Visibility Sensor

Optional Sensor for the Weather MicroServer

Part Number: 82620-1

Features

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

Specifications

Visibility Range: 30m - 16 km standard
Extinction Range: 100 - 0.1863 km-1 standard
Accuracy: +/- 10% RMSE
Time Constant: 60 secw
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.

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