

MODEL 5450

Frost Depth Probe

- High Accuracy
- Rugged Construction
- SDI-12 for Versatility
- Low Power Consumption



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The Model 5450 Frost Depth Probe is a highly accurate, low power, temperature sensor system for determining ground frost depth. The assembly is installed vertically underground and provides highly accurate temperature readings at various depths below the surface. The rugged design is ideal for long term deployment below the road surface for determining the frost depth.

The Frost Depth Probe communicates via the open-architecture SDI-12 data protocol. This allows the sensor to be connected to HSE's line of dataloggers and many other industry standard dataloggers and telemetry options.

The sensor probe is of one piece construction made out of polyurethane to prevent any water intrusion to the sensor elements. Energy conductive aluminum elements are positioned with the temperature sensors to provide accurate soil temperatures without transferring energy along the sensor probe.

The probe is available in various configurations and can be customized for length and sensor intervals. A standard configuration provides 12 temperature elements encapsulated within a 5 foot length. The temperature elements are positioned with 3 inch spacing for the first foot and 6 inch spacing thereafter.



SPECIFICATIONS:

Sensor type	Sub Surface Temperature
Power	9.6 to 16 VDC
Current Consumption	<80 μ A per Element when Idle, 2.5 mA per Element when Polled
Communications	SDI-12 (Each Sensor element individually Addressed)
Operating Temperature	-40° F. to +140° F. (-40° C. to +60° C.)
Accuracy	\pm 0.36° F. (\pm 0.2° C.)
Temperature Element Placement	3", 6", 9", 12", 18", 24", 30", 36", 42", 48", 54", and 60" (Standard) 66" and 72" (Optional) Other Spacing Available
Materials	Polyurethane with Aluminum Elements
Cable Type	Shielded, with Drain, Direct Burial, UV Resistant
Cable Length	50 Feet (15.2 m) Standard
Cable Diameter	0.312 Inches (8 mm)
Size	61 Inch (155 cm) Length Standard, 1.31 Inch (3.33 cm) Diameter
Weight	6 Pounds (2.7 kg)
Shipping Weight	10 Pounds (4.5 kg)

ORDERING GUIDE:

Model 5450-01	Frost Depth Temperature Probe, 12 Element, 5 Foot Length
Model 5450-02	Frost Depth Temperature Probe, 14 Element, 6 Foot Length
Model 5450-00	Frost Depth Temperature Probe, Customer Specified Configuration

OPTIONAL:

Model 5450-60	Extra Cable, 3 Conductor (1 Foot Increments) (Maximum 200 Feet Total)
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Environmental Monitoring Solutions

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