

The NewTek M Series AC LVDTs are specially designed for applications demanding the highest levels of reliability while performing in the rugged environments that are required for industrial equipment. These transducers consist of a coil assembly potted into a 3/8" diameter housing with a separate moveable core. The M Series are available from  $\pm 0.025$  inch ( $\pm 0.63$  mm) to  $\pm 2.0$  inch ( $\pm 50$  mm) and offer high sensitivity, high resolution and excellent linearity.

## Features

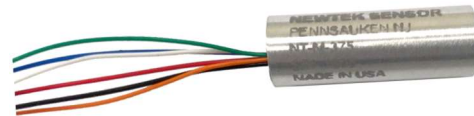
- Rugged 3/8 inch stainless steel housing
- Measurement ranges from  $\pm 0.025$  to  $\pm 2$  inches
- Linearity  $\pm 0.15\%$  of Full Range Typical
- Shock and vibration tolerant
- Operating temperature range:  $-65^{\circ}\text{F}$  to  $275^{\circ}\text{F}$  (Standard) or extended temperature range:  $-65^{\circ}\text{F}$  to  $400^{\circ}\text{F}$  (optional)
- Choice of imperial or metric threaded core
- Standard and custom models available

## Applications

- Factory automation
- Medical equipment
- Valve position monitoring
- Materials testing
- Dimensional gaging

## Electrical Specifications

<b>Input Voltage:</b>	3 Vrms (Nominal)
<b>Input Frequency:</b>	400Hz to 10KHz
<b>Linearity:</b>	$< \pm 0.15\%$ Full Range Typical
<b>Extended Operating Range:</b>	1.5 X Linear Range
<b>Null Voltage:</b>	0.5% Full Range
<b>Hysteresis:</b>	$< 0.01\%$ of Full Range Typ
<b>Repeatability:</b>	$< 0.01\%$ of Full Range Typical



## Environmental Specifications

<b>Operating Temp.;</b>	<b>Standard:</b>	$-65^{\circ}\text{F}$ to $275^{\circ}\text{F}$ ( $-55^{\circ}\text{C}$ to $135^{\circ}\text{C}$ )
<b>Operating Temp.;</b>	<b>400° Option:</b>	$-65^{\circ}\text{F}$ to $400^{\circ}\text{F}$ ( $-55^{\circ}\text{C}$ to $204^{\circ}\text{C}$ )
<b>Thermal Coefficient:</b>		$< -0.01\%/^{\circ}\text{F}$ ( $< -0.02\%/^{\circ}\text{C}$ ) of Full Range
<b>Humidity:</b>		90% R.H., 240 Hours
<b>Shock Survival:</b>		1000 g, 11 ms
<b>Vibration:</b>		20 g to 2 KHz

## Materials Specifications

<b>Housing:</b>	Corrosion-resistant nickel-iron alloy
<b>Core:</b>	Hi-permeability nickel-iron alloy
<b>Coil Form:</b>	Ceramic/Plastic
<b>Magnet Wire:</b>	Film insulated copper
<b>Lead Wires:</b>	# 32 AWG Teflon insulated, 12" long

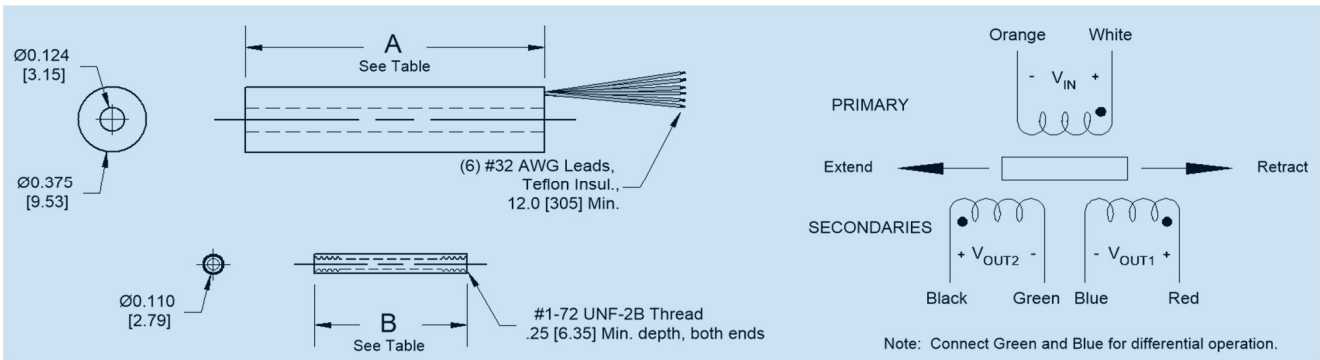
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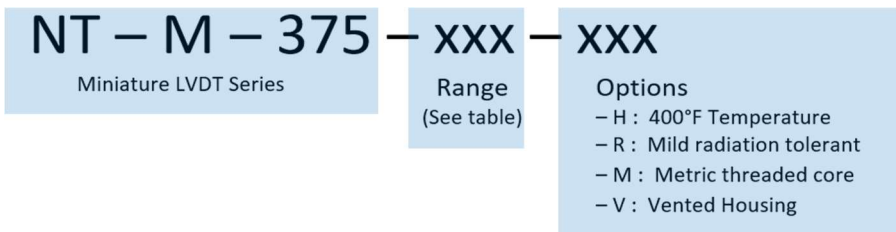
## Specifications

Model	NT-M-375-025	NT-M-375-050	NT-M-375-100	NT-M-375-250	NT-M-375-500	NT-M-375-1000	NT-M-375-2000
<b>Parameter</b>							
Nominal Range (Inches)	± 0.025	± 0.050	± 0.100	± 0.250	± 0.500	± 1.00	± 2.00
Nominal Range (mm)	± 0.63	± 1.25	± 2.50	± 6.25	± 12.5	± 25.4	± 50.8
Sensitivity (mV/V/.001 Inch)	3.5	1.7	1.8	2.5	1.7	0.75	0.50
Sensitivity (mV/V/mm)	138	67	71	98	67	30	19.7
Primary Impedance (Ω)	95	345	345	505	130	240	540
Dimension " A " (inches)	0.45	0.75	1.00	1.75	3.30	5.50	9.95
Dimension " B " (inches)	0.40	0.60	0.65	1.15	2.00	3.00	5.50
Body Weight ( grams )	3.0	6.0	6.0	11.5	18.0	28.0	56
Core Weight ( grams )	0.3	0.5	0.5	1.0	1.6	2.6	5.2

## Dimensions and Wiring



## Ordering Info



## Notes

- Electrical specifications measured at 3KHz excitation frequency.
- 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.



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