

IceSight

Model 5433



Key features:

- **Weather responsive traffic management.** Activate public warning ITS devices based on road surface conditions or friction.
- **Road weather management tool.** Utilize data in winter severity and road weather indexes to better manage resources.
- **Measures numerous parameters.**
 - Surface Condition (dry, damp, wet, snow, ice)
 - Surface Friction
 - Surface Temperature
 - Air Temperature
 - Relative Humidity
- **Dirty lens indication.** An internal algorithm determines when the front lens needs to be cleaned. The flat lens is easily cleaned with the removable nose cone.

Non-intrusive road condition sensor

The Model 5433 IceSight Non-intrusive Surface Condition Sensor provides road weather professionals the surface and atmospheric measurements required to make critical maintenance decisions in a single compact unit. Surface condition information eliminates road-treatment guesswork and supports more effective allocation of surface treatment resources. Information is typically used for ATMS, MDSS and Weather Responsive Traffic Management applications to improve traffic safety and road maintenance programs.

The IceSight measures the road surface condition, surface friction or grip, surface temperature, air temperature and relative humidity without the need to embed a sensor in the road surface. This reduces the costs involved with installation and maintenance. The IceSight is easily mounted on a pole or RWIS tower structure near the road surface with available mounting brackets or commonly available camera mounting hardware.

BENEFITS



No road surface cutting reduces time and costs of maintenance and installation



Open communication protocol for simple integration



Long optical range offers flexible installation



Larger measurement area provides more representative determination of surface condition



IceSight non-intrusive road condition

The IceSight sensor uses electro-optical technology to monitor the near infrared spectral differences of the roadway surface to determine the condition in real-time. Using special signal processing techniques and comprehensive data analysis, the sensor is immune to passing traffic and various road treatment chemicals.

When used in conjunction with our RWIS Remote Processing Units, the IceSight sensor provides NTCIP 1204 ESS standards compliant open architecture communications.

Specifications

COMPONENT	SPECIFICATION
Range	10 to 50 ft (3 to 15 m) concrete 10 to 33 ft (3 to 10 m) black asphalt
Measurement Area	12 in (30.5cm) diameter @ 33 ft (10 m)
Surface	Asphalt or Concrete
Sensitivity	0.01 in Ice/Water, 0.05 in Snow
Elevation Angle	30° to 85° from road surface, 45° optimum
Surface Temperature Range	-40° to 185°F (-40° to 85°C)
Surface Temperature Accuracy	±1° at 32°F otherwise ±2°F (±0.5°C at 0°C otherwise ±1°C)
Air Temperature Range	-40° to 149°F (-40° to 65°C)
Air Temperature Accuracy	±0.4 at 32°F, otherwise ±0.9°F (±0.2 at 0°C, otherwise ±0.5°C)
Relative Humidity Accuracy	±1.8% at 10% to 90% RH, ±3% at 0% to 10% and 90% to 100%
Voltage Range	9 to 30 VDC
Power Consumption	3.2 Watts or VA
Operating Temp	-40° to 149°F (-40° to 65°C)
Surface States	Dry; Wet (3) - damp, wet, standing water; Snow (2) - snow, uncompacted snow; Ice (2) - ice, black ice
Surface Grip	0 to 1 and classified surface grip (good, fair, poor)
Optics Condition	Dirty lens output
Communication	EIA-485, multi-drop capable (up to 8 addresses), EIA-232, Ethernet
Targeting	High Visibility Green Laser
Safety	Eye Safe Class 1 Lasers
Mounting	Standard flat camera mount foot (3x ¼" -20 holes spaced 1")
Dimensions	16.5 x 5.5 x 8.0 inch (42 x 14 x 20 cm)
Weight	8 Lbs (3.6 kg)
Shipping Weight	15 Lbs (6.8 kg)
CE Certification	EN 61326-1
RoHS Compliant	Yes

Ordering guide

SENSOR OPTIONS	
Model 5433-34	IceSight with Wired LAN and 30 ft (9.144 m) cable to bare leads
Model 5433-35	IceSight with Wired LAN and 30 ft (9.144 m) cable to breakout box
ACCESSORIES	
Model 5433-64	IceSight 30 ft (9.144 m) replacement cable with breakout box
Model 5433-65	IceSight 30 ft (9.144 m) replacement cable bare leads
Model 5433-36	Extra IceSight sensor cable (Per foot/meter)
Model 5433-70	IceSight pole mounting bracket; 3 to 8 inch pole (7.62 cm to 20.32 cm)