3600	1	2~20,000	0.5~5mA	15~25V
General Purpose	708		1500	1	3~23,000		
High Sensitivity	707		150	10	3~14,000		
Triaxial	724Z	Shear	400	10	1~8,000		21~24V
Triaxial, TEDS	724ZT		360	10	1~8,000		
Triaxial	7240Z		4000	1	1~8,000		
Triaxial, TEDS	7240ZT		3600	1	1~8,000		

Accessories and Cable

Adapter and Connector

Model	Descriptions	Outline Drawing
CN-031	Miniature Receptacle (10-32UNF Screw)	
CN-032	Miniature Plug (10-32UNF Screw)	
CA-033	Cable Extension Adapter (Use when extending cable)	
CA-034	Miniature Receptacle (10-32UNF)-BNC Plug	

Adapter and Connector

Model	Descriptions	Dimensions (mm)	Outline Drawing
IS-708	ISOLATION STUD(120°C)	A= ϕ 11, B=M6(P=1), C=14	
IS-707	ISOLATION STUD(120°C)	A= ϕ 17, B=M6(P=1), C=21	
IS-707H	ISOLATION STUD(260°C)	A=4 B=M6	
MG-707	MAGNET MOUNT	A= ϕ 24 B=14 C=M6(P=1)×4	

Low Noise Cable

Model	Length/Connectors	Suitable Model
CL-200	Specified length/Miniature to Miniature	608, 608T, 608LF, 708, 707
CL-200B	Specified length/Miniature to BNC (Plug)	
CL-206	1.5m/Miniature to Miniature	
CL-206B	1.5m/Miniature to BNC (Plug)	
CL-207	3m/Miniature to Miniature	
CL-207B	3m/Miniature to BNC (Plug)	601, 612, 613, 612ZS, 611ZS
CL-600	Specified length/Miniature to Micro	
CL-601	1.5m/Miniature to Micro	
CL-602	3m/Miniature to Micro	724Z/7240Z Series
CL-714M	3.3m/DP-4S-1(4pin) to Three Miniatures	
CL-714B	3.3m/DP-4S-1(4pin) to Three BNC (Plug)	

Note: Miniature: 10-32UNF Screw, Micro: M3 Screw

Charge amplifier SA-611

The SA-611 is a charge amplifier for piezoelectric accelerometers and other charge-couple accelerometers. It can measure acceleration, pressure, and force over a wide range of vibration frequencies.

- Compact, light in weight, and inexpensive
- Operable on DC5V~15V



Specifications

Input

BNC Connector, Switched Charge Type or IEPE Type

Maximum Input

Charge Input: 10000pC

Voltage Input: $\pm 10V$

Current Sources

0.5mA, 4mA / 24V DC

Sensitivity Setting

Three Digits Digital Switch

Input Ranges

$\times 1$, $\times 10$, $\times 100$

Sensitivity Range

from 0.03 to 999 pC/m/s² or mV/m/s²

Rated Output

$\pm 1V$; BNC Connector; Output Impedance 1 Ω or less

Maximum Output

$\pm 10V$; $\pm 5mA$; Load Impedance 2k Ω or more

Sensitivity Accuracy

$\pm 1.5\%$ or less

Frequency Response

0.2Hz to 30kHz; +0.5dB/-3dB
(LPF and HPF Pass; 'H' or 'M' Range)

0.2Hz to 10kHz; +0.5dB/-3dB
(LPF and HPF Pass; 'L' Range)

Output Filter

Low Pass Filter (-3dB); 1kHz, 10kHz; $-12dB/oct$

High Pass Filter (-3dB); 5Hz; $-6dB/oct$

Noise Level

0.02pC(mV) rms or less; at Input

Input Capacitance 1000pF, Sensitivity 1pC(mV)/m/s²;
Range 'H', 'M', 'L'; LPF Pass

Calibration Voltage

Rectangular Wave 200Hz \pm 20Hz, 2Vpp \pm 5%
('H' or 'M' Range)

Rectangular Wave 200Hz \pm 20Hz, 20Vpp \pm 5%
('L' Range)

Power Supply

Built-in Batteries; LR6 Four Alkaline Batteries

40 Hours at Charge Input

External DC 5V to 15V

Consumption 45mA (DC 6V, Charge Input, CAL OFF)

Power Indicator

ON at about 5V or more; External DC Preceded

Temperature

0 degrees to 40 degrees Celsius

Humidity

20% to 80% RH, without dew

External Dimensions Approx.

48 Width, 110 Height, 110 Depth mm(Except Projections)

Weight

Approx. 440g; Except Batteries

Contact Information

Features and specifications are subject to change without notice.

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