



SurfaceVue10

Fixed-Location, Non-Invasive Road Surface Condition and Temperature Sensor



Know How Weather Is Impacting Your Roads

Using spectroscopic analysis

Overview

The SurfaceVue™10 is a road condition sensor designed for use with your Road Weather Information Systems (RWIS). This non-invasive sensor uses spectroscopic analysis to provide you with surface state, friction, water, and ice layer thickness data. The

SurfaceVue 10 also measures surface temperature, air temperature, dew point, air pressure, and wind speed parameters. This data provides you with vital information to make better maintenance and operational decisions.

Benefits and Features

- › Non-contact sensor to reduce costs associated with installation and maintenance
- › Proven performance and reliability to make confident maintenance and operational decisions
- › Simple sensor calibration when using Campbell Scientific road weather solutions
- › No moving parts for minimal maintenance and long lifespan
- › Easy installation for completion any time of year with no disruption to traffic

Specifications

Road Conditions	
Surface States	Dry, moist, wet, slush, snow, ice
Friction (Grip)	
Measurement Range	0 to 1.0 (unitless)
Accuracy	±0.1 (compared to braking friction reference)
Resolution	±0.01
Water and Ice Layer Thickness	
Range	0 to 3 mm (0 to 0.12 in.)

Accuracy	› 10% > 1.0 mm (10% > 0.04 in.) › ±0.1 mm up to 1.0 mm (0.004 in. up to 0.04 in.)
Resolution	±0.01 mm

Road Surface Temperature	
Measurement Range	-40 to +60°C (-40 to +140°F)
Accuracy	±0.3°C
Resolution	±0.1°C

Ground Temperature (Modeled)

Measurement Range	-40 to +60°C (-40 to +140°F)
Accuracy	±0.5°C
Resolution	±0.1°C

Dew Point Temperature (Calculated)

Measurement Range	-40 to +60°C (-40 to +140°F)
Accuracy	±1.0°C
Resolution	±0.1°C

Air Temperature

Measurement Range	-40 to +60°C (-40 to +140°F)
Accuracy	±0.3°C
Resolution	±0.1°C

Relative Humidity

Measurement Range	0 to 100%
Accuracy	±2%
Resolution	±0.1%

Barometric Pressure

Measurement Range	500 to 1100 hPa
Accuracy	±1.0 hPa
Resolution	±0.1 hPa

Wind Speed (Modeled)

Measurement Range	0 to 60 m/s (0 to 134 mph)
Accuracy	±10%
Resolution	±1 m/s

General Specifications

Measuring Range	3 to 10 m (9.8 to 32.8 ft)
Installation Angle	30 to 80°
Road Surface Conditions	2.8°
Field of View	0.5 m (at 10 m)
Road Surface Temperature	10°
Field of View	1.7 m (at 10 m)
Operating Temperature Range	-40 to +60°C (-40 to +140°F)
Operating Humidity Range	0 to 100%
Power Consumption @ 12 Vdc	< 100 mA (typical)
Supply Voltage Range	9 to 30 Vdc
Digital Output	RS-232
Warm-up Time	1 min
Cable Type	Five conductor
Cable Length	10 m (32.8 ft)
Dimensions	76.2 x 27.9 x 17.8 cm (30 x 11 x 7 in.)
Weight	4.9 kg (10.8 lb)

For comprehensive details, visit: www.campbellsci.com/surfacevue10 



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