

IRS21 Intelligent Road Surface Sensor



Lufft's IRS21 is a passive sensor that monitors road surface temperature, freezing temperature for NaCl (others on request), road condition (dry/damp/wet/ice or snow / residual salt/freezing), and water film level (up to 4 mm). This intelligent road surface sensor is a primary component of our Road Weather Information Stations (RWIS). When used in an RWIS application, the IRS21 is connected to a CR800, CR850 or CR1000 datalogger via the SDM-SIO1 Serial Data Interface Module.

Installation

Two IRS21 sensors are typically installed at the measurement site. Each sensor is placed inside a hole in the road and then the hole is fitted with epoxy. To provide accurate measurements and prevent damage to the sensor, the IRS21 must be installed flush to the road surface.

Ordering Information

IRS21 - Intelligent Road Surface Sensor with 25 m (75ft) cable.

SDM-SIO1 - Serial Interface Module

Specifications

Operating Humidity:
100% RH

Temperature Range:
-40° to +70°C
operating; -50° to +70°C
storage

Power Requirements: 9 to 14
Vdc; less than 200 mA (during
measurement)

Interface: RS-485

Road Condition Output: dry,
damp, wet, snow, freezing
wetness, ice

Road Temperature Range:
-40° to +70°C (-40° to +158°F)

Road Temperature Accuracy:
±0.2°C (-10° to 10°C);
±0.5°C (-40° to 70°C)

Road Temperature Resolution:
-0.1°C

Freezing Point Range: -20°
to 0°C (-4° to +32°F)

Freezing Point Accuracy:
±0.1°C

Freezing Point Resolution:
-0.1°C

Dimensions: 13 cm (5"),
diameter, 5 cm (2") height

Weight: 0.9 kg (2lb)

