DTX-6017SSC/HV

Integrated Sensor Conditioning Data Recorder

- 16 Channels in a standard 5U rack mount chassis
- DC to 2 MHz analog bandwidth (10 MHz sampling)
- 100 uV to 500V input signal range
- Multi-Mode Programmable Sensor conditioning
- Local GUI or Remote Operation via Ethernet

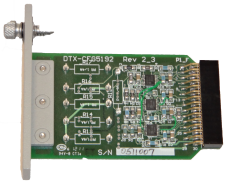
Each DTX-6017SSV/HV Integrated Sensor Conditioning Data Recorder provides up to 16 channels of state-of-the-art sensor processing for a variety of environmental test sensors along with wideband data recording capability in a compact (5U) chassis. A comprehensive user GUI running on the embedded Windows OS can be used locally with the addition of a user keyboard, mouse and video terminal, or run remotely via the integrated Ethernet connection to create high channel count (1000+) synchronous data acquisition systems controlled by a single remote desk top application.

SENSOR CONDITIONING

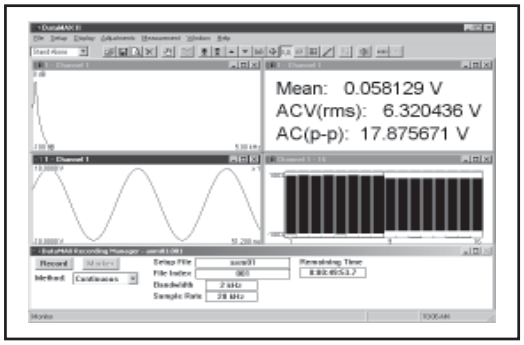
- Strain Conditioners
- IEPE Conditioners
- High Gain (x10,000) Instrumentation Amplifier
- Thermocouple with Cold Junction
- Constant Current RTD
- High Voltage

Isolated low noise instrumentation amplifiers with ultra stable voltage excitation and current sources...

Hot swappable modules with front access user configuration cards



Integration with the complete suite of DataMAX display utilities allows for real time monitoring of data recording to verify signal integrity during the test sequence. Local displays along with multiple remote monitor stations can be easily configured to match multiple signal types.



DataMAX DISPLAY

- Time based analog signal displays
- Frequency based spectral displays
- Multiple channel overlays
- Digital readouts in Engineering Units
- Bar graph displays (with peak hold)
- Customized user configuration

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6192

DTX-6192 Multi-Mode Signal Conditioner

Description

The DTX-6192 is a single channel high-performance sensor conditioner with integral 10 MHz digitizer and 4GB SDRAM memory buffer in shielded modular package which can be synchronized into 1000+ channel configurations when installed in a DTX-6017SSC/HV chassis. Sensor conditioning includes a programmable differential voltage input with AC or DC coupling, Strain, Thermocouple, RTD and IEPE type sensors. Programmable voltage and current excitation is provided for bridge or self-powered sensors with bridge completion or user customization done on an easily removed and configured plug-in card.

Unique to the DTX-6192 modules is the ability to switch between multiple external calibration sources while monitoring the conditioned signal source for automated system health checking and and calibration to external NIST reference standards, or an internal NIST traceable voltage reference.

One feature of this module is that there is complete galvanic isolation of the front end input instrumentation amplifier and sensor excitation (voltage or current) circuitry. Each analog input stage is powered by an isolated power supply and all signal coupling between stages is done in the digital realm using digital isolators.

All operating parameters are programmable, including input coupling and offset-correction, channel gain, low-pass filtering, voltage and current excitation level, and system calibration. A graphical user interface program is provided for user-control of these parameters.

Specifications

General

Gain Range:	1 to 10,000, programmable
Gain Accuracy:	0.05%
Linearity:	0.01%
Input voltage range:	+/- 10 uV to +/- 500 V
Input protection:	250v max
Input impedance:	10 Meg
Input coupling:	AC or DC, programmable
Input offset compensation:	Yes, programmable
Input Isolation:	1500 V
Optical Isolators:	Yes
Common-mode voltage:	300v
Common-mode rejection:	100 dB (80 dB for gain < 10)
Frequency Response:	DC to 2 MHz

Low-Pass Filter

Type:	Digital
Range:	10 Hz to 2 MHz, programmable
Roll-off:	4-pole Butterworth

Overload Indicator

Type:	Front-panel LED and software flag
Trip level:	0.1v to 10v, programmable

Noise

Input (RTI):	3 uv rms
Output (RTO):	0.5 mv rms

Calibration Source

Type:	Internal voltage reference
Voltage range:	0 - 2.5v, programmable
Accuracy:	0.01%
Stability:	10 ppm/C
Voltage substitution:	Yes, selectable under program control

Voltage Excitation

Range:	0.1v to 10v, programmable
Current capability:	100mA
Voltage Sense:	Local or Remote
Accuracy:	0.02%
Regulation:	0.005%
Stability (zero to full load):	0.01%
Temperature stability:	0.003% / C
Noise:	1 mV max
Short-circuit protection:	Yes

Current Excitation

Range:	1 to 20 mA, programmable
Accuracy:	0.3%
Regulation:	0.005%
Compliance:	24v
Stability (zero to full load):	0.01%
Temperature stability:	0.005% / C
Noise:	1.5uA max

Environmental

Operating temperature:	0 to 50 C
Storage temperature:	-25 to 85 C
Humidity:	0 to 90% non-condensing

Physical characteristics

Package:	Shielded, 6 sides
Dimensions:	0.8” x 4.2” x 9.5”
Weight:	1.3 lbs

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