



Digital Accelerometers User Configurable to $\pm 70g$

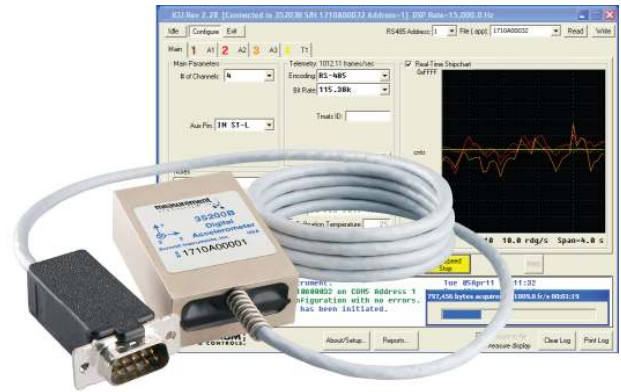
Digital Accelerometer

These Measurement Specialties digital accelerometers are complete, easy-to-use, user-configurable sensors containing one to three accelerometers, a temperature sensor, signal processor, RS-485 interface and three analog outputs in a small, easy-to-install package.

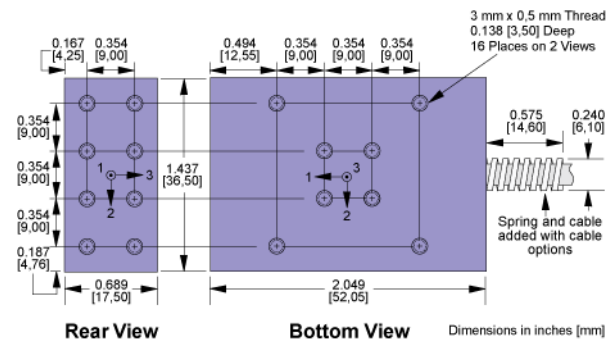
No data acquisition system is required; data is streamed directly to a PC. A connection kit is available to set up and begin testing immediately upon receipt of the sensor.

The analog/digital output range and low-pass filter of each digital accelerometer axis can be set via a built-in RS-485 interface using a free, downloadable Instrument Configuration Utility (ICU). An RS-485 to RS-232 adapter is available.

Calibrated, ranged and filtered data can be streamed out at up to 3 Mbit/sec via RS-485. Analog output of up to three calibrated, ranged and filtered channels are provided for compatibility with existing systems.



dimensions



Two through holes and four 3 mm x 0.5 mm threaded holes are provided for mounting.

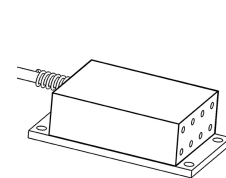
FEATURES

- User Configurable Settings
- RS485 Serial and Analog Outputs
- High Accuracy and Linearity over Wide Temperature Range
- Built-in Calibration Data
- Built-in Power Supply Regulation
- Easy Installation
- Suitable for Harsh Environments
- DO-160 Version Available
- Three Year Warranty

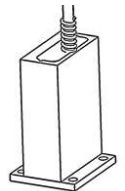
APPLICATIONS

- Vehicle dynamics
- Construction Equipment
- Research & Development
- Test & Measurement
- Military/Aerospace

Mounting
adapters
(sold
separately)



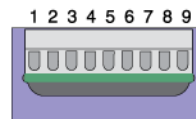
35170A Horizontal



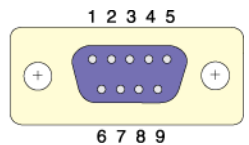
35172A Vertical

connections

T000
Terminal
Block



T004
Male D-Shell
Connector



Pin	1	2	3	4	5	6	7	8	9
Signal	Analog1+	Analog2+	Analog3+	Signal-	RS485-	RS485+	Aux	+Vs	Gnd
Wire	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White

15200B/25200B/35200B Accelerometer



深圳市亿为测控电子有限公司
Shenzhen Bill-Well Measurement & Control Electronics Co., Ltd.

performance specifications

$T_A = T_{min}$ to T_{max} ; Acceleration = 0 g unless otherwise noted; within one year of calibration. Improved specifications available upon request.

PARAMETERS	Min	Typical	Max	Units	Conditions/Notes
Range: Measurement Full Scale					Lower ranges are user configurable
Option R070			±70	g	
Option R050			±50	g	
Option R035			±35	g	
Sensitivity Drift 25°C to T_{min} or T_{max}				±0.5	% Percent of sensitivity at 25 °C
Zero g Drift 25°C to T_{min} or T_{max}				±1	g
Alignment				±3.0	degrees Deviation from ideal axes
Transverse Sensitivity				±0.25	% Inherent sensor error, excluding misalignment
Nonlinearity				0.2	% FSR Best fit straight line
Frequency Response				0	400 Hz Lower filter cutoffs are user configurable*
Noise Density					10 Hz to 400 Hz
Option R070		1.8	3.5	mg/√Hz	
Option R050		1.4	3	mg/√Hz	
Option R035		1.1	3	mg/√Hz	
Temperature Sensor					Accuracy ±1 °C over temperature
Range				-55	125 °C
Resolution				0.25	°C
Accuracy				±2	±3 °C $T_A = -40$ to $+85$ °C
Digital Signal Processor					
Sensor Scan Rate				42,500	Hz User configurable; channels processed in parallel
Analog Outputs					Configurable to sensor
Voltage Swing				0.25	4.75 V $I_{out} = 1$ mA max
Impedance to Analog -				100	130 220 Ω
Nonlinearity				0.15	% FSR Excluding sensor nonlinearity
Digital Output Word Size				16	bits Filtered, gained and calibration corrected
Power Supply (V_s)					
Input Voltage Limits				-80	+80 V -80 V continuous, >38 V if ≤550 ms, duty <1%
Input Voltage – Operating				+8.5	+36 V
Input Current				55	mA
Rejection Ratio				>120	dB DC
Temperature Range (T_A)				-40	+85 °C Terminal block option T000 rated to -30 °C
Mass				78	grams
Shock Survival – Sensor				-1500	+1500 g Any axis for 0.5 ms, limited by oscillator

*User configurable low-pass filter 3dB cutoff (number poles configurable)

ordering info

