

FURUNO

NAV*pilot*

Model **NAVpilot-10000**



NMEA2000
Certified

www.furuno.com



The NAVpilot-1000 is a HCS (Heading Control System) type-approved Autopilot that can be connected to an analog steering system or solenoid steering system, which are often used for relatively large vessels. The NAVpilot-1000 has both IMO and Non-IMO modes depending on steering types or operation requirements and covers various types of vessels.

Model NAVpilot-1000

Steering Straight with AUTO Mode

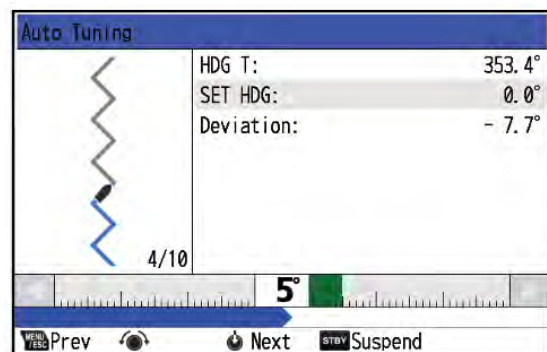
The NAVpilot-1000 takes the helm with an advanced steering algorithm that is designed for larger vessels. Specially designed features, like TURN Mode, ensure that you make smooth turns with confidence.

► Work Profiles

When vessels are operated on a daily basis, sea conditions are different depending on weather or locations. In addition, preference on how-to-steer is also different depending on operators. The NAVpilot-1000 can save a total of six (6) patterns of Work Profiles. Parameters set in Auto Tuning or manual adjustment can be assigned to each profile. Simply select one of the suitable profiles for the day, location or operator.

► Auto Tuning

Before navigating with the NAVpilot-1000, Auto Tuning helps to adjust control parameters. While Auto Tuning, the vessel will run in zig-zag towards the preset heading and automatically adjust rudder gain, counter rudder, and rate of turn to match with vessel characteristics.



- ▶ **HCS (Heading Control System) type-approved Autopilot**
- ▶ **Both IMO and Non-IMO Configurations Available**
- ▶ **The NAVpilot-1000 covers larger boats from commercial vessels to luxury yachts.**



HCS Type-Approved

NAVpilot-1000 received the Type Approval certification for the Heading Control System (HCS) and Heading control system for high speed craft. The Type Approval certifies that the product meets specific safety, quality, and reliability standards required for the international marine industry.



Easy to Read and Robust Controls

The NAVpilot-1000 comes with a 5.7" color control unit. Large, high-contrast characters are easy to read on the color LCD.

The robust rotary knob and buttons are comfortable to rotate and press even in rough sea conditions.

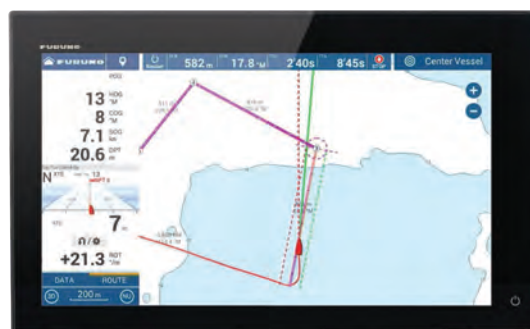
Easily Follow Routes with NAV Mode ^{*Non-IMO mode only}

The NAVpilot-1000 helps steer vessels on a monitored or activated route with NAV mode.

▶ Interconnect with MFD

The NAVpilot-1000 can be connected to FURUNO's NavNet TZtouch series MFDs*¹ via NMEA2000.

AUTO and NAV modes can be activated from the MFD screen, as well as adjusting the set course while navigating.



*Photo: NavNet TZtouch3 TZT19F

*1 TZT10X/13X/16X/22X/24X: All software versions
TZT9F/12F/16F/19F: Software version 3.56 or later
TZT2BB: Software version 9.56 or later



SPECIFICATIONS OF Model NAVpilot-1000

CONTROL UNIT

Display	5.7-inch color LCD, 640 x 480 dots (VGA)
Brilliance	720 cd/m ²
Max. number of units in a network	6 units (requires external 9-16 V power source and isolator for connection of 4 or more units)
Language	English

PROCESSOR UNIT

Steering mode	STBY, AUTO, Advanced AUTO, NAV* ¹ (Standard/Precision), FU-RC* ² , NFU-RC* ¹ * ² , FU-KEY* ² , NFU-KEY* ² , DISENGAGED (FU/NFU: Follow-Up/Non-Follow-Up, RC/KEY: remote/keyboard control)
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*1: Non-IMO mode only, *2: Available only when the RRU is installed.

Rudder gain	Auto / Manual
Counter rudder	Auto / Manual
Trim gain	Auto / Manual
Rate of turn	0.1-10 deg/s
Rudder angle settings	±45 deg
Alert	Heading monitor, Watch, Off heading
Rudder control (analog)	
Voltage	0 to 5 V (min.), -10 to +10 V (max.) (5 mA max.)
Current	4 to 20 mA (load resistance 500 ohm max.)
Solenoid control for rudder on/off	
Isolation	Galvanic/non-galvanic isolation
Connection	Common negative
Load range	3 A max.
Clutch / Bypass drive for rudder	
Isolation	Galvanic/non-galvanic isolation
Connection	Common negative
Load range	3 A max.

*The NAVpilot-1000 is designed for use on 100 m or smaller vessels.

INTERFACE

Number of ports	
Serial	4 ports, I/O, IEC61162-1 Ed.3 to 5, NMEA0183 Ver1.5/2.0, 4800/38400 bps
LAN	1 port, Ethernet 100Base-TX, IEEE802.3 data link, IGMPv2 acceptable
NMEA2000	1 port, for control unit
Universal output	6 ports (dry contact), alarm/status: 100 mA max.
Universal input	4 ports (dry contact)
Power failure	1 port, 12-24 V: 100 mA max.
Changeover switch	1 port (input)
USB	1 port, USB 2.0, for maintenance

POWER SUPPLY

Processor unit	12-24 VDC (10.8-31.2 V): 4.0-2.0 A (control unit: 3 units)
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ENVIRONMENTAL CONDITIONS

Ambient temperature	-15 °C to +55 °C (storage: -30 °C to -70 °C)
Relative humidity	93% or less at +40 °C
Waterproofing	Control Unit: IP22 Processor Unit: IP22

EQUIPMENT LIST

Standard

Control Unit	FAP-10001
Processor Unit	FAP-10002

Installation Materials

Spare parts

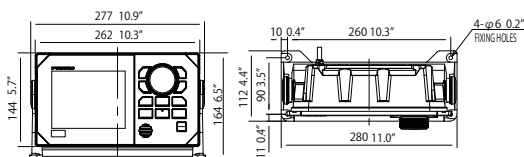
Optional Supply

Control Unit	FAP-10001
Rudder Reference Unit	FAP-6112
NMEA2000 Junction Box	FI-5002
Cable Assembly	FRU-NMEA-PFF 1/2/6 m FRU-NMEA-PMMFF 1/2/6 m FR-FTPC-CY 10/20/30 m ¹ LAN Cable

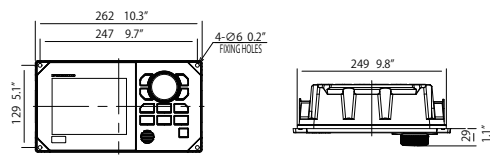
CONTROL UNIT

FAP-10001

DECK MOUNT
1.2 kg 2.65 lb

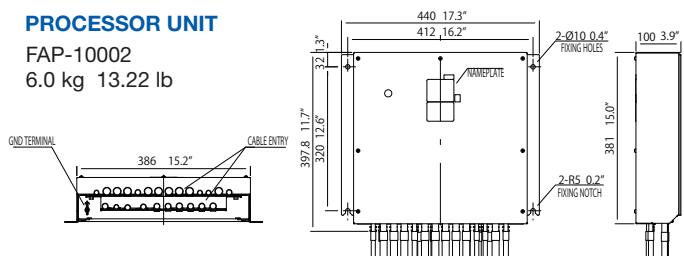


FLUSH MOUNT
0.95 kg 2.09 lb

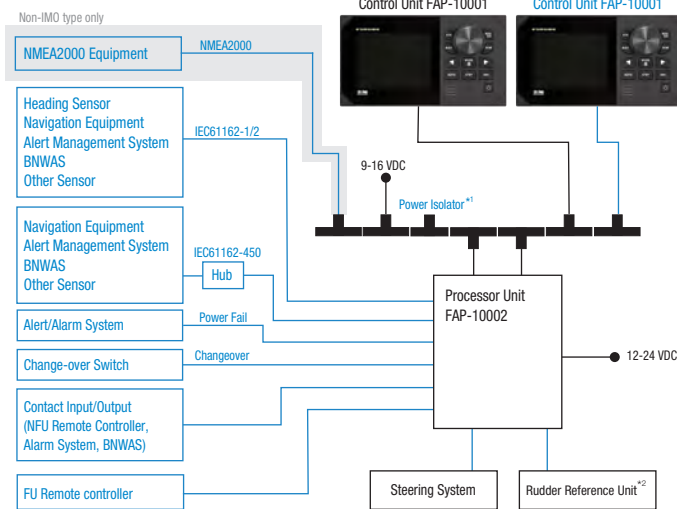


PROCESSOR UNIT

FAP-10002
6.0 kg 13.22 lb



INTERCONNECTION DIAGRAM



An emergency stop method is required for safety at emergency. Refer to Installation Manual for details.
*1 When four or more control units are connected, connect the power isolator to the NMEA2000 network and provide the external power supply to the backbone.
*2 FAP-6112 (optional supply) or third-party RRU.

Beware of similar products

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