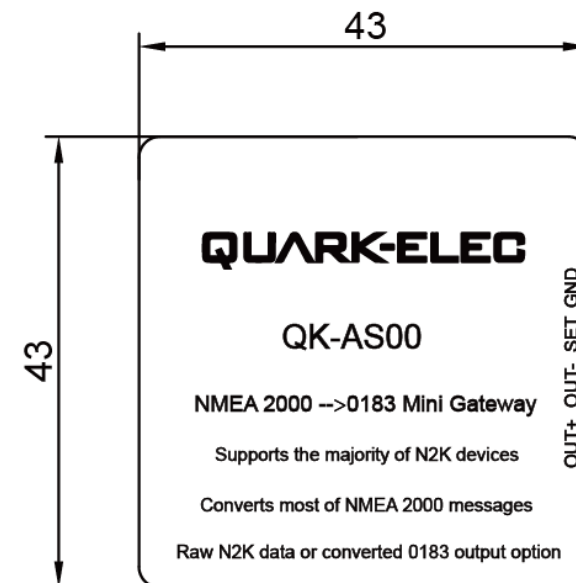# QUARK-ELEC

QK-AS00

NMEA 2000 TO NMEA 0183 MINI GATEWAY

COMPATIBLE WITH A WIDE RANGE OF NMEA 0183 LISTENER DEVICES

SUPPORTS THE MAJORITY OF NMEA 2000 PGNs

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QUARK-ELEC

QK-AS00

NMEA 2000 -->0183 Mini Gateway

Supports the majority of N2K devices

Converts most of NMEA 2000 messages

Raw N2K data or converted 0183 output option

OUT+ OUT- SET GND

⚠ **This is an overview only.** Please familiarize yourself with the manual and the manuals of any connecting devices before installation. It is always recommended that electronic equipment be installed by an experienced installer.

INSTALLATION

1. Mounting: Consider the location…

- Dry, sturdy location.
- Ensure you have the right length of cable needed. If drilling holes for your cabling, seal around any holes after installation to prevent water ingress and damage to your vessel or equipment.

2. Connect Power

The AS00 is powered by the NMEA 2000 network.

3. NMEA 2000 is a plug-and-play communications standard, the AS00's NMEA2000 input does not require additional setup before connecting it to an NMEA 2000 network.

4. NMEA 0183: The AS00 uses the differential end NMEA0183 -RS422 interface. Connect the 'OUT+' and 'OUT-' terminals of the AS00's NMEA output to the '+' and '-' terminals of the listener device's NMEA 0183 input. If there is a communication issue between your devices, you may find swapping data wires might resolve the problem.

The AS00 also supports the single end protocol for NMEA0183-RS232 interface devices.

AS00	RS422 device input ter-	RS232 device input ter-
OUT+	NMEA Input-	GND
OUT-	NMEA Input+	NMEA Input

*Swap NMEA Out + and NMEA Out - wires / NMEA Output and GND wires if the communication does not work.

If there is still no communication between your devices, a Quark-elec protocol bridge (QK-AS03) will be required.

The AS00 can be helpful for the boat owners or the trained technician to directly access the boat's NMEA 2000 network data and perform any diagnostic or analytical work accordingly. In this case viewing raw NMEA 2000 data in PCDIN format might be required. This can be achieved by short connecting the AS00's GND and SET terminals. Please ensure your device is disconnected from the NMEA 2000 network (powered off) before short connecting / disconnecting the GND and SET terminals.

⚠ **By default the AS00's NMEA 0183 output baud rate is set to 38.4kbps. As the NMEA 2000 network uses a significantly higher data rate (250kbps), data overflow on the NMEA 0183 output port cannot be completely avoided. If there are multiple devices connected to your NMEA 2000 network, please be aware of the possibility of data overflow.**

CONVERSION LISTS

The following table lists the supported NMEA 2000 PGN's (parameter group numbers) and NMEA 0183 sentences. It is important to check the table to confirm that the AS00 will convert the NMEA 2000 PGNs to the required NMEA 0183 sentences.

NMEA 2000 PGNs	Converted to NMEA 0183 sentence	Function
128267	DBT	Depth Below Transducer
128267	DPT	Depth
126992, 129025, 129029	GGA	Global Positioning System Fix Data
126992, 129025	GLL	Geographic Position Latitude/Longitude
129539	GSA	GNSS DOP and Active Satellites
129540	GSV	GNSS Satellites in View
127250	HDG	Heading, Deviation & Variation
127250	HDM	Heading, Magnetic
127250	HDT	Heading, True
130311	MTW	Water Temperature
130306	MWD	Wind Direction & Speed
130306	MWV	Wind Speed and Angle (True or relative)
129283,129284	RMB	Recommended Minimum Navigation Information
126992, 127258, 129025, 12902	RMC*	Recommended Minimum Specific GNSS Data
127251	ROT	Rate Of Turn
127488	RPM	Revolutions
127245	RSA	Rudder Sensor Angle
127250, 128259	VHW	Water Speed and Heading
128275	VLW	Dual Ground/Water Distance
129026	VTG*	Course Over Ground and Ground Speed
130306	VWR	Relative (Apparent) Wind Speed and Angle
129283	XTE	Cross Track Error, Measured
126992	ZDA	Time & Date
129038	VDM/VDO	AIS Message 1,2,3
129793	VDM/VDO	AIS Message 4
129794	VDM/VDO	AIS Message 5
129798	VDM/VDO	AIS Message 9
129802	VDM/VDO	AIS Message 14
129039	VDM/VDO	AIS Message 18
129040	VDM/VDO	AIS Message 19
129041	VDM/VDO	AIS Message 21
129809. 129810	VDM/VDO	AIS Message 24

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