# Manuals+

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## Contents [ hide ]

**QUARK-ELEC**

## QUARK-ELEC AS10 3-in-1 Nmea 2000 Environmental Sensor

## Specifications

- DC supply
- Average supply current
- Data output frequency
- LEN
- NMEA 2000 Compatibility
- Output NMEA 2000 PGNs
- Cable Length NMEA 2000
- Temperature Range
- Humidity Range
- Barometric Pressure Range
- Sensor body dimensions

## Product Usage Instructions

### Introduction:

The AS10 is a NMEA 2000 3-in-1 Environmental Sensor that measures Air Temperature, Humidity, and Barometric Pressure.

### Mounting:

To mount the AS10:

- Disconnect the NMEA 2000 cable from the backbone before installation.
- Ensure the mounting location is flat and stable.
- The sensor can be mounted in any direction required.
- Securely fit the drop cable to prevent trip hazards.
- Ensure all mounting screws are tightly fastened.
- Avoid mounting near heat-generating components.
- If a longer reach is needed, additional drop cables can be connected in series (ordered separately).

**NMEA 2000 Connection:**

The AS10 is equipped with a five-core screened cable for the NMEA 2000 connection. Connect the cable to the NMEA 2000 network backbone or using a T-piece connector. The AS10 will start working when powered by the NMEA 2000 network.

**Specification**

Refer to the specifications listed above for detailed information on the product's technical specifications.

## Features

- Designed specifically for harsh marine environments to ensure long-term durability and reliability
- Accurate and stable environmental monitoring in a single compact device
- Simple plug-and-play installation via standard NMEA 2000 connection
- Outputs standard NMEA 2000 PGNs for seamless network integration
- Powered directly from the NMEA 2000 network (no external power required)
- Low power consumption, ideal for continuous onboard operation
- Compact, rugged design suitable for space-constrained applications
- High measurement accuracy: ±0.5 °C (temperature), ±3% RH (humidity), ±1 hPa (pressure)

## Introduction

- The AS10 is a compact, high-precision environmental sensor purpose-built for

seamless integration into any NMEA 2000 network.

- Designed with durability and simplicity in mind, it connects directly via an integrated 1-metre drop cable and draws power from the network—no additional wiring required.
- Delivering real-time measurements of air temperature, humidity, and barometric pressure, the AS10 translates environmental conditions into standard NMEA 2000 PGNs.
- This information can be utilised by a wide range of onboard systems, including chart plotters and multi-function displays (MFDs), helping users to make informed decisions and improve situational awareness at sea.
- With a precision of ±0.5 °C for temperature, ±3% RH for humidity, and ±1 hPa for barometric pressure, the AS10 offers reliable performance across a broad measurement range.
- Whether navigating changing weather patterns or optimising onboard climate monitoring, the AS10 delivers essential data in a compact, all-in-one device.
- Tested in demanding marine environments, the AS10 is built to withstand the elements and operate reliably in challenging conditions—giving boaters confidence, accuracy, and control, wherever their journey takes them.

## Mounting

- The AS10 comes with a 2-screw mount, allowing for flexible installation anywhere on the vessel. Each mounting hole has a diameter of Ø3.5 mm, with a centre-to-centre spacing of 29 mm between the two holes.



To ensure optimal performance and proper operation, consider the following guidelines when mounting the AS10:

- Disconnect the NMEA 2000 cable from the backbone before installation.
- Mounting Location: Ensure the mounting location is flat and stable
- Alignment: The sensor can be mounted in any direction required

- Cable Security: Securely fit the drop cable to prevent any trip hazards.
- Fastening: Ensure that all mounting screws are tightly fastened.
- Do not mount near heat-generating components such as engines, heaters, or high-powered displays.
- The AS10 comes with a 1-metre drop cable. If a longer reach is needed, an additional drop cable can be connected in series and must be ordered separately.



**NMEA 2000 connection**

- The AS10 is equipped with a five-core screened cable for the NMEA 2000 connection. Simply connect the cable to the NMEA 2000 network backbone or use a T-piece connector. The AS10 will start working as it's powered by the NMEA 2000 network.



- After powering up, the AS10 will turn environmental data into a digital signal, which is read by the AS10 and transmitted along the NMEA 2000 network via PGN130312 (Temperature), PGN130313 (Humidity) and PGN130314 (Barometric Air Pressure).
- These PGNs can be used to display the data on an MFD or chart plotter.

## Specification

| Item | Specification |
|---|---|
| DC supply | 12.0V (+/-10%), drain power from NMEA 2000 bus |
| Average supply current | 4mA |
| Data output frequency | 1Hz |
| LEN | 1 |
| NMEA 2000 Compatibility | Yes |
| Output NMEA 2000 PGNs | PGN130312 (Temperature)<br>PGN130313 (Humidity)<br>PGN130314 (Barometric Air Pressure) |
| Cable Length NMEA 2000 | 1.0 meters |
| Temperature Range | 40°C ~ +85°C, ±0.5°C |
| Humidity Range | 0% ~ 100% RH, ±3% RH |
| Barometric Pressure Range | 300 ~ 1100 hPa, ±1hPa |
| Sensor body dimensions | 112mm x Ø14mm |

# Warranty

## Limited Warranty and Notices

- Quark-elec warrants this product to be free from defects in materials and manufacture for one year from the date of purchase. Quark-elec will, at its sole discretion, repair or replace any components that fail in normal use.
- Such repairs or replacement will be made at no charge to the customer for parts and labour.
- The customer is, however, responsible for any transportation costs incurred in returning the unit to Quark-elec. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.
- A return number must be given before any unit is sent back for repair.
- The above does not affect the statutory rights of the consumer.

## Disclaimer

- This product is designed to aid navigation and should be used to augment normal navigational procedures and practices. It is the user's responsibility to use this product prudently.
- Neither Quark-elec, nor their distributors or dealers accept responsibility or liability either to the product's user or their estate for any accident, loss, injury, or damage whatsoever arising out of the use or of liability to use this product.
- Quark- products may be upgraded from time to time and future versions may therefore not correspond exactly with this manual.
- The manufacturer of this product disclaims any liability for consequences arising from omissions or inaccuracies in this manual and any other documentation provided with this product.

## Document history

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| Issue | Date | Changes / Comments |
|-------|------------|-----------------|
| 1.0 | 26-06-2025 | Initial release |
| | | |

Quark-elec (UK) Unit 3, Clare Hall Parsons Green St Ives Business Park St Ives PE27

Designed in UK

## Customer Services

- https://www.quark-elec.com

## FAQ

Q: What should I do if the AS10 does not start working after connecting to the NMEA 2000 network?

A: If the AS10 does not start working, ensure that the NMEA 2000 network is properly powered and check the cable connections for any issues. If problems persist, contact Quark-elec support for assistance.

# Documents / Resources

| | |
|---|---|
|  | QUARK-ELEC AS10 3-in-1 Nmea 2000 Environmental Sensor [pdf] Owner's Manual<br>AS10 3-in-1 Nmea 2000 Environmental Sensor, AS10, 3-in-1 Nmea 2000 Environmental Sensor, Nmea 2000 Environmental Sensor, Environmental Sensor |

## References

- User Manual

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🏷️ 3-in-1 Nmea 2000 Environmental Sensor, AS10, AS10 3-in-1 Nmea 2000 Environmental Sensor, Environmental Sensor, Nmea 2000 Environmental Sensor, QUARK-ELEC

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