



The embedded active road weather sensor ARS31-UMB detects freezing temperatures independently from de-icing materials and is easy to maintain through its two parted housing...

- **Parameters measured**  
freezing point
- **Measurement technology**  
active cooling and heating (Peltier element)
- **Product highlights**  
Two part housing design allows easy maintenance/re-calibration, low energy consumption allows solar operation, freezing point determined independently from de-icing material
- **Interfaces**  
RS485
- **Article number**  
8610.U050

The active road sensor ARS31 is installed flush with the road/runway surface and calculates the freezing temperature by means of active cooling and heating of the sensor surface. The freezing temperature measurement is independent of mixture. The two-section housing design allows the combined sensor/electronics unit to be removed for maintenance purposes at any time, in just a few minutes. In conjunction with interface converter 8160.UISO, the sensor can be built into new and existing UMB networks. Passive sensor IRS31 and active sensor ARS31 can be combined without difficulty, in fact this is recommended. The sensors are addressable and hence can be networked.

# Technical Data

Intelligent Active Road Sensor ARS31-UMB



General	
Dimensions	Ø 120mm, height 50mm
Weight	Approx. 900g
Storage temperature	-40...80°C
Protection type	IP68
Power supply	24 VDC ±10%
Connector	CAGE CLAMP, WAGO, (cross-section <0.5mm <sup>2</sup> )
Operating temperature	-40...80°C
Operating rel. humidity	0...100% RH
Power consumption	Approx. 30 W
Interface	RS485, baud rate: 2,400...38,400 bit/s (default: 19,200),
cable length	50m

Freezing point	
Measuring range	-40 ... 0 °C
Unit	°C
Accuracy	±0.5°C RMS for freezing temperature > -15 °C, or ±1.5°C RMS for freezing temperature < -15 °C (with NaCl)
Resolution	0.1