ALS-2

Ambient Light Sensor

The ALS-2 is designed to provide an accurate and reliable determination of the amount of background light during all weather conditions.

Digital or analogue output

Extensive self-test capabilities

Field calibration using the optional automatic ALS-2 calibrator

2 years warranty

Designed to comply with specifications and guidelines produced by ICAO, WMO and the Federal Aviation Authority in the USA, the ALS-2 meets all the requirements for use in typical RVR systems. The ability to connect the sensor directly to visibility or present weather sensor and have the background luminance data incorporated into the visibility sensors data string simplifies system design and construction.

Available with a choice of serial data or analogue outputs the ALS-2 can be used to replace a wide range of background

luminance meters in both legacy and new installations. The simple pole mounting system even incorporates an angular scale to ease installation. A unique feature of the ALS-2 is its ability to be calibrated in the field without the need to disconnect the cable or send commands via the software interface.

Designed to operate in the harshest of weather the ALS-2 has window heating and window contamination adjustment as standard. Extensive self-test capabilities and optional heating complete the package.

Technical specifications

Ambient light measurement

Measures	luminance (ambient light)	
Output	serial data; optional analogue outputs	
Measurement range: Serial data Analogue outputs	0 - 40,000 cd m^{-2} 0 - 4,000 cd m^{-2} 0 - 40,000 cd m^{-2}	(0.5 - 11,700 fL) low output high output
Resolution	1 cd m^{-2}	(0.29 fL)
Measurement error	$\leq$ 10 % of value or 2 cd m^{-2} (0.58 fL), whichever is the greatest	
Spectral response	wavelength sensitivity range 400 - 700 nm, peak 565 nm; analogous to CIE luminous spectral efficiency	
Field of view	6°	
Averaging period	60 s	

Outputs

Serial data outputs	RS-232, RS-422 or RS-485
Analogue outputs (option)	2 voltage outputs, high and low range 0 - 10 V DC

Power requirements

Sensor power	9 - 36 V DC
Hood heating power	24 V AC or DC
Sensor & window heater **Hood heater** **Extended heating**	2 W 12 W 18 W (includes hood heater)

Additional features

Window heater	fitted as standard
Window contamination monitoring and compensation	fitted as standard

Environmental

Operating temperature **with extended heating**	-40 °C to +70 °C -60 °C to +70 °C
Operating humidity	0 – 100 %RH
Protection rating	IP 66

Physical

Material	powder paint coated aluminium
Weight	1.5 kg
Elevation angle range from horizontal	0° to 45°
Warranty	2 years
Lifetime	> 10 years

Maintenance

Self-test capability	as standard
User confidence check	6 months recommended
Window cleaning	automatic compensation and warnings
Field calibration	with optional calibration kit

Certification & compliance

CE Certified

EMC compliance with EN61326-1997, 1998, 2001

RoHS and WEEE compliant

Accessories – optional

ALS-2.CAL	Ambient Light Sensor Calibrator
ALS2.WTY	1 year extended warranty

Included with sensor

The sensor is delivered in sturdy recyclable foam filled packaging with:
- Pole mounting kit (1 x U-bolt and saddle)
- User manual and calibration certificates

ISO Quality Certified Company