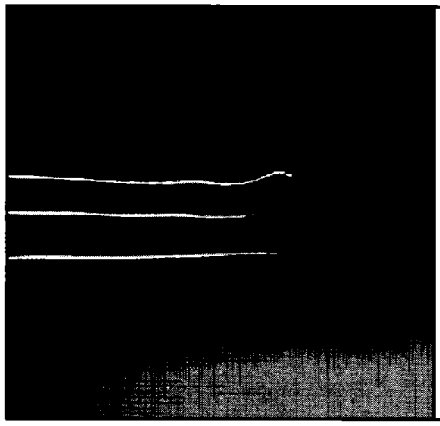
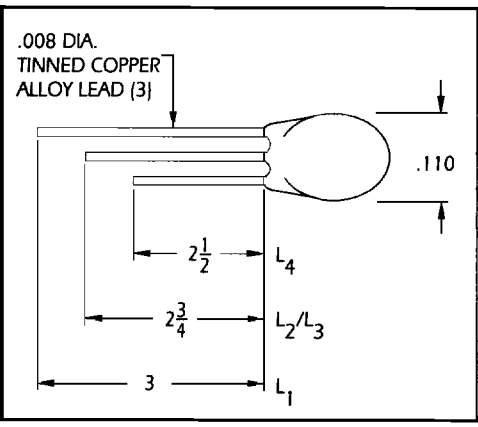
FENWAL ELECTRONICS
NTC / PTC Thermistors

LINEAR THERMISTORS NETWORK LTN®





FEATURES

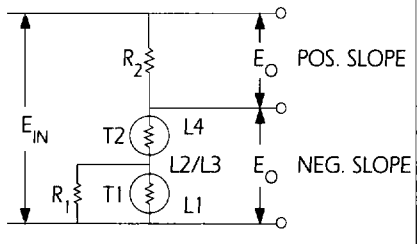
- Simplifies circuitry in digital readout systems
- Interchangeability from unit to unit
- High accuracy
- Greater sensitivity than wire-wound resistance bulbs or thermocouples
- May be P.C. board mounted or purchased as individual components to allow design flexibility
- No known reference temperature or cold junction is required as in thermocouples
- May be used in either a voltage or resistance mode

All illustration dimensions are in inches.

LINEAR THERMISTOR NETWORKS (LTN®) consist of precision resistors and thermistors which are designed to produce a resistance change or voltage output that varies linearly with temperature over the selected temperature range. They provide a sensitivity that is hundreds of times greater than that of thermocouples or wire-wound resistance bulbs. The Composite Series consists of one twin thermistor and two precision resistors, and is designed to provide greater flexibility in mounting and location. These are also available in probe assemblies to your specifications and are ideally suited for use where space must be considered in existing or newly designed circuitry.

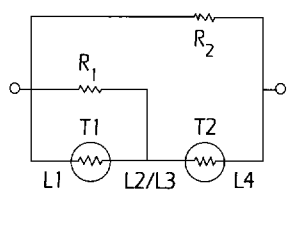
With Resistors	**137-462ZWS-D01**	**137-113ZXT-D01**	**137-292ZFT-D01**
Without Resistors	**133-462ZWS-D50**	**133-113ZXT-D50**	**133-292ZFT-D50**
Temperature Range	-5 TO 45 deg C	-30 TO 50 deg C	0 TO 100 deg C
Interchangeability	.308 deg C	.284 deg C	.331 deg C
Maximum Linearity Deviation	.067 deg C	.256 deg C	.283 deg C
Resistance mode Slope	-40.178	-152.79	-21.433
Resistance mode Zero Intercept	5613.2	14567	3425.7
Positive Voltage mode Slope	5.756E-03	6.852E-03	5.399E-03
Positive Voltage mode Zero Intercept	1.958E-01	3.468E-01	1.371E-01
Negative Voltage mode Slope	-5.756E-03	-6.852E-03	-5.399E-03
Negative Voltage mode Zero Intercept	8.042E-01	6.532E-01	8.629E-01
Resistance mode Maximum Current	650 micro-amps	500 micro-amps	700 micro-amps
Voltage mode Maximum Current	323 micro-amps	171 micro-amps	402 micro-amps
Voltage mode Maximum Input Voltage	2.250 Volts	3.813 Volts	1.596 Volts

$E_O = E_{IN}(mT + b)$
m= Slope (Volts/Deg C)
T= Temperature (Deg C)
B= Intercept (Voltage at 0° C)



FOR VOLTAGE MODE

R= M T + b
m= Slope (Ω/Deg C)
T= Temperature (Deg C)
B= Intercept (Resistance at 0° C)



FOR RESISTANCE MODE

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