

RDA METER

Indispensable Assistant For Optimizing
The Road Winter Service



Device Construction

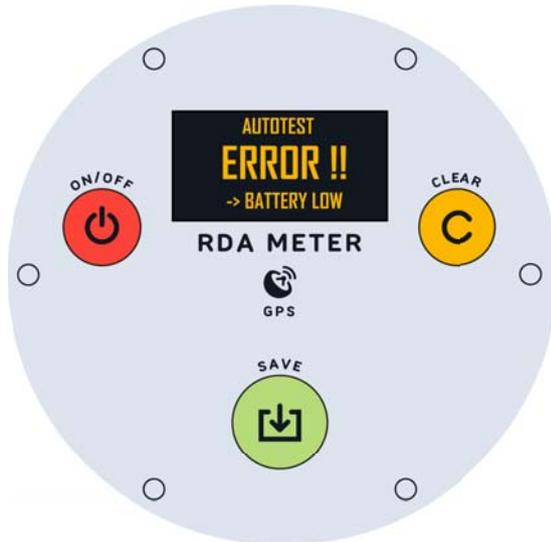
RDA Meter is managed by three buttons and graphical LCD.

The unit consists of the following modules:

- Mechanical unit for solvent application and coupling of the meter with the road surface,
- Electrical unit, which measures conductivity and temperature,
- Processing unit managing the gauge, GPS module and GPRS module (optional).

Quick & Simple

RDA meter is quick and simple to use. The unit has to be filled with solvent prior to its use. Battery and charger are built in. When switched ON, the unit performs autotest and notifies on errors.



Basic Functions

RDA Meter measures the residual quantity of deicing agent on the pavement, ambient and ground temperature, determines GPS location, date and time of the measurement. RDA Meter is the first step to optimizing the road winter service.

RDA Meter stands for Residual Deicing Agent Meter. RDA METER measures the residual quantity of deicing agent on the pavement, ambient and ground temperature. It simultaneously determines GPS location, date and time of the measurement.

Measured values are saved on demand in the internal memory of RDA METER in order to be downloaded to a computer or sent over GPRS to a central server for review and road winter service planning.

High Precision And Accuracy

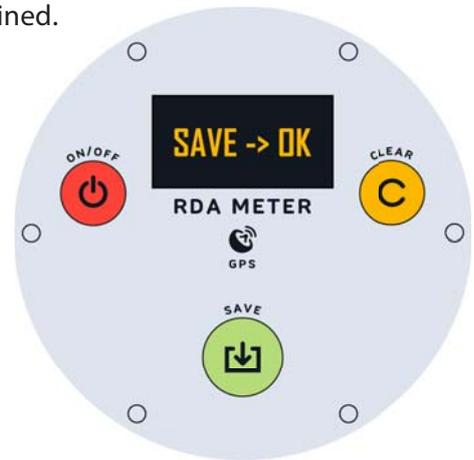
Precision: 0,1 g/m²,
Accuracy: ±0,5 g/m², ±1°C.

RDA Meter measures electrical conductivity in a solution and its temperature. The conductivity is compensated with respect to temperature. The result for quantity of NaCl and CaCl₂ on isolated surface area is reported in grams per square meter.

Pavement and air temperature, date, time, and GPS location are acquired in parallel to basic measurement.

On-Site Measurement In Four Steps

1. By the road. When RDA METER is switched on, it performs a self-check and searches for satellites to determine GPS location. When the unit is ready to use "0.0 g/m²" and "GPS: OK" signs are displayed on LCD.
2. On the road. User presses RDA METER against the road surface. By pressing on the lever, deicing agent solvent is applied into the measuring cell. The result is shown on LCD in few seconds. At the same time GPS location, air and ground temperature are obtained. When the lever is released, the measuring cycle stops.
3. By the road. The measurement result remains frozen on the LCD. User can instantly move to a safe place by the road to check and save the result to RDA METER memory. The result can be instantly sent to central server via GPRS.
4. By the road. RDA METER turns off on demand or by itself after certain timeout.

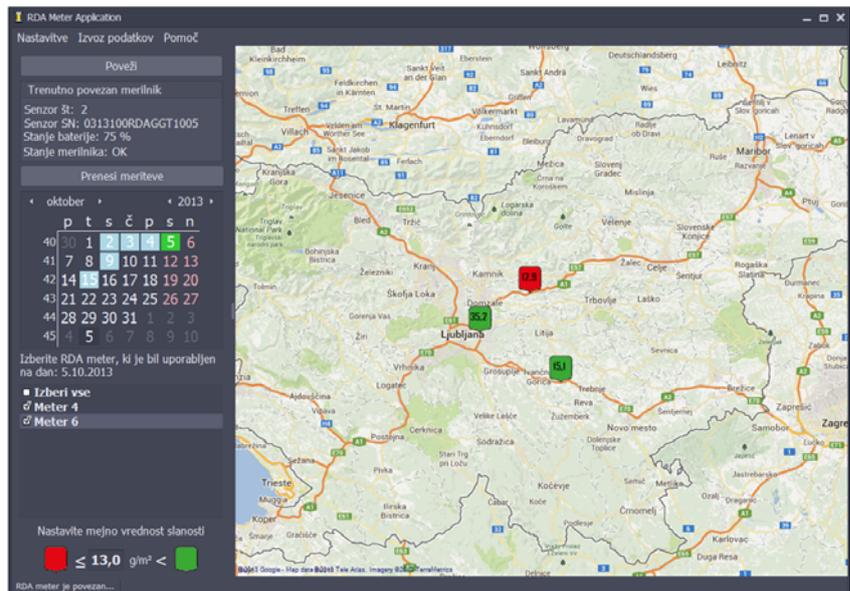


At Road Service Center

RDA Meter basic package includes software for downloading results to a PC. After user gets back to the road service center, results are downloaded to a computer. Software enables overview of results for selected meters on selected date, and data export to a semicolon separated text file.

RDA Meter with GPRS instantly sends data to central server application for further use. The data can be integrated into road weather information system. Results are used for planning of optimal salting taking into account remaining quantities of deicing agent on the pavement, ground temperature and weather forecast.

Optimal spreading of deicing agent reduces costs of winter road maintenance and pollution.



Specifications

- Residual deicing agent quantity for NaCl and CaCl₂: 0-45 g/m².
- GPS location, air and ground temperature: -40°C to 60°C.
- Precision: 0.1 g/m².
- Accuracy: ±0.5 g/m² below 5 g/m², ±1°C -40°C to 60°C.
- Date and time is reset on each valid GPS connection.
- Internal memory: 1000 points.
- OLED display: resolution 128 x 64.
- USB port for connection to a PC.
- Basic software for downloading measured values to PC and their overview is enclosed.
- Optional GPRS module for centralized data collection and server application.
- External dimensions: 275 mm x 933 mm x 120 mm (W x H x L).
- Weight: 6,5 kg.
- Operating temperature: -30°C to 50°C.
- Enclosure: IP65.

