

Features

- Conditions eight LVDT-type position transducers
- Self-scanning with onboard microprocessor
- Presents scaled, normalized position data to the VME bus
- 16-bit resolution with programmable noise filtering

The V550 is a 6U, one-slot VME module which will acquire position data from up to eight LVDT (linear variable differential transformer) position sensors. The LVDT sensors are excited by an ultrastable synthesized sinewave generator, and conditioned by a precision 16-bit A/D converter followed by digital signal processing. The resident microprocessor supervises scanning and signal conditioning, and places updated position data in VME-accessible dual-ported data registers for instant access from the VME bus.

The V550 provides 16-bit resolution, allowing sub-micron measurement with commercially available LVDTs. Users may select a range of DSP filtering factors to trade off position noise against acquisition rate.

The V550 provides unprecedented signal acquisition accuracy. Total RMS error (including absolute error, noise, and all drifts) is typically under 1.5 LSBs, equivalent to less than 25 PPM of full-scale span.



Specifications : V550 LVDT/RVDT scanner

FUNCTION	8-channel VME LVDT/RVDT scanner
DEVICE TYPE	Register based slave: A16:D16:D08(E0)
CHANNELS	8 - LVDT
LVDT DRIVE	Standard 3 Vrms, 2.4 KHz; other levels and frequencies available Drive is differential to minimize capacitive error effects Wiring shorts on any channel will not damage the module or disturb measurements of other channels
ACCURACY	Better than ± 50 PPM
STABILITY	Temperature influence < 1 PPM per degree C Long-term drift < 4 PPM per year
SCAN TIME	Time to scan all eight channels varies from 84 ms to 1.8 sec depending on user-selected filtering factors
DATA FORMAT	Signed two's complement 16-bit data
RESOLUTION	16 bits
OPERATING TEMPERATURE	0 to 60°C; extended MIL/COTS ranges available
CALIBRATION INTERVAL	One year
POWER	Standard VME supplies: +5 V, 2 A max +12 V, 500 mA max -12 V, 500 mA max
CONNECTORS	Two front-panel mounted female D25s, five leads per LVDT
INDICATORS	Three LEDs VME access, scan blinks at half the scan rate and pass/fail status
PACKAGING	6U single-width VME module
CONFORMANCE	ANSI/VITA 1-1994 (R2002) VMEbus spec