

Overview

The *optic-Q* is a non-intrusive pavement condition sensor designed to detect ice, snow, or water on the roadway. The sensor utilizes an electro-optical sensor to detect pavement condition without having to install a sensor in the roadway surface. The *optic-Q* sensor is contained within a weather-proof, durable housing to protect it from harsh weather elements, which allows it to provide accurate readings during any weather condition.

The *optic-Q* benefits maintenance personnel by warning them immediately when snow or ice begins to form, and allows appropriate action to be taken before roads become hazardous. The *optic-Q* is an excellent alternative in locations where invasive sensors cannot or do not want to be used. With no lane closures or cutting of the roadway required, installation is safe and easy.

Additionally, maintenance requirements are low, making the *optic-Q* an affordable option for road weather systems. The sensor can be mounted on an existing road weather station or other structure where a clear, unobstructed view of the pavement is available.

Benefits

- ▶ Detects formation of snow and ice on the pavement surface
- ▶ Remotely senses condition of pavement surface
- ▶ Non-intrusive results in quick and easy installations
- ▶ Affordable solution for sensing road weather
- ▶ Low maintenance costs
- ▶ Use with existing RWIS network

Applications

- ▶ Remote locations
- ▶ Bridge decks
- ▶ Problem areas
- ▶ Roadway configurations that include sharp corners



Features

- ▶ Remote surface sensing of ice, snow, wet, damp and dry
- ▶ Multiple wavelengths have the capability to detect black ice and slush
- ▶ Insensitive to liquid deicing chemicals
- ▶ Infrared detector with up to 50 feet (15.24 meter) range
- ▶ Easy to install with no lane closures required
- ▶ Rugged design to withstand and measure conditions in all types of weather
- ▶ Wiper/washer to keep lens clean
- ▶ Window heater
- ▶ Interfaces with SSI® Linux RWIS platforms



Key Specifications

Model Number	PCQ-2400
Surface Condition Data Output	Ice; snow; wet; damp; dry
Range	50 feet (15.24 meters)
Measuring Area Diameter	36 inches at 50 feet (91.44 centimeters at 15.24 meters)
Elevation Angle	30° to 90°
Power Input	12 VDC and 24 VAC
Maximum Power	66 watts
Operating Temperature	-40°F to +150°F (-40°C to +65.5°C)
Sensitivity	±1°F (±0.56°C)
Surface	Concrete or asphalt (factory selectable)
Communication	RS-485 serial link (optional RS-232 or RJ45)
Mean Time Between Failures	1.5 x 10 ⁶ hours
Safety	Eye safe class I laser
Diagnostics	Start up BIT once digital test signal input



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