Sensice ice detectors

Dr Ulf Elman, President
Sensice’s superior detectors
Smart new design gives better performance

• More advantageous price/performance ratio

• Significantly reduced maintenance cost
Traffic accidents in Sweden 1995-1999:

- 37828 at snowy or icy road surface conditions, of these did
- 15589 occur during black ice conditions, and in addition did
- 572 accidents related to aquaplaning occur
General properties

Principles of spectroscopy

- Ice transparent to visible light
- Ice is reflective (metal like) in the MIR range
- Ice is distinctly "coloured" in the NIR range
Applications

Use with RWS
Applications

Icing alert at building entrances
Applications

Ice detection at airports
Applications

Ice sheet or icicle buildup at sensitive spots
General properties

Large thickness interval due to two wavelength detection

0.05mm – 3 cm
General properties

Differentiates between six states:

1. Dry
2. Wet
3. Clear ice
4. Snow
5. Sleet
6. Wet clear ice
Mechanical properties

- 182mm x 154mm x 82mm
- 3.1 kg
Optical properties

Detection range

- Recommended range 3-15 m
- Use at distances exceeding 25 m impractical
Optical properties

Angular dependence of detection range
Optical properties

Detection range dependent on surface properties
Optical properties
Detects over extended area

• Beam divergence 12°
Optical properties

Lamp exchange port
Electrical properties

Power supply

- 12V DC
- 2.6A
Electrical properties

Communication interface

- RS232
- 57600 baud, one stop bit and no parity
- New measurement results once per second
Electrical properties

- Power on LED
- Hardware reset
Electrical properties

Ports not intended for customer use

• Calibration
• Software download
Resistance to environmental influences

Precipitation immunity

• Rain shield
Resistance to environmental influences

Dew and frost

- 31W heating
Resistance to environmental influences

Temperature range -20°C to +40°
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Smarter design gives better detectors

• More advantageous price/performance ratio

• Significantly reduced maintenance cost
Thank you

Further information:
www.sensice.com

Inquiries:
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