MEMS Capacitive Accelerometer Digital Interface RS232

Features:

- Digital Interface RS232
- MEMS Capacitive
- Triaxial
- Resolution: 4 µg
- Sample Rate for RS232: 15, 62, 125 SPS
- Measurement Range: ±10g, ±20g, ±40g for 40g
- Measurement Range: ±2g, ±4g, ±8g for 8g
- Frequency Range (±5 %): DC to 1000 Hz
- Temperature Measurement

Applications:

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

Software Features:

- Display and Record: X, Y, Z Acceleration, Temperature
- Analyze: FFT, Downsample, Average
- Calibration: Linear Equation
- Export: .CSV, .MAT,.TXT and .PNG

Capacitive accelerometers are based on proven micro-electro-mechanical systems (MEMS) technology. These capacitive accelerometers are reliable, long-term stable, and precise. MEMS technology facilitates the precise measurement of both static (DC) and continuous accelerations, allowing for the calculation of the velocity and displacement of moving objects.

Sensor is designed with three digital interfaces (**RS232**, USB, CAN) and can detect dynamic (AC) accelerations with amplitudes ranging from ±2g to ±40g. It has a speed of up to 4000 samples per second and a resolution close to 4 µg 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. The triaxial accelerometers allow quick and easy mounting.

We offer RS232 accelerometers in two configurations:

8g sensor: Include 2g, 4g and 8g.

40g sensor: Include 10g, 20g and 40g.

Marking:

DYN-□□□□□□-□□

Interface
RS = RS232

Range
02 = ±2g
04 = ±4g
08 = ±8g
10 = ±10g
20 = ±20g
40 = ±40g

Sample (SPS) For RS232
03 = 15 Hz
05 = 62 Hz
06 = 125 Hz

30 = Three axes

Example: DYN-300640-RS: Triaxial, 125 SPS, ±40 g, Capacitive Accelerometer with RS232 Interface.

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Specifications:

Full-scale acceleration	(g)	± 2	± 4	± 8	± 10	± 20	± 40
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 2	RXD	White
	Pin 3	TXD	Green
	Pin 5	GND	Black
	Pin 9	5V	Red
Mounting	Adhesive or screw holes		
Housing Material	Anodized Aluminum		
Weight (without cable)	80 g		

Sample per second (SPS)	Low-Pass Filter (Hz)
15	3.9
62	15.62
125	31.25

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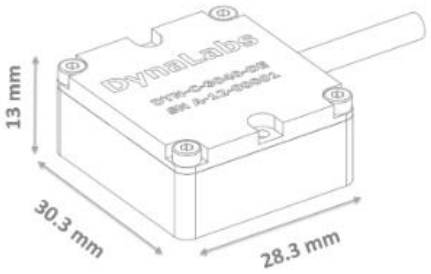
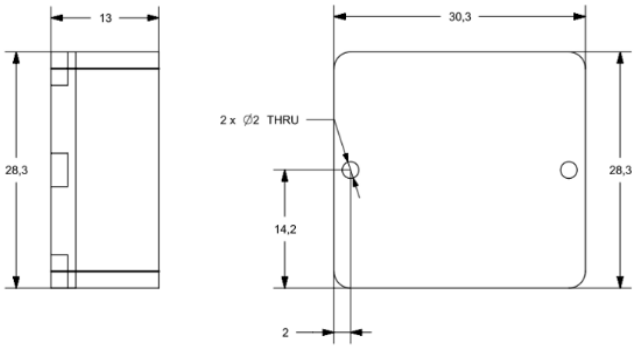
Technical Drawings:





Options:

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

Quality:

All Dynalabs products are **CE** compliant.