



Present Weather & Visibility Model 6498 Series



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

OVERVIEW

The Model 6498 Series of present weather and visibility sensors uses infrared forward scatter to measure visibility and report present weather. The 6498 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.

Accuracy by Design

The Model 6498 applies 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 Model 6498's 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. 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 and mist. 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 incorporates 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 continuously monitors its own status 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.

Temperature and relative humidity sensors can be fitted to the Model 6498, providing improved performance in identifying precipitation, and allowing relative humidity information to be transmitted.

SENSORS

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	±8% up to 600 m ±10% 600 m to 10 km ±15% 10–15 km ±20% above 15 km
Scatter Measurement Accuracy	±3%
Visibility Resolution	1 m
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
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

DIMENSIONS & WEIGHTS

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

ORDERING INFORMATION

Model	Description
6498-P	Present Weather
6498-V	Visibility
6498-PV	Present Weather and Visibility

OPTIONS

Part Number	Description
M403326-01	Day/Night Sensor Kit
M488600-00	Background Luminance Sensor Kit for RVR
M482264-00	Radar Precipitation Detector*
M482295-00	Temperature/Relative Humidity Probe†

- * Augments Present Weather reports to include freezing rain, sleet, and hail
- † Improves Present Weather reporting at or near freezing temperatures

ACCESSORIES AND PARTS

Part Number	Description
M482243-00	Replacement Sensor Head
2715-P	Replacement UPCM for 6498-P
2715-V	Replacement UPCM for 6498-V
2715-PV	Replacement UPCM for 6498-PV
M482254-00	Calibration Kit
M438130-00	Backup Battery
M442071	10 A 250 V, 5x20 mm slow blow fuse



All Weather Inc.

www.allweatherinc.com

Phone: 916-928-1000
USA Toll Free: 800-824-5873
Fax: 916-928-1165

20210901