

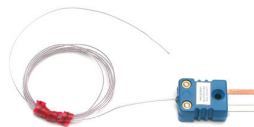
## **MLT1401 T-Type Implantable Thermocouple (IT-18)**

*Transducer Series*

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### **Description**

The MLT1401 T-type Implantable Thermocouple is a flexible microprobe for temperature measurements in liquid, semi-solids and tissue. It is inserted into tissue with the supplied 18 ga. hypodermic needle. The MLT1401 has a 2-pin T-type thermocouple plug suitable for connection to the ML312 T-type Pod or ML290 Thermometer for T-type thermocouples.



### **Operation**

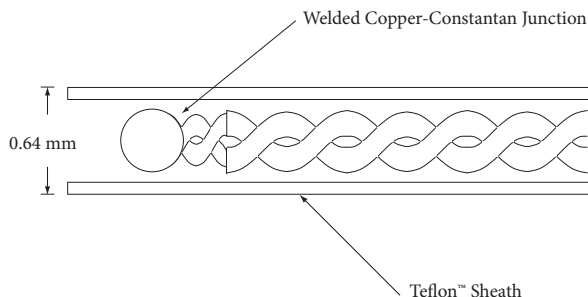
A thermocouple is a temperature measurement sensor that consists of two dissimilar metals joined together at one end (a junction) which produces a small thermoelectric voltage when heated. The MLT1401 uses a type T thermocouple element with a copper/constantan junction.

To use the thermocouple in tissue, insert the tip of the sensor into a needle from the hub end until the tip is flush with the bevel. Insert the needle to the required depth then withdraw the needle along the lead, pressing gently forward on the sensor to keep it in position. Continue drawing the needle back along the lead until it reaches the plug end of the probe. Tape to secure the thermocouple in place.

### **Application**

The MLT1401 T-type Implantable Thermocouple is suitable for temperature measurements to a maximum of 150 °C. It can be used to measure rectal temperature of small animals.

### **Technical Diagram**



## Caution

Read “Statement of Intended Use” on our website or in “Getting Started with PowerLab” before use.

- The product is fragile.
- Sterilize before use (autoclave or gas sterilize).
- Only use with the needles supplied.
- Take care not to damage when removing the probe from the needle. Press finger lightly against needle bevel, keeping the wire parallel with needle shaft. The needle should slide out smoothly.
- When disconnecting cable from the T-type Pod or thermometer, grasp the plug. Don't pull directly on the wire.

## Specifications

Operating range:	-273 to 150 °C
Sensor element:	Type T Thermocouple
Accuracy:	±0.1 °C
Thermal response time:	0.1 seconds
Probe type:	Isolated
Wire diameter:	0.64 mm (0.03")
Wire length:	1 m (3.3')
Wire coating:	Teflon™ sheathed
Needle:	18 ga. hypodermic
Weight:	6.1 g
Connector:	T-type

All specifications were tested at the time of printing and are subject to change.

## Ordering Information:

MLT1401 T-type Implantable Thermocouple Probe (IT-18)

For use with:

ML312 T-type Pod

ML290 Thermometer for T-type Thermocouples