

# WEATHER

## PW/Visibility Sensor

Model 6498



### Overview

The Model 6498 Series of present weather and visibility sensors uses infrared forward scatter to measure visibility and report present weather. The 6498 sensors can be used in standalone applications or with an automated weather station. The economical design, precise data, and power saving features make the 6498 ideal for most applications.

### Features

- FAA Certified
- ICAO/WMO compliant
- NWS Codes
- Cost Effective
- Low Maintenance

### Accuracy by Design

The Model 6498 sensors apply the well-established forward scatter technology for visibility measurements, using a 42° scatter angle to obtain the most accurate estimates of the Meteorological Observable Range (MOR). It identifies precipitation particles from their scattering properties and fall speeds, and combines this with a temperature measurement to identify the weather type. The downward-pointing optics reduce the risk of contamination and blockage from snow build-up while also minimizing the risk that flow distortion or heat will cause interference between the sample volume and the sensor.

The Model 6498 sensors provide reliable present weather information in the form of SYNOP, METAR, and NWS codes, including information on the intensity of precipitation. Precipitation accumulation can also be reported.

This cutting-edge sensor uses continuous high-speed sampling to reduce errors during mixed weather events and events that return intermittent signals such as rain and hail, while still providing reliable readings during more stable events such as fog, mist, and haze. The Model 6498 has high immunity to interference from the visible and infrared warning lights used to mark obstructions such as wind turbines.

The sensor can be set to a lower sampling frequency to save power, if required. The Model 6498 sensors incorporate low-power dew prevention heaters as well as higher power anti-icing heaters for the hoods as standard. These heaters are automatically controlled to ensure operation in all weather or can be disabled to save power. The Model 6498 sensor monitors its own status continuously and will report internal faults and contamination or blockage of the sensor lenses. It also has two user configurable alarm outputs which can be used to drive audio or visual alarms.

The Model 6498 sensors providing visibility reports may be combined with a Background Luminance Sensor to provide Runway Visual Range (RVR) reports.

Temperature and relative humidity sensors can be fitted, providing improved performance in identifying precipitation, and allowing relative humidity information to be transmitted.

### Ordering Information

Part Number	Description
6498-P	Present Weather (includes Model 2715 UPCM)
6498-V	Visibility (includes Model 2715 UPCM)
6498-PV	Present Weather and Visibility (includes Model 2715 UPCM)
6498-DC-P	Present Weather (used with Model 1192 DCP)
6498-DC-V	Visibility (used with Model 1192 DCP)
6498-DC-PV	Present Weather and Visibility (used with Model 1192 DCP)

### Accessories

Part Number	Description
M482254-00	Calibration Kit
M403582-00	Day/Night Sensor (for visibility <sup>*</sup> )
5000	Background Luminance Sensor (for RVR <sup>†</sup> )
M488600-00	Background Luminance Sensor (for RVR <sup>†</sup> )
M482264-00	Radar Precipitation Detector <sup>‡</sup>
M482295-00	Temperature/Relative Humidity Probe <sup>§</sup>

\* Day/Night Sensor required for visibility (MOR) measurements

† Either Background Luminance Sensor required for RVR measurements

‡ Augments Present Weather reports to include freezing rain, sleet, and hail

§ Improves Present Weather reporting at or near freezing temperatures

# PW/Visibility Sensor

## Specifications

Parameter	Specification
Measuring Range	5 – 75,000 m
Rain Rate	0 – 999.99 mm/h
SYNOP Codes	As per WMO Table 4680
METAR Codes	As per WMO Table 4678
NWS Codes	L, R, S, SG
Visibility Accuracy	±10% average (≤10 km) ±15% average (≤20 km)
RVR* Accuracy	1 m
Scatter Measurement Accuracy	±3%
Visibility Resolution	1 m
RVR* Resolution	25 m (<400 m) 50 m (400 to 800 m) 100 m (>800m)
Precipitation Detection Sensitivity	0.05 mm/h
Operating Temperature	-40 to +70°C
Storage Temperature	-40 to +85°C
Operating Wind Speed	max. 60 m/s (120 kts)
Relative Humidity	0 – 100%
Address Range	0 – 9
Communications	RS-232/RS-485
Protocol Mode	Polled or Auto Output
Enclosure	IP66 (NEMA 4X)
Power Supply	115/230 V AC, 50/60 Hz, 50 V•A
Transient Protection	AC power and serial signal lines fully protected
Mounting	32.0–52.5 mm dia. mast coupling
Baseline	30 m, 50 m or 75 m
Mounted Height	2.5 m
Mounting	Bolts to concrete foundation block; mounting kit included

\* Background Luminance Sensor required for RVR measurements

## Dimensions & Weights

Dimensions	447 mm H x 640 mm W x 245 mm D
Weight	3 kg (6.6 lb)
Shipping Weight	18 kg (40 lb)