

DAQP-CFB2

- Bandwidth
- Input ranges
- Sensor Excitation
- Bridge completion
- Shunt
- TEDS

Carrier frequency module

- DC to 9.6 kHz
- 0.1mV/V to 1000 mV/V
- Programmable voltage and frequency up to 5 V_{RMS} /20 kHz
- Remote sense support
- Internal completion for ½ and ¼ bridge (120 and 350 Ohm)
- Two internal shunts (50 k, 100 k)
- Support for TEDS sensors

**Module specifications**

DAQP-CFB2	
Bridge input ranges	0.1 mV/V to 1000 mV/V
Inductive bridge input ranges	5 mV/V to 1000 mV/V
Capacitive input Ranges	20 pF to 1 uF
Bridge resistance	60 - 5,000 Ohm depending on excitation voltage
Excitation voltage level	1, 2, 5 V _{RMS} sensed excitation provided
Excitation voltage accuracy	0.05 % of value ± 200 µV
Excitation voltage frequency	0.6; 1; 2.5; 5; 10; 20 kHz sine wave ±100 ppm
Maximum excitation current	50 mA _{RMS} short circuit protected
Excitation voltage synchronisation	internal crystal oscillator or external
Excitation voltage drift	typically 20 ppm/°K
Excitation frequency drift	typically 2 ppm/°K
Nonlinearity	±0.02 % FS
Accuracy bridge mode	±0.1 % of reading ±0.05 % of range
Offset drift	±0.003 µV/V/K ±40 ppm of Range/°K
Gain drift	within ±30 ppm/°K
Balance adjusting range	±400 % of Range (±200 % at 1 V excitation)
Phase adjustment range	±90° (inductive mode only)
Balance adjusting accuracy	within ±0.1 % FS
Supported sensors	4- or 6-wire full bridge 3- or 5-wire ½ bridge with internal completion (software programmable) 3- ¼ bridge with internal resistor for 120 and 350 Ω (software programmable) inductive full bridge inductive half bridge (typically LVTD Sensors)
Shunt calibration	internal 50 kOhm and 100 kOhm Shunt
Completion and shunt resistor accuracy	±0.05 %
-3 dB Bandwidth	DC to max 9.6 kHz
Reconstruction filter	7 th order Butterworth, automatically adjusted to excitation frequency * 0.48
Signal filters (low pass)	10, 30, 100, 300, 1 kHz, 3 kHz
Filter characteristics	2 nd order Bessel or Butterworth (40 dB/ decade)
Typ. SNR @ 1000 Hz [100 Hz]	78 dB [85 dB] @ 1 mV/V
and 2 V _{RMS} excitation	80 dB [87 dB] @ 100 mV/V
Over voltage protection	±10 V
Output voltage	±5 V
Out current	±5 mA
Output protection	continuous short to ground
Power consumption	max. 1.5 W
Supported TEDS chips	DS2406, DS2430, DS2432, DS2433, DS2431
Weight	within 250 (±30) g