

Runway Condition Monitor RCM511W



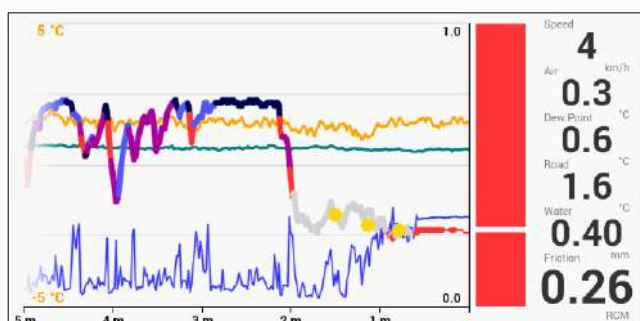
Runway Condition Monitor RCM511W has been designed to measure water layer thickness up to 15 mm and to help assess Runway Condition Code for Global Reporting Format. RCM511W can be also used together with RCM511 Runway Condition Monitor and RTD411 Runway Surface and Dew Point temperature sensor for full runway condition reporting. The RCM511W features improved layer thickness measurement combined with a small physical size. The sensor can be installed onto a moving vehicle to follow water layer thickness in real time. RCM511W detects the following contaminant types:

- Dry
- Wet

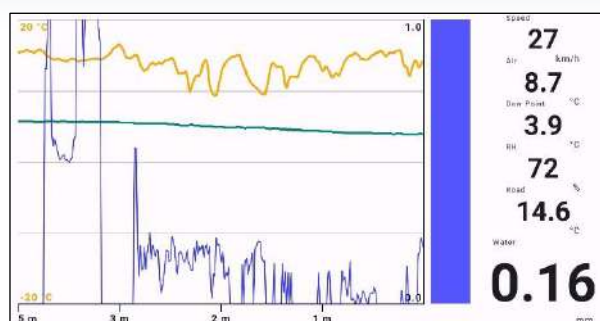
When RCM511W is used alone without RCM511 the surface condition is reported as Wet with a non-zero water layer thickness, if the contaminant is frozen. A braking friction measurement application is integrated into the same user interface RCM Mobile (Android app) to allow braking friction measurements. The results are communicated to selected servers. All the data can be explored with <https://roadweather.online> on a map interface.

Features and benefits:

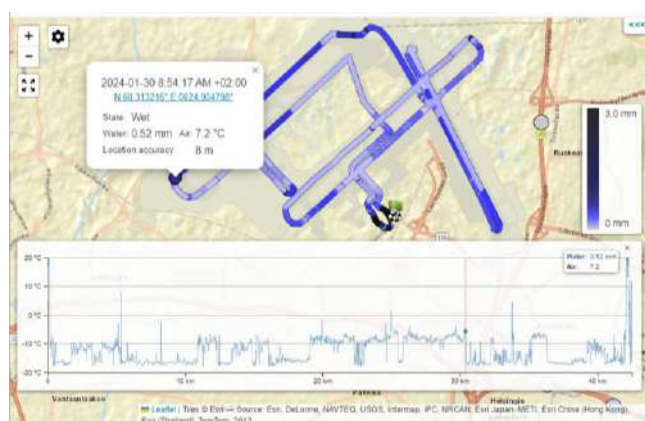
- mobile water layer measurement with an optical remote sensor
- high accuracy and resolution
- measurements
 - contaminant types Dry and Wet
 - water layer thickness
 - friction by braking friction measurement
 - surface temperature (optional)
 - dew point temperature (optional)
- solid state design
 - no moving nor wearing parts
- small size makes installation easy
- output serial RS-232 or Bluetooth
- power input 9-30 VDC
- data communication to a mobile phone, PC or other systems
- photographs of the surface manually, at selected intervals or preselected locations
- water layer thickness for Runway Condition code (RWYCC) of Global Reporting Format (GRF)



Screenshot of a cell phone user interface during snowy (grey), icy (red), slushy (magenta), wet (blue) and moist (dark blue) surface conditions, when using RCM511W together with RCM511 and RTD411(I2C).



Screenshot when using RCM511W together with RTD411(I2C). The large numeric reading is water layer thickness in mm or imperial units.



Color-coded water layer thickness readings measured by RCM511W at an airport as displayed at <https://roadweather.online> map interface.



RCM511 together with RCM511W and RTD411(I2C) sensors installed magnetically on a vehicle door.

RCM511W Specifications:

Sensor type:	Runway Condition Monitor RCM511W
Measures:	length 70 mm, diameter 50 mm, weight 230 g (sensor part only)
Material:	aluminum housing
Cable:	four pin M8 connector for power and data
Power supply:	9 ... 30 VDC, power from trailer light connector or cigarette lighter
Power consumption:	about 1 W
Temperature range:	-40 ... 60 °C
Resolution of thickness:	0.01 mm, range 0 mm to 15 mm
Accuracy of thickness:	0.10 up to 1.0 mm, 10 % from 1.0 to 10.0 mm
Friction:	Braking friction measurement included in the RCM Mobile app
Output:	TTL-USB, RS-232 serial interface or Bluetooth
Installation:	magnetic fixing, pull hook fixing, trailer hitch fixing or M8 bolt fixing
User interface:	Bluetooth connection to a mobile phone. The data is communicated to a map user interface at https://roadweather.online .