

## QX3 Specifications Summary<sup>1</sup>

### Strain Gauge Channels

Channels	16 with totally independent configuration.
Input Type	Differential or Single-ended input (with or without backoff)
Sensitivity	±5,10,20,50,100,200 & 500mV, 1,2,5 & 10V full-scale.
Excitation	Totally Variable 0-10VDC, each channel current limited at 60mA.
Bridge Balance	Fine/Coarse voltage injection & autozero via nSoft.
Sensor Backoff	±0-10VDC backoff for single-ended input voltages.
Sensor Calibration	One of 4 software selectable internal calibration resistors for each channel (one available on 2 pins of the input connector) can be applied across any arm of the bridge. One of 8 software selectable calibration resistors common to all channels.
Inputs Connector	Screw locked panel mount female 7 pin Amphenol C91A Series.
Strain Gauge Type	Front panel switch configurable for 120, 350 & 1KΩ, 0.1% 3ppm/°C. Full, half and 2-, 3- and 4-wire quarter bridge configurations.
Input Impedance	>1GΩ.
Input Offset	Factory adjusted to ~0 on 5mV range at 37°C. Compensation via hardware calibration table.
Thermal Drift	±(12+120/Gain)μV/°C (output = 10V).
Bandwidth	DC to 80KHz (see filter).

### Anti-aliasing Filter

Type	8 pole switched capacitance + guard filter. Butterworth (Bessel or Elliptic optional at time of order).
Mode	AC, DC, Bypass & Channel Zeroed.
Frequency	1, 2, 5, 10, 20, 50, 100, 200, 500Hz, 1, 2, 5, 10 & 20KHz.
Frequency Reference	Accuracy 0.01%
Gain vs Fo	0.50 Fo            -0.02dB 1.00 Fo            -2.7dB 2.00 Fo            -48dB 4.00 Fo            -78dB

### Sampling

Sample and Hold	Simultaneous sample and hold for all Strain Gauge/Voltage Channels.
Sample Rate	Cumulative sample rate up to 50KHz. Sample rates for channels may differ provided they are power of two of each other.

### Calibration

Reference	Internal 10.00V (0.05%) available via BNC or external BNC input. Drift ±2ppm/°C.
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### Thermocouple Channels

Channels	16 with ice-point compensation
Inputs	Remote diecast module with miniature type-K thermocouple sockets
Range	-270 to +1000°C

### Pulse Channels

Channels	8
Inputs	Single-ended BNC
Sensitivity	0.1 – 100V peak to peak
Measure	Counts per second

### General

Power	10-35V DC at 6-40W depending on gauge loading and activity
Control	Remote via RS232 or Tape recorded style Control module

### Status

Production	No longer in production
Spares/Service/Upgrade	Contact Pi Logic

<sup>1</sup> Specification subject to change without notice