

# 6000-PWS

## PRESENT WEATHER SENSOR



### Advantages

- **Advanced Optical Technology**
- **Rugged Design**
- **Easy Installation**
- **Long-term Reliability**
- **Reports WMO formats**
- **Rainfall Rate and Accumulation**
- **Self Diagnostics & Testing**
- **Enhanced EMI Protection**

### Features

The 6000-PWS offers the user a present weather sensor based on the leading design concepts of field proven optical pulse width and pulse height analysis technologies using advanced DSP. Whilst the 6000-PWS is suited to use in tropical and subtropical environments this device is suitable for use in all climates. Many of the 6000-PWS features make the instrument excellent for efficient, real-time, remote weather sensing.

The 6000-PWS provides present weather information such as precipitation rate and type in a digital RS-232 output format. Flexible communications options allow linking this device to most data logging devices or it can be linked directly to your PC. The output comes in both NWS and WMO code formats. The PWS's small weight and size make it easy to handle. While the PWS's U-bolts configuration gives the user an easy and flexible method of installation. The PWS is relied on heavily in critical road weather and aviation applications.

The PWS outputs the following WMO Present Weather Codes.

These codes are available for current, 15 minute and 60 minute time frames:

00 No Significant Weather	61 Rain, not freezing, slight
04 Haze	62 Rain, not freezing, moderate
10 Mist	63 Rain, not freezing, heavy
20 Fog detected in last hour	64 Rain, freezing, slight
21 Precipitation detected in last hour	65 Rain, freezing, moderate
22 Drizzle detected in last hour	66 Rain, freezing, heavy
23 Rain detected in last hour	67 Rain/snow, slight
24 Snow detected in last hour	68 Rain/snow, moderate or heavy
30 Fog	71 Snow, slight
41 Precipitation, slight or moderate	72 Snow, moderate
47 Freezing precipitation, slight or moderate	73 Snow, heavy
51 Drizzle, not freezing, slight	74 Ice Pellet, slight*
52 Drizzle, not freezing, moderate	75 Ice Pellet, moderate*
53 Drizzle, not freezing, heavy	76 Ice Pellet, heavy*
54 Drizzle, freezing, slight	93 Hail, Light*
55 Drizzle, freezing, moderate	93 Hail, Moderate *
56 Drizzle, freezing, heavy	96 Hail, Heavy*
57 Drizzle and rain, slight	*With HIPS
58 Drizzle & rain, moderate or heavy	

Reference : WMO 306 Code form 4680

<b>Performance Specification</b>	
Present Weather Codes	More than 50 WMO codes
Rain Dynamic Range	0.1 to 3000 mm/hr
Snow Dynamic Range	0.01 to 50 mm/hr (Water equivalent)
Measurement Technique Present Weather	Scintillation with optical forward scatter and optional acoustic*
Codes Reported	More than 50 NWS and WMO codes
Present Weather Type Identification	Rain, snow, drizzle, mixed, hail and ice pellets*
Snow / Rain Accumulation	0.001 to 999.999 mm
Snow / Rain Measurement Resolution	0.001 mm
Rain Measurement Accuracy	5% accumulation
Snow Measurement Accuracy	10% accumulation
Hail / Ice Pellet Reporting Accuracy	Correct ID better than 90% of time*
Ambient Light Dynamic Measurement Range	0 to 9,990 candles /
Visibility / RVR Contrast Threshold	5%
Visibility / RVR Time Constant	3 minute harmonic
Visibility / RVR Accuracy	10% to 5 km, 15% to 10+ km
Data Reporting Update Rate	1 minute
Visibility / RVR Dynamic Range	0.001 to 75 km
<b>Electronic Specification</b>	
Power Requirements	100/115/220/230 VAC, 50/60 Hz @ 80 VA-12 VDC (Option)
Power Consumption	20 VA Nominal
Signal Output	RS-232 ASCII, Ethernet (Option)
<b>Environmental</b>	
Temperature	-40 to +65 C
Humidity	0-100%
Precipitation Dust	NEMA-4 type protection
<b>Physical</b>	
Head Size	737 x 102 x 254 mm
Head Weight	4.5 kg
Enclosure Size	457 x 305 x 230 mm
Enclosure Weight	11 kg

## Options:

### **6000-CALKIT - Field Test Kit for 6000-PWS**

The 6000-CALKIT is designed to field calibrate the PWS Sensor. The calibration card is used to easily calibrate the present weather measurement. The card is enclosed in a handy foamed line carrying case

### **6000-HIP - Hail & Ice Pellet Sensor for 6000-PWS**

The 6000-HIP Sensor enhances the present weather capabilities of the 6000-PWS by detecting the occurrence and intensity of hail and ice pellets. The acoustic arm is easy to install on top of the instrument enclosure.

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