MetPak™ PRO

Weather Station

Expandable, up to 10 Reference Quality Parameters
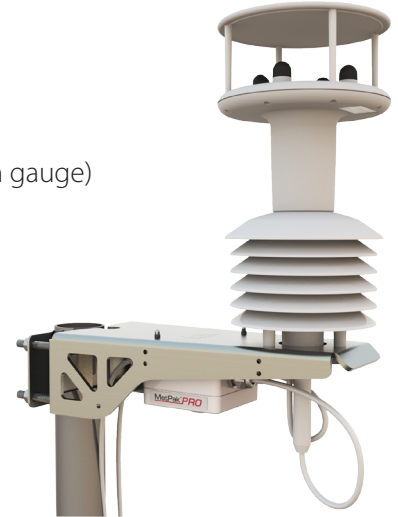
GILL
INSTRUMENTS

Key Features

- Wind Speed & Direction
- Temperature
- Humidity
- Barometric Pressure
- SDI-12 Output

- Dew Point
- 2 Analogue Inputs
- Pt100 Input
- Digital Input (tipping bucket rain gauge)
- Gill ASCII Output

MetPak Pro monitors 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 a PCB allowing users to conveniently add additional parameters using industry standard formats. Additional inputs allow for connection of a Pt100 temperature sensor, tipping bucket rain gauge (available from Gill) and two analogue sensors (water level sensor, pyranometer, pressure sensor, soil temperature sensor etc).
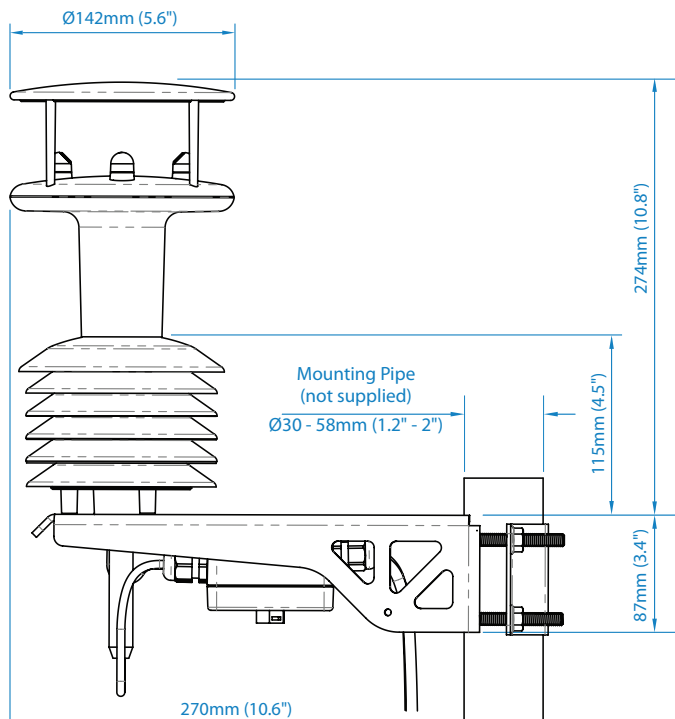
Base Station Options Available

MetPak Pro can be configured with optional rain gauge and remote sensors. See page 3 for wind sensor options.
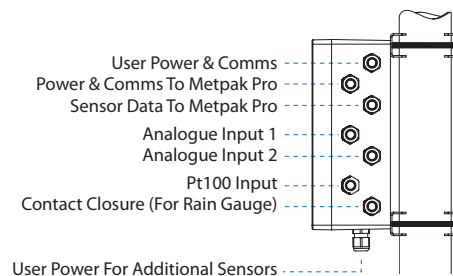
MetPak Pro

Ø142mm (5.6")

274mm (10.8")

Mounting Pipe (not supplied)
Ø30 - 58mm (1.2" - 2")

115mm (4.5")

87mm (3.4")

270mm (10.6")

Included:

- MetSet configuration software
- MetView data logging/visualisation software
- Mounting kit to adapt to poles or masts.

Optional:

MetPak Pro Junction Box

The optional junction box allows an alternative method to connect the sensors to the MetPak in a convenient separate box.

User Power & Comms
Power & Comms To Metpak Pro
Sensor Data To Metpak Pro
Analogue Input 1
Analogue Input 2
Pt100 Input
Contact Closure (For Rain Gauge)

User Power For Additional Sensors

Heater Interface Box

Ease of connection for remote heated wind sensors.

MetPak™ PRO

The MetPak Pro integrates industry leading products in a convenient, economical package allowing users to concentrate on the measurement rather than the quality of the measurement. Calibration services available from Gill.

Wind Measurement

Parameters	Wind speed & direction or U & V (Vectors)
Units of measure	m/s, knots, mph, kph, ft/min

	Wind Speed	Wind Direction
Range	0-60m/s (134 mph)	0 to 359° - No dead band
Accuracy	±2% @12m/s	±3° @12m/s
Resolution	0.01m/s (0.02 mph)	1°

Air Temperature

Air temperature	Pt100 1/3 Class B
Range	-35°C to +70°C
Accuracy	±0.1°C
Resolution	0.1°C (0.1°F)
Units of measure	°C or °F

Relative Humidity

Range	0-100% RH
Accuracy	±0.8% @ 23°C
Resolution	0.1% RH
Units of measure	% RH
Compensated for temperature dependency	

Barometric Pressure

Range	600-1100hPa
Accuracy	±0.5hPa
Resolution	0.1hPa
Units of measure	hPa, mbar, mmHg, inHg
Compensated for temperature dependency -30°C to +70°C	

Dew Point

Resolution	0.1°C (0.1°F)
Units of measure	°C or °F
Accuracy	±0.15°C (23°C ambient temp @ 20°C dew point)

Power Supply

Input voltage	5V to 30V d.c.
Current	<26mA (Output 1 second) @12V d.c.
SDI-12	
Input voltage	12V nominal (9.6-16V d.c.)
Current	<12mA Low power operation

Outputs

Digital outputs	RS232, RS422, RS485* or SDI-12 (user selectable) *2 wire point to point
Baud rates	4800-57600 (ASCII) or 1200 (SDI-12)
Protocols	ASCII or SDI-12 V1.3
Data output	1s, 2s, 4s or polled mode

Inputs

Analogue 1	0-5 V or 4-20mA loop or self powered
Analogue 2	0-5 V or 4-20mA loop or self powered
MetPak Pro A-D Conversion	12 bit resolution with an accuracy of ± 0.1% of reading +35µV offset
Pt100 Temperature Probe	4 Wire Pt100 conforms to IEC 60751
Digital	Contact closure for tipping bucket rain gauge Capable of capturing events up to 10Hz

Environmental

Protection class	IP65
EMC	EN 61326
Operating temperature	-35°C to +70°C
Storage temperature	-40°C to +80°C
Operating humidity	0% to 100% humidity

Mechanical

External construction	UV stabilised white thermoplastic
Fittings	Anodised Aluminium bracket to allow fitting to 30 mm to 58 mm mast dimensions
Weight	2.1kg (including bracket)

Software

MetView	Free software for the display of data and logging
MetSet	Free software for the configuration of the MetPak, MetPak RG & MetPak Pro

Optional Accessories

Cables	15m Power & Data cable USB Configuration cable
Hardware	Tipping Bucket Rain Gauge MetPak Pro Junction Box MetPak Pro Junction Box PCB MetPak Pro Junction Box Mounting Bracket Heater Interface Box

Specifications may be subject to change without prior notice.
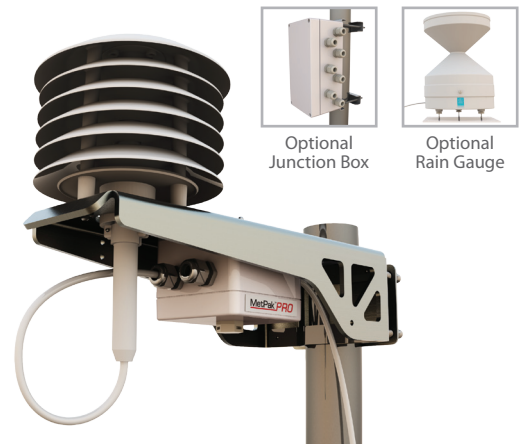
ISO 9001 Registered

Sensor Options

Base Station

MetPak Pro is available as a Base Station which enables the system to be specified with a remote wind sensor if required. This sensor can be positioned away from the Base Station and a connection cable is provided.

The Base Station has been tested in accordance with BSEN 60945 and is suitable for use in marine environments. This system, which includes inputs for a Pt100 temperature sensor, tipping bucket rain gauge (available from Gill) and two analogue sensors, can also be specified without a wind sensor if wind measurement data is not required.

Optional Junction Box

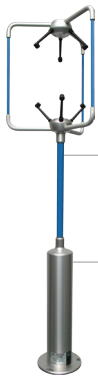Optional Rain Gauge

Sensor Options

WindSonic™

For wind speed and direction measurements to 60 m/s. Corrosion free, polycarbonate housing.

WindSonic™ M

Wind speed and direction measurements to 60 m/s with heating and impact resistant to UL2218 Class 1 & BSEN 60945.

WindMaster™

Three dimensional wind measurements up to 45 m/s in a lightweight carbon fibre/aluminium construction.

WindMaster™ PRO

Three dimensional wind measurement up to 65 m/s in a stainless steel housing.

WindObserver™ 70

With enhanced heating and wind measurements up to 70 m/s for extreme conditions.

RAINGAUGE

ARG100 Professional quality tipping bucket Rain Gauge.

Output rate from the wind sensors is controlled by the Base Station.