

Features:

- Accurate DC measurement
- Voltage Output
- High frequency response
- High shock protection
- Low noise – high resolution
- Differential output signal
- Gas damping



Applications:

- Structural monitoring and testing
- Aerospace vibration testing
- Automotive ride quality & comfort
- Railway engineering
- GVT and flutter testing

Capacitive accelerometers are based on proven micro-electro-mechanical systems (MEMS) technology. These capacitive accelerometers are reliable and long-term stable. They have DC response. The advantage of these sensors is their outstanding temperature stability, their high frequency response and their lightweight. These sensors have reliable aluminum housing with IP68 protection class.

Dynalabs 3000LN series triaxial accelerometers provide an outstanding noise performance from 9 to 680 $\mu\text{g}/\sqrt{\text{Hz}}$. These accelerometers provide a wide frequency range ($\pm 5\%$) from 700 Hz to 2,900 Hz.

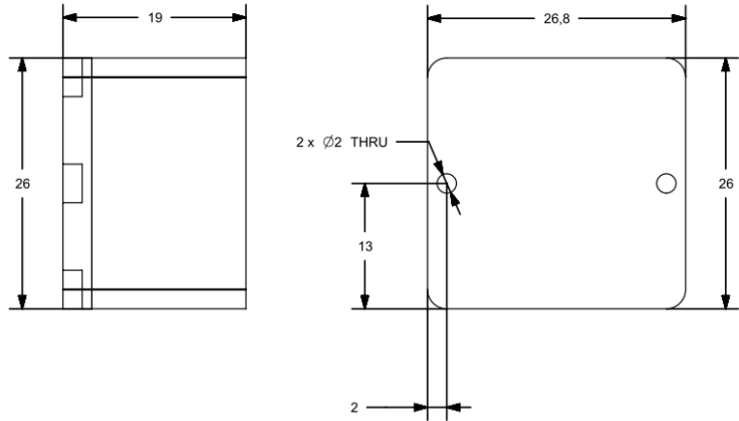
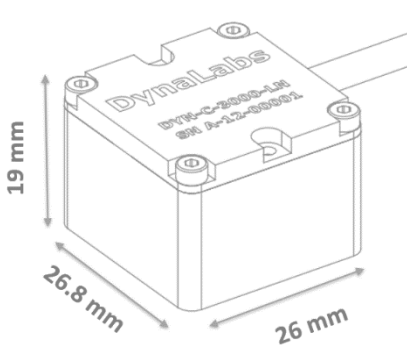
Specifications:

		3002LN	3005LN	3010LN	3030LN	3050LN	3100LN	3200LN
Full-scale acceleration	(g)	± 2	± 5	± 10	± 30	± 50	± 100	± 200
Sensitivity	(mV/g)	1,350	540	270	90	54	27	13.5
Frequency range ($\pm 5\%$)	(Hz)	700	1,150	2,000	2,300	2,700	2,900	2,500
Non-linearity (full scale)	(%)	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Noise (in band)	($\mu\text{g}/\sqrt{\text{Hz}}$)	9	21	40	100	180	340	680
Bias temperature	(mg/ $^{\circ}\text{C}$)	± 0.2	± 0.5	± 1	± 3	± 5	± 10	± 20
Shock survivability	(g)	± 3000 g pk	± 3000 g pk	± 3000 g pk	± 3000 g pk	± 3000 g pk	± 3000 g pk	± 3000 g pk

Physical and Environmental:

Protection Level	IP 68
Operating Voltage	6 V – 40 V
Operating Temperature	-40 $^{\circ}\text{C}$ to +100 $^{\circ}\text{C}$
Weight (without cable)	28 g (aluminum) 55 g (steel)
Housing Material	Aluminum or Steel
Connector (Optional)	D-Sub 9 or 15 pin, Lemo, Binder
Mounting	Adhesive or screw mount
Base plate (Optional)	Aluminum or Steel

Technical Drawings:



Options:

- Custom Cable Length (5m standard cable)
- Custom Housing Material
- Custom Connector
- Base plate

Standard length of the integrated cable is 5 meters. But, based on request customized cable lengths are possible.

Standard version has no connector at the cable end. However, it is possible to assemble connector during production.

Cable Code/Pin Configuration:

- | | | |
|----------|----------------------|--|
| • Red | : V+ | Supply voltage |
| • Black | : Ground | GND |
| • X-Axis | : Yellow : Signal(+) | Positive, analog output voltage signal for differential mode |
| | Purple : Signal (-) | Negative, analog output voltage signal for differential mode |
| • Y-Axis | : Blue : Signal(+) | Positive, analog output voltage signal for differential mode |
| | Green : Signal (-) | Negative, analog output voltage signal for differential mode |
| • Z-Axis | : White : Signal (+) | Positive, analog output voltage signal for differential mode |
| | Orange : Signal (-) | Negative, analog output voltage signal for differential mode |

Cable: 8x #28 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket

Quality:

All Dynalabs products are **CE** compliant.