



The Mesotech Professional Forward Scatter Visibility Sensor is a highly

reliable, compact and rugged atmospheric visibility sensor. The sensor can replace existing transmissometers, providing advantages in stability, accuracy, and maintainability at a much lower cost. This sensor is ideal for automated meteorological systems at airports, lighthouses, along roadways, and on ships, as well as for general observations. The sensor is also an ideal option for detecting transportation hazards such as fog, snow, smoke, or blowing sand.

The Professional Visibility Sensor uses the forward scatter principle of light in the presence of atmospheric particles to measure the extinction coefficient and visibility. A high intensity infrared LED transmitter illuminates the sensor's scatter

volume, which results in a high signal-to-noise ratio and reduces the effects of natural background light variations.

Accurate visibility measurements are possible over a standard range of 0 feet to more than 50 miles. The use of light near the visibility spectrum allows the sensor to most accurately simulate human perception of visibility. Field calibration is simple and can even occur during periods of impaired visibility.

Outputs can be either analog or digital, with two alarm channels. This enables setting the appropriate thresholds to indicate good/medium/poor visibility.

The Professional Visibility Sensor has been extensively tested and widely accepted by the World Meteorological Organization, the British Meteorological Office, the U.S. National Weather Service, and the Canadian Atmospheric Environmental Service.

Technical Specifications

Range:	20 ft. to 50 miles (6 m to 80 km)
Accuracy:	±10% of reading or 10 ft. (3 m)
Scatter angle:	42° nominal
Illumination:	Infrared LED
Output	
Analog:	0-1, 0-5, 0-10 volts, 4-20 mA
Alarms:	2 channels, TTL Hi/Lo
Digital:	RS232, RS422, 300 – 38,400 baud
Environmental:	-40°F to +130°F (-40°C to +55°C)
Humidity:	0-100%
MTBF:	>10 years (MIL-HDBK-217E)
EMI	MIL-STD-461
Power:	110/240 VAC or 12/24 VDC Sensor @ 17 watts nominal Heater @ 25 watts
Dimensions:	11" H x 41" W x 21" D (28 cm x 104 cm x 86 cm)
Mast Diameter	1.5" to 2.5" (38 mm to 63 mm)
Weight:	Sensor – 20 lbs (9.1 kg)

Ordering Options

Forward scatter visibility sensor. Specify power input voltage at time of order. Includes 10 ft. (3 m) mast.

Calibration kit for visibility sensor.

The Professional Forward Scatter Visibility Sensor is an excellent choice for aviation use.

