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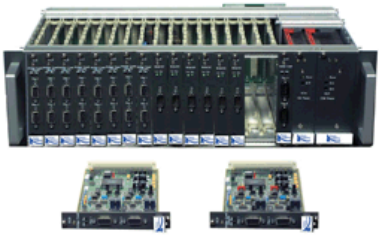
# V710

## VXI Signal Conditioning Termination Panel

The V710 active termination panel is a 19" rack mount 3U chassis that supports up to 16 signal conditioning modules for a maximum of 32 bridge signal conditioning channels.

The V710 is designed for use with the KineticSystems 3U front-end signal conditioning modules SC20 & SC21, that are controlled and monitored by the serial controller module SC15.

The V710 also accomodates ADC hosting connector modules SC16 & SC17, direct input modules SC25, and the system power supply modules SC10 & SC11.



SC20 Module | SC21 Module | SC15 / SC16 / SC17 Modules | SC25 Module | SC10 / SC11 Modules | V710 Chassis

## SC20: VXI Wideband Bridge Signal Conditioner Module



SC20 Data Sheet

Supporting Software

Request Quote

The SC20 is a 3U two-channel bridge signal conditioner module accommodating transducers that represent 1, 2 or 4 active arms of a bridge circuit.

Up to 16 SC20 modules for a total of 32 channels can be installed in a single V710 termination panel. Therefore, two 16-channel V200 Sigma-Delta 16-bit ADC modules or one 32-channel V213 16-bit ADC scanning module can be used with a single V710 chassis of SC20 bridge signal conditioners.

Strain gages, RTDs and other bridge-type sensors can be accommodated.

When used with a V200, this bridge conditioner can achieve a signal bandwidth of 90 kHz, with the V200 sampling at 200,000 samples/s. The SC20 and V200 form an ideal combination for high-bandwidth measurements as the high sample rate, high-rolloff digital filters to prevent signal aliasing, simultaneous sampling (an ADC per channel), programmable gain and AC/DC coupling are already built into the V200 ADC module. When used with a V213, anti-alias filtering is as provided by that module.

Sockets are provided for on-board bridge completion. High-precision 120Ω and 350Ω resistors are available. Shunt calibration is activated under program control. Shunt calibration resistors can be plugged into the module to accommodate various bridge requirements. Bridge excitation is programmable, with 0, 2.5, 5 and 10 V selection. The bridge excitation is non-isolated and balanced to ground (e.g. 10 V excitation is supplied to the legs of the bridge as +5 V and -5 V with respect to ground). Each SC20 channel contains a regulator for excitation, and individual remote sensing is provided for high excitation stability.

For applications that exhibit high electrical noise, the trifilar-wound input transformer provides excellent high-frequency common-mode rejection.

Connections are available to provide a full 10-wire bridge hookup. Each of the bridge channels is connected via a 15-contact "D" connector on the associated SC20 front panel. Setup and control of the SC20 are accomplished via a standard serial port on the SC15 Serial Controller module.

### VXI Module Features

- Adds Bridge Signal Conditioning for use with VXI ADC Modules:
  - V200: Sigma-Delta 16-bit ADC Module
  - V213: 16-bit ADC Scanning Module
- 2 Bridge Signal Conditioning Channels per SC20 Module
- Up to 16 SC20 Modules for 32 Channels Total per V710 Active Termination Panel Chassis
- 90 kHz Bandwidth with V200 ADC Sampling at 200 KSPS
- Accommodates 1, 2 or 4 Active Bridge Arms
- Programmable Shunt Calibration & Bridge Balance
- Programmable Excitation with 0, 2.5, 5 or 10 V Selection with Excitation Alarm

### VXI Module Ordering Information

| SC20 Products and Part Numbers | |
|---|---|
| 2 Channels, Wideband Bridge Signal Conditioner, with Trifilar Transformers | SC20-AA11 |
| 120Ω Bridge Completion Resistor Kit (3 per kit) | SC20-0002 |
| 350Ω Bridge Completion Resistor Kit (3 per kit) | SC20-0003 |

- Excitation Regulation and Sensing per Channel for Maximum Stability
- 10-Wire Transducer Hookups can be Accommodated
- Trifilar-Wound Transformer for Excellent High-Frequency CMRR

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