Frost-SMacs®

Active Road Surface Sensor Station

WINTER MAINTENANCE OF ROADS

The road conditions can disrupt significantly the traffic performance.

The significant reduction of average speeds determined by the icy road surface reduces the traffic flow capacity of the roads and the resulting increase in travel time imposes the need to act on-time to ensure even in the winter an efficient traffic flow, with an appropriate level of service and overall safety.
The provisions of the Highway Code require the drivers to adjust their driving behavior to the specific conditions of the road.
The manager of the road network, thanks to Frost-SMacs® is able to implement in a timely manner all the precautions provided by modern techniques of winter roads service.

BENEFITS

- Knowing with accuracy the conditions of the road surface allows to act faster and more efficiently.
- Automatic alert of the necessity of salting the road brings efficiency and organization of resources.
- Centralized control provides the manager with all the necessary data to best decide which solutions to adopt.
- Innovative technologies for the detection of the state of the road surface with 24 hours a day connection to a Remote Control Platform.

DETECTION OF ROAD SURFACE'S CONDITIONS

• Dry • Damp • Wet • Ice • Snow • Frozen (verglas)

MEASUREMENT OF WATER LAYER

Up to 4 mm by Microwave Radar Sensor
- Resolution : 0,01 mm
- Accuracy : 0,1 mm + 20%

MEASUREMENT OF SALT FACTOR + FREEZEING POINT

Through detection of conductivity depending on the water layer

MEASURING OF THE ROAD SURFACE'S TEMPERATURE

Through the probe of surface and depth

REAL TIME SENDING OF EACH DETECTION

Through GPRS Modem

REMOTE CONTROL AND ALERTING

Through the SMacs® Platform you can manage your data and be alerted in real time to the occurrence of any critical condition

In order to offer the best possible service, La Semaforica and Tecsen reserve the right to modify at any moment and without any warning the features of the products described in this document. This document has the only purpose of illustrating the products. If you need detailed technical data, please do not hesitate to contact us.

READY TO USE

Frost-SMacs® allows you to have a professional Station for road-surface conditions' monitoring, with the formula "Ready to Use".

The monitoring of these measurements is generally possible only through complex systems as they involve different technological components , heterogeneous among them.

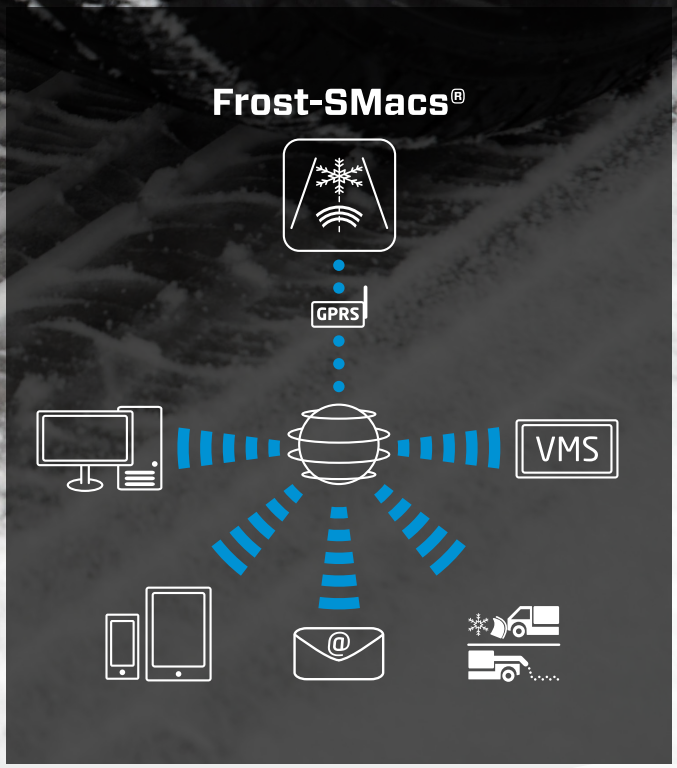
Our solutions are designed to be scalable, with central units of the highest level, but shared.

This allows you to get them very cheap and build a fully scalable system.

The goal is to spread these tools to a growing number of organizations, including also the small towns that need to monitor just a single spot.

The device installation on the road is very quick, and once installed does not require any additional configuration, the station is already ready to use, and the related data can be found out through the web, choosing who to notify in case of need.

Is available the option to provide the station with photovoltaic panel or with battery backup for supply through public lighting.



WEB ACCESS

Credentials to access to the web portal SMacs® with informations available for both the manager and for the ordinary citizen.

ALERT SYSTEM

Real Time alert at specific thresholds.

DATA STORAGE

Free access to the database to obtain the temporal trend of the monitored data for statistical purposes.

SYSTEM WIDENING

Possibility of integration with other modules and/or sensors maintaining the same platform.

SYSTEM CONTENTS

- Smart Road sensor LUFFT IRS31PRO UMB with Manufacturer Test Certificate.
- Data acquisition station Weather-SMacs® designed and configured for your Road Surface Sensor.
- GPRS data modem to enable constant communication with the Control Center (SIM not included).
- Web SW Macs Weather to communicate and be alerted in real time on the Platform for Smart City SMacs®.
- Special cable to link it to the sensor, lenght 50m.

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