

The NTC-6000-DS *Quik-Cal*™ LVDT Signal Conditioner from NewTek Sensor Solutions serves AC LVDTs requiring ratiometric, or difference over sum measurement common in LVDTs used over large temperature ranges to reduce temperature sensitivity, or in aerospace applications. The user can select whether the LVDT is measured via a ratiometric Diff/Sum measurement, or differential measurement. Using the proven and reliable signal conditioning platform of the NTC-6000, the NTC-6000-DS offers even more options, compatibility, and many advanced features that make NewTek Sensor Solutions NTC-6000-DS module an extremely versatile smart LVDT signal conditioner.

Features

- Selectable Ratiometric (Diff/Sum) LVDT Measurement or Differential
- Proven reliability of the NTC-6000, with the addition of optional (Diff/Sum) measurement
- Self-diagnostics for LVDT failure. disconnect or short circuit
- Compatibility with almost any AC
- Hot swapability --- setup can be saved and reloaded via RS-485 port
- Cybersecurity lockout and tamper detect



Applications

- Aerospace Test Stand
- Materials Testing
- Governor and Throttle Valves
- Autoclave
- Packaging equipment
- Turbine Control Systems
- Extreme Temperature Swings

Specifications

Power:	Input Voltage	9-30 VDC, 90 mA max @ 24 VDC
Excitation:	Primary Voltage	3 Vrms (nominal)
	Primary Current	30 mA max
	Primary Impedance	90Ω min
	Primary Frequency	1.5kHz / 3 kHz / 5 KHz / 10 kHz (selectable)

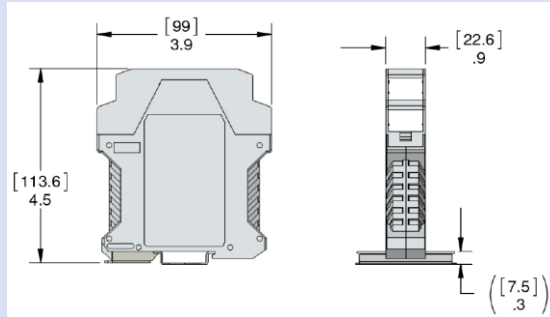
Specifications (continued)

Signal Output:	Voltage Output	0-10 VDC / ± 10 VDC / 0.5-4.5 VDC / 0-5 VDC / 4-20 mA Current Output (selectable)
	LVDT Measurement	Selectable Diff/Sum (S1 - S2)/(S1 + S2) OR Differential (S1 - S2)
	Loop resistance	1K Ω Max
	Frequency Response	500Hz Max (10KHz Excitation)
	Low Pass Filter	1Hz / 10Hz / 100Hz / Full (selectable)
	Output Voltage Ripple	1 mV rms Max (no Filter)
	Output Current Ripple	10 μ A rms max (no Filter)
	Output Non-Linearity	$\pm 0.1\%$ of FSO (typical)
	Error Flag Output	Open collector 50 mA, 30 V DC max.

Environmental:	Coef. Of Thermal Sensitivity	<0.02% FRO/ $^{\circ}$ C
	Operating Temperature Range	-45 $^{\circ}$ C to 85 $^{\circ}$ C
	Enclosure	4.5 x 3.9 x 0.9 in. DIN Rail mountable
	EMC Compliance	EN 61326-1: 2006, CISPR 11-A1: 2003 EN 61000-4-2: 2009, EN 61000-4-3: 2010, EN 61000-4-4: 2004, EN 61000-4-5: 2009, EN 61000-4-6:2009

Terminal Assignments:	1	SYNC I/O	Synchronization Master/Slave Input/Output
	2	ERROR FLAG	Error Flag Output
	3	PRI-1	Primary Excitation to LVDT
	4	PRI-2	Primary Excitation to LVDT
	5	SHIELD	Optional cable Shield connection (GND)
	6	SEC_CT	Secondary CT conn. (Required for Diff/Sum Mode)
	7	SEC-1	Secondary signal from LVDT
	8	SEC-2	Secondary signal from LVDT
	9	VDC OUT	Output Voltage
	10	n.c.	No Connection
	11	OUT RTN	VOUT / IOUT Return (GND)
	12	IDC OUT	Output Current
	13	RS-485 B	RS-485 Data +
	14	RS-485 A	RS-485 Data -
	15	-VIN	Supply Voltage Return (GND)
	16	+VIN	Supply Voltage In

Dimensional Drawing:



Warranty

The NewTek Sensor Solutions NTC-6000-DS Quik-Cal™ LVDT Signal Conditioner is warranted against defective materials and workmanship for a period of one year from the date of delivery to the original purchaser. NewTek Sensor Solutions accepts no liability for damages in the misuse of our products.



REV -