

## Vaisala SSI Active Pavement Sensor DRP110



### Benefits

- In-pavement sensor accurately measures pavement temperature
- Chemical type or mixture on pavement does not affect freeze point measurement
- Sensors can be placed at key locations
- Integrates with RWIS or fixed anti-icing spray systems
- Cost-effective for maintenance operations by reducing labor operating costs and chemical usage

### Features

- Freeze detection algorithm used to detect true freeze point of moisture sample
- Works with almost any deicing chemical or mixture of chemicals
- Flush mounting unaffected by traffic and snowplows
- Durable construction, reliable
- On-board microprocessor
- Maximum wired distance from data source is 290 meters (950 feet)
- Removable lid for easy maintenance or recovering electronics during road resurfacing

### Overview

Vaisala SSI Active Pavement Sensor DRP110 is an active and passive pavement sensor combined. The in-pavement sensor measures the current surface temperature, the freeze point of any liquid on the pavement, and determines whether the pavement surface is wet or dry. The DRP110 uses active sensor technology, which means it cools the liquid on the pavement to determine the actual freeze point. This method is carried out independent

of chemical type or mixture on the pavement. The DRP110 provides data for successful road or runway weather management, and is designed to integrate with RWIS or fixed anti-icing spray systems.

The DRP110 has a removable lid, which allows for easy access to all electronics and sensing components. This design makes upgrading or replacing the sensing components quick and easy. In addition, this feature contributes to lower, long-term maintenance costs.

# Technical data

## Components

Active Element	Peltier junction Collection cup temperature sensor
Passive Element	Surface Temperature External Probe "Pigtail" Pavement Probe Length: 43.18 cm / 20 inches Electrical conductance pins

## Operating Range Specifications

Freeze Point Range	-20 °C to 0.5 °C (-4 °F to 32.9 °F)
Surface Temperature	-55 °C to 85 °C (-67 °F to 185 °F)
Survivability Range	-55 °C to 85 °C (-67 °F to 185 °F)

## Electronic Specifications

Micro processor	Processor core module running at 22.1MHz
Core Module	Includes 256K of flash memory and 128K of static RAM

## Communication

RS-485

## Maximum Distance from Data Source

>950 feet (290 meters)

## Sensor Power

18V to 28V  
Current = 0.5A at 28V

## Operating Temperature Range

-40 °C to +85 °C (-40 °F to +185 °F)

## CE Compliant

EN-55011:2003 Class A; EN-61000-3-2:2000; EN-61000-3-3:2001;  
EN-61000-4-2:2003;  
EN-61000-4-3:2004; EN-61000-4-4:2004; EN-61000-4-5:2004;  
EN-61000-4-6:2003;  
EN-61000-4-8:2001; EN-61000-4-11:2004

## Applications

- Remote locations
- Bridge decks
- Problem areas
- Runways and/or taxiways
- Gather data for anti-icing operations and pavement forecasts
- Fixed anti-icing spray systems



# VAISALA

For more information, visit  
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