# Application Notes

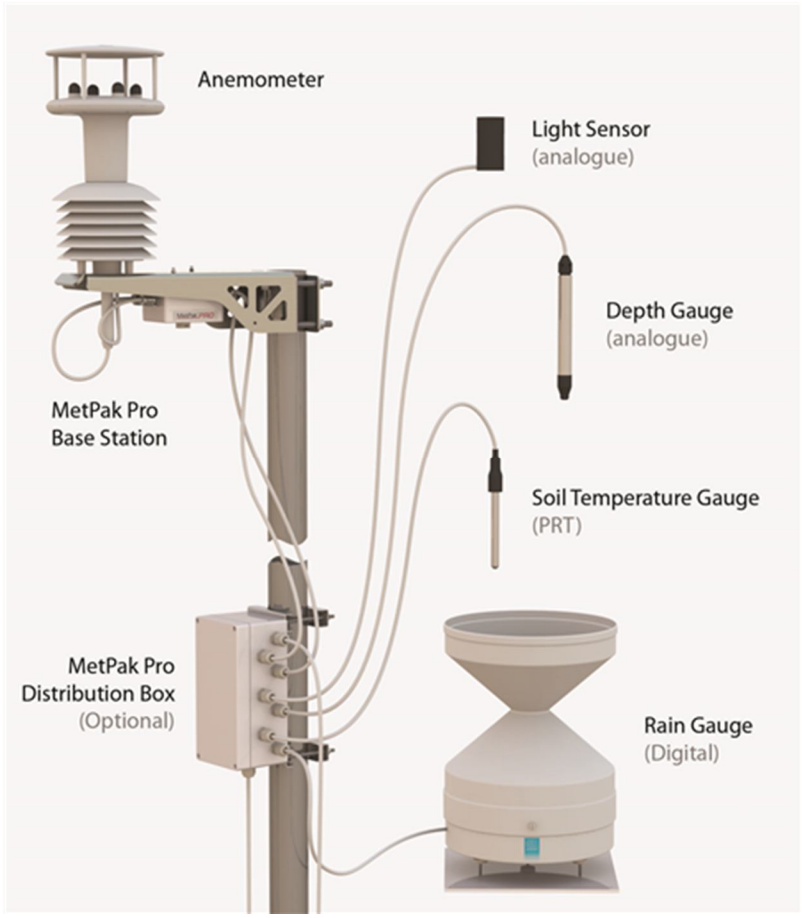
**Subject:** MetPak Pro with Water Temperature & Water Level Measurement

**Reference** AN0004

## Introduction

MetPak Pro offers the user the opportunity to monitor the most essential weather parameters with the additional ability to connect up to four external measurement devices.

The system combines a Gill WindSonic ultrasonic wind speed & direction sensor, a highly accurate barometric pressure sensor and Rotronic Hygroclip temperature/humidity probe. MetPak Pro contains additional inputs allowing for connection of a Pt100 temperature sensor, tipping bucket rain gauge (available from Gill) and two analogue sensors (including a water level sensor).




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## Optional Sensors

The following sensors can be added to the MetPak Pro to enable water temperature and water level measurement.

Water Temperature

| | |
|---|---|
| TEMPCON PRT | 4-wire type<br>3mm x 50mm long<br>Element (+/- (0.15+0.002t) +/-0.06 ohm 0.003851+/-0.000005)<br>Set range -5 to +50$^{o}$C<br>Maximum water depth 3m<br>5m Cable |

Water Level

| | |
|---|---|
| DRUCK PTX1830 | Material titanium<br>Compact design<br>Accuracy +/- 0.1%<br>Output 4-20mA<br>Range 0-10mH2O<br>Maximum depth 10m<br>10m Cable |

Both of the above sensors (along with any other sensors i.e. tipping bucket rain gauge) are wired into the MetPak Pro via a gland inputs on the optional Distribution Box and so no additional connectors are required.

## Notes

The PRT will need to be mounted / protected once in the water and this can be done by using a simple plastic drainpipe (with drilled holes) if required.

The Water Level sensor will need to be fixed to a structure in the water so that it does not move.

Cables for the above sensors should be routed so that they cannot be damaged.

Please note that the MetPak must be provided with a +12VDC supply due to the Water Level sensor.