

visibility



Model 73000
Sentry™ Visibility Sensor

The YOUNG Sentry™ Visibility Sensor measures atmospheric visibility (meteorological optical range) by determining the amount of light scattered by particles in the air (smoke, dust, haze, fog, rain, & snow).

Performance in all weather conditions is achieved with an integrated design that keeps all cabling internal to the sensor for complete protection from hazards. The sensor is made from anodized aluminum and rugged, UV-resistant fiberglass enclosures. Based on the proven field experience of the NWS and FAA, the sensor uses a “look down” geometry to reduce window contamination and clogging from blowing snow. The optical windows have continuous duty anti-dew heaters. Optional thermostatically controlled external hood heaters are available for additional protection in extreme environments. All power and signal lines to the Sentry™ are protected with surge and EMI filtering to ensure uninterrupted service for the life of the sensor.

Installation and maintenance are simple with the Sentry™. A sturdy mounting flange located on the bottom of the main enclosure mates with a user-supplied 1-1/2 inch IPS mounting pipe. Power and signal cables are installed through waterproof cable glands on the bottom of the main enclosure to terminal boards for simple but reliable connections.

Calibration of the Sentry™ in the field is as simple as attaching a factory supplied calibration fixture and following a procedure that takes less than 30 minutes.

Specifications

Visibility Range:	30 m – 16 km
Accuracy:	+/- 10% RMSE
Time Constant:	60 sec
Scatter Angle:	42 deg nominal
Output Options:	0-10 VDC 0-5 VDC 4-20 mA 4-20 mA Isolated RS-232, RS-422 or RS-485
Relay Options:	2 Control 1 Diagnostic
Power:	10-36 VDC, 6 VA Nominal 18 VA w/ hood heating
Operating Temperature:	-40 to +60 C
Humidity:	0 to 100% RH
Protection:	IP66 (NEMA-4X)
Weight:	8 kg (18 lb)
Dimensions: (W x H x D)	889 mm x 292 mm x 305 mm 35" x 11.5" x 12"
Mounting:	48 mm (1.9 inch) diameter (standard 1.5 inch IPS pipe)
Optional:	34 mm (1.3 inch) diameter (standard 1 inch IPS pipe)
Construction:	Frame: Anodized Aluminum Enclosures: Fiberglass, UV Resistant
Certifications:	• EN 61326-1:2010 • EMC Directive 2014/30/EU • RoHS Directive 2011/65/EU

Ordering Information

73000D Sentry™ Visibility Sensor

73004D Sentry™ Visibility Sensor with Hood Heating

Signal Output – select one:

V 0-5 VDC (no control relays)	S RS-232
W 0-10 VDC	T RS-422
L 4-20 mA	U RS-485
M 4-20 mA isolated	

Control Output – optional

C Single Control Relay (NA w/ output option V)
D Diagnostic Relay
E 2 Control Relays (NA w/ output option V)
F Control Relay and Diagnostic Relay (NA w/ output option V)
G 2 Control Relays, Diagnostic Relay (NA w/ output option V)**

** NOTE: Option G not available with Options S, T or U



EXAMPLE: 73004DWF = Sentry™ Visibility Sensor with hood heating, 0-10 VDC output, single control relay and single diagnostic relay

Accessories

73062 Calibration Fixture – recommended

74050 Mounting Bracket – for vertical surfaces including walls, traffic poles and Rohn-type towers

73038 Hood Extensions



CE Complies with applicable CE directives.



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