GRAPHTEC GL7-DCB Strain Amp Module

WWW.GRAPHTECAMERICA.COM

TEDS Compatible

Carries Internal Bridge

Low-pass Anti-aliasing Filter

Meets Low-Pass High-Pass Band-Pass Needs

- *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

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 µs 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 µε (µε : 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 kΩ
Measurement accuracy *1 (23°C±5°C)	Strain	±(0.2% of F.S. +10µε)
	Voltage	±(0.2% of F.S. +10µV)
	Resistance	±0.5%
*1 After power-on, more than 30 minutes, sampling 1 sec., filter in GND		
A/D converter		System: sequential comparison system Resolution: 16-bit (Effective Resolution : Approx. ±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 10kΩ (Excitation voltage 1V : 50Ω to 10kΩ, 2V : 100Ω to 10kΩ, 2.5V : 120Ω to 10kΩ, 5V/10V : 350Ω to 10kΩ)
Internal gauge resistor		1/4bridge or 1/2bridge: (available for 120Ω and 350Ω gauges) * When the internal gauge resistance is 120Ω, 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, 350Ω or more gauge is available.
Constant current bridge power supply		0.1 to 20 mA (Voltage supported : Max.10V)
Balancing		Method: Auto-balancing (Range: ±10,000 µε)*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 60kΩ (120Ω gauge), approximate 175kΩ (350Ω gauge)
Temperature coefficient		Gain: ±0.02% of F.S./°C 0 point : ±1.2µε/°C
Input resistance		10 MΩ ±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 : 100MΩ or more (at DC500 V)
Common mode rejection ratio		80 dB or more (50/60 Hz signal source 300Ω or less)
Noise		50µε or less (DC2V, 350Ω)
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 Class2 (emplate No. 33) Information: Readout and auto-set for sensor data
External dimensions [WxDxH] (approximate)		49.2 × 136 × 160 mm (not including protruding parts)
Weight (approximate)		840 g