

Weather Station Sirius-NAV



Features

- * Integrated weather station with special surface coatings for wind speed, wind direction, air temperature, barometric pressure, with no moving parts technology
- * Maintenance-free measuring element with permanent air density compensation
- * Operation under severe climatologically conditions and wind speed up to 80 m/s
- * Solid-state controlled sensor heating device to prevent icing (optional)
- * Simple installation on a 50 mm standard pipe and central plug connector
- * Operational condition from $-40\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$
- * Rugged and corrosion-free housing with integrated plug connector
- * Serial interface RS485
- * MTBF of 10 years
- * Automatic cyclic self-testing and reporting

Applications

- * The Sirius-NAV is especially designed for at sea or coastal applications. Special surface coatings make the station extremely resistant to seawater

Standards

- * Standard of construction: VDE 100
- * Low voltage guideline: 73/23 EWG and VDE 100
- * EMV: DIN EN 50081-1
VG 95373
EC 630004-3,-6
- * ESD / Burst: EC 630004-2,-4
- * Vibration: BV 0440, diagram 1,8,9
- * Shock resistance: BV 0430, diagram 3
- * Salt spray test: MIL STD 810 D
- * Class protection: IP 67
- * Message format: HEX or NMEA 0183
- * Interface: RS485 (EIA standard)

Technical Data & Dimensions

General

Operation temperature range	-40 °C to +70 °C
Storage temperature	-50 °C to +90 °C
Interface	RS485
Power supply	12 or 24 VDC / 15 Watt
Isolation voltage	500 VDC

Measurement Specifications

Wind speed

Range	0...80 m/s
Accuracy (RMS)	0.5 m/s ± 5 % of actual wind
Resolution	0.1 m/s

Wind Direction

Azimuth	0...360° (no electrical gap)
Accuracy (RMS)	± 3 °
Resolution	1°

Air Temperature

Range	-40...70 °C
Accuracy (RMS)	± 1 °C at wind speed ≥ 2 m/s
Resolution	0.1°C

Barometric Pressure

Range	600...1100 mbar
Accuracy (RMS)	± 1.5 mbar at 20°C ± 3 mbar, -40°C to +70°C
Resolution	0.1 mbar

Option

Relative Humidity

Range	0...100 %
Accuracy (RMS)	± 3 % at 20...80 % ± 4 % for <20 % and >80 %
Resolution	0.1 %

Heating

Power supply	24 VDC / 100 Watt
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Analog Input

Range	0-10 VDC
Resolution	2.44 mV

Digital Counter

Range	16-bit counter
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Mechanical

Class of protection:	IP 67
Height:	300 mm
Diameter:	105 mm
Weight:	1.5 Kg
Mast adapter:	51 mm

Note: See also mechanical drawings for installation

Accessory (not included)

Mating connector for cable

Version

Sirius-NAV

Compact and robust weather station with special surface coatings for wind speed, wind direction, air temperature and barometric pressure, with serial interface RS485

Sirius-NAVC

Compact and robust weather station with special surface coatings for wind speed, wind direction, air temperature, barometric pressure and relative humidity, with serial interface RS485

Sirius-NAVH

Heated, compact and robust weather station with special surface coatings for wind speed, wind direction, air temperature and barometric pressure, with serial interface RS485

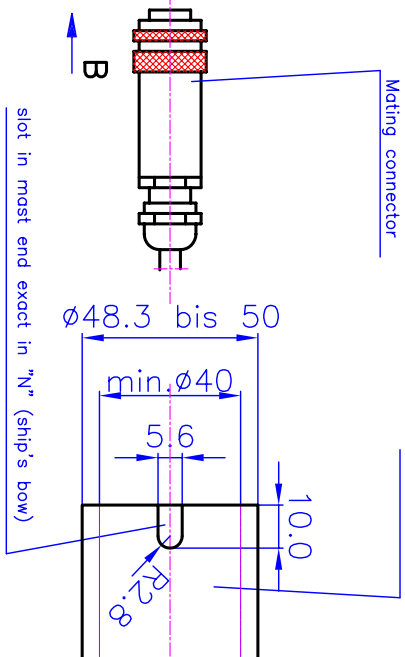
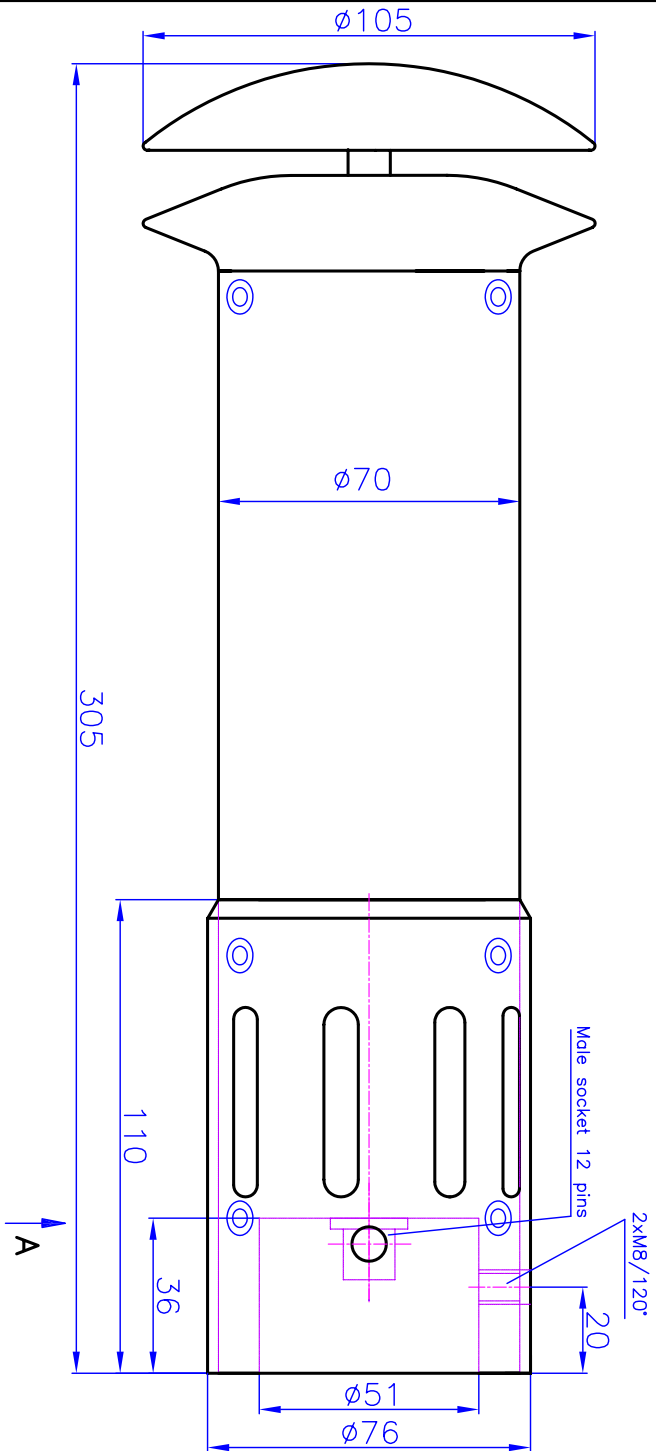
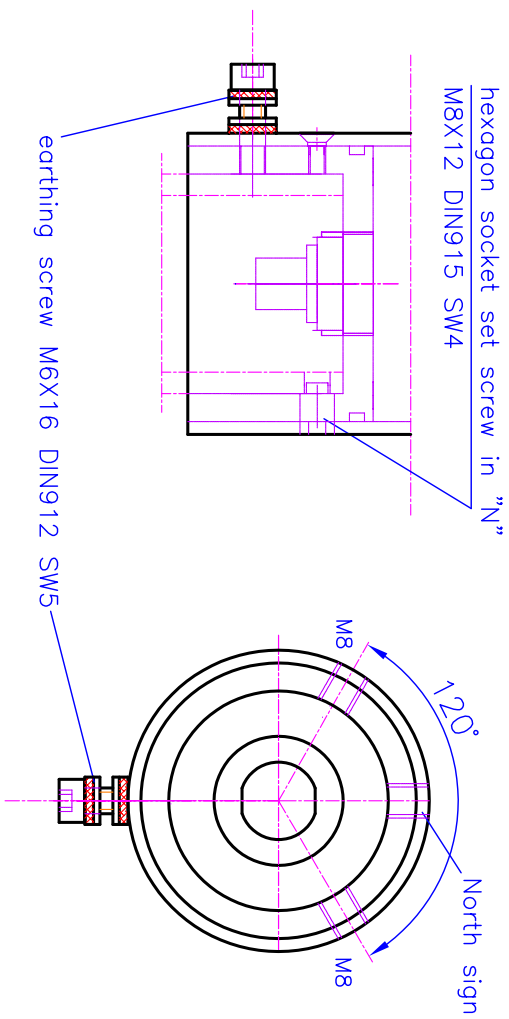
Note:

For analog input and digital counter, please specify in the request

The standard communication protocol is in HEX, but it is also available in NMEA 0183 (send us a request for detail about communication protocol)

View from A

View from B



Sensor seat pipe
 Expl. pipe 48,3x2,6 or
 pipe 50x2,5 or
 pipe 50x2

19.07.02	YS	-	Series SIRIUS-MET / NAV	4.40.000	B