

The NT-C-5000 smart LVDT Signal Conditioner module from NewTek Sensor Solutions ends the difficulties that accompany AC-LVDT setup with built-in null indicators and front panel pushbuttons to set zero and full scale output. Engineered to work with AC-LVDTs and inductive half-bridge LVRTs, the NT-C-5000 offers a choice of 4 excitation frequencies and 8 analog outputs, operates LVDT sensors with over a 40 dB dynamic range of AC output, indicates most common system failures, and incorporates a 2-wire RS-485 digital communications port. Along with color-coded plug-in screw terminal connectors and a 2 year warranty, these are just a few of the many advanced features that make NewTek Sensor Solutions NT-C-5000 module an extremely versatile smart LVDT signal conditioner.

Features

- Smart setup with front panel push buttons
- Built-in null indication with front panel LEDs
- Auto-mastering fail-safe excitation syncing for multiple units
- Self-diagnostics for LVDT failure or disconnect
- Digital communications via RS-485 2-wire multi-drop bus
- Hot swapability --- setup can be saved and reloaded via RS-485 port

Applications

- Steam Valve Position Feedback
- Governor and Throttle Valves
- Interceptor and Stop Valves
- Boiler Feedwater Pumps
- Turbine Control Systems



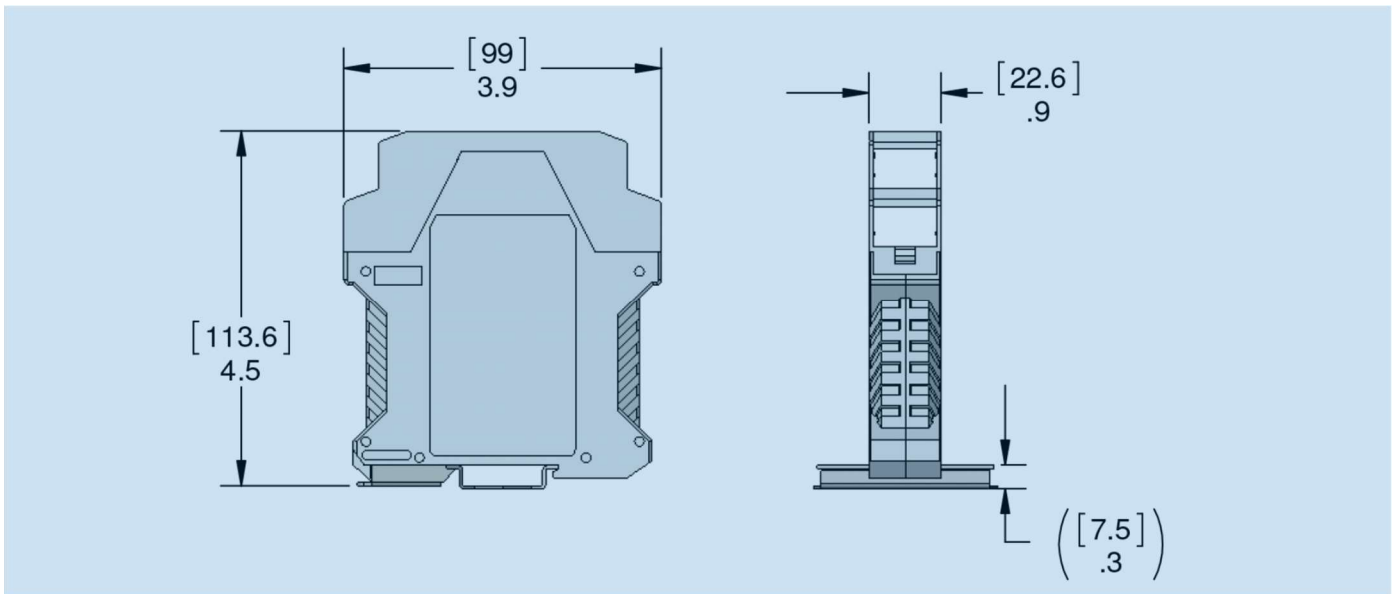
Specifications

- Operating Power:** +15 to +30 V DC (+24 V nominal), 60 mA max. at 24 V DC; +15 V DC and -15 V DC needed for ± 10 V DC bipolar output
- Excitation Voltage:** 3.0 Vrms (nominal) push-pull drive (factory default)
4.5 Vrms (nominal) push-pull drive (via jumper change)
1.5 Vrms (nom) single ended drive (for low impedance primary)
- Excitation Frequencies:** 1 kHz, 3 kHz, 5 kHz, 10 kHz (nominal)
- Auto-Master Syncing:** Master output couples up to fifteen slave units; if master fails, new master is automatically generated for fail-safe excitation
- LVDT AC Output Range:** 50 mVrms to 5000 mVrms at LVDT is full scale position
- Analog DC Outputs:** 0 - 5 V, 1 - 5 V, 0.5 - 4.5 V, 0.5 - 9.5 V, 0 - 10 V, -10 to +10 V, 0 - 20 mA sourcing, 4 - 20 mA sourcing
- Loop Resistance:** 850 Ohms max. with 24 V DC supply

Specifications (continued)

- Output Non-Linearity:** $\pm 0.025\%$ of Full Span Output (FSO)
- 3 dB Response:** 10% (minimum) of excitation frequency (normal setting);
10 Hz (default) user adjustable (low noise setting)
- Noise and Ripple:** ≤ 2.5 mVrms (voltage output); ≤ 5 μ Arms (current loop output)
- Fault Detection:** Open LVDT winding, cable disconnected, loss of excitation
- Failure Indication:** Flashing LED's; analog output out of range; open-collector switch
- Null Detection:** Front panel LEDs
- Null Output Signal:** Up to ± 3 VDC
- Operating Temperature:** 0 to 75 C
- Temperature coefficient:** $\pm 0.002\%$ of FSO/C (combined zero and span shift)
- Zero/Full Scale Set:** Front panel push button or RS-485 command
- Digital Interface:** RS-485 2-wire multi-drop network, 16 addresses

Dimensions and Wiring



Notes

- Additional options are available. Please consult factory for custom designs.
- Specifications subject to change.

Warranty

NewTek products are warranted against defective materials and workmanship for a period of one year from the date of delivery to the original purchaser. NewTek accepts no liability for damages in the misuse of our products.

