

Wind Speed and Direction Sensors

High quality, aluminium, ultrasonic anemometer with optional heating

Gill WindSonic M utilises Gill's proven ultrasonic technology to provide wind speed and direction data.

WindSonic is WMO-compliant for gust measurement.

With an impact resistant, corrosion-free, hard anodised aluminium alloy housing and optional heating system, this wind sensor is recommended for use in harsh environmental conditions and is particularly suited to both marine and land based installations. WindSonic M has no moving parts, offering maintenance-free operation in a wide range of applications.

Typical applications

- Remote weather monitoring stations
- Building controls
- Data buoys
- Marine vessels
- Remote airports & helipads
- Road & rail tunnels
- Environmental field sites
- Ports & harbours
- Mobile weather monitoring vehicles
- Coastal weather monitoring stations

WindSonic key features

- Wind speed & direction sensor
- Hard anodised aluminium alloy construction
- -40°C operation (with optional heating)
- Vibration BS EN 60945 : 2002
- Impact resistance to UL2218 Class 1
- 0-60 m/s (116 knots) wind speed
- 0-360° wind direction
- WMO-compliant gust wind speed and direction calculated from a rolling average
- NMEA output
- Solid-state ultrasonic technology - no moving parts
- Analogue output (optional)

Benefits

- High accuracy, low cost wind measurement
- Excellent, well proven reliability
- Low maintenance delivers low cost of ownership
- Models and outputs to suit varied applications
- Rapid heating (option) for extreme low temperature applications



WindSonic ultrasonic anemometers offer high accuracy, low cost wind measurement



WindSonic wind sensors provide excellent reliability combined with low maintenance, for long-term deployment including in remote locations

Wind Speed and Direction Sensors

High quality, aluminium, ultrasonic anemometer with optional heating

WIND SPEED	
Range	0 - 60 m/s (116 knots)
Accuracy	2% RMSE @12 m/s
Resolution	0.01 m/s (0.02 knots)
Response time	0.25 seconds
Starting threshold	0.01 m/s

WIND DIRECTION	
Range	0 - 360° (no dead band)
Accuracy	2° RMSE @12 m/s
Resolution	0.1° (output at 0, 1 or 2 decimal places)
Response time	0.25 seconds

MEASUREMENT	
Ultrasonic output rate	0.25, 0.5, 1, 2 or 4 Hz
Parameters	Wind speed & direction or U and V (vectors)
Units of measurement	m/s, knots, mph, kph, ft/min
Anemometer status	For unit diagnostics

OUTPUTS	
Digital	RS232, RS422, RS485**
Analogue (optional)	0-5V or 0-20 mA or 4-20 mA
Protocols	ASCII, NMEA 0183
Baud Rate	2400 to 38400

POWER REQUIREMENT	
Anemometer	5-30 VDC non-analogue (5.5 mA @ 12 V)
	7-30 VDC analogue (9-44 mA @ 12 V)
Optional heating ***	24 V AC/DC (4.2 A @ 24 V)
Analogue outputs	Current consumption increases if analogue output is selected. Add up to 40 mA to nominal power consumption above
	Start up time < 5 seconds

MECHANICAL	
External construction	Al Alloy 6061 T6
Finish	Hard anodised
Size	142 mm x 163 mm
Weight	0.9 kg

ENVIRONMENTAL	
Protection class	IP66 BS EN 60529 : 1992
Operating temperature	-40°C to +70°C (with heating) -35°C to +70°C (without heating)
Storage temperature	-40°C to +80°C
Operating humidity	< 5% to 100% RH
Precipitation	300 mm/hr
Impact resistance	UL2218 Class 1
Compass safe distance	BS EN 60945 : 2002 Section 11.2
Vibration	BS EN 60945 : 2002

OPERATIONAL	
Warranty	24 months
Factory calibration	Traceable to National Standards

ACCESSORIES	
Pipe mounting (optional)	44.45 mm (1.75 in) diameter
Wind software	Display / logging*
Cables (optional)	Available to match output options
Display (optional)	See Gill Display datasheet

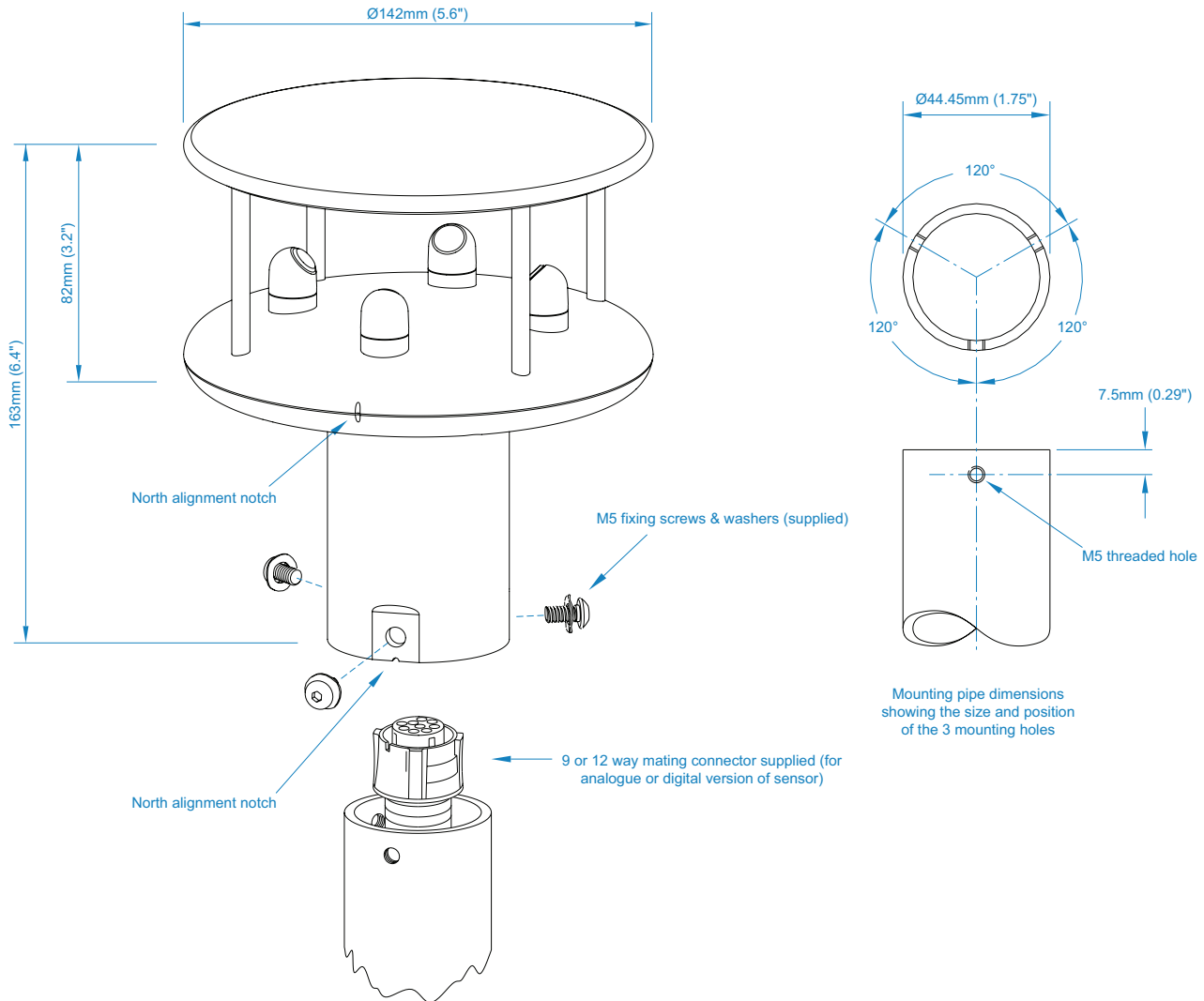
* Download software free from gillinstruments.com

** 2-wire is point-to-point only

*** Consult the User Manual for optimum heating supply voltage

Wind Speed and Direction Sensors

High quality, aluminium, ultrasonic anemometer with optional heating



Specifications may be subject to change without prior notice.

For more information about the WindSonic range, please contact Gill Instruments.

Designed and manufactured in the UK by Gill Instruments Limited.

Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers

Gill WindSonic 60 is a low-cost anemometer, which utilises Gill's proven ultrasonic technology to provide wind speed and direction data via one serial or two analogue outputs. To confirm correct operation, outputs are transmitted together with an instrument status code.

WindSonic is WMO-compliant for gust measurement.

With a robust, corrosion-free polycarbonate housing, this small, lightweight wind sensor is recommended for use in harsh environmental conditions and is particularly suited to marine & offshore (ships, data buoys) and land based installations. WindSonic anemometers have no moving parts, offering maintenance-free operation in a wide range of applications.

Typical applications

- Remote weather monitoring stations
- Building controls
- Data buoys
- Marine vessels
- Small airports & helipads
- Road & rail tunnels
- Environmental field sites
- Ports & harbours
- Mobile weather monitoring vehicles
- Coastal weather monitoring stations

WindSonic key features

- Wind speed & direction sensor
- 0-60 m/s (116 knots) wind speed
- 0-360° wind direction
- WMO-compliant gust wind speed and direction calculated from a rolling average
- NMEA output
- Low power consumption
- Fast start-up
- Solid-state ultrasonic technology - no moving parts
- Corrosion free

Benefits

- High accuracy, low cost wind measurement
- Excellent, well proven reliability
- Low maintenance delivers low cost of ownership
- Models and outputs to suit varied applications



WindSonic ultrasonic anemometers offer high accuracy, low cost wind measurement



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Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers

WIND SPEED	
Range	0 - 60 m/s (116 knots)
Accuracy	2% RMSE @12 m/s
Resolution	0.01 m/s (0.02 knots)
Response time	0.25 seconds
Starting threshold	0.01 m/s

WIND DIRECTION	
Range	0 - 360° (no dead band)
Accuracy	2° RMSE @12 m/s
Resolution	0.1° Option 1,2 & 3 (output at 0, 1 or 2 decimal places) 1° Option 4
Response time	0.25 seconds

MEASUREMENT	
Ultrasonic output rate	0.25, 0.5, 1, 2 or 4 Hz
Parameters	Wind speed & direction or U and V (vectors)
Units of measurement	m/s, knots, mph, kph, ft/min
Anemometer status	For unit diagnostics

OUTPUTS	
Option 1 interface	RS232
Option 2 interfaces	RS232, RS422, RS485**
Option 3 interfaces	RS232, RS422, RS485** Analogue 0-5V or 0-20 mA or 4-20 mA
Option 1, 2 & 3 protocols	ASCII, NMEA 0183
Option 4	SDI-12 (refer to manual or separate datasheet for technical specification)
Baud Rate	2400 to 38400

POWER REQUIREMENT	
Anemometer	5-30 VDC Option 1 & 2
	7-30 VDC Option 3
	9-30 VDC Option 4
Current drain	Dependent on option selected e.g. < 2 mA @ 12V (SDI-12) to 44 mA @ 12V (4-20 mA) Refer to manual for further advice
	Start up time < 5 seconds

MECHANICAL	
External construction	LURAN S KR 2861/1C ASA/PC
Size	142 mm x 163 mm
Weight	0.5 kg

ENVIRONMENTAL	
Protection class	IP66
Operating temperature	-35°C to +70°C
Storage temperature	-40°C to +80°C
Operating humidity	< 5% to 100% RH
Precipitation	300 mm/hr

OPERATIONAL	
Warranty	24 months
Factory calibration	Traceable to National Standards

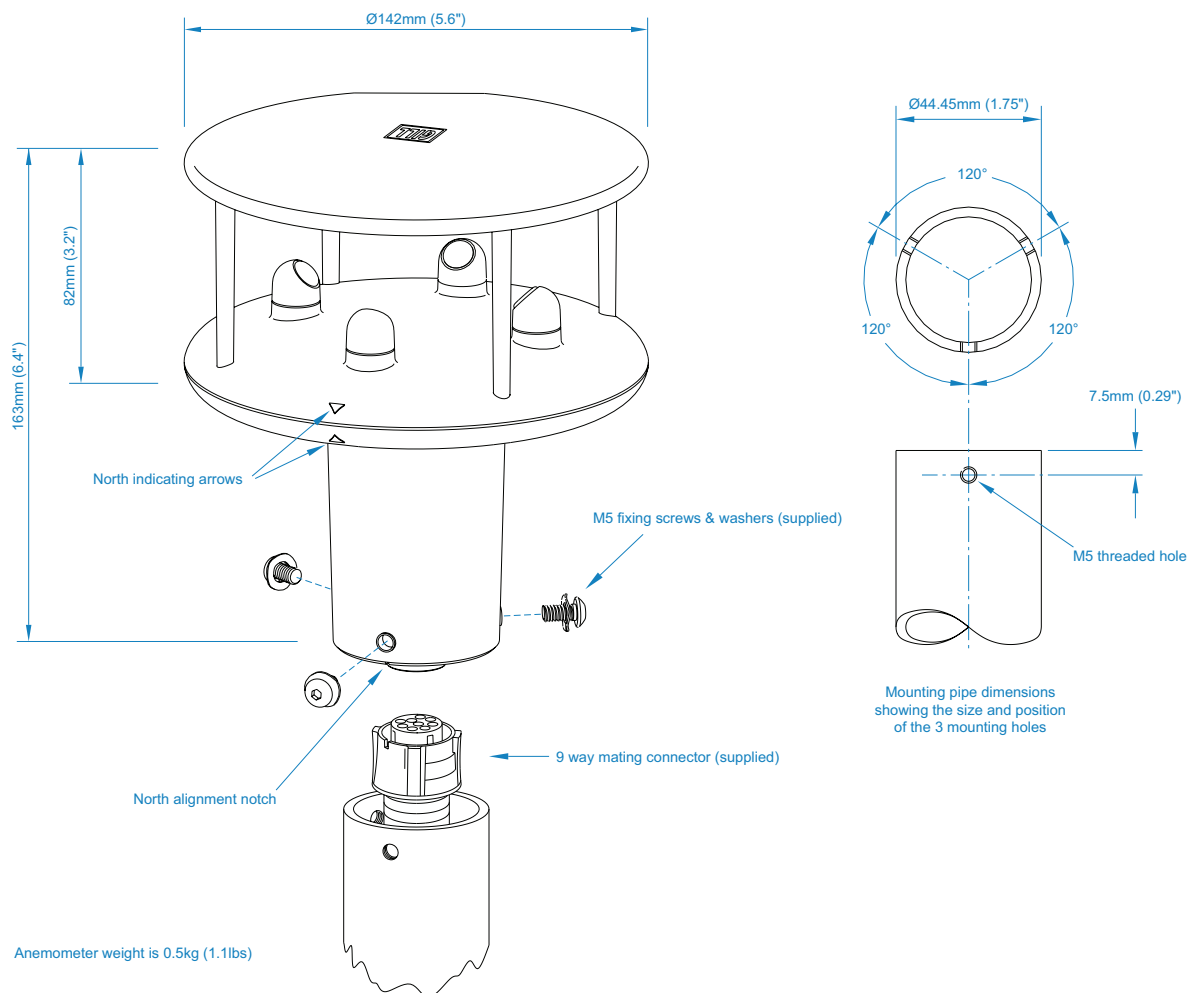
ACCESSORIES	
Pipe mounting (optional)	44.45 mm (1.75 in) diameter
Wind software	Display / logging*
Cables (optional)	Available to match output options
Display (optional)	See Gill Display datasheet

* Download software free from gillinstruments.com

** 2-wire is point-to-point only

Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers



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For more information about the WindSonic range, please contact Gill Instruments.

Designed and manufactured in the UK by Gill Instruments Limited.

Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers

Gill WindSonic 75 is a low-cost, high speed anemometer, which utilises Gill's proven ultrasonic technology to provide wind speed and direction data via one serial or two analogue outputs. To confirm correct operation, outputs are transmitted together with an instrument status code.

WindSonic is WMO-compliant for gust measurement.

With a robust, corrosion-free polycarbonate housing, this small, lightweight wind sensor is recommended for use in harsh environmental conditions and is particularly suited to marine & offshore (ships, data buoys) and land based installations. WindSonic anemometers have no moving parts, offering maintenance-free operation in a wide range of applications.

Typical applications

- Remote weather monitoring stations
- Building controls
- Data buoys
- Marine vessels
- Small airports & helipads
- Road & rail tunnels
- Environmental field sites
- Ports & harbours
- Mobile weather monitoring vehicles
- Coastal weather monitoring stations

WindSonic key features

- Wind speed & direction sensor
- 0-75 m/s (146 knots) wind speed
- 0-360° wind direction
- WMO-compliant gust wind speed and direction calculated from a rolling average
- NMEA output
- Low power consumption
- Fast start-up
- Solid-state ultrasonic technology - no moving parts
- Corrosion free

Benefits

- High accuracy, low cost wind measurement
- Excellent, well proven reliability
- Low maintenance delivers low cost of ownership
- Models and outputs to suit varied applications



WindSonic ultrasonic anemometers offer high accuracy, low cost wind measurement



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Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers

WIND SPEED	
Range	0 - 75 m/s (146 knots)
Accuracy	2% RMSE @12 m/s
Resolution	0.01 m/s (0.02 knots)
Response time	0.25 seconds
Starting threshold	0.01 m/s

WIND DIRECTION	
Range	0 - 360° (no dead band)
Accuracy	2° RMSE @12 m/s
Resolution	0.1° (output at 0, 1 or 2 decimal places)
Response time	0.25 seconds

MEASUREMENT	
Ultrasonic output rate	0.25, 0.5, 1, 2 or 4 Hz
Parameters	Wind speed & direction or U and V (vectors)
Units of measurement	m/s, knots, mph, kph, ft/min
Anemometer status	For unit diagnostics

OUTPUTS	
Option 1 interface	RS232
Option 2 interfaces	RS232, RS422, RS485**
Option 3 interfaces	RS232, RS422, RS485** Analogue 0-5V or 0-20 mA or 4-20 mA
Option 1, 2 & 3 protocols	ASCII, NMEA 0183
Baud rate	2400 to 38400

POWER REQUIREMENT	
Anemometer	12-30 VDC Options 1, 2 & 3
Current drain	Dependent on option selected e.g. to 44 mA @ 12V (4-20 mA) Refer to manual for further advice
	Start up time < 5 seconds

MECHANICAL	
External construction	LURAN S KR 2861/1C ASA/PC
Size	142 mm x 163 mm
Weight	0.5 kg

ENVIRONMENTAL	
Protection class	IP66
Operating temperature	-35°C to +70°C
Storage temperature	-40°C to +80°C
Operating humidity	< 5% to 100% RH
Precipitation	300 mm/hr

OPERATIONAL	
Warranty	24 months
Factory calibration	Traceable to National Standards

ACCESSORIES	
Pipe mounting (optional)	44.45 mm (1.75 in) diameter
Wind software	Display / logging*
Cables (optional)	Available to match output options
Display (optional)	See Gill Display datasheet

* Download software free from gillinstruments.com

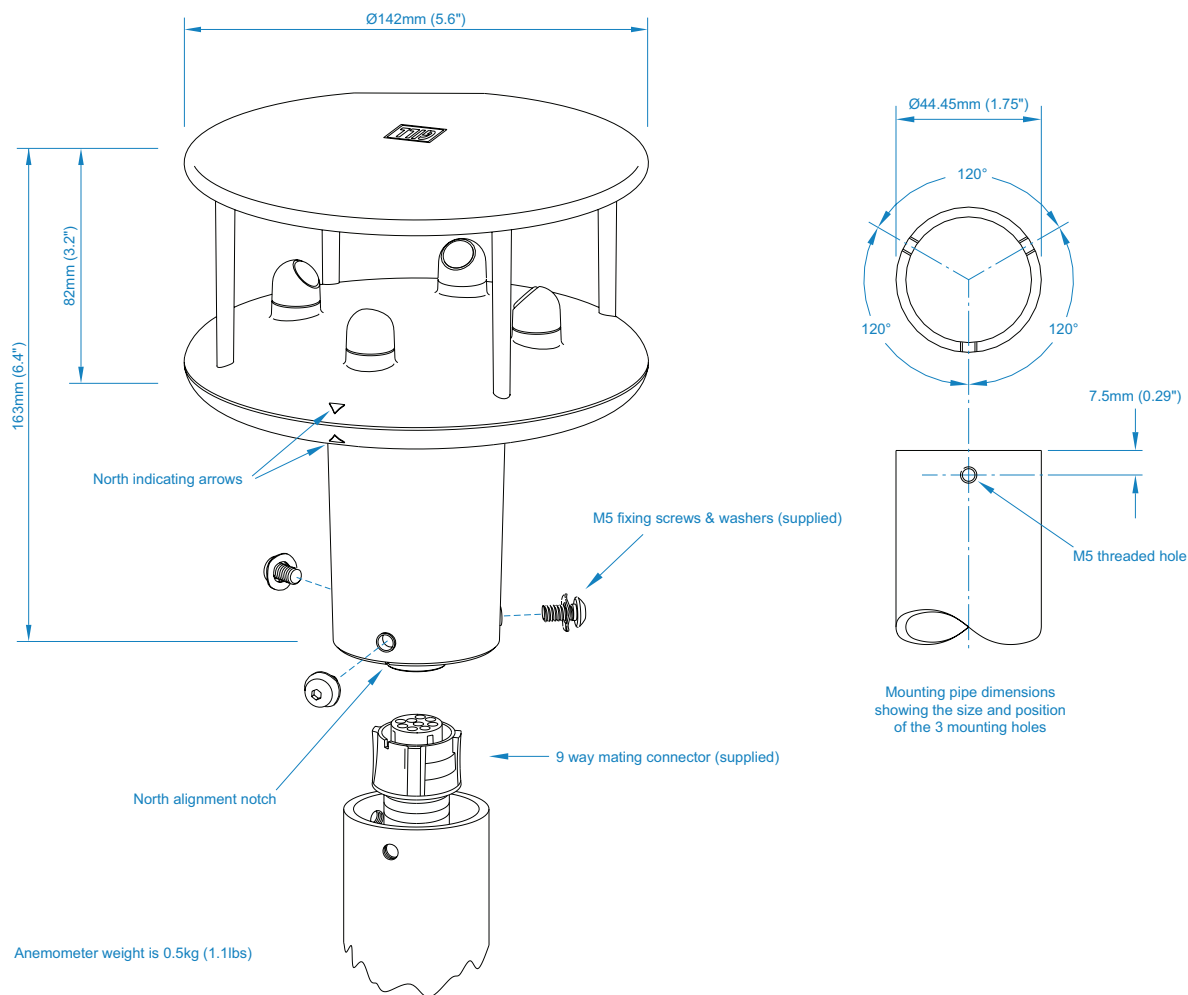
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WindSonic 75

Datasheet

Wind Speed and Direction Sensors

High quality, general purpose, ultrasonic anemometers



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