

## HSS VPF-750 sensor

### Visibility, past and present weather including freezing rain

measures 50 of the most important WMO codes



- Compact and light weight
- Very low power requirements
- Distinguishes haze and smoke from mist
- Advanced present weather determination
- Proven accuracy, reliability and repeatability
- Designed for airports, research and met observations
- Optional ambient light sensor for RVR measurements

**The HSS VPF-750 is based on the market leading HSS VPF-730 sensor combined with reference quality humidity, temperature and precipitation sensors to provide even better discrimination of present and past weather.**

The HSS VPF-750 provides industry leading accuracy combined with the 50 most important WMO table 4680 codes (present weather reported from an automatic weather station).

With the addition of reference quality temperature, humidity and precipitation sensors the VPF-750 can provide even better discrimination of present weather. The VPF-750 meets the requirements of ICAO 9328 for use in RVR (Runway Visual Range) when used with the optional Biral ambient light sensor.

The sensor outputs the following data: meteorological optical range (MOR), present weather (WMO codes), past weather (SYNOP codes), obstruction to vision, METAR codes, precipitation rate and amount, EXCO, temperature, relative humidity, precipitation indicator and optionally the ambient light level.

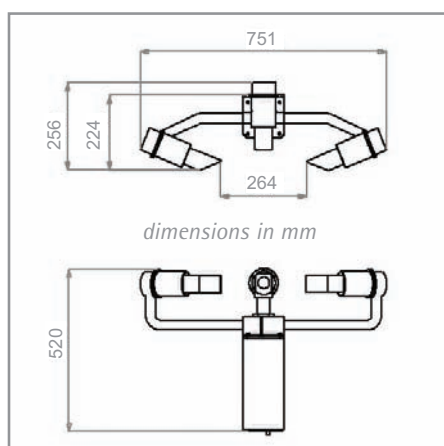
#### **Optional Ambient Light Sensor (ALS)**

The ambient light sensor is designed for use in ICAO compliant RVR (Runway Visual Range) systems. The twin brightness outputs interface seamlessly with the VPF750 hardware and software providing excellent resolution across the 0 to 40,000 Cd/m<sup>2</sup> range thus reducing the integration burden on the installer.

## HSS VPF-750 Specifications

Measures	visibility, present weather, past weather
Output	digital
Range	10 m to 75 km
Accuracy	+/- 2%
Light source	Infra-red
Light source wavelength	880 nm
Forward Scatter Meter angle	45°
Measurement geometry	horizontal
Sample volume size	400 cm <sup>3</sup>
Power requirements	sensor head: 17.5 W (max) window heaters: 2.5 W
Hood heating option available	Yes
Hood heater power requirements	45 W
Power	24 VDC
Operating temperature	-50 °C to +60 °C
Weight	7 kg
Output rate (seconds)	30 to 300 (selectable)
Materials	hard anodised aluminium
Reliability	> 8 years MTBF (mean time between failure)
Undisturbed sample volume	Yes
Detection threshold	rain: 0.015 mm / hr snow: 0.0015 mm / hr
Maximum rain rate	250 mm / hr
Comms	RS232 full duplex

*The range is in continuous development therefore specifications may change without prior notice. E. & O.E.*



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### WMO Table 4680 present weather codes measured by the VPF-750

CODE	DESCRIPTION
XX	Not Ready (first 5 minute from restart)
00	No significant weather observed, or sensor starting
04	Haze or Smoke
10	Mist
codes 20 - 25	Past weather codes ie fog, precipitation, drizzle, rain, snow, freezing drizzle of rain in last hour but not at time of observation
30	Fog
31	Fog in patches
32	Fog become thinner in last hour
33	Fog no appreciable change in last hour
34	Fog begun or become thicker in last hour
35	Freezing Fog
40	Indeterminate Precipitation Type
50	Drizzle
51	Light Drizzle
52	Moderate Drizzle
53	Heavy Drizzle
54	Freezing Light Drizzle
55	Freezing Moderate Drizzle
56	Freezing Heavy Drizzle
57	Drizzle and Rain, Slight
58	Drizzle and Rain, Moderate or Heavy
60	Rain
61	Light Rain
62	Moderate Rain
63	Heavy Rain
64	Freezing Light Rain
65	Freezing Moderate Rain
66	Freezing Heavy Rain
67	Rain and Snow, Slight
68	Rain and Snow, Moderate or Heavy
70	Snow
71	Light Snow
72	Moderate Snow
73	Heavy Snow
74	Ice Pellets, Slight
75	Ice Pellets, Moderate
76	Ice Pellets, Heavy
77	Snow Grains
78	Ice Crystals
80	Showers
81	Rain Showers, Slight
82	Rain Showers, Moderate
83	Rain Showers, Heavy
85	Snow Showers, Slight
86	Snow Showers, Moderate
87	Snow Showers, Heavy
89	Hail



HSS Sensors are manufactured by Biral to rigorous ISO 9001:2000 quality standards.