

BG03 smart**fittings** gateway guide

For load display on smartphone, see 'App Instructions', and for sensor guides see 'smartlink guide' or 'smarttune guide'.

Product Description

With the addition of a smart**fittings** gateway, data from our sensors can be outputted to most modern marine electronics, allowing data to be viewed from anywhere on your boat via existing on-board displays. It is designed to plug directly into displays or electronics configuration and is splash resistant to IP54, for mounting below deck. Up to 50 sensors can be connected, data can be logged and downloaded for analysis, and exported for use with sailing analytics software.

How it works...

Simply plug the gateway into existing marine electronics network. Add new sensors to the gateway using WiFi web interface and configure displays to show live loads.

Gateway Installation

What you need:

smarttune
or
smartlink

smart**fittings**
gateway

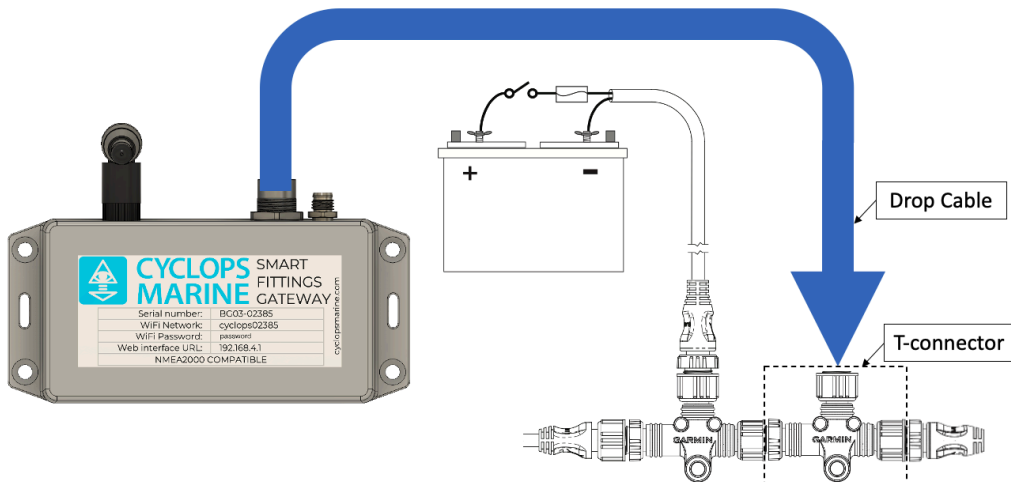


Before installation, ensure:

- If boat hull/deck is constructed of carbon fibre, it is highly recommended to purchase optional dome antenna with 1m cable, so that there is a direct line of sight between the sensor and antenna. This requires having the antenna mounted on deck, with the gateway below deck, so that there is no carbon fibre in the line of sight. For boats with a mainly fibreglass construction, this shouldn't be necessary.
- smarttune/smartlink batteries are installed and sensor is powered on.
- Antenna is screwed onto gateway.
- Marine electronics are switched off at switch panel.

NMEA2000 electronics

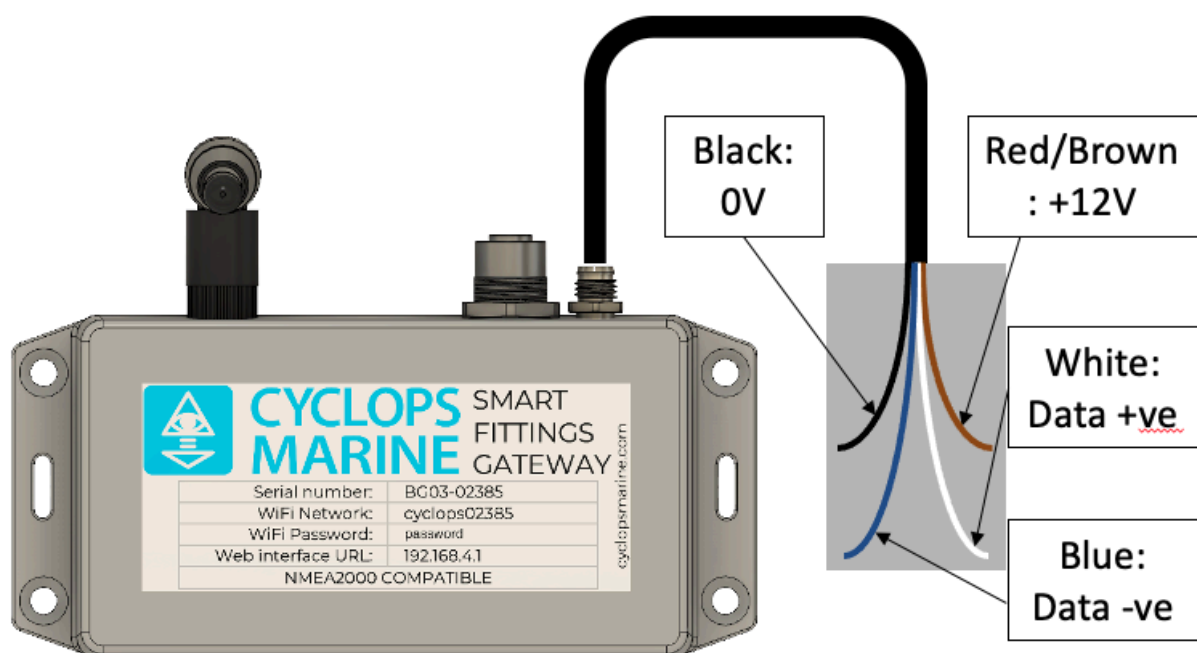
- Find NMEA2000 CANbus/backbone closest to load sensors. For example, for a forestay smarttune, the backbone closest to the forward bulkhead is optimal. It is important to find the right location to allow for the strongest, uninterrupted signal from the sensors. If necessary, a NMEA2000 drop cable can be added in to reach this position (not supplied). Typical locations for backbones include:
 - Behind displays
 - Mast base
 - Near speed & depth sensors
- Connect T-connector + drop cable to gateway M12 connector (larger of the two) and backbone.



- Power on marine electronics.

NMEA0183 electronics (includes NKE products)

- Find nearest installed marine electronics device to wireless load sensors with NMEA0183 input. Consult manufacturer documentation for more information.
- Connected supplied cable to gateway M8 Connector (smaller of two) and to NMEA0183 input using below wiring arrangement:



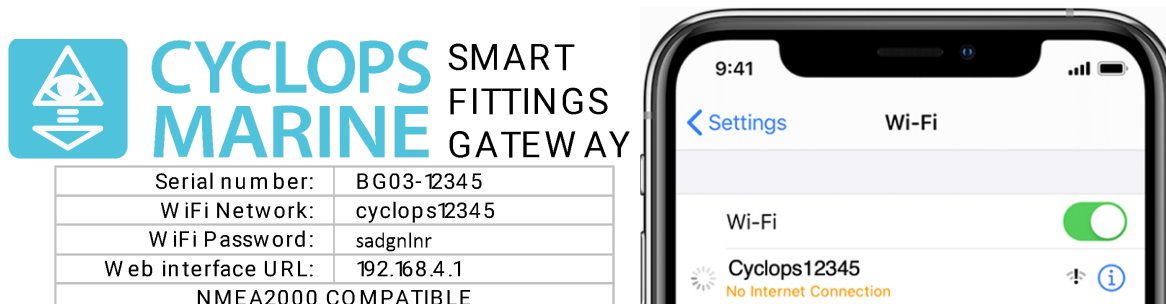
- Power on marine electronics.

Gateway Web Interface

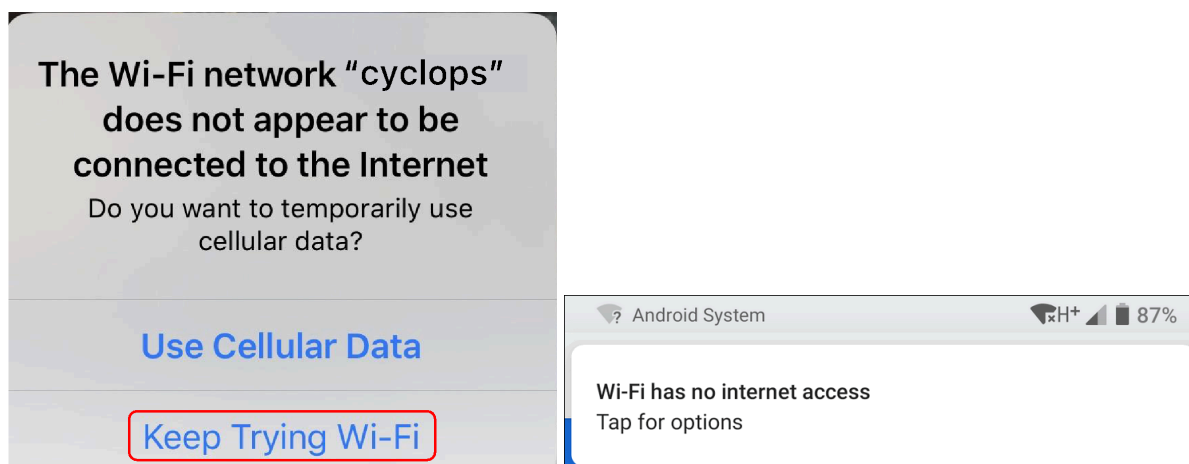
The web interface can be used to view live load data, add, modify or remove sensors, download log files and change general settings. Viewing the web interface requires connection to gateway WiFi, or to an existing WiFi network that the gateway has been programmed to connect to.

Connect to Gateway WiFi Network

1. After installation, ensure marine electronics (including gateway) are powered on.
2. Using smartphone/tablet/laptop, connect to gateway WiFi, as shown on label (left).



IMPORTANT: While connected to Gateway Wi-Fi, the below message (or similar) may appear. Always select 'Keep trying Wi-Fi', otherwise connection to web interface will not work.



Access web interface

The web interface can be accessed using a web browser such as Chrome or Safari, at 192.168.4.1

PLEASE NOTE: Your retailer may have pre-configured your gateway to listen for your load sensor.

Load Sensors

The screenshot shows the 'New Sensor' form with the following fields and options:

- Name:** A new sensor
- Source:** Wireless (selected), Wired
- Key:** 25GDS4-KN6035 (with a callout: 'Enter data key provided with sensor here')
- Units:** kg, tonne, lbf (with a callout: 'Change designation of sensor for B&G and Salmon, e.g. Forestay, Backstay etc (list of 64 names)')
- Precision:** 0.00X (selected), 0.X, X (with a callout: 'Units' changes what units the load is output to the displays in.')
- NMEA2000 B&G station:** None (selected)
- NMEA2000 Garmin custom channel:** None (selected)
- NMEA0183 message type:** None (selected), Standard, NIKE (with a callout: 'If using NMEA0183 output, choose type of output message.')
- Buttons:** Add (with a callout: 'Don't forget to select 'Add'/'Change', when finished!')

At the bottom, there is a 'Sensors' list with a 'New Sensor' button highlighted in red. A callout points to this button: 'Sensor list Select 'New Sensor' to add a sensor'.

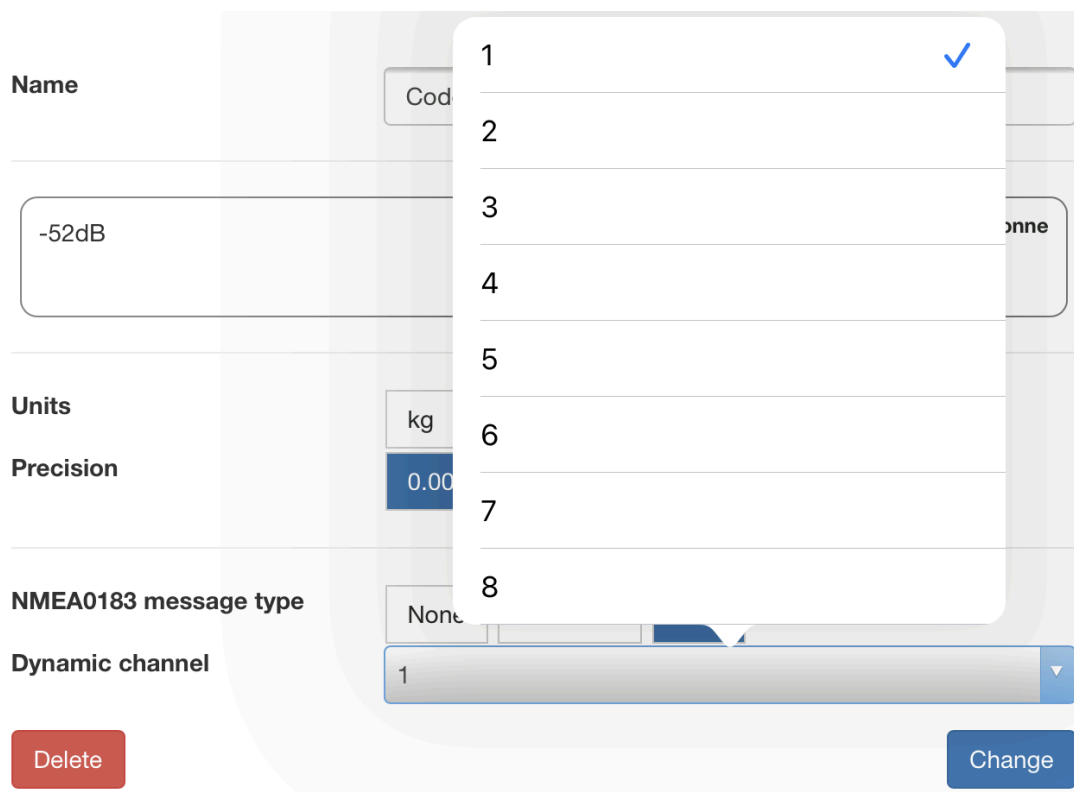
At the bottom right, there are navigation icons for 'Sensors', 'Loads', 'Log', and 'Settings'.

Sensors page – Configuring for NMEA0183

NKE electronics

If NKE is selected as the message type, a drop-down menu will show to choose a dynamic channel. Each sensor will require its own channel. The name displayed will be the first 10 characters of the sensor name.

PLEASE NOTE: This functionality has only been verified using the NKE Multigraphic display. Consult your local marine electrician for assistance if unsure.



Name

Units

Precision

NMEA0183 message type

Dynamic channel

1 ✓

2

3

4

5

6

7

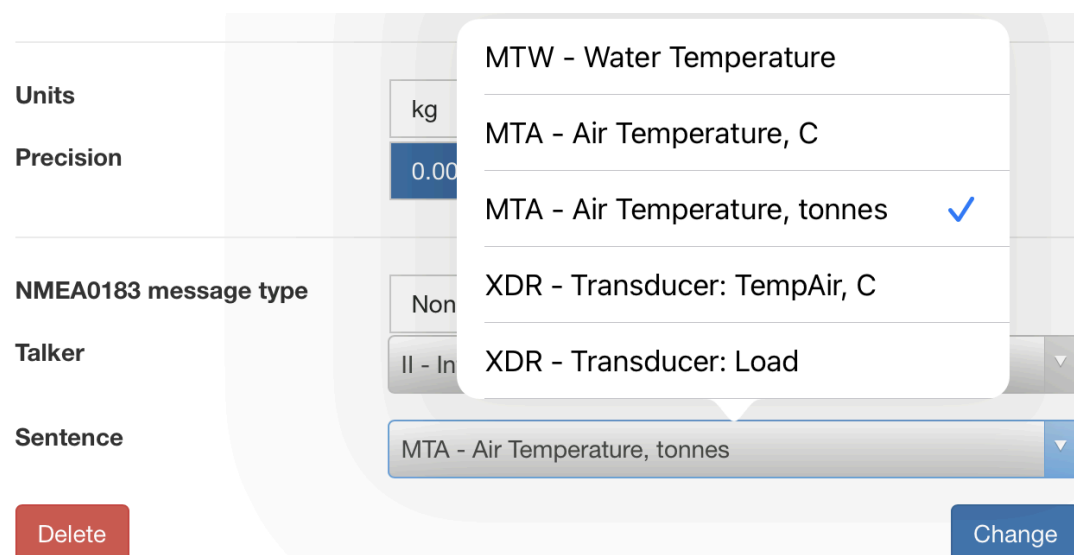
8

Delete

Change

Standard NMEA0183 (extra for experts only)

If standard NMEA0183 is selected, it is possible to send a message with the load data mimicking a variety of different 'talkers' (device types) and as using the format of different variables i.e. Air Temperature, Transducer. Only one sensor can be broadcast via standard NMEA0183. Consult your local marine electrician for assistance in setting this up with your instruments.



Units

Precision

NMEA0183 message type

Talker

Sentence

MTW - Water Temperature

MTA - Air Temperature, C

MTA - Air Temperature, tonnes ✓


XDR - Transducer: TempAir, C

XDR - Transducer: Load

Delete

Change

Loads Page explained


 **CYCLOPS
MARINE**


Loads


Code0 tack


0.043

tonne

 Sensors


 Loads

 Log












 Settings

All sensors added on the 'Sensors' page will appear here. If a sensor is not powered on or in range, the last detected load value will show in grey.

Log Page explained

 **CYCLOPS
MARINE**

Logfiles

 CyclopgsBE1.csv - Code0 tack	2020-11-13 18:09:08.0
 CyclopgsBE1.csv.1 - Code0 tack	2020-11-13 18:08:26.0
 CyclopgsBE1.csv.2 - Code0 tack	2020-11-13 18:07:56.0
 CyclopgsBE1.csv.4 - Code0 tack	2020-11-13 18:07:03.0
 CyclopgsBE1.csv.3 - Code0 tack	2020-11-13 18:02:22.0
 CyclopgsBE1.csv.5 - Code0 tack	2020-11-13 17:57:21.0
 CyclopgsBE1.csv.6 - Code0 tack	2020-11-13 17:46:22.0
 CyclopgsBE1.csv.7 - Code0 tack	2020-11-13 17:42:23.0
 CyclopgsBE1.csv.8 - Code0 tack	2020-11-13 17:41:44.0
 CyclopgsBE1.csv.9 - Code0 tack	2020-11-13 17:38:39.0
 CyclopgsBE1.csv.10 - Code0 tack	2020-11-13 17:04:14.0

Log files

Filename

Name of selected log file – a new file is created each time gateway is powered on


Preview


A preview of the time stamped data will appear here.


Size


The size of the file will appear here.

Download

 Sensors

 Loads

 Log

 Settings

Settings page explained



Gateway Settings

NMEA 0183 / Serial

Output mode

NMEA0183

Alters function of M8 connector – can also output for legacy NMEA2000 converter lead, and function as wired sensor input

Baud rate

38400

NMEA0183 speed

Update

Connect to a WiFi network

Select a WiFi Network

7 Mag

BT-X8A2RP

BTWi-fi

DIRECT-6D-HP ENVY 5000 series

TALKTALK-512DB4

Network

Select visible WiFi network from list or enter name here to connect

Password

Enter WiFi network password here

NOTE: once the gateway is connected to a WiFi network, its own network will be disabled.

Join

Connected to 7 Mag with IP 192.168.1.112

Set time / date

13/11/2020 05:41

Reset the gateway internal clock here (battery powered)

Update

System

Reset

Reset the gateway to Factory Settings (all configurations and data will be lost)

Safety

Please read all instructions before installing smartfittings gateway. Consult a professional before undertaking installation if at all unsure.

Technical Data

Wireless	2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, IEEE802.15.1
Dimensions	114 x 63 x 28mm
Mass	118g
Housing Material	Flame Retardant ABS (Black) IP54 rated
Clock Battery	life 10 years