

Features:

- Digital Interface CAN
- MEMS Capacitive
- Triaxial
- Resolution: 20-bit
- Sample Rate: 1 to 4000 SPS (Customize)
- Measurement Range: ± 2 to ± 40 g (Customize)
- Frequency Range (± 5 %): DC to 1000 Hz
- Aluminum Housing



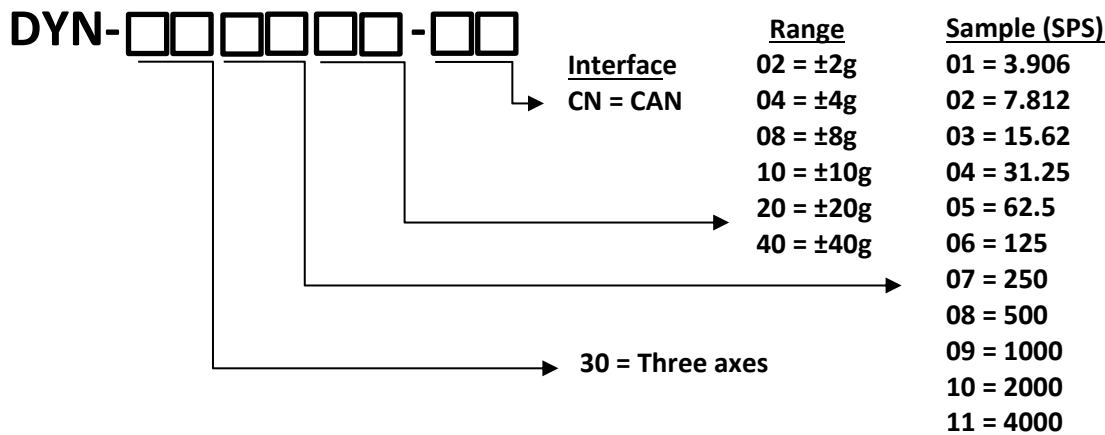
Applications:

- General Industrial Test & Measurement
- Condition Monitoring
- Robotics and Automation
- Tilt sensing
- Seismic imaging

Capacitive accelerometers are based on proven micro-electro-mechanical systems (MEMS) technology. These accelerometers are known for their reliability, long-term stability, and precision. MEMS technology enables the precise measurement of both static (DC) and continuous accelerations, allowing for the calculation of the velocity and displacement of moving objects.

The sensor is designed with three digital interfaces (CAN, USB, RS232) and can detect dynamic (AC) accelerations with amplitudes ranging from ± 2 g to ± 40 g. It has a speed of up to 4000 samples per second and a resolution close to $4 \mu\text{g}$ in three axes. Users can choose the appropriate sensor based on their needs. The power supply voltage is flexible, ranging from 5 to 16 VDC. Triaxial accelerometers allow for quick and easy mounting.

Marking:



Example: DYN-301140-CN: Triaxial, 4000 SPS, ± 40 g, Capacitive Accelerometer with CAN Interface.

Specifications:

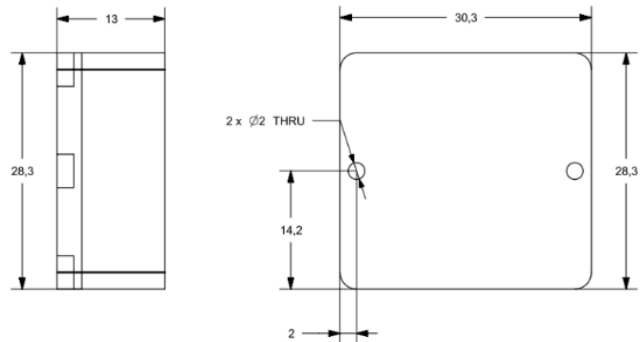
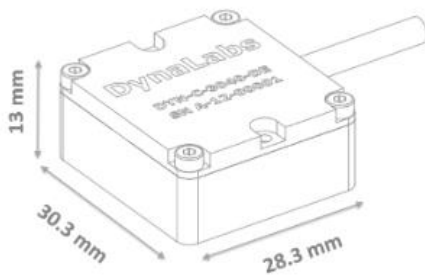
| Full-scale acceleration | (g) | ± 2 | ± 4 | ± 8 | ± 10 | ± 20 | ± 40 |
|-------------------------|----------|---------|--------|--------|----------|----------|---------|
| Scale Factor | (LSB/g) | 256000 | 128000 | 64000 | 51200 | 25600 | 12800 |
| Sensitivity | (µg/LSB) | 3,90625 | 7,8125 | 15,625 | 0,195313 | 0,390625 | 0,78125 |
| Sensitivity (Change/°C) | (%/°C) | ±0.01 | ±0.01 | ±0.01 | ±0.01 | ±0.01 | ±0.01 |
| 0 g Offset | (mg) | ±25 | ±25 | ±25 | ±125 | ±125 | ±125 |
| Noise | (µg/√Hz) | 25 | 25 | 25 | 75 | 85 | 90 |
| Non-Linearity | (%) | 0,1 | 0,8 | 1,6 | 0,1 | 0,5 | 1,3 |
| Resolution (1 LSB) | (µg) | 4 | 8 | 16 | 20 | 40 | 80 |

Physical and Environmental:

| | | | |
|-------------------------------------|-------------------------|--------|-----------|
| Operating Voltage | 5V - 16 V | | |
| Operating Power/Current | 1W/62.5 mA | | |
| Operating Temperature | -40 °C to + 85 °C | | |
| Shock Limit | 5000 g | | |
| Protection Level | IP 68 | | |
| Connector at Sensor (open ended) | Pin 1 | NC | Shielding |
| | Pin 2 | Red | 5 - 16V |
| | Pin 3 | Black | GND |
| | Pin 4 | Yellow | CAN-High |
| | Pin 5 | Green | CAN-Low |
| Mounting | Adhesive or screw holes | | |
| Housing Material | Anodized Aluminum | | |
| Weight (without cable) | 80 g | | |

| Sample per second (SPS) | Low-Pass Filter (Hz) |
|-------------------------|----------------------|
| 3,90625 | 0,97 |
| 7,8125 | 1,9 |
| 15,625 | 3,9 |
| 31,25 | 7,81 |
| 62,5 | 15,62 |
| 125 | 31,25 |
| 250 | 62,5 |
| 500 | 125 |
| 1000 | 250 |
| 2000 | 500 |
| 4000 | 1000 |

Technical Drawings:



Options:

- Customize Range
- Customize Frequency
- Customize Connector
- Customize Cable Length (5m standard cable)
- Customize Aluminum or Steel

Quality:

All Dynalabs products are **CE** compliant.