FURUNO

NAVpilot

NAVpilot-711C with Yanmar VC10
Compatible with 8VL and JC10
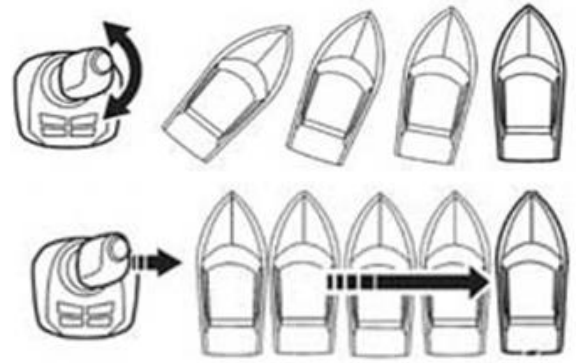
What is a Yanmar VC10?

Yanmar offers electronically controlled steering systems called **VC10**.

All steering actions are controlled electronically as in Yamaha Helm Master and Volvo IPS. Shifting and rotational vessel motion can be controlled with a joystick as shown at right.
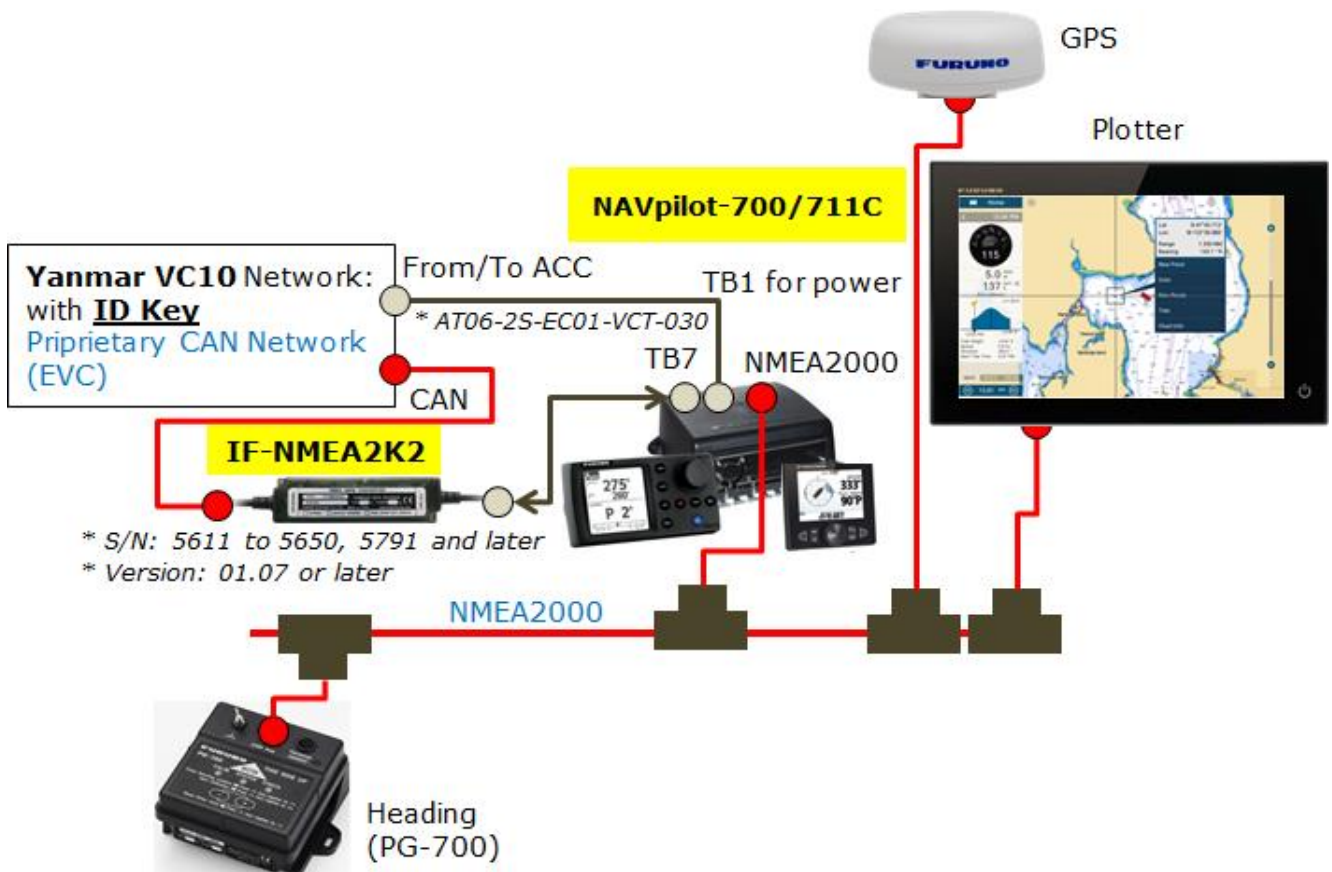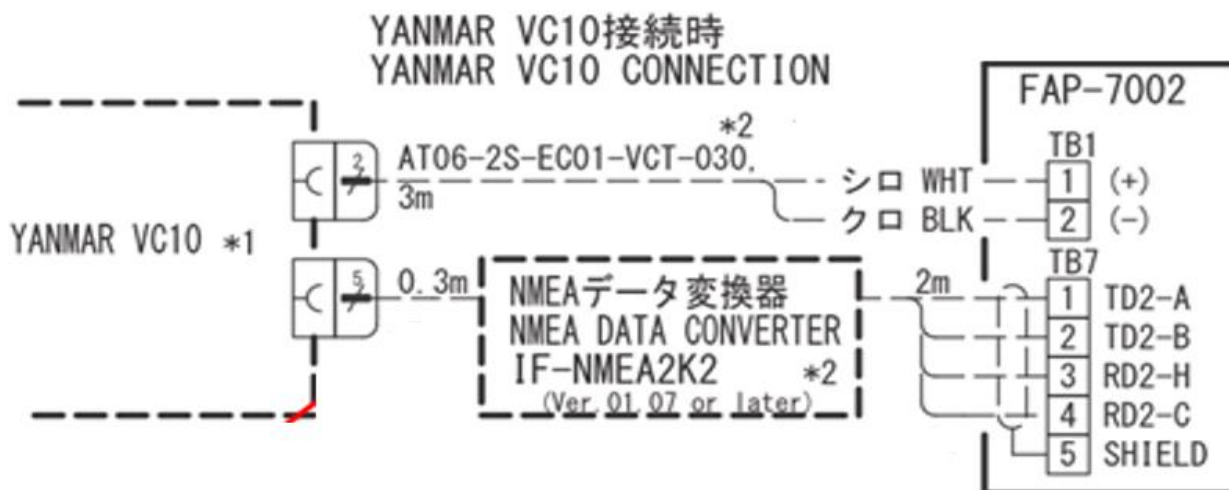
Yanmar VC10 with NAVpilot-711C

The **NAVpilot-711C** is connected to the EVC via an I**F-NMEA2K2**. The IF-NMEA2K2 (serial number: 5611 to 5650, 5791 and later, Version: 01.07 or later) is necessary to network with Yanmar VC10.

The processor power is supplied by the EVC bus.

Interconnection

The following drawing shows an overview of NAVpilot-711C connected to the Yanmar VC10 network. The NAVpilot-711C processor unit, **FAP-7002** is connected to the Yanmar EVC bus **via an IF-NMEA2K2** . **The power of processor unit FAP-7002 is supplied from the EVC bus**.
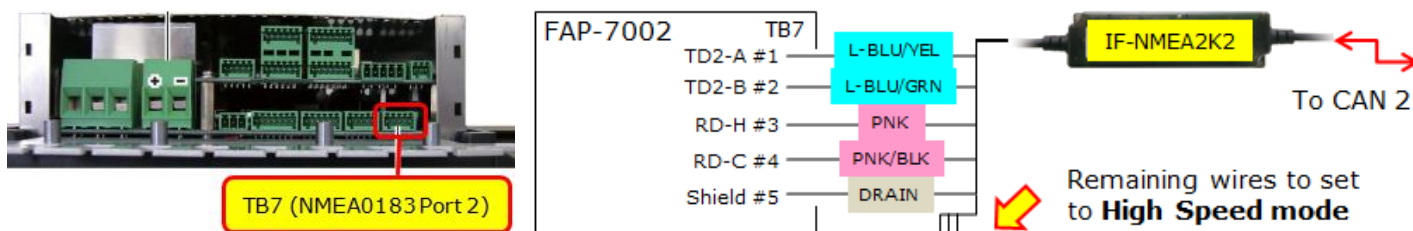
YANMAR VC10接続時
YANMAR VC10 CONNECTION

Note:

The Yanmar VC10 system **must** have an **ID Key (Yanmar supply)** in advance to activate the communications with an autopilot.

Wiring the IF-NMEA2K2 to EVC

Connect the **NMEA2000 connector (Micro-C, male)** of IF-NMEA2K2 to the bus of the Yanmar VC10 network.

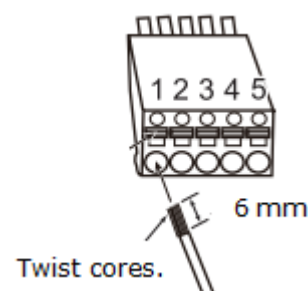## Wiring the IF-NMEA2K2 to the NAVpilot-711C (TB7)

Connect **NMEA0183 wires** of IF-NMEA2K2 to the processor unit F**AP-7002**: **TB7 (NMEA0183 Port 2)** ports as shown below. Make sure that the IF-NMEA2K2 conversion mode is set to **High Speed mode** by modifying the remaining wires in order to communicate in 38,400 bps.

Connection with TB7 (NMEA port 2)

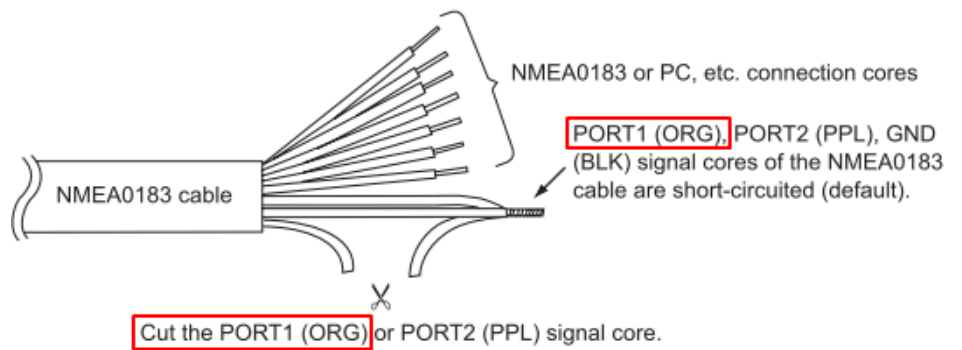Connect the signal lines of the cable to TB7 with the color assignment shown at right.

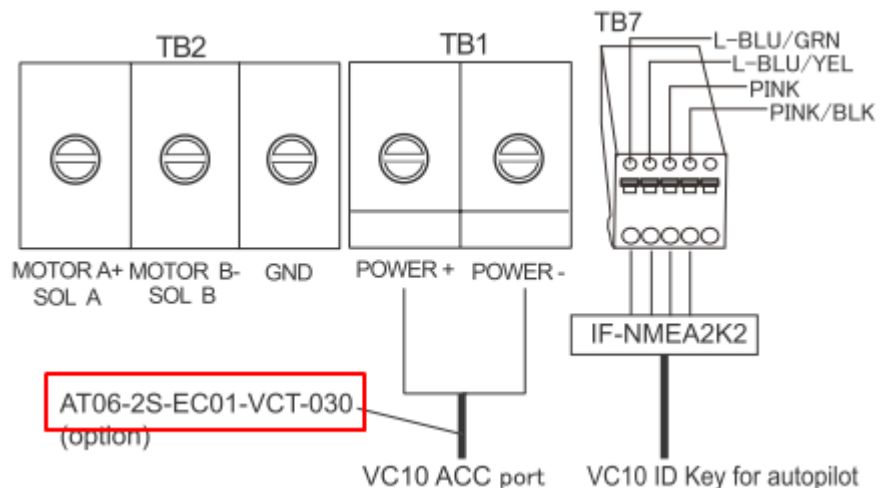| Pin No	Signal	Color
1	TD_A	L-BLU/YEL
2	TD_B	L-BLU/GRN
3	RD_H	PNK
4	RD_C	PNK/BLK
5	Shielded	DRAIN

Setting High Speed Mode

The remaining wires are short-circuited by default for the Normal mode. The conversion mode can be changed to another one by cutting one of the wires. For the High-Speed mode, cut the PORT1 (ORG) as shown at right.

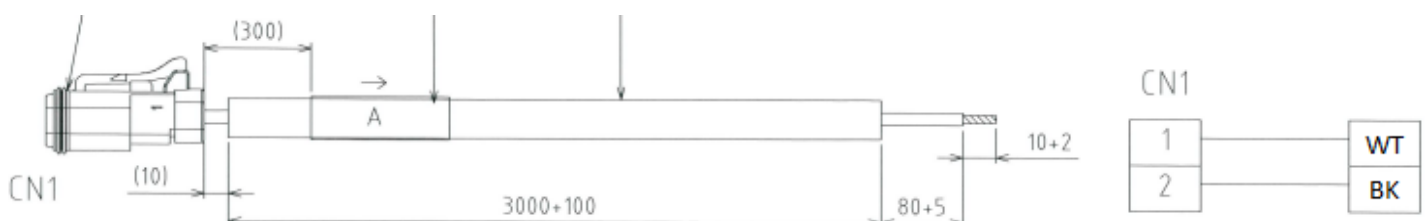## Wiring Power Cable from EVC to NAVpilot-711C (TB1)

The **processor power is supplied from the Yanmar VC10 bus (ACC)**, **NOT** from ship's mains. This is done in order to synchronize the power failure status with the EVC bus. Cable **AT06-2S-EC01-VCT-030, Furuno part # 000-193-626-10** is used.
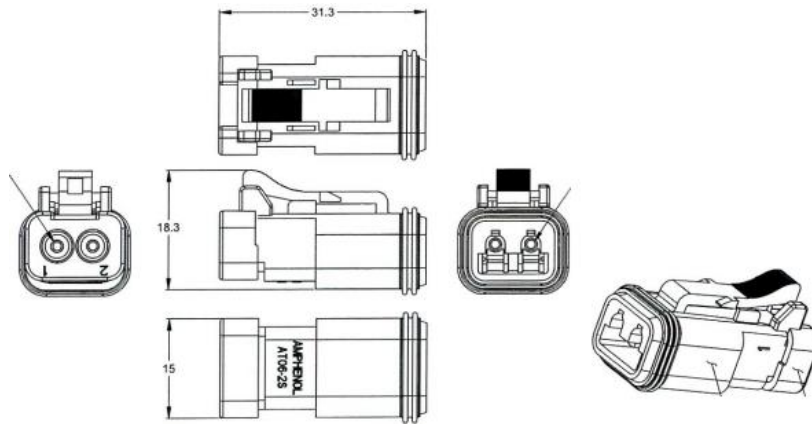
Extracted from NAVpilot-700 Installation Manual:

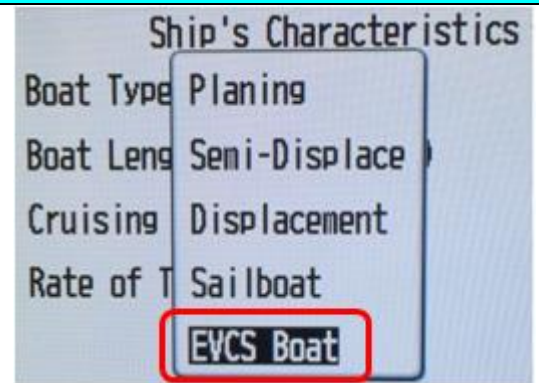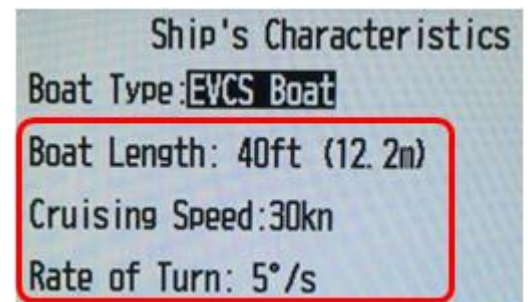| Code	Name	Type
000-193-626-10	CONNECTOR ASSEMBLY	AT06-2S-EC01-VCT-030

Cable Drawing

Initial Settings on NAVpilot-711C

(1) In the Installation Menu, access [Installation] – [SHIP'S CHARACTERISTICS] – [BOAT TYPE] and select [**EVCS BOAT**].

Selecting the [EVCS BOAT] will allow the NAVpilot-711C system to communicate with the Yanmar VC10 system via the IF-NMEA2K2.

(2) Set the [Boat Length], [Cruising Speed], and [Rate of Turn] to fit the customer's boat characteristics.
(3) Set the [Boat Length], [Cruising Speed], and [Rate of Turn] to fit the customer's boat characteristics.

You **do not** need to perform the rudder limit setup and rudder test because those values are already fixed by the Helm Master system.

Compatible Software Versions

The NAVpilot-711C is compatible with the Yanmar VC10 with the following software versions. Make sure to install the latest versions of both processor and control units in the correct combination, as well as the appropriate IF-NMEA2K2 serial number and version.

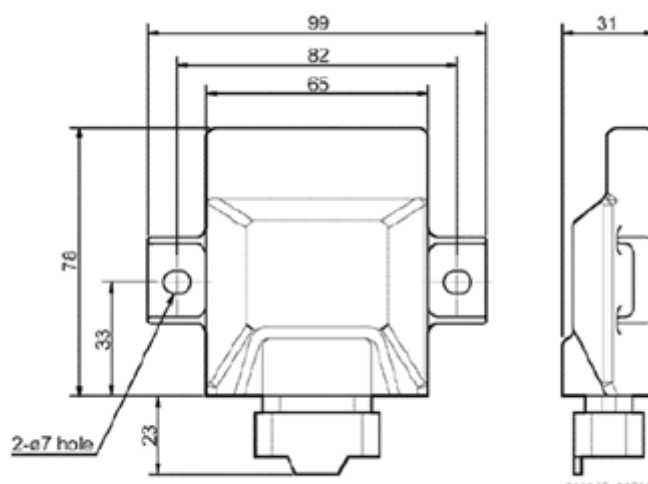| Items	Versions
Processor Unit FAP-7002	01.26 or later
Control Unit FAP-7001/7011 (Monochrome)	01.16 or later
Control Unit FAP-7011C (Color)	01.07 or later
IF-NMEA2K2 (S/N: 5611 to 5650, 5791 and later)	01.07 or later

Note on IF-NMEA2K2:

The **serial number (S/N) of IF-NMEA2K2** should be **5611 to 5650, 5791 and later** and the **version 01.07 or later is loaded**. The IF-NMEA2K2 with older serial numbers **CANNOT** detect the EVC even with the version 01.14 installed, showing the error message [EVC INTERFACE HAS FAILED START UP TEST.] on the NAVpilot-700/711C display. Make sure that the compatible serial numbers are used.

Reminder:

The Yanmar VC10 system **must** have an ID Key (Yanmar supply) to activate the communications with an autopilot.

The ID Key must be installed for the Yanmar system to recognize an autopilot.

Yanmar ID Key

Refer to the NAVpilot-711C Installation manual for complete instructions.

Refer to the Yanmar VC10/JC10 Installation manual for installation settings.

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