

CUSTOM ENGINEERING LEVEL II

NEW PRODUCT DESIGN

**OMEGA Goes to Any Length
(or Depth) for Its Customers!**

A CASE IN POINT

An environmental research team in the Northwest is conducting a survey involving temperature measurement at different depths below the ground surface, to track the winter frost line. The areas of interest to them all have different soil types and are in remote locations without power facilities.

PROBLEM

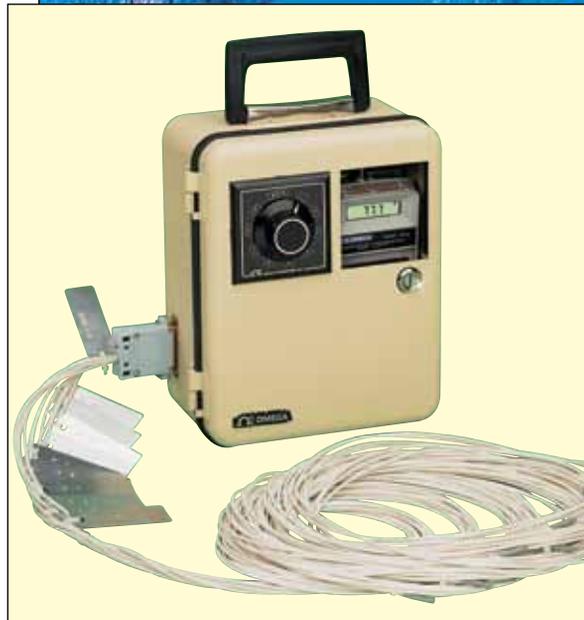
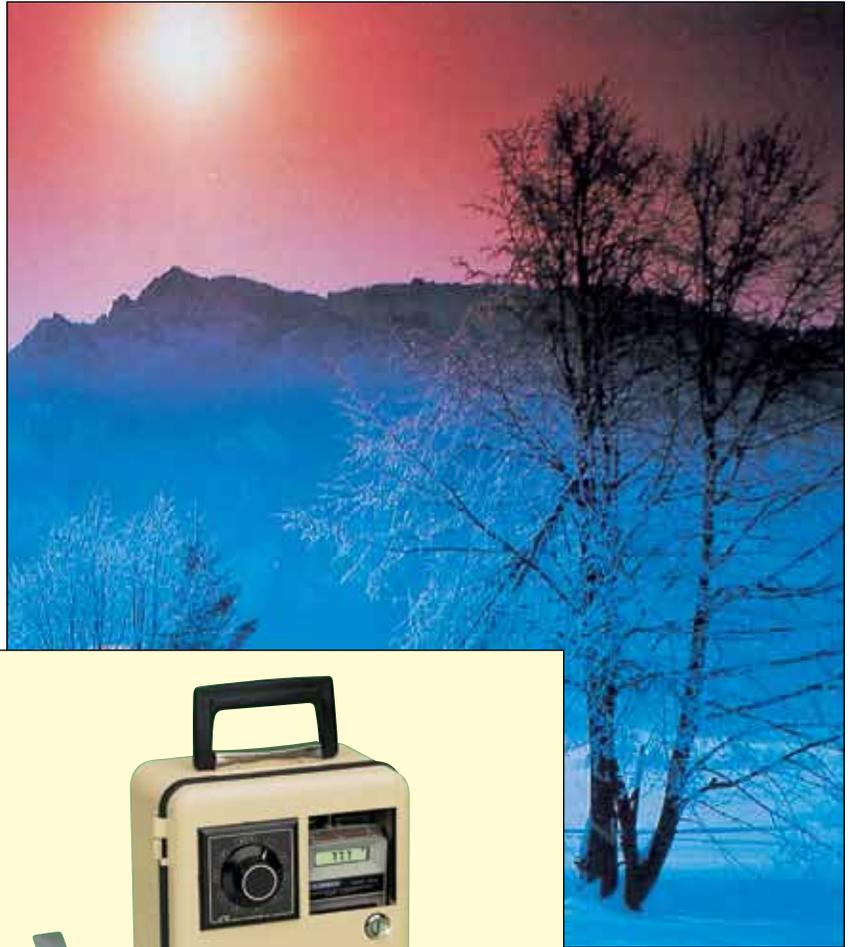
The research team has the ability to insert a protection tube ten feet into the soil at each measurement area to house temperature sensors. However, they need a single, lightweight, portable temperature readout in a weather-resistant case, and a convenient means of switching between the different temperature sensors.

OMEGA® SOLUTION

Inside each of the stainless steel protection tubes is a permanently installed bundle of RTD sensors with lead wires extending to the top of the tube. Each bundle of RTD's terminates in a single standard SUB-D type connector, which provides for quick attachment to the portable readout device.

An OMEGA® Model 450 APT digital handheld thermometer is mounted with Velcro inside a protective enclosure with a display window. A selector switch is mounted to the front of the box, and on one side is the mating connector to the bundle of RTD probes. The user can now monitor the temperature of all of the sensors in each tube with a single temperature readout device, making what would have been an expensive proposition relatively economical!

The instrumentation enclosure cost \$835 plus standard RTD sensors found in OMEGA's product line. 



Portable RTD Meter with Selector Switch Makes Field Measurements Possible in Remote Locations

Other Examples of New Product Designs...



Disks Protect Probe Sheath From Damaging Vibration



Sensor Mounted in Customer-Owned Flange



Molybdenum Sheath Sensor with Stepped Diameter Sleeves Helps Reduce Vibration in Reducing Atmospheres