

## Universal Testing Type Accelerometer

### DETAILS

C00CGX series and C00AG1 charge single axis shock acceleration sensor using a unique shear structure, smaller base strain and lateral sensitivity, high quality piezoelectric ceramics with long term stability ensures years of accurate measurements. Unique double shielded construction, insulated to ground, one-piece screw-in cable output for ruggedness and reliability, customizable output connectors.

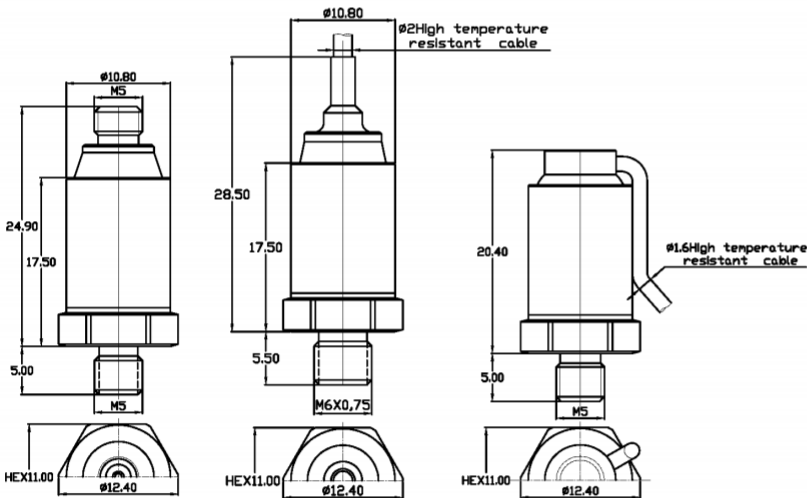
### FEATURES

- Charge-type Universal Acceleration Sensor
- Standard series with multiple range options
- Shear structure
- Broadband response

### TYPICAL APPLICATIONS

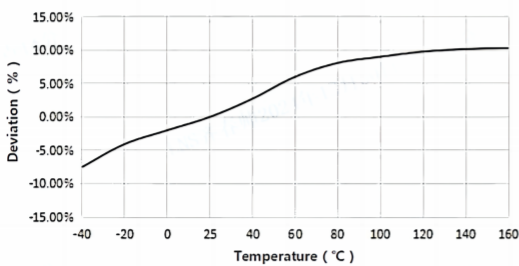
- Drop test
- Burst impact test

Fig\_1 Dimensions of C00XGX

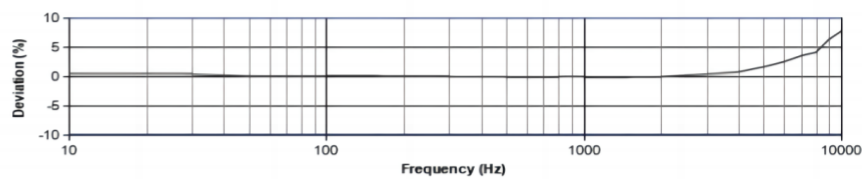


C00XGX

Fig\_2 Typical Temperature Response



Fig\_3 Typical Frequency Response



## Specifications-C00XGX

| MODEL NUMBER                            | UNIT                   | C00CG7                                      | C00CG3                                      | C00CG2                                      | C00AG1              | C00CG1                                      |
|---|------------------------|---|---|---|---------------------|---|
| <b>PERFORMANCE</b>                      |                        |   |   |   |                     |   |
| Sensitivity <sup>1</sup>                | pC/g                   | 0.05  | 0.3   | 0.5   | 1                   | 1   |
|   | pC/(m/s <sup>2</sup> ) | 0.005                                       | 0.03  | 0.05  | 0.1                 | 0.1   |
| Measurement Range                       | g                      | ±100000                                     | ±80000                                      | ±50000                                      | ±25000              | ±25000                                      |
| Non-Linearity <sup>3</sup>              |                        | per10000g 3%                                |   |   |                     |   |
| Frequency Range                         | ± 5%                   | Hz  | -   | -   | -                   | -   |
|   | ±10%                   | Hz  | 5-15k                                       | 5-12k                                       | 5-12k               | 5-12k                                       |
| Resonance Frequency <sup>2</sup>        | Hz                     | ≥100k                                       | ≥80k  | ≥60k  | ≥65k                | ≥65k  |
| Discharge Time Constant <sup>2</sup>    | s                      | -   |   |   |                     |   |
| Transverse Sensitivity                  | %                      | ≤5  |   |   |                     |   |
| <b>ELECTRICAL</b>                       |                        |   |   |   |                     |   |
| Capacitance                             | PF                     | 350   | 320   | 300   | 300                 | 300   |
| Resistance                              | Ω                      | ≥1×10 <sup>11</sup>                         | ≥1×10 <sup>11</sup>                         | ≥1×10 <sup>11</sup>                         | ≥1×10 <sup>11</sup> | ≥1×10 <sup>11</sup>                         |
| Electrical Isolation                    | Ω                      | ≥1×10 <sup>8</sup>                          | ≥1×10 <sup>8</sup>                          | ≥1×10 <sup>8</sup>                          | ≥1×10 <sup>8</sup>  | ≥1×10 <sup>8</sup>                          |
| <b>ENVIRONMENTAL</b>                    |                        |   |   |   |                     |   |
| Sinusoidal Vibration Limit <sup>4</sup> | g                      | -   | -   | -   | -                   | -   |
| Shock Limit <sup>4</sup>                | g                      | 130000                                      | 90000                                       | 70000                                       | 35000               | 35000                                       |
| Temperature Range                       | °C                     | -50-160                                     |   |   |                     |   |
|   | °F                     | -58-320                                     |   |   |                     |   |
| Temperature Response <sup>2</sup>       | %/°C                   | 0.08  | 0.05  |   |                     |   |
| <b>PHYSICAL</b>                         |                        |   |   |   |                     |   |
| Sealing                                 | -                      | Laser welding IP68                          |   |   |                     |   |
| Sensing Element                         | -                      | Piezoelectric ceramics                      |   |   |                     |   |
| Housing Material                        | -                      | 17-4SS                                      |   |   |                     |   |
| Size                                    | mm                     | HEX11×28.5<br>or<br>HEX11×20.4              | HEX11×28.5<br>or<br>HEX11×20.4              | HEX11×28.5<br>or<br>HEX11×20.4              | HEX11×24.9          | HEX11×28.5<br>or<br>HEX11×20.4              |
|   | in                     | HEX0.433×<br>1.122 or<br>HEX0.433×<br>0.803 | HEX0.433×<br>1.122 or<br>HEX0.433×<br>0.803 | HEX0.433×<br>1.122 or<br>HEX0.433×<br>0.803 | HEX0.433×<br>0.980  | HEX0.433×<br>1.122 or<br>HEX0.433×<br>0.803 |
| Electrical Connector                    | -                      | Connected cable Top/Side                    |   |   | M5 Top              | Connected<br>cable Top/Side                 |
| Mounting Thread                         | -                      | M5/M6×0.75Jointed thread                    |   |   |                     |   |
| Weight <sup>2</sup>                     | g                      | 12  | 12  | 12  | 11.7                | 12  |
|   | oz                     | 0.423                                       | 0.423                                       | 0.423                                       | 0.413               | 0.423                                       |

## Additional Information

### Note:

- @ 160Hz, 1g
- Typical values
- JBT 6822-2018 7.12.1 Vibration Testing Method
- References the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state

### C00XGX

Supplied Accessories:

- Product Verification Report
- Install Screws

### OPTIONAL VERSIONS

- A: 10-32 Output Connector
- E: 10-32 Mounting Thread

### COMPLIANCE WITH STANDARDS



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