### Technical Data Sheet | Kelsius

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# Thermocouple

## High Accuracy for extreme conditions

The Kelsius thermocouple sensor, available as a battery-powered or 12-volt mains powered device, is an integral part of any high-accuracy temperature measuring system, especially in extreme high and low temperature conditions.

The unit can be placed, for example, on top of the cold-box or freezer cabinet.

The tough 7-strand thermocouple cable provides extra strength against rough handling. Each cable is insulated with an overall clear Teflon insulation providing extra protection in extreme temperature environment.

Suitable for liquid nitrogen applications.



| Specification             |  |
|---------------------------|--|
| Product Code              | K115XBT (battery powered) or K115X12V (12V mains powered)  |
| Temperature Range         | -200°C to +200°C<br>An extended measurement range can be offered up to 360°C with a different<br>thermocouple accessory.   |
| Battery powered (K115XBT) | <ul> <li>Battery Type: 1 x 3V 6000mAh LiMnO2 (CP1005050 Primary Cell)</li> <li>Battery Lifetime: 2 years + at ambient 21°C on 5-minute wake-up</li> </ul>                                    |
| Mains powered (K115X12V)  | <ul> <li>Power Supply: 12VDC 1A 12W</li> <li>Battery Type: 1 x 4.8V 1100mAh NiMH (MH1100AA4BC Secondary Cell)</li> <li>Battery Lifetime: 50Hr at ambient 21°C on 5-minute wake-up</li> </ul> |
| Typical Accuracy          | +/-0.3°C   |

| Maximum Expected Error Thermocouple |           |  |
|-------------------------------------|-----------|--|
| Temperature                         | Error:    |  |
| -196°C                              | +/-2.94°C |  |
| 0°C                                 | +/-0.5°C  |  |
| 121°C                               | +/-0.5°C  |  |
| 200°C                               | +/-0.8°C  |  |

### Application

The battery-powered thermocouple sensor has a range of applications, including:

- Liquid Nitrogen
- Biological Samples
- Electronic Components