

# **AM1110 Type S Precision Thermocouple User's Guide**



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### ***Before you start ---- Warnings & Cautions***

- ❖ **Warnings:** Follow these guidelines to avoid personal injury:
  1. Only use this instrument in the manufacture specified temperature range.
  2. The handle of this instrument can become hot when it is used to measure high temperatures for extended periods of time.
  3. DO NOT submerge handle when taking measurement.
  4. DO NOT use this instrument to measure the temperature of any hazardous live component.
  5. Follow all other safety guidelines listed in this user's guide.
  
- ❖ **Cautions:** Follow these guidelines to avoid possible damage to the instrument:
  1. Avoid mechanical shocks. DO NOT drop or slam the probe in any way. This will cause damage to the probe internally and affect its calibration and accuracy.
  2. Read Section entitled "Care and Handling Guidelines" before removing the thermocouple from the shipping box. Incorrect handling can damage the thermocouple and void the warranty.
  3. Keep the shipping container in case it is necessary to ship the thermocouple. Incorrect packaging of the thermocouple for shipment can cause irreparable damage.
  4. Calibration Equipment should only be used by Trained Personnel.

## **1 Introduction and Specifications**

### **1.1 Introduction**

AM1110 Type S Precision Thermocouple is constructed using reference grade Platinum and Platinum vs. 10% Rhodium alloys. It has wide range of applications for dry-wells and furnaces. Thermocouple of 12-inch length comes in as standard but customize length is available per request.

AM1110-12-A comes with alumina sheath and AM1110-12-M comes with Inconel™ sheath.

### **1.2 Specifications**

|                                     |  |
|-------------------------------------|--|
| <b>Temperature Range</b>            | AM1110-12-A: 0°C to 1450°C<br>AM1110-12-M: 0°C to 1100°C |
| <b>Type</b>                         | Platinum/Platinum vs.10% Rhodium (type S)                |
| <b>Accuracy without calibration</b> | 1.5°C at 500°C<br>2.5°C at 1000°C                        |
| <b>Sheath Material</b>              | AM1110-12-A: Alumina<br>AM1110-12-M: Inconel™            |
| <b>Dimension</b>                    | 0.25 inch X 12 inch (6.35 mm X 305 mm)                   |
| <b>Extension Cable</b>              | S type thermocouple extension wire, 2 meters             |
| <b>Handle Dimension</b>             | 15mm (OD) X 65 mm (L)                                    |
| <b>Handle Temperature Range</b>     | -50°C to 180°C   |

## **2 Care and Handling Guidelines**

1. DO NOT subject the thermocouple to any physical shocks and vibrations.
  - a. When not using the thermocouple, keep it in a place that's not prone to drop, slam, bang, vibration or other strong physical contacts. Use a protective box or a carrying case whenever possible.

- b. When shipping the thermocouple, use protective box and other protective packaging materials to minimize mechanical shocks as much as possible.
  - c. When using dry blocks, make sure the well diameter is appropriate to allow the thermocouple move up and down smoothly.
2. DO NOT subject the thermocouple to any contaminations. Keep the thermocouple as clean as possible.
  - a. DO NOT over heat. Do not use the thermocouple above the manufacture specified temperature range.

### ***3 Limited Warranty & Limitation of Liability***

Each product from AccuMac Corporation is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is 1 year for the thermocouple. The warranty period begins on the date of the shipment. Parts, product repairs, and services are warranted for 90 days. The warranty extends only to the original buyer or end-user customer of an AccuMac authorized reseller. The warranty will not extended to products that have been misused, altered, neglected, or damaged by accident or abnormal conditions of operation or handling.

To obtain warranty service, contact AccuMac Corporation at:

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