

MLT1405 T-type Implantable Thermocouple (IT-21) *Transducer Series*

Description

The MLT1405 T-type Implantable Thermocouple Probe is a flexible microprobe for temperature measurements in liquid, semi-solids and tissue. It is inserted into tissue with the supplied 21 ga. hypodermic needle. The MLT1405 has a 2-pin T-type thermocouple plug suitable for connection to the ML312 T-type Pod, ML313 Cardiac Output Pod or ML290 Thermometer for T-type Thermocouples.



Operation

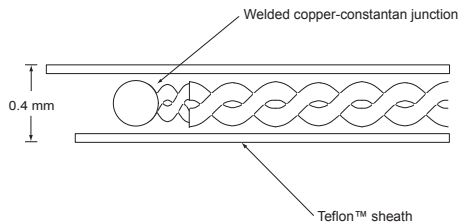
A thermocouple is a temperature measurement sensor that consists of two dissimilar metals joined together at one end (a junction) which produces a small thermoelectric voltage when heated. The MLT1405 uses a type T thermocouple element with a copper/constantan junction.

To use the thermocouple, 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. The thermocouple can be secured using tape.

Applications

The MLT1405 Implantable Thermocouple Probe is suitable for temperature measurements to a maximum of 150 °C. It can also be used to measure cardiac output by the thermodilution method.

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 supplied needles.
- Take care not to damage the lead when removing the probe from needle. Press finger lightly against needle bevel, keeping the wire parallel with needle shaft. The needle should slide out smoothly.
- When disconnecting cable from instrument, grasp the plug. Don't pull directly on wire.

Specifications

Operating range:	-273 to 150 °C
Sensor element:	Type T Thermocouple
Accuracy:	±0.1 °C
Thermal response time:	0.08 seconds
Probe type:	Isolated
Wire diameter:	0.4 mm (0.02")
Wire length:	30 cm (1')
Wire coating:	Teflon™ Sheathed
Needle:	21 ga. hypodermic
Weight (including lead):	5.7 g
Connector:	T-type

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

Ordering Information:

MLT1405 T-type Implantable Thermocouple Probe (IT-21)

For use with:

ML313 Cardiac Output Pod

ML312 T-type Pod

ML290 Thermometer for T-type Thermocouples