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# Ice Point Reference

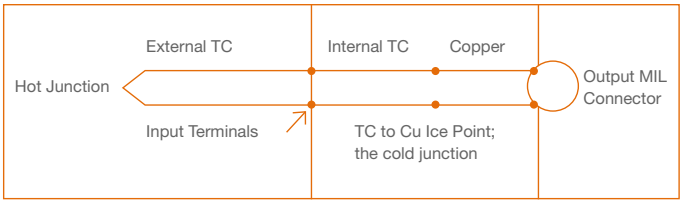
## HIGH STABILITY ICE POINT REFERENCE EQUIPMENT TO GET THE HIGHEST ACCURACY POSSIBLE FROM YOUR THERMOCOUPLES


The K170 Ice Point Reference performs ice point referencing for up to 75 thermocouples. The user wires external thermocouples to the unit's input terminals which are in turn connected to matching internal TCs that terminate to copper at the temperature of a thermoelectrically produced ice-water mixture. Thermocouple-grade copper wire is taken from ice to MIL style connectors for output. Individual pass-through shield connections can also be provided.

The Kaye Ice Point references offer the ultimate accuracy in automatic referencing. Used in applications ranging from precision calibration work to routine production testing, the units provide zero long term drift maintaining reference temperature at 0°C. Three models, K140, K150 and K170, provide ice point references for multiple sensors.

### ICE POINT REFERENCE WITH EXTERNAL CALIBRATION WELLS

The K140 ice point reference, provides 4 calibration wells which accept up to 16 type T thermocouples, depending on the diameter.




Thermocouple circuit of the K170 with external TC wire connected to input terminals.

## ICE POINT REFERENCE WITH BUILT-IN THERMOCOUPLES

For applications where frequent connections are made or when calibrating temperature instruments, the K150 or K170 is convenient. The models have built-in thermocouples connected to matching material posts. The K150 provides references for 2, 4, 6, or 8 sensors.

The K170 Unit provides accurate simultaneous reference for up to 75 thermocouples. The K170 models with 6 to 75 channels are rack-mounted and with matching material terminal strip inputs and Military Standard connectors for outputs, including mating connectors with wiring diagrams. Shielding can be provided for input and output terminals.

## ICE POINT REFERENCE SPECIFICATIONS

| | K140 | K150 | K170 |
|---|---|---|---|
| **Reference Temperature** | 0°C | 0°C | 0°C |
| **Ambient Operating Range** | 5 to 40°C | 5 to 40°C | 5 to 40°C |
| **Long Term Drift** | None | None | None |
| **Stability** | 0.01°C typ. / 0.025°C guar. | 0.02°C typ. / 0.05°C guar. | 0.02°C typ. / 0.05°C guar. |
| **Total Instrument Error*** | 0.02°C typ. 0.05°C max. | 0.05°C max. | 0.05°C max. |
| **Number of Channels** | 4 Wells | Up to 8 | Up to 75 |
| **Power** | 115VAC, 60Hz or 230VAC, 50Hz | 115VAC, 60Hz or 230VAC, 50Hz | 115VAC, 60Hz or 230VAC, 50Hz |
| **Dimensions** | 6.4"W x 13.5"D x 10.6"H (162W x 343D x 270mmH) | 6.4"W x 13.5"D x 11.0"H (162W x 343D x 279mmH) | 19"W x 10.75"D (483W x 273mmD) |

**Height-for K170**

| CH | NON-SHIELDED | T/C SHIELDED |
|---|---|---|
| 6 | 178mm (7") | 178mm (7") |
| 12 | 178mm (7") | 178mm (7") |
| 24 | 178mm (7") | 178mm (7") |
| 36 | 178mm (7") | 311mm (12.25") |
| 50 | 311mm (12.25") | 311mm (12.25") |
| 75 | 311mm (12.25") | 400mm (15.75") |

AAS-DSK-11001-A

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**www.kayeinstruments.com/en/demo**


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