Installation Guide

Location

Be sure to locate the WD500 MTU so that the internal GPS and Cellular antennas are not obstructed by any large metallic objects. Materials such as metal can interfere with the radio tranmissions used by the MTU.

Orient your MTU so that you can still observe the LED Status Indicators (p 4) through the front of the clear cover.

The MTU should be installed in a dry area, away from the elements. The shortest distance possible to the CAN bus is recommended. This unit is rated IP-66 and protected from moisture and dust.

Materials & Tools Required

• Mounting hardware - 1/4" dia. or M7 bolts. The WD500 MTU is appoximately 1.40" thick. Be sure to use long enough bolts or screws. When using bolts, install with washer, lockwasher and/or lock nuts.

• 18 AWG wire is recommended for all wiring connections.

• Butt-splice connectors - Molex #0191640013 or similar.

• Set(s) of battery stud terminals (for 18 AWG wire).

• Recommended 3A inline fuses for any wiring connection to positive (+) terminal on battery(s).

• Recommended heatshrink around all splices.

——— **Tools** ———

• Drill with 7/16" bit

• Sockets / Screwdriver for mounting and for battery terminal stud

• Wire cutters, splicers / crimpers

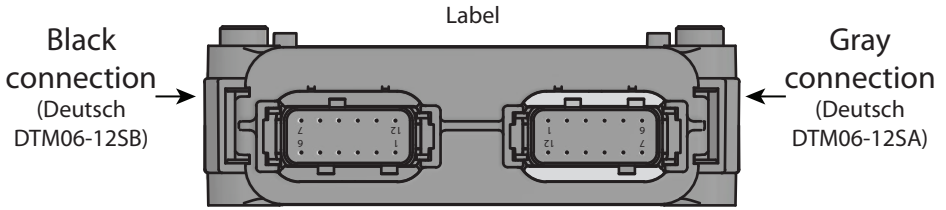• Recommended heatgun for all splices

INSTALLATION EXAMPLE

WASHER x4   WASHER x4   BOLT x4   LOCK-NUT x4   ←1.40"→
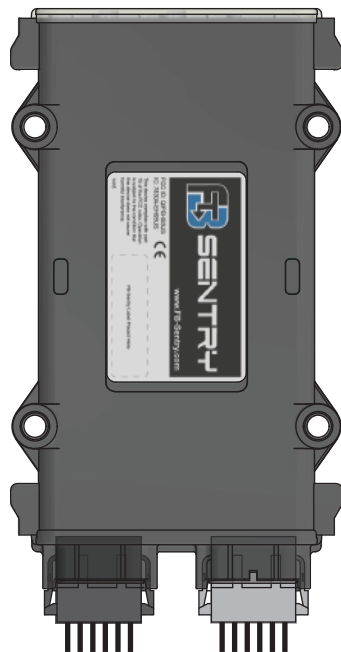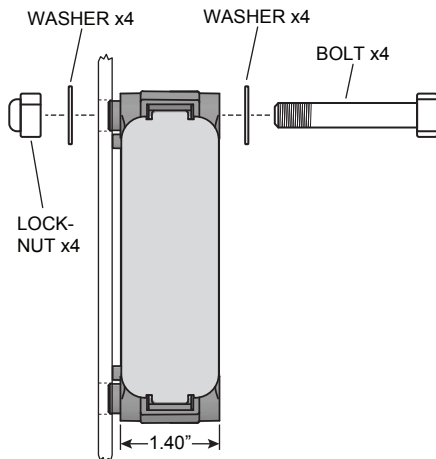
Side view looking at faceplate

1

Wiring

Insert the gray connector into the gray connection on the MTU. If applicable, insert the black accessory connector into the black connection.

Black connection
(Deutsch DTM06-12SB)

Label

Gray connection
(Deutsch DTM06-12SA)

Harness Connections

HN0915 / HN0909 / HN0916 - Gray Connector

Bilge Pump #1	To Bilge pump counter #1 (pos)	1	Blue
Battery #2	To Battery #2 (positive)	2	Violet/White
Entry Alert	To door or motion sensor (NO)	3	Brown
Ground	To negative side of battery	4	Black
Battery #1	To Battery #1 (positive)	5	Violet
Bilge Pump #2	To Bilge pump counter #2 (pos)	6	Gray
High Water	High water switch (to ground)	7	Orange
Analog Input	Analog input #1	8	Pink
Serial to CAN		9-12	CAN (see page 3)

HN0917 - Black Connector (Accessories)

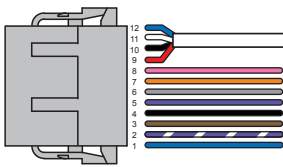| Temperature	To temperature sensor	1	Green/Black
Control #1	Relay coil sink (150ma) to ground	2	Tan/White
Boot-load	To boot-load ground	3	Blue/Black
Boot-load	To boot-load switch	4	Green
TBD	No Connections	5	Red/White
TBD	No Connections	6	Red/Blue
Shore Power	To DC adapter negative lead	7	Black
Shore Power	To DC adapter positive lead	8	White
Temperature	To temperature sensor	9	Red/Violet
Control #2	Relay coil sink (150ma) to ground	10	Tan/Black
Control #3	Relay coil sink (150ma) to ground	11	Tan/Blue
Temperature	To temperature sensor	12	Yellow

Connect the Violet Wire (pin 5 - Gray connector) to the main battery (12 or 24 vDC ready) or an un-switched power source with in-line fuse (3 A) installed.

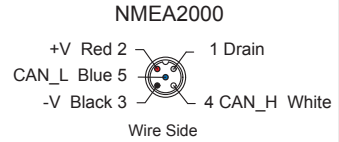Connect the Black Wire (pin 4 - Gray connector) to the negative side of the battery or vessel ground.

Connect the CAN connector to the CAN Bus.
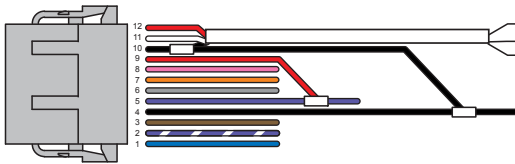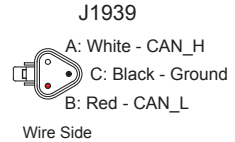
Harness Connections

HN0915

NMEA2000
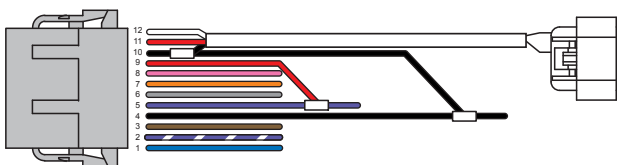
NMEA2000

+V Red 2 ———— 1 Drain
CAN_L Blue 5
-V Black 3 ———— 4 CAN_H White

Wire Side

HN0909

J1939

J1939

A: White - CAN_H
C: Black - Ground
B: Red - CAN_L

Wire Side

HN0916

SmartCraft

SmartCraft

N/C :E   K: White - CAN +
N/C :D   J: Red - CAN -
N/C :C   H: N/C
N/C :B   G: N/C
N/C :A   F: N/C

Wire Side

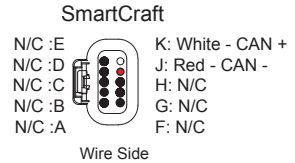| **HN0915** Pinout		**HN0909** Pinout		**HN0916** Pinout	
12: Blue	1: Blue	12: Red	1: Blue	12: White	1: Blue
11: White	2: Violet/White	11: White	2: Violet/White	11: Red	2: Violet/White
10: Black	3: Brown	10: Black	3: Brown	10: Black	3: Brown
9: Red	4: Black	9: Red	4: Black	9: Red	4: Black
8: Pink	5: Violet	8: Pink	5: Violet	8: Pink	5: Violet
7: Orange	6: Gray	7: Orange	6: Gray	7: Orange	6: Gray
Wire Side		Wire Side		Wire Side	
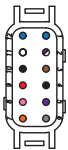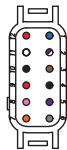
Optional Accessory Harness

HN0917
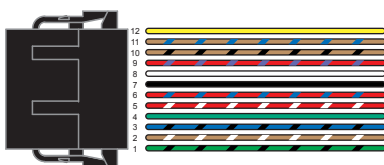
HN0917
Pinout

12: Yellow	1: Green/Black
11: Tan/Blue	2: Tan/White
10: Tan/Black	3: Blue/Black
9: Red/Violet	4: Green
8: White	5: Red/White
7: Black	6: Red/Blue

Wire Side

3

Basic Monitoring

Bilge Pumps

If bilge pumps are to be monitored connect bilge pump 1 via the Blue Wire (Pin 1 - Gray connector) to positive side of pump #1. If a second bilge pump is to be monitored connect the Gray Wire (Pin 6 - Gray connector) to the positive side of the bilge pump #2.

High Water Detection

If a High Water Detection is required connect the Orange Wire (Pin 7 - Gray connector) to the ground side of the FB-Sentry High Water/Float Switch Part # SW0052.

Entry Door Monitoring

If entry monitoring is required connect the Brown Wire (Pin 3 - Gray connector) to the FB-Sentry Entry Door Switch Sensor Monitoring Kit (will do 2 doors, hatches, etc.) Part # SW0049 and follow the installation instructions.

Additional Monitoring & Features

Shore Power Monitoring

If shore power is to be monitored connect the White Wire (Pin 8 - Black connector) and Black Wire (Pin 7 - Black connector) to the FB-Sentry Shore Power Sensor Part # SN0073 and follow the installation instructions.

Temperature Monitoring

If temperature monitoring is required connect the Green/Black Wire (Pin 1 - Black connector) to the Black wire (Sender), Red/Violet Wire (Pin 9 - Black connector) to the Red wire (Sender) and Yellow Wire (Pin 12 - Black connector) to the Yellow wire (Sender) to the FB-Sentry Temperature Sensor Part # SN0072 and follow the installation instructions. Longer wires (up to 20') may be spliced on to Temperature Sensor if desired.

Remote Digital Switching - Outputs are switched to ground

Part# SW0050 - FB-Sentry Control Relay - 12v DC
Part# SW0051 - FB-Sentry Control Relay - 24v DC

The FB-Sentry MTU will sink 150mA's to turn on various switches:

Device #1 (relay) connect the Tan/White Wire (Pin 2 - HN0917 black connector)

Device #2 (relay) connect the Tan/Black Wire (Pin 10 - HN0917 black connector)

Device #3 (relay) connect the Tan/Blue Wire (Pin 11 - HN0917 black connector)

For technical assistance, contact Faria Beede Instruments - Customer Service between
8:30 AM and 5:30 PM
Eastern time weekdays at (860) 848-9271 or (800) 473-2742.

LED Status Indicators

With power applied check for blinking LED's

Amber for GSM Signal

Green for GPS fix

Red - Fault Code

Blue - CAN Activity

LED location

Amber   Blue
Green   Red

Label
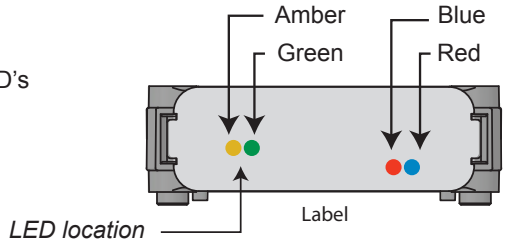
Note: To view the LED look inside the clear plastic part of the case opposite the connectors. The LEDs are located inside the case.

To be fully operational both the Green and Amber LED must be solid (on) and the Blue LED blinking when engine running.

The tables below identify the meaning of the blinking sequence for diagnostic purposes.

LED #1 (Cellular signal - Amber)

Off	Modem Off
Slow Blinking (1 Hz)	Comm On - Searching
Fast Blinking (3 Hz)	Network Available
Alternates from Solid to Fast Blink (1 per second)	Registered but no Inbound acknowledgment
Solid (On)	Registered and Received Inbound acknowledgment.

LED #2 (GPS signal - Green)

Off	GPS Off
Slow Blinking (1 Hz)	GPS On - Searching
Fast Blinking (3 Hz)	GPS - Time Sync
Solid (On)	GPS - Fix

The FB-Sentry will report data at intervals based on user's service plan

Voltage Specifications:

12 & 24V ready (9-30 vDC)
Less than 20 mA during 12V sleep
Less than 70 mA average while active

Operating Temperature: -30°C – 75°C
Storage Temperature: -40°C – 85°C

Note: It is recommended to disconnect FB-Sentry when storing your boat.

Activation

Go to www.fb-sentry.com

Click on the "Sign Up" link.

FB SENTRY

Welcome to FB-Sentry!

Email

Password

Sign in

Sign in with Google

Forgot password

Sign up ← "Sign Up"

FB SENTRY

Welcome to FB-Sentry!

Email

Confirm email

Password

Confirm password

Sign up

Sign up via Google

Sign in

Enter your email and password at the prompts.

From your email, record the verification code.

_____

Enter verification code at prompt.

FB·SENTRY

Email Verification

Please check your email and click the link.

Alternatively you may enter the code received below.

[   ] Submit code

Not receiving verification? Check your spam folder.

Resend verification email

Log out
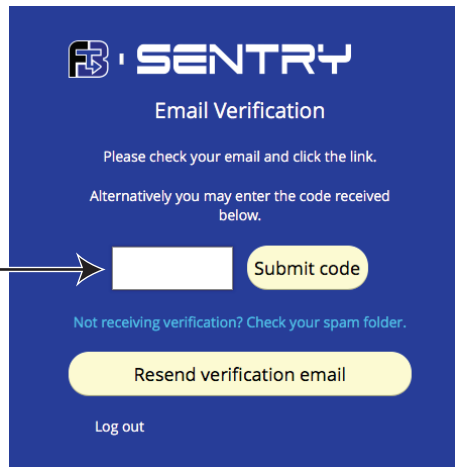
Enter your boat name.

Enter product key. The product key can be found on the MTU on the brand label.

R-117

The product key is also recorded on the label to the right.

Follow the remaining prompts to complete activation

FB·SENTRY   ⚙ Settings

Add new Boat

Enter Boat name

[Enter Boat name   ]

Enter product key, e.g. R-117

[Enter product key   ]

Cancel   Add FB-Sentry

Activation Serial Number

Web Application

For your convenience you can add the web application (FB-Sentry) to your home screen.

iOS

Launch the Safari browser and navigate to www.fb-sentry.com. Tap the share button on the browsers tool bar.

Android

Launch Chrome for Android and open the website www.fb-sentry.com. Tap the menu button.

Both

Tap the Add to Home Screen icon in the menu. Name the icon shortcut and save.