

Innovative Dynamics Inc.

Surface Sentinel

Surface Temperature Sensor Model 5439

Features

- Measures Remote Surface Temperature
- Trigger ITS Devices Directly from Sensor
- Low Cost, Durable, Accurate
- SDI-12 Interface: Simple Integration w/Industry-Standard Dataloggers
- Fan Provides Air Temp/RH Aspiration

Overview

The *Surface Sentinel* is a compact and rugged sensor that provides surface temperature, air temperature, relative humidity and dew point from a fixed tower or pole. The Surface Sentinel was designed for the demands of road management professionals.

Standard open-architecture data output is available via SDI-12 to provide a common interface to industry standard datalogger and telemetry options. The sensor has an integrated, power-managed fan as an option for applications where higher accuracy air temperature and relative humidity readings are needed. A contact output is provided directly from the sensor to trigger ITS field devices at user defined sensor thresholds.

Applications

- Low cost way to fill in gaps between existing weather stations
- Remotely triggering ICY bridge flashing beacon signs
- Alerting paint stripe crews that the road temperature is ready to start work
- Alert when the road or sidewalk might be too warm and could start to see buckling

Output

- Surface Temperature
- Air Temperature
- Relative Humidity
- Dew Point

Specifications

Power9-14 VDC
Current150uA (without fan)
100mA (max with fan)
Operating Air Temp40°to 185°F
Range3 to 50ft (1 to 15m)
Elevation Angle35° to 90°
Field of View12°
Measuring Area2ft diameter at 10ft
Emissivity0.96
Surface Temp±0.5°C@0°C,±1°C@-40° to 85°C
Air Temp±0.2°C@0°C,±0.5°C@-40° to 65°C
Humidity±1.8%@10% to 90%RH,
±3%@0% to 10% and 90% to 100%
Contact OutputOpenCollectorCable
Cable Length25ft (standard)
Size8" x 4" x 4"
Weight2 lb