

# IDS-10

IDS-10 is an Ice Detection Sensor designed to detect icing on surfaces and freezing rain.



## Properties and benefits

- » Detection of icing
- » Discrimination between ice and water
- » Detection of ice rain
- » Minimum ice thickness: 0.1 mm
- » Robust design
- » Maintenance-free operation
- » Low power consumption
- » Parameters measured:
  - Icing
  - Rain
  - Dew point
  - Frost point
  - Temperature
  - Humidity
- » Analysis:
  - Number and duration of icing events

## Description

The IDS-10 Ice Detection Sensor was designed to reliably detect icing in multiple applications.

With the complex impedance measurement technology ice and water can be discriminated. This is a robust, non-contact and solid state measurement method. In addition the IDS-10 also measures the ambient air temperature and humidity. Derived from these measured parameters the sensor also outputs the current frost and dew point as well as the air temperature to dew point spread.

For safe and reliable operation the IDS-10 has several integrated features that help to monitor the status of the sensor. Not only are the supply voltage and the heating current measured, the sensor also outputs error codes to inform about the operational functions.

Also integrated are three relay outputs to indicate pre- and main alarms that can be defined individually depending on the user's requirements. The third relay outputs system failures.

## Applications

The IDS-10 can be used in various applications:

- » Wind-power turbines:
  - Detection of icing on rotating blades
- » High voltage power lines
- » Overhead wires for railway and tram
- » Icing on antennas
- » Site evaluations for wind power plants
- » Weather stations
- » Controlled heating of meteorological sensors and antennas
- » Scientific evaluation of icing conditions
- » Road hazard warning systems
- » Detection of icing on airports

General	
Total weight IDS-10	3.30 Kg
Dimensions IDS-10 (mm)	L = 585 mm W = 85 mm H = 500 mm
Protection	IP 66
Supply voltage	Ice Detection Sensor: 10 ... 30 VDC Heating unit: 12V / 24V AC/DC
Power consumption	Measurement: 50 mA @ 12VDC Heating: max. 2 A
Operating temperature	-40 ... 80°C
Output	Icing: Analog 4-20 mA; SDI-12; RS-485 (Modbus) Three relay outputs: Rain, Ice, Failure
Others	Integrated lightning protection Integrated reverse voltage protection

\* All declarations of weight and accuracy referring to standardised weights.