

400-6400 All Environment Visibility Sensor

The **400-6400 Visibility Sensor** is designed to calculate visibility conditions over a range of 20 feet to 50 miles (6m to 80km). Visibility is detected using widely accepted principles of forward scattering. A high output infrared LED transmitter projects light into a sample volume and light scattered in a forward direction is collected by the receiver. The light source is modulated to provide excellent rejection of background noise and natural variations in background light intensity.

Applications

- Synoptic stations
- Lighthouses
- Highways
- Resort areas
- Shipboard and other marine platforms.



Features

- The sensor's digital interface indicates present visibility, diagnostic information, and provides access to the configuration and calibration options. The sensor can asynchronously stream RS232 or RS485 visibility data at user configured intervals, or can be operated in the polled mode, outputting information only when asked.
- Visibility is compared to the preset relay thresholds, so that when an alarm condition is reached, the relay output is switched. Visibility thresholds can be set to any value within the instrument range. The SPDT relay can provide signals to a VMS or other optional user system.
- Analog output (voltage, current) is proportional to a user-specified range.
- The 400-6400 Visibility Sensor is designed to provide both accuracy and reliability in a cost effective package. It now features ease of field serviceability. A calibration kit is available for field calibration. Calibration is possible under most weather conditions.

Ordering Information

400-6400	All Environment Visibility Sensor with Analog Output
400-6400CK	Calibration Kit
400-6300ALS	Ambient Light Sensor (Optional, must be factory installed.)

400-6400 Visibility Sensors are protected by a light-weight housing, which can be installed on a simple pipe mast. They are constructed entirely of corrosion resistant materials for durability. The unit includes window heaters (to prevent condensation on the optics) and hood heaters. Transmitter and receiver hoods are designed to divert precipitation away from the optical paths.



400-6400 Visibility Sensor

Range	20 feet to 50 miles (6m to 80km)
Accuracy	+/- 10%
Scatter Angle	42° nominal
Ingress Protection	IP66
Light Source	Infrared LED
Outputs	
Serial Communications	RS232 / RS485, 300 to 38,400 baud
Analog Voltage Output	0v-1vdc, 0v-5vdc, 0v-10vdc
Analog Current Output	4 to 20 mA
Relay	SPDT Relay, configurable set points
Environmental	-40° to 130° F (-40° to +55° C) 0 to 100% Humidity
Power Requirement	+11.8 to 13.8 VDC at 280 mA or 3.4 Watts
Window Heater On	Additional 550 mA or 6.6 Watts
Hood and Electronic Heater On	Additional 1.66 Amps or 20 Watts
ALS Attached	Additional 500 mA or 6 Watts
Mounting	U-bolts, 1.5 to 3.5" mast diameter (38 to 89 mm)
Dimensions	38" W X 13" H X 16" D
Weight	17.5 lbs.(7.9kg)

Optional 400-6300 Ambient Light Sensor (factory installed only)

Range	0 FL to 40,000 FL (foot-lambert)
Field of View	6°
Update rate / averaging	30 seconds / 30 second average
A/D integration time	Adapted to luminance level for optimum accuracy.
Accuracy	5% from 2 FL to 50,000 FL 0.1 FL below 2 FL.
Diagnostics	Hood heater and window fouling

