

GRAPHTEC GL7-DCB Strain Amp Module

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TEDS
Compatible

Carries
Internal
Bridge

Low-pass
Anti-aliasing
Filter

Meets
Low-Pass
High-Pass
Band-Pass
Needs



GL7-DCB (Strain Module) specifications

Item	Contents
Input ch number	4 ch/1 module
Input terminal shape	DSUB 9-pin (female)
Input system	All ch insulation, simultaneous sampling, balanced input
Sampling interval	10 μ s to 1 hour
Built-in RAM	2,000,000 data
Input type	Strain, voltage, resistance values (including potentiometer)
Measurement range	Strain 400, 500, 800, 1000, 2000, 4000, 5000, 8000, 10000, 20000 μ e (μ e : 10^{-6} Strain) 0.2, 0.25, 0.4, 0.5, 1, 2, 2.5, 4, 5, 10 mV/V * The range depends on the bridge voltage.
	Voltage 1, 2, 5, 10, 20, 50, 100, 200, 500 mV, 1, 2, 5 V
Resistance	1, 2, 5, 10, 20, 50, 100, 200, 500 Ω , 1, 2, 5, 10, 20, 50 k Ω
	Measurement accuracy *1 (23°C \pm 5°C)
*1 After power-on, more than 30 minutes, sampling 1 sec., filter 100 Hz GND	
A/D converter	System: sequential comparison system Resolution: 16-bit (Effective Resolution : Approx. \pm Range 1/40,000)
Gauge factor	2.0 constant
Sensor supported	Strain [Strain gauge transducer] 4-wire full bridge, 6-wire full bridge (Available for remote sensing) [Strain gauge] 4-wire full bridge, 6-wire full bridge (3/4-wire: available for remote sensing) 3 or 4 or 5-wire 1/2bridge (4/5-wire: available for remote sensing) 4 or 6-wire full bridge (6-wire: available for remote sensing)
	Resistance Potentiometer, resistance
Internal gauge resistance	50 to 10k Ω (Excitation voltage 1V : 50 Ω to 10k Ω , 2V : 100 Ω to 10k Ω , 2.5V : 120 Ω to 10k Ω , 5V/10V : 350 Ω to 10k Ω)
Internal gauge resistor	1/4bridge or 1/2bridge: (available for 120 Ω and 350 Ω gauges) * When the internal gauge resistance is 120 Ω , the Excitation voltage 1, 2, 2.5 V are available.
Excitation voltage	DC 1, 2, 2.5, 5, 10 V * When the Excitation voltage is 5 V or more, 350 Ω or more gauge is available.
Constant current bridge power supply	0.1 to 20 mA (Voltage supported : Max. 10V)
Balancing	Method: Auto-balancing (Range: \pm 10,000 μ e)*Strain input only
Remote Sensing	3 or 4-wire 1/4bridge, 4 or 5-wire 1/2bridge, and 6-wire full bridge are available.
Shunt calibration	Internal approximate 60k Ω (120 Ω gauge), approximate 175k Ω (350 Ω gauge)
Temperature coefficient	Gain: \pm 0.02% of F.S./°C 0 point : \pm 1.2 μ e/°C
Input resistance	10 M Ω \pm 5%
Maximum input voltage	Differential input : DC10V Common-mode voltage : 10VACrms Input terminal(-) /Input terminal (-) interval : 10 Vp-p Input terminal (-)/GND interval : 60Vp-p
Withstand voltage	Input terminal (-)/GND interval : 1000Vp-p 1 minute
Insulation resistance	Input terminal (-)/GND interval : 100M Ω or more (at DC500 V)
Common mode rejection ratio	80 dB or more (50/60 Hz signal source 300 Ω or less)
Noise	50 μ e or less (DC2V, 350 Ω)
Frequency response	DC to 20 kHz
Filter	L.P.F. OFF, Line (1.5 Hz) 3, 6, 10, 30, 50, 60 Hz, 100, 300, 500 Hz, 1, 3, 5, 10kHz at -30 dB/oct
	A.A.F. OFF/ON (Anti-aliasing filter)
TEDS	Standards: Conforms to IEEE1451.4 Class 2 (template No. 33) Information: Readout and auto-set for sensor data
External dimensions [WxDxH] (approximate)	49.2 x 136 x 160 mm (not including protruding parts)
Weight (approximate)	840 g

- Direct pin-access is possible with internal Wheatstone bridge circuit that allows up to 6-wire full bridge remote sensing.
- Uses IEEE Template 1451.4 Class 2 (No. 33) designation for simple TEDS (Transducer Electric Data Sheet) format.
- Low-pass anti-aliasing feature allows high quality waveform to be displayed real-time using GL7000-DISP.



GL7000

