

The NIRS31-UMB is a non-invasive road weather sensor with optical principle. It is mounted several meters above the ground and can even monitor bridges...

- **Parameters measured**
  Layer thickness of water, snow and ice, surface conditions (dry, damp, wet, snow, ice), friction, road surface temperature, saline concentration

- **Measurement technology**
  Optical principle, pyrometer

- **Product highlights**
  non-invasive, easy to install and add to existing measurement networks, friction measurement, real time data providing

- **Interfaces**
  UMB-binary, SDI-12, ASCII-UMB, analog outputs in combination with digital-analog-converter DACON8-UMB

- **Article number**
  8710.UT01

The NIRS31-UMB is a non-invasive road weather sensor working with optical principle and is mounted several meters above the surface at bridges or masts. It measures surface conditions such as wetness, ice, snow, or frost as well as water film heights, ice percentage in water and freeze point temperature. Through these measurements it generates the friction coefficient on the road or runway.

General	
Dimensions	H. ca. 425 mm, W. ca. 225mm, D. ca. 285mm
Weight	10 kg

Storage conditions	
Permissible ambient temperature	-40...70°C
Permissible relative humidity	0 ... 95% R.H. non-condensing

Operating conditions	
Permissible relative humidity	0 ... 100% R.H.
Operating voltage	24 VDC ±10%
Power consumption	Approx. 40VA
Operating temperature	-40...60°C
Protection type	IP65

Layer thickness	
Layer thickness	Water, Snow, Ice
Principle	Optical
Measuring range	0...2mm (snow 0 ... 10 mm)
Resolution	0.01mm

Surface conditions	
Surface conditions	Dry, Damp, Wet, Snow, Ice

Friction	
Friction	Measurment range 0...1 (critical ... dry)

Road surface temperature	
Principle	Pyrometer
Measuring range	-40 bis +70°C
Accuracy	0,8°C
Resolution	0,1°C

Saline Concentration	
Measurement process	Spectroscopic
Measuring range	0% ... 100%
Resolution	0.1%
Sampling rate	<1 minute
Units	%