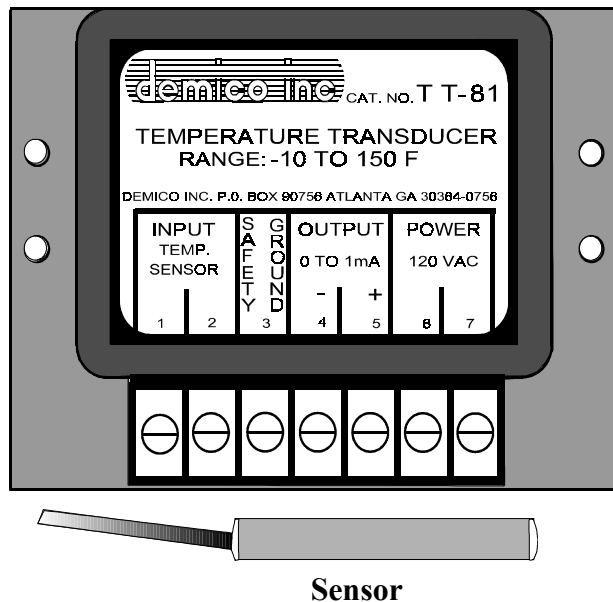


# TEMPERATURE TRANSDUCER

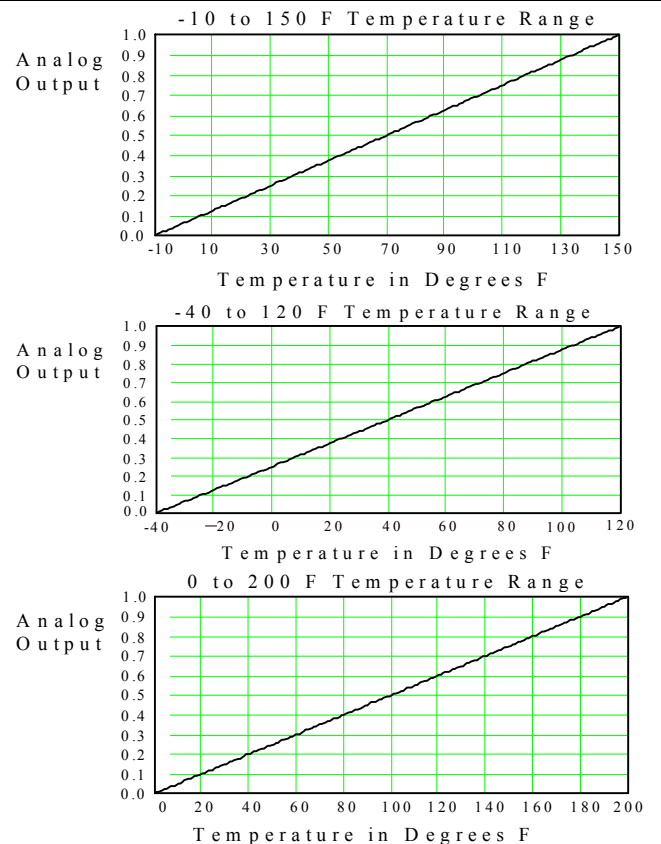


- ◆ LINEAR ANALOG OUTPUT
- ◆ ONE DEGREE F ACCURACY
- ◆ INTERCHANGEABLE SENSORS
- ◆ WATER TIGHT SENSOR
- ◆ SENSOR CABLE TO 1000 FT.
- ◆ SENSOR CABLE CAN BE SHORTER
- ◆ 3 TEMPERATURE RANGES
- ◆ AC OR DC POWER SUPPLIES

## APPLICATIONS

REMOTELY MONITOR INDOOR OR OUTDOOR TEMPERATURES IN SUBSTATIONS, RTU'S, EQUIPMENT ENCLOSURES, COOLING SYSTEMS, ETC. MEASURE AMBIENT AIR TEMPERATURES FOR MAXIMUM TRANSMISSION LINE LOADING. CORRELATE AND PREDICT PEAK LOADING WITH AMBIENT TEMPERATURE.

Temperature is one of the most important variables to monitor in a Generation, Transmission, or Distribution system. Peak Demands typically occur at ambient temperature extremes so monitoring local substation temperature can provide data to help predict demand. Electrical and electronic equipment can malfunction at extreme temperatures. Monitoring substation house temperature and electronic control enclosure temperatures can give advance notice when environmental controls malfunction. Repairs can be made before your system controls malfunction. Monitoring cooling water temperature before discharge into streams and rivers is mandatory to comply with



government regulatory agency requirements.

The Demico Temperature Transducer (TT) is designed to easily and accurately monitor various temperatures throughout your Generation, Transmission, and Distribution system. The temperature measuring system has a low profile, flush mounted interface enclosure which can be mounted in an RTU cabinet, or substation house. A 3/8" diameter by 3" long cylindrical waterproof sensor with 100 feet of cable is included. Sensors with up to 1000 feet of cable can be ordered. Cable length can be altered in the field without having to recalibrate. The sensor technology is a precision linear thermistor network which provides excellent accuracy over a wide temperature range, excellent long term stability, and sensor interchangeability with no re-calibration. The one degree Fahrenheit accuracy is specified across the wide operating temperature range to give dependable data year round even without a climate controlled environment.

The TT series of transducers are available with three standard temperature input ranges and seven power supply ranges. The standard analog output is 0 to 1 milliamp for a burden resistance from 0 to 10,000 ohms. The TT series has galvanic, or ohmic, isolation between the power supply and output. Each TT is factory tested for isolation exceeding 1500 VAC between these two sets of terminals.

The non-conductive phenolic case mounts easily with two screws, and the terminal strips have built in wire clamps for quick and reliable connections. The label clearly indicates the input range and the numbered input and output terminals for easy installation.

This transducer is designed for use in the electrically noisy substation environment and meets the surge withstand requirements of ANSI 37.90.1-1989. The manufacturing process for Demico Transducers include:

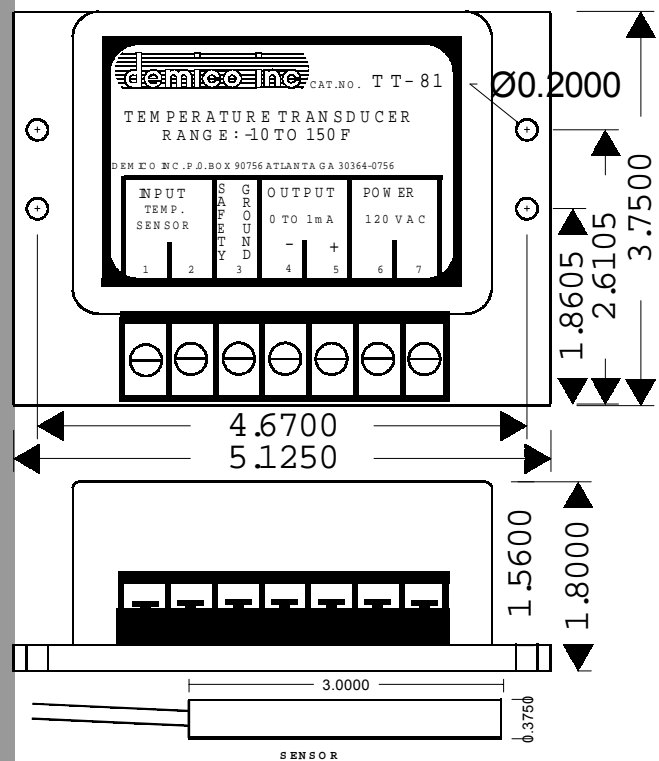
1. Boards are coated with a polyurethane coating.
2. Burn in for 100 hours at 110 degrees F.
3. Power cycled every 12 hours during burn in.
4. A 1500 VAC isolation test during final testing.

Demico takes these steps to ensure that our transducers provide good service over a long life. Demico's standard one year warranty includes parts and labor.

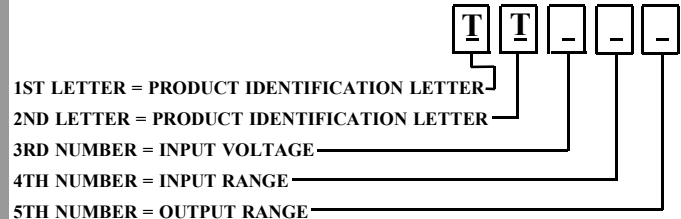
Note: Demico also has a Temperature transducer with a KYZ pulse output to interface with standard pulse recording equipment. See data sheet TT-KYZ.

## Specifications

<b>Accuracy</b>	<b>+/- 1 degree F</b>
<b>Output / Burden</b>	<b>0 to 1 mA / 0 to 10,000 ohms</b> <b>0 to 5 Volts / 5,000 ohms minimum</b> <b>4 to 20 mA / 0 to 500 ohms</b>
<b>Operating Temperature</b>	<b>-20 to +70 degrees C</b>
<b>Humidity</b>	<b>(polyurethane coated)</b>
<b>Maximum power</b>	<b>4 VA</b>
<b>Tested Isolation</b>	<b>1500 Vac</b>
<b>Surge Withstand</b>	<b>ANSI 37.90.1-1989</b>
<b>Enclosure</b>	<b>Black Phenolic</b>
<b>Terminals</b>	<b>8-32 with wire clamps</b>
<b>Warranty</b>	<b>1 year Parts &amp; Labor</b>

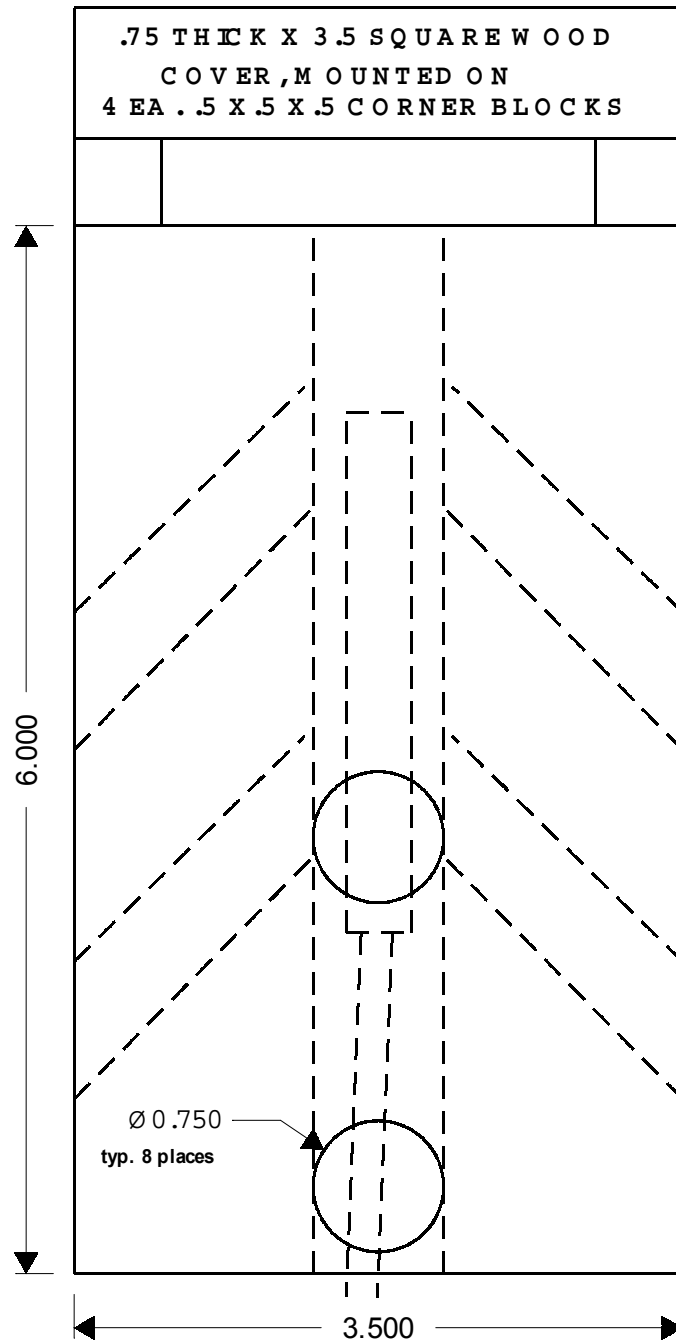


## ORDERING INFORMATION



POWER SUPPLIES	TT RANGES	OUTPUT RANGES
1 = 12 VDC	1 = -10 TO 150F	1 = 0 TO 1mA
2 = 24 VDC	2 = -40 TO 120F	2 = 0 TO 5 Volts
3 = 48 VDC	3 = 0 TO 200F	3 = 4 TO 20 mA
4 = 125 VDC		
5 = 250 VDC		
8 = 120 VAC		
9 = 240 VAC		

# Application Note for Construction of Sun Shield for Demico Inc. Temperature Sensor



4" X 4" WOOD POST X 6" LONG  
8 EA .75" HOLES AT 45 DEGREES ANGLE  
1 EA .75" HOLE IN CENTER FOR SENSOR MOUNT