Lufft ARS31Pro-UMB – Intelligent Active Road Sensor

The active ARS31Pro-UMB sensor is flush-mounted in the road/runway surface and measures the freezing temperature by means of active cooling and heating of the sensor surface.
In addition, the ARS31Pro-UMB measures dry/wet-conditions and the road surface temperature; this surface temperature sensor is integrated into a second housing which is connected with the ARS31Pro-UMB.

The distance between the two housings is 50 cm.
One additional measurement is carried out in order to find out critical conditions in the next few hours. This early alert message is an extra road surface condition information in addition to the road conditions which are measured „now“.

The freezing temperature measurement is independent of mixture. The two-section housing design allows the combiend sensor/electronics unit to be removed for maintenance purposes at any time, in just a few minutes.

In conjunction with the interface converter 8160.UISO, the sensor can be built into new and existing UMB networks.

The sensors are addressable and can be networked

Lufft ARS31Pro-UMB Intelligent Road Sensor			Order No.
ARS31Pro-UMB 50 m cable length			**8810.U051**
Technical data	Dimensions	Ø 120 mm, height 50 mm	
	Weight	approx. 1100 g	
	Detectable road conditions	Dry/wet/critical wetness/ ice alert	
	Storage temperature	–40 … 80 °C	
	Protection type	IP68	
	Op. power consumption	9 … 36 VDC	
	Plug	CAGE CLAMP, WAGO (cross-section < 0.5 mm²)	
	Op. temperature range	–40 … 80 °C	
	Operating humidity range	0 … 100 % RH	
	Power consumption	approx. 30 W	
	Interface	RS485, baud rate: 2,400 … 38,400 bit/s (default: 19,200)	
Freezing point	Measuring range	–20 … 0 °C	
	Accuracy	±0.5 °C RMS for Tg > –15 °C, or ±1.5 °C RMS for Tg < –15 °C (at NaCl)	
External road surface temp.	Principle	NTC	
	Measuring range	–40 … 80 °C	
	Accuracy	±0.2 °C (–10 … 10 °C), or ±0.5 °C	
	Resolution	0.1	
Accessories	UMB Interface converter ISOCON-UMB		**8160.UISO**
	Spare part cap + electronics ARS31Pro-UMB		**8610.DEC**
	Surge protector		**8379.USP**
	Digital-analog-converter DACON8-UMB		**8160.UDAC**

*External Road Surface Temperature Sensor

- Replaceable sensor/electronics
- Simulation of critical surface conditions in the avery near future
- All-in-one sensor including active measurement of freeze point temperature
- Mixture-independent measurement
- Analog outputs in combination with 8160.UDAC