



## VIS-430-DS Visibility Sensor



The OSi VIS-430-DS is a state-of-the-art triple aperture, forward scatter visibility sensor. Unlike traditional two-headed visibility sensor designs, the VIS-430 does not require periodic field calibration. This results in tremendous time savings and ease of use.

The VIS-430-DS is ideal for Road Weather Information Systems as well as Airport Automated Weather Observing Systems when present weather information is not required.

The transmitter unit contains an IRED diode and lens with dual heaters. The receiver contains two (2) independent receiver assemblies, each consisting of a photo diode, lens with dual heaters, and pre-amplifier electronics. One of the receivers detects in-beam signal and the other detects forward scatter signal. The two signals are processed by Digital Signal Processing (DSP) board. The advanced fuzzy logic self-calibration algorithm uses information from both the in-beam and forward scattered receivers.

The self-regulating lens heaters prevent dew, frost, and snow from building up on the lenses. Heaters are "on" continuously but draw more current when the outside temperature is cold and less current

### VIS-430 Advantages

State of the art forward scatter visibility sensor

- DSP based – no field calibration required
- Virtually no maintenance required
- Outstanding performance yet low cost
- Rugged design – field proven from tropical to sub-arctic environments
- Easy Installation and integration
- Long-term reliability – designed for unattended operation 24/7/365
- Unaffected by dust or buildup on lenses
- Built-in self -diagnostics & testing
- Enhanced EMI and surge protection

when the temperature is warm. All wiring between transmit and receive heads is within the welded sensor frame. The VIS-430 sensor is completely sealed from water intrusion at the factory.

### Ordering Information:

- Model no: VIS-430-DS (DC powered, RS-232 serial I/O – specify Metric or ANSI)

### Accessories:

- PSB-430 AC-powered junction box

## VIS-430-DS Specifications

Performance Specification	
Measurement Technique	Optical Forward Scatter
Data Reporting Update Rate	1 minute
Visibility Dynamic Range (metric and ANSI units)	0.01 to 10+ km (standard range) 0.01 to 25+ km (optional range) 0.01 to 50+ km (optional range)
Visibility Accuracy	Better than 10% to 10 km. Better than 20% 10.001 to 25 km.
Visibility Contrast Threshold	5%
Ambient Light Dynamic Measurement Range	0 to 9,990 candles / m <sup>2</sup>

Electronic Specification	
Power Requirements	10-18 VDC, 3 A nominal
Transient Protection	All power & signal lines fully protected
Signal Output	RS-232 ASCII, simple polled protocol

Environmental Specification	
Temperature	-40° to 140° F (-40° to 60° C)
Humidity	0 to 100%
Precipitation / Dust	NEMA 4 type protection

Physical Specification	
Sensor Size	35 x 5 x 11 inches (890 x 130 x 280 mm)
Sensor Weight	10 lbs. (4.5 kg)
Cable Length	25 ft. (7.7 meter)

Specifications are subject to change without notice.

	<p>2 Metropolitan Court, Suite 6 Gaithersburg, MD 20878 USA Ph. +01-301-963-3630 Fax +01-301-948-4674 website: <a href="http://www.opticalscientific.com">www.opticalscientific.com</a> email: <a href="mailto:sales@opticalscientific.com">sales@opticalscientific.com</a></p>
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