

Visibility Sensor

Optional Sensor for the Weather MicroServer

Catalog Number: 82620-1



Features

- 16 km (10 mile) visibility range
- Proven 42-degree forward scatter angle
- Ice-resistant "look-down" geometry

Specifications

Visibility Range: 30m - 16 km standard

Extinction Range: 100 - 0.1863 km⁻¹ standard

Accuracy: +/- 10% RMSE

Time Constant: 60 sec

Scatter Angle: 42 deg nominal

Source: 880 nm LED

Output: Serial RS-232

Power: 10-36 VDC, 6 VA Nominal

18 VA w/ hood heating

Operating Temperature: -40 to 60 C

Operating Humidity: 0-100%

Protection: IP66 (NEMA-4X)

Weight: 8 kg (18 lb)

Dimensions: 889 mm W x 292 mm H x 305 mm D

(35 in x 11.5 in x 12 in)

Mounting: Nominal 40 mm ISO pipe, 48 mm OD
max (1-1/2" IPS pipe, 1.9 inch OD max)

Measuring atmospheric visibility, also known as meteorological optical range (MOR) by determining the amount of light scattered by particles (smoke, dust, haze, fog, rain, and snow) in the air that passes through the optical sample volume. A 42-degree forward scatter angle ensures performance over a wide range of particle sizes.

An integrated, one-piece housing design keeps all cabling internal to the sensor for protection against the elements. The sensor housing is made from anodized aluminum and the enclosures are rugged, UV-resistant fiberglass rated to IP66.

Based on the proven experience of the NWS and FAA, the sensor uses a "look down" geometry to reduce window contamination and clogging from blowing snow. The windows use continuous duty anti-dew heaters.

Surge and EMI filtering on all power and signal lines help ensure uninterrupted service for the life of the sensor.

This equipment is in compliance with the essential requirements and other provisions of Low Voltage Directives 73/23/EEC and 89/336/EEC as amended by Directive 93/68/EEC.

Installation and maintenance: A 1-1/2 inch IPS pipe or optional 1 inch IPS pipe flange located on the bottom of the Main Electronics Box mates with a user supplied pipe. Power and signal connections are made through waterproof cable glands to terminal boards in the Box.

Field Calibration: Connect the factory-supplied calibration fixture (included) and follow a simple procedure that takes less than 30 minutes. Annual calibration is recommended.

Optional:

External Hood Heaters - thermostatically controlled for protection in extreme snowy environments.



Columbia Weather Systems, Inc.
5285 NE Elam Young Pkwy, Suite C100
Hillsboro, OR 97124
Toll-free 1 888 508-7375
Phone (503) 629-0887
Fax (503) 629-0898
info@columbiaweather.com
ColumbiaWeather.com