



## Rugged construction

### Digital temperature measurements

### Overview

The CS225 temperature string provides multi-point temperature profiles for a wide variety of applications and environments, including boreholes, soils, freshwater, saltwater, frost, and permafrost monitoring. It consists of temperature sensors mounted in rugged steel reinforced cable. The user

specifies the number of temperature sensors and their spacing. The completely sealed cable assembly permits the CS225 to be buried, submerged or integrated directly into structures. Temperature points are over-molded to provide long-term protection in all mediums.

### Benefits and Features

- › Customizable measurement spacing of temperature sensors for a variety of applications
- › One SDI-12 channel used to connect all temperature sensors
- › Low power—suitable for remote applications
- › No calibration required
- › Serial number and installation depth data for each location stored onboard each sensor
- › Excellent long-term stability of measurements
- › Comprehensive measurement range
- › Steel-reinforced polyurethane cable for added strength and durability
- › Electrical surge protection provided by SGB3

### Specifications

- › Operating range:  $-55^{\circ}$  to  $+85^{\circ}$ C
- › Accuracy (includes lifetime drift)  
Typical:  $\pm 0.2^{\circ}$ C ( $-40^{\circ}$  to  $+85^{\circ}$ C)  
Worst case:  $\pm 0.4^{\circ}$ C ( $-40^{\circ}$  to  $+85^{\circ}$ C);  $\pm 0.5^{\circ}$ C ( $-55^{\circ}$  to  $-40^{\circ}$ C)
- › Maximum Pressure: 150 psi
- › Communications: SDI-12
- › Temperature Point Diameter: 2.22 cm (0.875 in)
- › Maximum cable length: 152 m (500 ft)
- › Maximum number of sensors per probe: 36
- › Minimum spacing: 15 cm (5.9 in)
- › Supply voltage: 9 to 28 Vdc
- › Current consumption:  
Quiescent current draw per sensor: 1.0 mA (maximum)  
Active current draw: 20 mA + (number of sensors \* 1.0 mA)
- › Warm up time on power up: 10 s
- › Lifetime minimum/maximum temperature recording
- › User resettable minimum/maximum temperature recording
- › Automatic 1 s temperature update

