


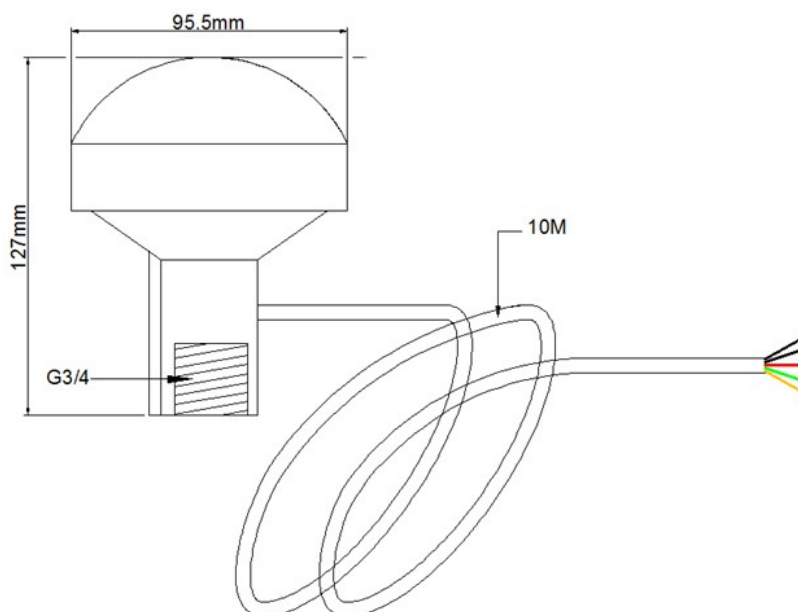


QUARK-ELEC QK-AS07-0183 GPS and Heading Sensor User Guide

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SET-UP GUIDE QK-AS07-0183 GPS & HEADING SENSOR



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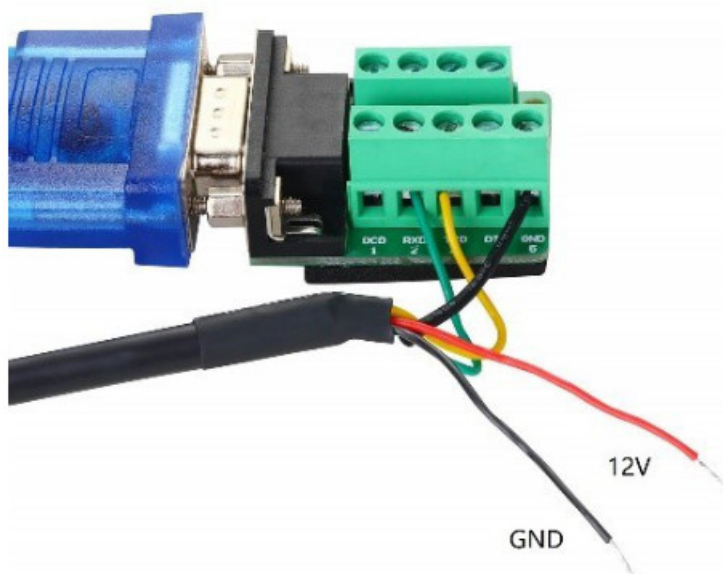
USB CONNECTION:

The AS07-0183 is designed to be used out of the box. Alternatively, AS07-0183 can be connected via a USB adaptor (optional) to a Windows PC for

1. Accessing GPS /heading data on a PC.
2. Configuring additional settings (using Windows configuration tool)
 - a. Filtering of NMEA 0183 output sentences, to eliminate unwanted data
 - b. Adjusting the baud rate
 - c. Adjusting output frequency. The frequency of data transfer can be set to 1/2/5/10 per second. 1Hz is the default setting and is generally recommended. Please note: changing the setting to 10Hz may cause data overflow in some devices.
 - d. Programming to compensate for installations where the sensor heading marker is positioned off of the direct course heading. A sensor must still be located but could be rotated up to +90° degrees or -90° degrees if necessary. In this case this adjustment should be configured into the device.



	QK-AS07-0183 wire	Connection on RS422 to USB adaptor
NMEA 0183	Green: TX (NMEA OUT)	USB adaptor—RX
	Yellow: RX (NMEA IN)	USB adaptor—TX
	Black (thick): GND shield	USB adaptor—GND
POWER	Black (thin): GND	GND (for Power)
	Red: Power	12v—14.4v Power



TAKE CARE: There are two GND connections.

One is GND for the NMEA Connection, and one is GND for Power. Ensure you check the above table and your device's documentation carefully before connecting-

INSTALLATION:

Location:

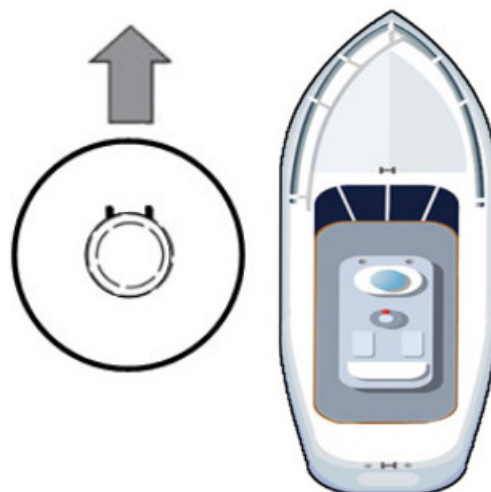
Mount the AS07-0183 in a,

- Sturdy outdoor location, with 'line of sight' to the sky.
- As close to the vehicle/boat's center of gravity as possible. Avoid mounting too high up, to ensure a more accurate compass reading.
- Minimum 0.3 meters from other compasses (standard and steering).
- Minimum 2 meters from a VHF antenna.
- Ensure the mounting location will not disrupt moving equipment (eg. Radar)
- Do NOT install near ferrous metals or anything that can create a magnetic field such as: magnetized materials, electric motors, electronic equipment, engines, generators, power/ ignition cables, and batteries.
- Do not install within a steel/ magnetic container, including not within the hull of a steel boat/vehicle.
- With the correct orientation. AS07-0183 has two raised lines on the tube, the center point of these should be pointed straight forward, towards the front of the boat, as illustrated.

If this is not possible, you can configure this adjustment to +90 to -90 degrees using the Windows configuration

tool.

(See the full manual for more details)



The AS07-0183 has a standard G3/4 thread and is supplied with a corresponding base.

Wiring:

The AS07-0183 is designed to be used out of the box, for instant positional data to other NMEA 0183 devices. The default baud rate has been set as 4800bps, at 1Hz updating frequency.

Ensure power is turned OFF when connecting any wire of your device. The AS07 connects directly to your 12v power and NMEA 0183 device. No other connections or configuration is generally required.

Wire	Function
Red	12V-24V POWER
Black (thin)	GND
Black (thick)	GND (shield)
Green	NMEA OUT / RS232 TX
Yellow	NMEA IN / RS232 RX



USING THE OPTIONAL USB OUTPUT

Connecting to NMEA 0183 (RS232) devices

The AS07-0183 sends positional sentences, in the NMEA 0183-RS232 (single-ended) protocol.
For RS232 interface devices, these wires need to be connected.

	QK-AS07-0183 wire	The connection needed on the RS232 device
NMEA 0183	Green: TX (NMEA OUT)	RX (NMEA IN)
	Black (thick): GND shield	GND (sometimes called COM)
POWER	Black (thin): GND	GND (for Power)
	Red: Power	12v—14.4v Power

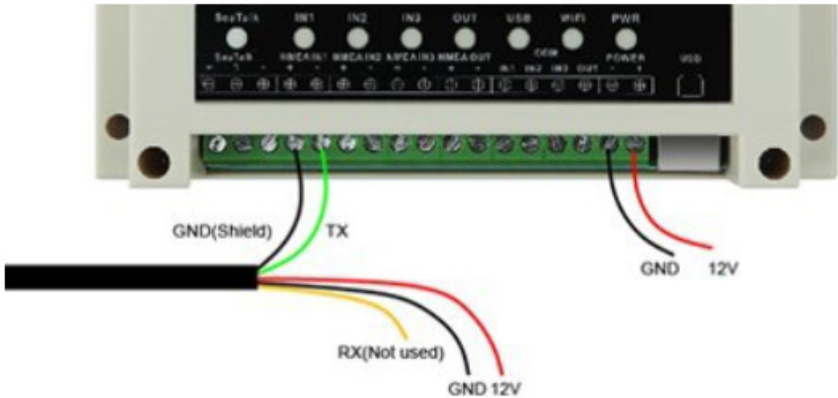


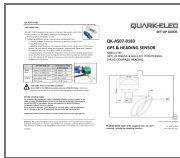
TAKE CARE: There may be two GND connections on your connecting NMEA 0183RS232 device. One is GND for the NMEA Connection and one is GND for Power. Ensure you check the above table and your device's documentation carefully before connection.

Connecting to NMEA 0183 (RS422) devices

Although AS07-0183 sends out NMEA 0183 sentences via single end RS232 interface, it also supports RS422 (differential signal) for RS232 interface devices, these wires need to be connected

	QK-AS07-0183 wire	The connection needed on RS422 device
NMEA 0183	Green: TX (NMEA OUT)	NMEA IN- (sometimes called NMEA/B or -Ve)
	Black (thick): GND shield	NMEA IN+ (sometimes called NMEA/A or +Ve)
	Black (thin): GND	GND (for Power)
POWER	Red: Power	12v—14.4v Power





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