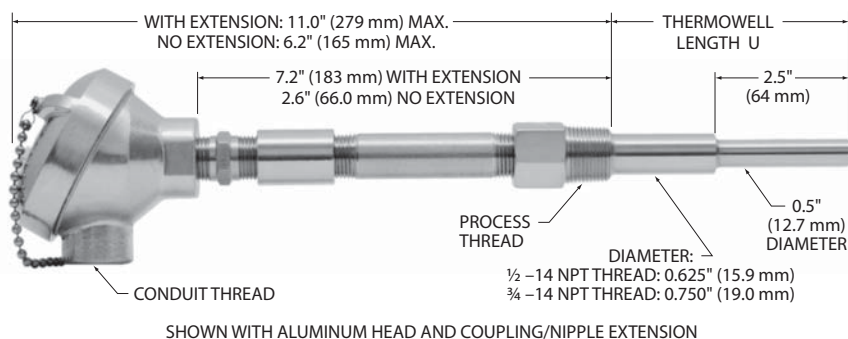


# Tip-sensitive Thermocouples with Thermowells



## Overview

Thermowells protect sensors from the effects of fluid flow and pressure. These assemblies are spring-loaded for positive probe contact against the bottom of the thermowell. The probe's copper alloy tip provides superior time response and reduces error from stem conduction.

- 316 stainless steel thermowell
- Tip-sensitive thermocouple for use to 260°C (500°F)
- Spring-loaded probe
- Cast iron, stainless steel, or aluminum connection head

## Specifications

**Temperature range:** -50 to 260°C (-58 to 500°F).

### Material:

Probe: Stainless steel with copper alloy tip.

Connection head: Cast iron, aluminum, or stainless steel.

Thermowell: 316 stainless steel.

Extension: Stainless steel.

**Pressure rating:** 7000 psi (483 bar) at 21°C, reducing to 6300 psi (433 bar) at 260°C.

**Standard U dimensions:** 2.5, 4.5, 6.0, 7.5, 8.0, 10.5, 13.5, 16.5, and 22.5".

**Insulation resistance:** 10 megohms min. at 100 VDC, leads to case. Ungrounded junctions only.

**Connection:** Terminal block for wires to AWG 14.

**Time constant:** Typical value in moving water.

Grounded junction: 17 seconds.

Ungrounded junction: 22 seconds.

## Temperature Transmitters

Minco's Temptran™ thermocouple transmitters provide a 4 to 20 mA signal or HART® Protocol that can be sent over long distances with a simple 2-wire system. See Section 4 for complete temperature transmitter specifications.

## Specification and order options

|   |   |
|---|---|
| AS5145  | Assembly number<br>AS5145: Single junction TC<br>AS5146: Dual junction TC   |
| E   | Junction type:<br>E = Chromel-Constantan<br>J = Iron-Constantan<br>K = Chromel-Alumel<br>T = Copper-Constantan  |
| U   | Junction Grounding:<br>G = Grounded<br>U = Ungrounded   |
| 135   | Thermowell length U:<br>Specify in 0.1" increments (Ex: 135 = 13.5 inches)  |
| P   |   |
| 1   | Conduit thread:<br>1 = 1/2 - 14 NPT<br>2 = 3/4 - 14 NPT   |
| C   | Connection head:<br>C = Cast iron<br>A = Aluminum<br>S = Stainless steel  |
| 1   | Thermowell process thread:<br>1 = 1/2 - 14 NPT<br>2 = 3/4 - 14 NPT  |
| U   | Extension option:<br>P = Coupling/nipple extension<br>N = No extension<br>U = Union/Nipple extension  |
| To order sensor assembly, stop here.<br>To order with transmitter, add: |   |
| 509   | Temptran™ transmitter model:<br>205 = TT205: Fixed Range, Miniature<br>509 = TT509: Programmable, Hockey Puck<br>511 = TT511: HART® Programmable, Hockey Puck |
| A   | Temperature range codes starting on page 4-20 or at <a href="http://www.minco.com">www.minco.com</a>  |
| AS5145EU135P1C1U509A = Sample part number                               |   |

▼ = STANDARD OPTIONS

Specifications subject to change