

ANALOG CAPACITIVE ACCELEROMETER

DynaLabs

DYN-C-3000-DE

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 they are low noise-high resolution features. These sensors have reliable aluminum housing with IP68 protection class. Dynalabs 3000DE series triaxial accelerometers provide an outstanding noise performance from 25 to 170 $\mu\text{g}/\sqrt{\text{Hz}}$. These accelerometers provide a wide frequency range ($\pm 3\text{dB}$) from 1,500 Hz to 3,000 Hz.



Features

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



Application Areas

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

		3002DE	3004DE	3008DE	3010DE	3020DE	3040DE	3050DE	3100DE	3200DE	3500DE
Full-scale Acceleration	(g)	± 2	± 4	± 8	± 10	± 20	± 40	± 50	± 100	± 200	± 500
Frequency range ($\pm 3\text{dB}$)	(Hz)	1,500	1,500	1,500	1,500	1,500	1,500	3,000	3,000	3,000	3,000
Non-linearity (full scale)	(%)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Noise (in band)	($\mu\text{g}/\sqrt{\text{Hz}}$)	25	25	25	80	75	110	35	50	80	170
Scale factor (nominal)	(mV/g)	1,600	800	400	320	160	80	40	20	10	4
Shock survivability	(g)	5,000	5,000	5,000	5,000	5,000	5,000	6,000	6,000	6,000	6,000



DYNALABS MUHENDISLIK LTD STI

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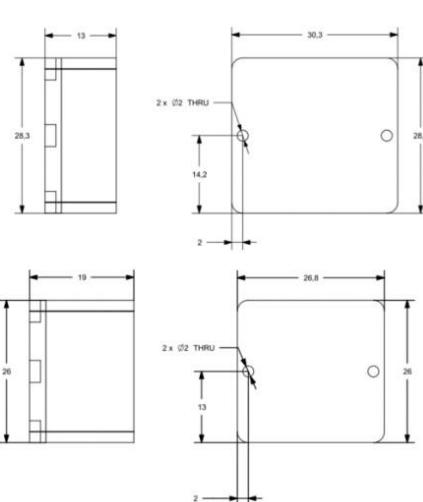
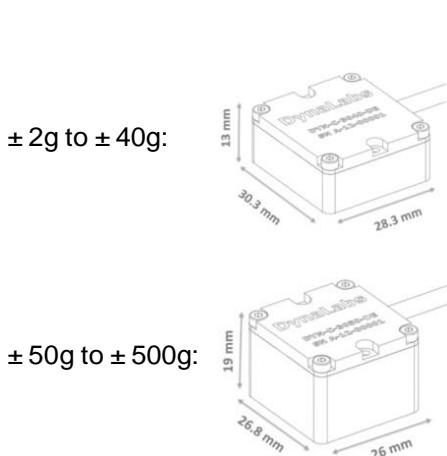
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OPTIONS:

- 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(+) : Purple	Positive, analog output voltage signal for differential mode Negative, analog output voltage signal for differential mode
• Y-Axis : Blue	: Signal(+) : Green	Positive, analog output voltage signal for differential mode Negative, analog output voltage signal for differential mode
• Z-Axis : White	: Signal(+) : Orange	Positive, analog output voltage signal for differential mode Negative, analog output voltage signal for differential mode

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

Protection Level	Operating Voltage	Operating Temperature	Weight (without cable)
IP 68	6 V – 40 V	-40 °C to +100 °C	25 g (aluminum) 55 g (steel)

Housing Material	Connector (Optional)	Mounting	Base plate (Optional)
Aluminum or Steel	D-Sub 9 or 15 pin, Lemo, Binder	Adhesive or screw mount	Aluminum or Steel



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