

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 µF |
| Bridge resistance | 60 - 5000 Ω 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 | typically ±0.1 % of reading ±0.05 % of range |
| Max. offset drift | ±0.003 µV/V/K ±40 ppm of Range/K |
| Max. gain drift | ±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-wire ¼ bridge with internal resistor for 120 and 350 Ω (software programmable) inductive full bridge inductive half bridge (typically LVDT Sensors) |
| Shunt calibration | internal 50 kΩ and 100 kΩ Shunt |
| Completion and shunt resistor accuracy | ±0.05 % |
| -3 dB Bandwidth | 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 |