TBS QuickLink to NMEA 2000 Interface Kit Installation Guide

QuickLink to NMEA 2000 interface kit installation and setup guide

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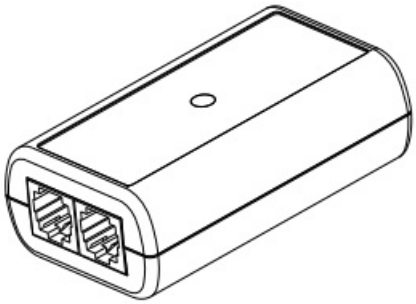
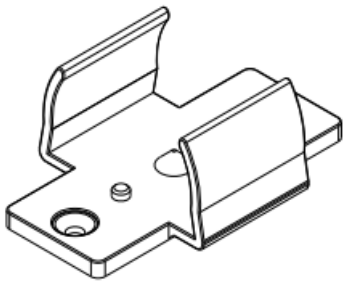
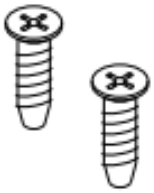
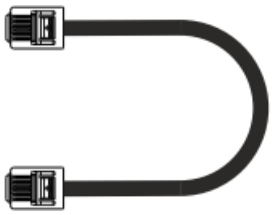
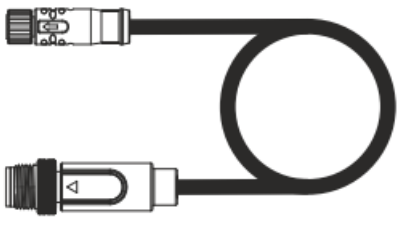
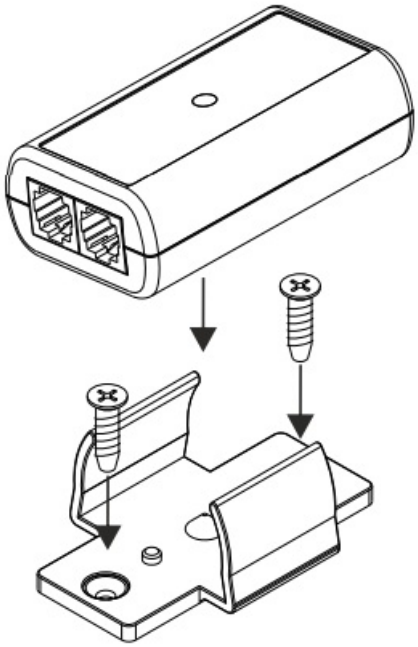
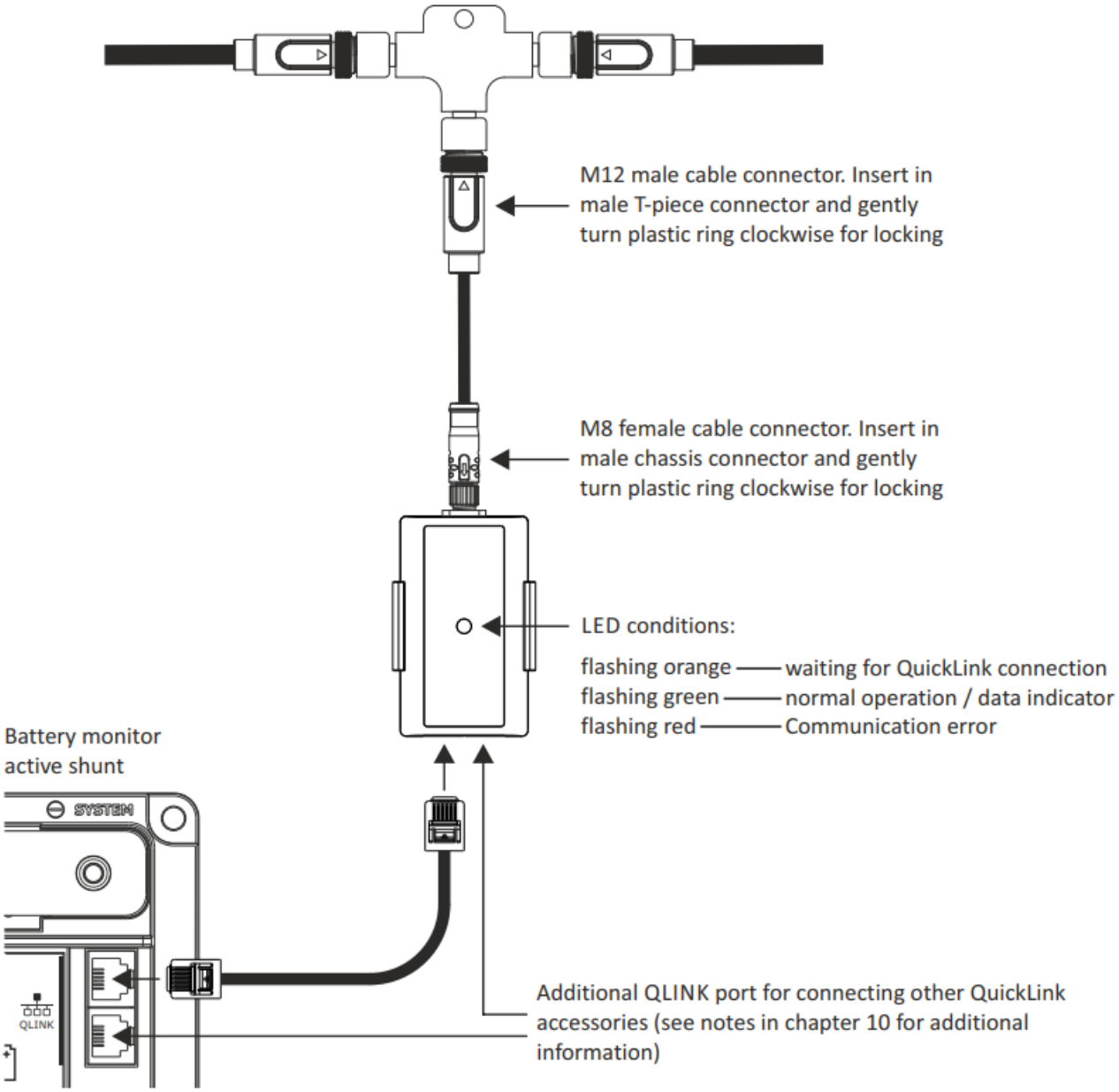
	Interface box
	Mounting bracket
	Mounting screws
	QuickLink cable
	NMEA 2000 drop cable

Mounting the interface box



Connecting the interface box



Introduction

The QuickLink to NMEA 2000 interface forms a bridge between QuickLink enabled devices and an NMEA 2000 network. Currently it only supports the Expert Modular baery monitor.
The interface presents the following parameters on the NMEA 2000 network.

- Voltage
- Current
- Amp-Hours removed
- State-of-Charge
- Time Remaining
- Temperature
- Baery Capacity
- Baery Type
- Nominal Voltage

Only the parameters of baery bank 1 are available.
Changing of device- and baery instance is fully supported by this interface, allowing muls on the NMEA 2000 network, with each Expert
Modular having its own QuickLink to NMEA 2000 interface. A proper NMEA 2000 network management tool is needed to change device- and baery instance. Such a tool is not provided by us.
It is assumed that the user of this device has a good understanding of the NMEA 2000 standard.

NMEA 2000 Interface Standard

The NMEA 2000 standard contains the requirements of a serial data communicaork to inter-connect marine electronic equipment on vessels. It is multer and self-configuring, and there is no central network controller. Equipment designed to this standard will have the ability to share data, including commands and status with other compat over a single channel. It is based on CAN (Controller Area Network). NMEA 2000 is a registered Trademark of the Naonics Associa

Supported PGNs

The following PGNs are transmied by the interface. These may be broadcasted,sent on request, or as acknowledgment.

PGN	Name
59392	ISO Acknowledgment
60160	ISO Transport Protocol, Data Transfer
60416	ISO Transport Protocol, Connecement – RTS Group Func
60928	ISO Address Claim
126208	NMEA – Request Group Func
126464	PGN List – Received / Transmit PGNs Group Func
126993	Heartbeat
126996	Product Informa
126998	Configuraorma
127502	Switch Bank Control
127506	DC Detailed Status
127508	Baery Status
127513	Baery Configuraatus
59904	ISO Request
60160	ISO Transport Protocol, Data Transfer
60416	ISO Transport Protocol, Connecement – RTS Group Func
60928	ISO Address Claim
65240	ISO Commanded Address
126208	NMEA – Request Group Func

See backside of this paper for con
The following PGNs are accepted by the interface:

Changing Instances

The following instances are used by the interface:

Instance	Default value
System	0
Device	0
Baery	1
Switch Bank	252

All the above instances can be changed via an NMEA Command Group Func
The newly set instance is stored and maintained between power cycles.

Changing a PGN’s transmission interval

The following PGNs are broadcast at a fixed interval:

PGN	Name	Default interval (ms)
126993	Heartbeat	60000
127502	Switch Bank Control	2000
127506	DC Detailed Status	1500
127508	Baery Status	1500

The default transmission interval can be changed via an NMEA Request Group
Funcansmission interval offset is not supported. The newly set transmission interval is stored and maintained between power cycles.

Switch Bank Control

The Switch Bank Control PGN is used to present Expert Modular alarms on the NMEA 2000 network. External alarm contacts 1 to 8 are mapped to Switch Bank fields Switch 1 to Switch 8. By default the Switch Bank Instance of the interface is configured to 252.
A special condio instance 252. The Switch Bank Control PGN is broadcasted, but all switches within the PGN will always have value 11b, meaning “no ac. This is to prevent Expert Modular external alarms to interfere with Switches already configured on the network. With any other instance than 252, Switch 1 to Switch 8 will represent the status of Expert Modular external alarm contacts 1 to 8.
To make Expert Modular alarms visible on the NMEA 2000 network, the user needs to change the Switch Bank PGN Instance to any other value than the default 252, and select one of the external alarm contacts (Ext.1 to Ext.8) as the Alarm Contact for the alarms the user wishes to make visible.

Specifications plus notes

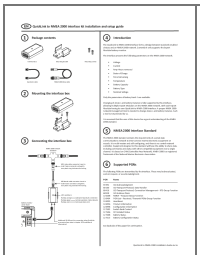
Technical specifications isolated NMEA 2000 interface box

Input communication bus type	TBS QulckUnk
Current consumption	6.5mA (Quicklink) / < One Network Load (NMEA 2000)
Isolation value	1000Vrms for 3 sec.
Operating ambient temp.	-20 … +50’C
Dimensions (L x W x H)	74 x 43 x 25mm

Notes:

1. Each QuickLink network may contain only one master device (i.e. battery monitor)
2. Each QuickLink network may contain only one communication interface.

Documents / Resources

	TBS QuickLink to NMEA 2000 Interface Kit [pdf] Installation Guide QuickLink to NMEA 2000 Interface Kit, QuickLink to NMEA, NMEA 2000 Interface Kit, Interface Kit