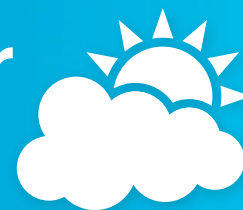


Visibility & Present Weather Sensor VPF-730



FEATURES

- ▶ Only sensor with adjustable matrix for varying wind conditions.
- ▶ Very low power requirements.
- ▶ Minimal maintenance requirements & running costs.
- ▶ **Measuring Range:** 10m - 75,000m (33 ft - 47 miles)
- ▶ Integrates easily into airfield weather information & monitoring systems. Single lightweight unit easily be installed by one person.
- ▶ **Present Weather includes:** all forms of liquid, freezing and frozen precipitation; e.g., rain, drizzle, snow, snow pellets, snow grains, ice pellets (formerly sleet) and hail, and those suspended particles that are classed as obstructions to vision; namely, mist, fog, haze, dust and smoke."
- ▶ **Measurement Principle** The sensor calculates EXCO (the atmospheric EXtinction COefficient) by measuring the amount of light scattered by the particles in the sampling volume. From this EXCO value the MOR (Meteorological Optical Range) and thus visibility is determined.
- ▶ **Data Output** The sensor is configured with RS-232C signal output as standard with RS-422 communication available as an option. The data is output in various ASCII data strings, such as a small compressed data string, expanded data string and remote maintenance data string amongst others. The unit can be set in either automatic or polled mode and data sent to a printer or to a PC for tagging, processing and archiving.
- ▶ **Maintenance, Calibration, Self-Test & Monitoring** The sensor is fully calibrated when manufactured. Routine maintenance, including calibrations, can be performed easily in a few minutes & re-calibration (although this should never be required) takes slightly longer. The sensor condition & performance can be monitored remotely using the self-test & monitoring system detailed overleaf.
- ▶ **Optimum Design** : Range is considered to provide the best correlation of EXtinction COefficient (EXCO) to observed visibility. In reduced visibility conditions, where other sensors report only precipitation, This Present Weather Sensors provides accurate visibility AND precipitation data.
- ▶ **Accuracy** : The infrared diode light source is proven to provide higher accuracy, longer life and more consistent readings than sensors which use visible light sources.
- ▶ **Consistency in All Weather** : Measurements are the best possible regardless of wind direction and precipitation conditions. Sensor does not suffer from turbulence effects or from precipitation splashing off the instrument enclosure.
- ▶ **Standard Features:**
 Sensor head of high quality aluminium construction which is hard anodised to give a superior finish that does not require painting.
 RS-232C digital output
 Power line surge arrestors
 Self test and monitoring system
 Waterproof mini-connectors
 User Manual
 Window de-misters
 Signal line surge arrestors
 6 metre power and signal cable
 Calibration reference certificate



SPECIFICATIONS

Specifications subject to change without notice

Measures	Visibility and present weather
Output	Digital
Range	10m to 75km
Accuracy	± 2 %
Light-source used	Infra-red
Light- source wavelength	880nm
Forward Scatter Meter (FSM) angle used	45°
Measurement geometry	Horizontal
Sample volume size (com3)	400
Power requirements	
Sensor head	2.0 W
Window heaters	2.5 W
Power Supply Unit	N/ A
Hood heating option	yes
Hood heater power requirements	45 W
Suitable for mains, battery, solar power	yes
Operating temperature range	-50°C to +60°C
Weight: sensor head	7 kg
Output rate (seconds)	10 to 300 (selectable)
Method of construction	Salt-dip brazing
Materials	Hard-anodised aluminium
Reliability	> 8 years (MTBF)
Undisturbed sample volume	yes
Detection Threshold	Snow-0.0015 mm / hr Rain-0.015 mm / hr
Maximum rain rate	250 mm / hr

ORDERING

5600-VPF730	Visibility & Present Weather Sensor
Accessories	
Calibration Kit	End-user confidence checks & re-calibration. Contains a carrying case, zero plugs & calibration plaque to a specific EXCO value. Use one kit for multiple sensors.
Stainless Steel Mounting Kit	Includes U-bolt & fasteners to secure sensor to any pole with a diameter between 40 - 64 mm
Transit Case	Scientific case lined with 3 inch foam to hold the sensor securely in place in extreme handling conditions