



CrossMet

Road Weather Station

CrossMet control unit is the core of a road weather station. CrossMet is compatible with various sensors and can measure different air parameters as well as road conditions. It works as a data logger and a communication module for sending the data to any superior system or for controlling connected variable message signs.

Designed specifically for monitoring road weather, the station processes meteorological data to provide warnings against hazardous situations. The warnings are aimed either to maintenance dispatchers to take early actions, or directly to road users via VMS to prevent danger of skidding.

CrossMet is an open platform and can be easily adapted to any new sensors and various applications, e. g. air quality monitoring. Allows the connection of weather sensors from several different independent manufacturers. CrossMet is integrated with central systems, including Invipo - Central Integration Platform.

KEY BENEFITS

- Flexible adaptation to new sensors and applications
- Field-proven reliability in harsh conditions
- Direct control of variable message signs
- Low power consumption
- Adaptation of data output for particular applications

KEY FEATURES

- Possibility to choose from a number of integrated sensors
- Fully remote configuration and monitoring using web and API interface
- Communication via TCP / IP using HTTP REST API
- Alternative power supply options: photovoltaic panel, wind turbine
- Sophisticated algorithm for detecting critical conditions



CONTROLLER TECHNICAL SPECIFICATION

Dimensions	190 x 110 x 70 mm
Power supply	12–24 V DC
Controller module ingress protection	IP 44
Data interface	5x RS 232, 2x RS 485, 1x Ethernet, 5x USB, 1x 1-Wire, 1x CAN bus
Extension board	4x RS 485, 2x relay
Memory card	microSD, standard 16 GB
Operational temperature	-40 to +85 °C

Road condition sensor (default)

Road surface conditions	Dry, moist, wet, moist with salt, wet with salt, ice, snow, frost
Road surface temperature	-40 to 80 °C ± 0.1 °C (-20 to 20 °C), otherwise ± 0.2 °C
Freezing point	-40 to 0 °C ± 0.5 °C (0 to -2.5 °C), else ± 20 % of average value
Water film height	0 to 4000 μ m, accuracy 200 μ m < 3 mm, otherwise ± 30 %
Friction	0 to 1
Operational temperature	-40 to 80 °C

Temperature and humidity sensor (default)

Air temperature	-40 to 70 °C, ± 0.1 K (0 to 60 °C), ± 0.2 K (-40 to 0 °C)
Relative humidity	0 to 80 %, ± 1.5 % (0 to 80 %), ± 2 % (> 80 %)
Barometric pressure	500 to 1100 hPa, ± 2 hPa (-30 to 70 °C), ± 1 hPa (-10 to 60 °C), ± 0.5 hPa at 25 °C

Visibility and precipitation sensor (default)

Visibility	Selectable measurement range from 10 m to 99 km
Present weather	14 WMO Table 4680 codes
Precipitation amount	0 to 99 mm
Max. precipitation rate	≈ 500 mm/hr
Operational temperature	-40 to 60 °C

