

Surface Sentinel SURFACE TEMPERATURE SENSOR



Fixed Road Weather Sensor

The Surface Sentinel non-intrusive surface temperature sensor provides surface temperature, air temperature, relative humidity and dew point measurements for warning systems and fixed weather stations. The surface temperature is measured by an accurate non-contact infrared temperature sensor. Air temperature and relative humidity are measured from an accurate sensor from which dew point is calculated.

The low-cost RWIS extension

The sensor is typically mounted on a pole next to a road surface. It can be used for remote monitoring or in an autonomous system. In the remote monitoring configuration, the Surface Sentinel can be connected to industry standard datalogger and telemetry options to send data to a central software system. In the autonomous system configuration, a contact output provided direct from the sensor can be used to trigger ITS devices based on user-defined sensor thresholds.

APPLICATIONS

- Expansion for Road Weather Information Systems (RWIS)
- Weather responsive traffic management
- System alerts for alarm road crews

Professional Line	Surface Sentinel
Id-No.	5439-00
Meas. range surface temperature	-40° to 85° C (-40° to 185° F)
Meas. range air temperature	-40 to 65° C (-40 to 149° F)
Meas. range rel. humidity	0 to 100% RH
Accuracy surface temperature	± 0.5° C at 0° C otherwise ± 1° C (± 1° at 32° F otherwise ± 2° F)
Accuracy air temperature	± 0.4° at 32° F otherwise ± 1° F(± 0.2° C at 0° otherwise ± 0.5° C)
Accuracy rel. humidity	±1.8% at 10% to 90% RH otherwise ±3%
Output	SDI-12, open collector
Supply voltage	9.6 to 16 VDC, per SDI-12 spec
Power consumption	170 µA (average at 2 minute measurement without fan) 210 mA (max with fan running) at 12 VDC supply voltage 7 mA (when measuring, without fan)
Dimensions	200 x 80 x 80 mm
Weight	0.9 kg
Material	Anodized aluminum, polycarbonate
Standards	CE Compliant EN 61326-1
Cable	10 m (standard)