FURUNO

OPERATOR'S MANUAL

FI-504 MULTI
FI-507 MULTI XL
Instrument

FURUNO ELECTRIC CO., LTD.

www.furuno.co.jp

ECF
(Elemental Chlorine Free)
The paper used in this manual
is elemental chlorine free.

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IMPORTANT NOTICES

General

- The operator of this equipment must read and follow the descriptions in this manual. Wrong operation or maintenance can cancel the warranty or cause injury.
- Do not copy any part of this manual without written permission from FURUNO.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and equipment specifications can change without notice.
- The example screens (or illustrations) shown in this manual can be different from the screens you see on your display. The screens you see depend on your system configuration and equipment settings.
- Save this manual for future reference.
- Any modification of the equipment (including software) by persons not authorized by FURUNO will cancel the warranty.
- All brand and product names are trademarks, registered trademarks or service marks of their respective holders.

How to discard this product

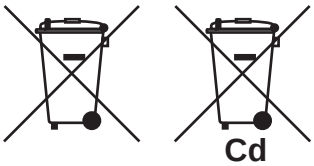
Discard this product according to local regulations for the disposal of industrial waste. For disposal in the USA, see the homepage of the Electronics Industries Alliance (http://www.eiae.org/) for the correct method of disposal.

How to discard a used battery

Some FURUNO products have a battery(ies). To see if your product has a battery(ies), see the chapter on Maintenance. Follow the instructions below if a battery(ies) is used.

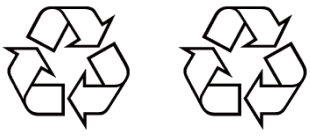
In the European Union

The crossed-out trash can symbol indicates that all types of batteries must not be discarded in standard trash, or at a trash site. Take the used batteries to a battery collection site according to your national legislation and the Batteries Directive 2006/66/EU.



In the USA

The Mobius loop symbol (three chasing arrows) indicates that Ni-Cd and lead-acid rechargeable batteries must be recycled. Take the used batteries to a battery collection site according to local laws.



In the other countries

There are no international standards for the battery recycle symbol. The number of symbols can increase when the other countries make their own recycling symbols in the future.

⚠ SAFETY INSTRUCTIONS

The operator of this equipment must read these safety instructions before attempting to operate the equipment.

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠ Warning, Caution ⃠ Prohibitive Action ❗ Mandatory Action

Safety instructions for the operator

⚠ WARNING

Do not open the equipment.

Only qualified personnel should work inside the equipment.

Do not disassemble or modify the equipment.

Fire or electrical shock can result if the equipment is modified.

Do not operate the equipment with wet hands.

Electrical shock can result.

Make sure no rain or water splash leaks into the equipment.

Fire or electrical shock can result if water leaks into the equipment.

Immediately turn off the power at the switchboard if water leaks into the equipment.

Continued use of the equipment can cause fire or electrical shock.

Safety instructions for the installer

⚠ WARNING

Turn off the power at the switchboard before beginning the installation.

Turn off the power to prevent electrical shock.

Make sure the installation site is not subject to water spray.

Fire or electrical shock can result if water leaks into the equipment.

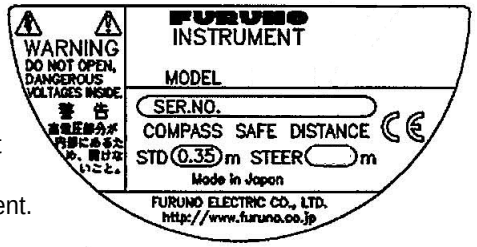
⚠ CAUTION

Observe the following compass safe distances to prevent interference to the instruments:

	Standard compass	Steering compass
FI-504	0.35 m	0.30 m
FI-507		0.25 m

Warning Label

A warning label is attached to the equipment. Do not remove the label. If the label is missing or damaged, contact a FURUNO agent or dealer about replacement.



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FOREWORD

A Word to the Owner of the FI-504, FI-507

Congratulations on your choice of the FURUNO FI-504 Multi/FI-507 Multi XL displays, members of the FI-50 series of marine instruments. We are confident you will see why the FURUNO name has become synonymous with quality and reliability.

For over 60 years FURUNO Electric Company has enjoyed an enviable reputation for quality marine electronics equipment. This dedication to excellence is furthered by our extensive global network of agents and dealers.

This equipment is designed and constructed to meet the rigorous demands of the marine environment. However, no machine can perform its intended function unless operated and maintained properly. Please carefully read and follow the recommended procedures for operation and maintenance.

Thank you for considering and purchasing FURUNO equipment.

Features

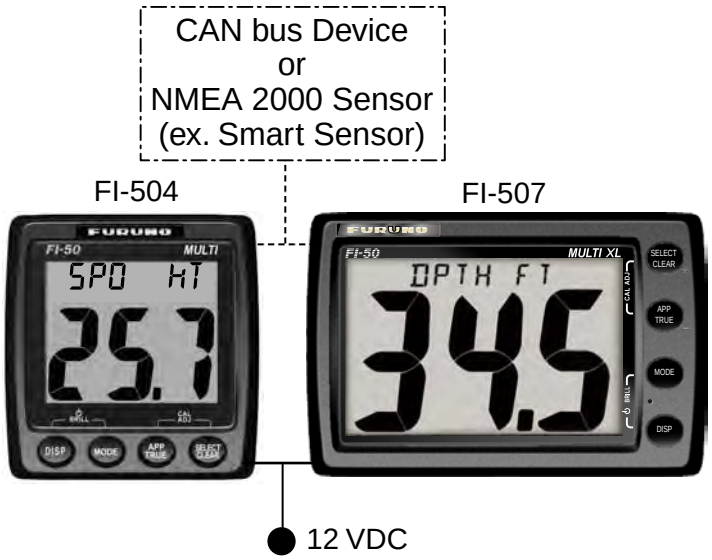
The FI-504 Multi/FI-507 Multi XL displays provide heading, environment, autopilot, engine, depth, speed, and wind information, all on a high quality, backlit LCD. The sturdy weather-proof case is built to stand up to even the harshest of environments.

The main features are

- Eight varieties of displays: heading, environment, autopilot, engine, depth, speed, timer, and wind.
- Four levels of backlighting including off.
- Timers: Stopwatch and count-down
- Depth alarms: Shallow alarm, Deep alarm
- Anchor alarms: Shallow alarm, Deep alarm
- Voltage alarm monitors power source voltage
- Wind alarms: High apparent wind angle, Low apparent wind angle, Max. true wind speed, Low true wind speed
- Speed indications: Max. STW, Average STW, SOG, Max. SOG, Average SOG, Wind speed, Max. true wind speed
- Log indication from 0 to 99,999 nm
- Resettable trip counter, from 0 to 999 nm

SYSTEM CONFIGURATION

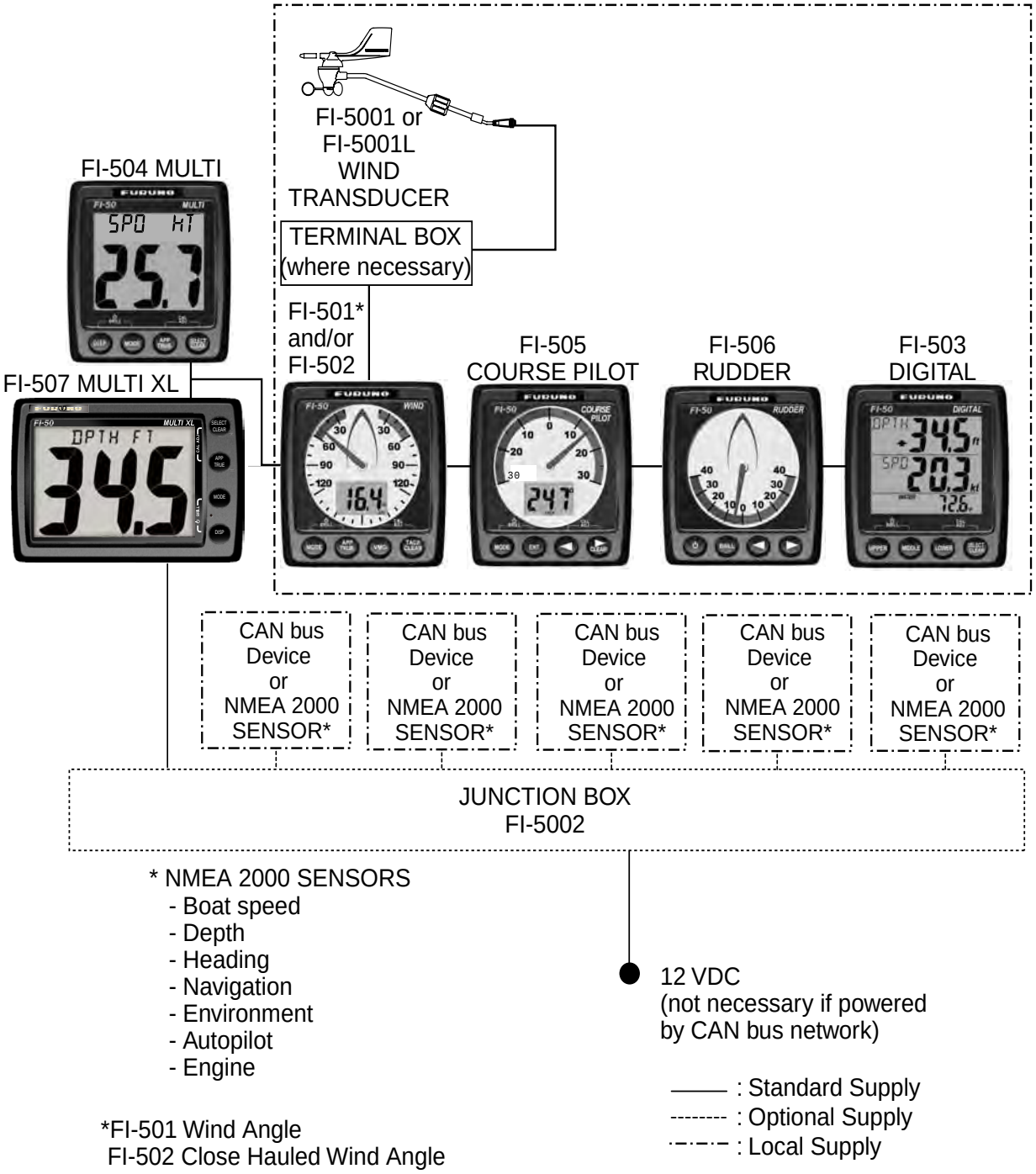
Standalone configuration



——— : Standard Supply
-------- : Optional Supply
-–-–-- : Local Supply

NOTICE: Turn on the terminal resistor in the instrument when connecting an NMEA 2000 sensor or CAN bus device. For the procedure, see the section on setting up, in the installation chapter.

CAN bus network



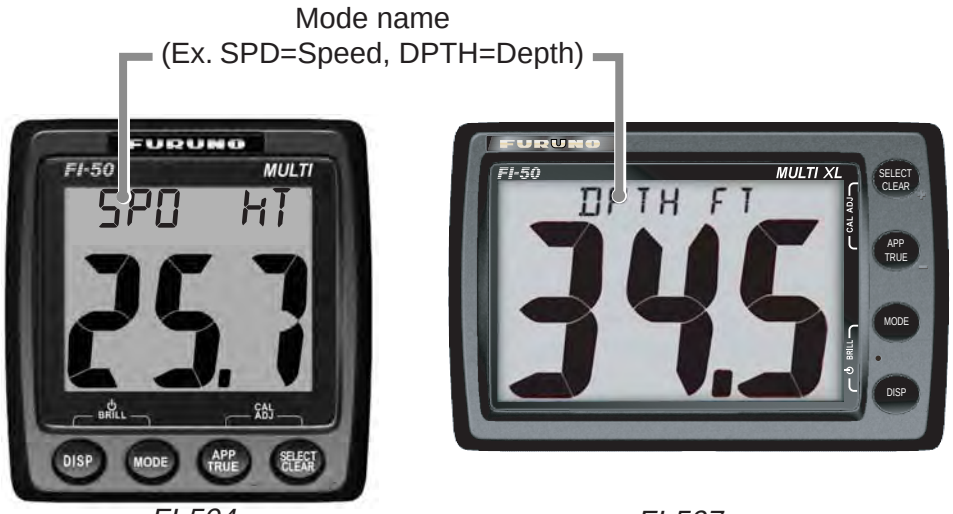
NOTICE: Turn on the terminal resistor in the terminator of the CAN bus network.

1. OPERATION

Provided applicable sensors are connected, the FI-504/FI-507 provides the following information, all on a backlit LCD:

- Depth
- Speed
- Heading
- Environment data
- Autopilot (rudder)
- Engine
- Wind
- Timers
- Navigation data

1.1 Operating Controls, Display Layout



FI-504 *FI-507*

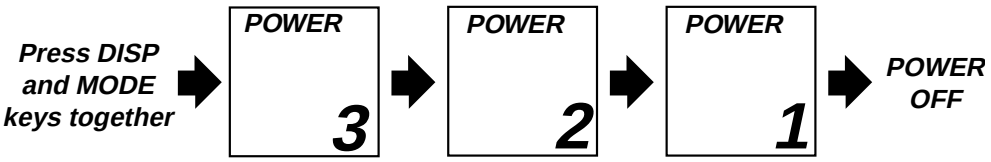
Key name	Function
SELECT/CLEAR	• Select menu option. • Silence alarm. • Clear data. • Reset counters and indications. • Increment value.
APP/TRUE	• Select apaprent or true (wind) alternately. • Decrement value.
MODE	Select a display.
DISP key	• Turn on power. • Select a display category.

Note: The example screens shown in this manual are taken from the FI-504. The screens from the FI-507 may be different.

1.2 Turning the Power On/Off

To power the instrument, press the **DISP** key. All LCD segments go on and off and then the last-used display appears.

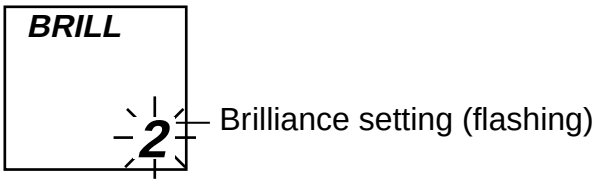
To power off the instrument, press the **DISP** and **MODE** keys together (about 7-10 seconds). The timer appears and counts down from three seconds to one second, and then the power goes off.



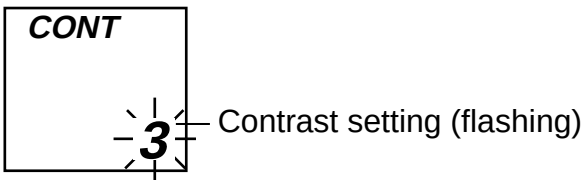
Power OFF sequence

1.3 Adjusting Brilliance and Contrast

1. Press the **DISP** and **MODE** keys together. The display for adjustment of brilliance appears, with current brilliance setting flashing.



2. Within seven seconds of completing step 1, press the **APP/TRUE** key to lower the brilliance, or the **SELECT/CLEAR** key to raise it.
3. Press the **DISP** and **MODE** keys together. The display for adjustment of contrast appears, with current contrast setting flashing.

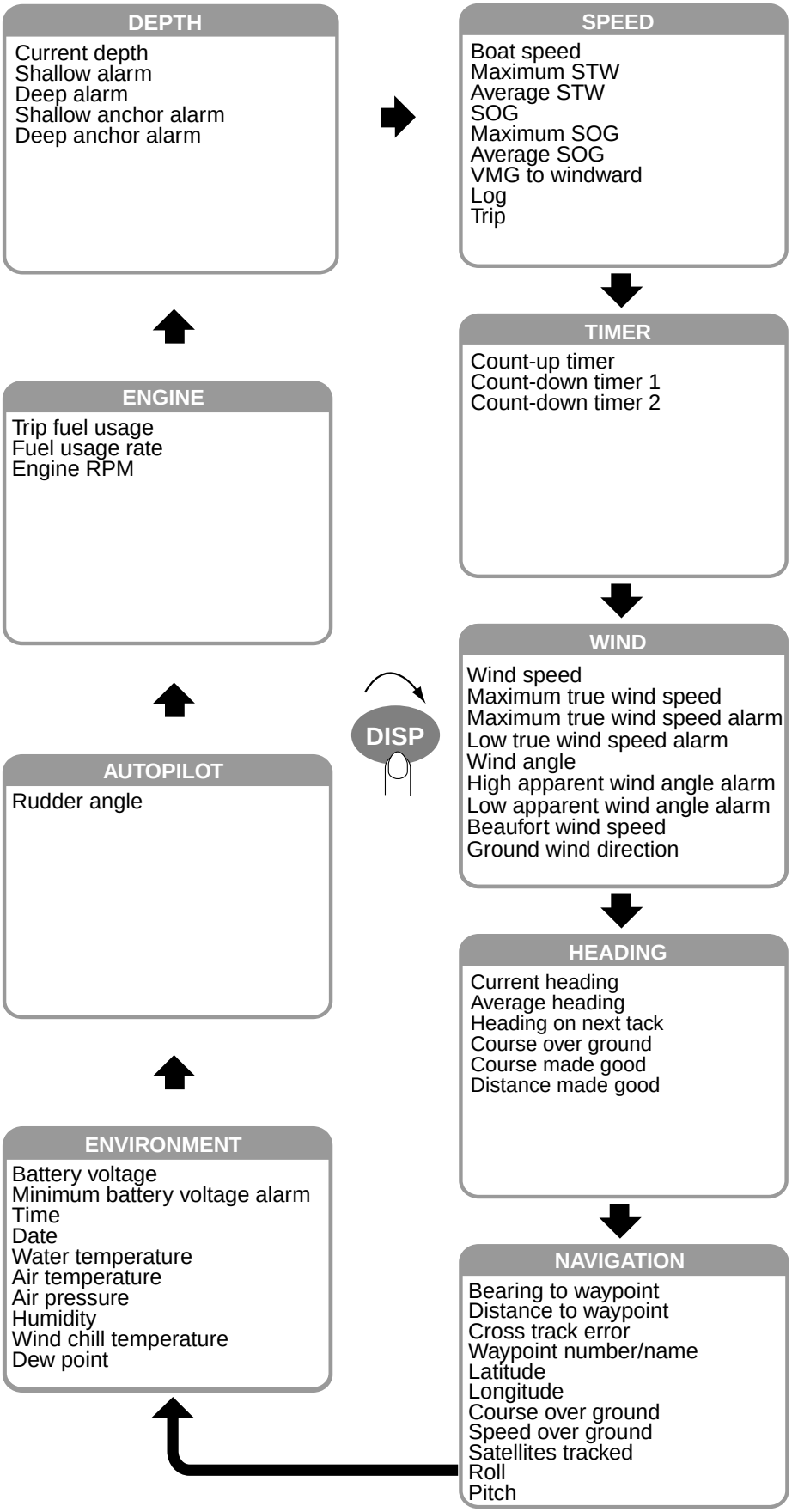


4. Within seven seconds of completing step 3, press the **APP/TRUE** key to lower the contrast, or the **SELECT/CLEAR** key to raise it.
5. Press the **DISP** and **MODE** keys together to save the settings and restore normal operation.

The brilliance and contrast will be the same on all units which are synchronized. (For how to synchronize units, see page 26.)

1.4 Selecting a Display

Use the **DISP** key to select a display category. Select desired display with the **MODE** key.



1.4.1 Display description

Depth category

Display title	Indication	Function
Current depth	DPTH	Current depth, in meters, feet or fathoms.
Shallow alarm	 SHALLOW	Set shallow depth alarm. Audio and visual alarms are released when the depth is lower than the threshold value.
Deep alarm	 DEEP	Set deep depth alarm. Audio and visual alarms are released when the depth is higher than the threshold value.
Shallow anchor alarm	 SHALLOW	Set shallow anchor alarm. Audio and visual alarms are released when the depth is lower than the threshold value.
Deep anchor alarm	 DEEP	Set deep anchor alarm. Audio and visual alarms are released when the depth is higher than the threshold value.

Speed category

Display title	Indication	Function
Boat speed	SPD	Boat speed, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
Maximum STW	MAX SPD	Maximum boat speed, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
Average STW	AVG SPD	Average boat speed, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
SOG	SOG	Speed over ground, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
Maximum SOG	MAX SOG	Maximum speed over ground, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
Average SOG	AVG SOG	Average speed over ground, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
VMG to windward	VMG	Velocity made good to windward, in knots (kt), miles per hour (MPH) or kilometers per hour (KMH).
Log	LOG	Log distance (total distance run), in nautical miles, (NM) kilometers (KM) or statute miles (SM).
Trip	TRIP	Trip distance (distance run between two points), in nautical miles (NM), kilometers (KM) or statute miles (SM).

Timer category

Display title	Indication	Function
Count up timer	UP	Count-up timer.
Count down timer 1	DOWN 1	Count-down timer 1.
Count down timer	DOWN 2	Count-down timer 2.

Wind category

Display title	Indication	Function
Wind speed	APP (or TRUE)	Wind speed, in knots or meters/second.
Maximum true wind speed	MAX TRUE	Maximum true wind speed.
Maximum true wind speed alarm	 MAX TRUE	Set maximum true wind speed alarm. Audio and visual alarms are released when the wind speed goes higher than the threshold value.
Low true wind speed alarm	 TRUE LO	Set low true wind speed alarm. Audio and visual alarms are released when the wind speed goes lower than the threshold value.
Wind angle	APP (or TRUE)	Apparent (or true) wind angle, in degrees.
High apparent wind angle alarm	 APP HI	Set high apparent wind angle alarm. Audio and visual alarms are released when the wind angle at starboard goes higher than the threshold value.
Low apparent wind angle alarm	 APP LO	Set low apparent wind angle alarm. Audio and visual alarms are released when the wind angle at port goes lower than the threshold value.
Beaufort wind speed	BFT	Beaufort wind speed. Beaufort speeds up to 12 are shown. See the table below for Beaufort no. and wind speed.
Ground wind angle	GWIND	Angle of wind over ground, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).

Beaufort no. and wind speed

Beaufort no.	Wind speed		Beaufort no.	Wind speed	
	kt	m/s		kt	m/s
0	0	0-0.2	7	28-33	14.4-17.4
1	1-3	0.5-2.0	8	34-40	17.5-21.0
2	4-6	2.1-3.5	9	41-47	21.1-24.6
3	7-10	3.6-5.6	10	48-55	24.7-28.8
4	11-16	5.7-8.6	11	56-63	28.9-32.6
5	17-21	8.7-11.2	12	64	32.7-32.9
6	22-27	11.3-14.3			

Heading category

Display title	Indication	Function
Current heading	HDG	Heading, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).
Average heading	AVG HDG	Average heading, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).
Heading on next tack	TACK	Heading on next tack, in degrees true (fixed). Bearing reference in Magnetic (MAG) or True (TRUE).
Course over ground	COG	Course over ground, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).
Course made good	CMG	Course made good, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).
Distance made good	DMG	Distance made good, in kilometers (km), nautical miles (nm) or statute miles (sm).

Navigation category

Display title	Indication	Function
Bearing to waypoint	BTW	Bearing to waypoint, in degrees. Bearing reference of Magnetic (MAG) or True (TRUE)
Distance to waypoint	DTW	Distance to waypoint, in kilometers (KM), nautical miles (NM) or statute miles (SM).
Cross track error	XTE	Cross-track error, in kilometers (KM), nautical miles (NM) or statute miles (SM).
Waypoint number/name	WPT	Waypoint number and name are shown.
Latitude	LAT	Position in latitude.
Longitude	LON	Position in longitude.
Course over ground	COG	Course over ground, in degrees. Bearing reference in Magnetic (MAG) or True (TRUE).
Speed over ground	SOG	Speed over ground, in knots (KT), miles per hour (MPH) or kilometers per hour (KMH).
Satellites tracked	GPS SAT	GPS satellites tracked.
Roll	ROLL	Ship’s roll, in degrees.
Pitch	PITCH	Ship’s pitch, in degrees.

Environment category

Display title	Indication	Function
Battery voltage	VOLTS	Battery voltage.
Minimum battery voltage alarm	 VOLTS LO	Set low battery voltage alarm. Audio and visual alarms are released when the battery voltage goes lower than the threshold value.
Time	-	Current time, in 12-hour or 24-hour format.
Date	-	Current date.
Water temperature	WATER	Water temperature, in °C or °F.
Air temperature	AIR	Air temperature, in °C or °F.
Air pressure	PRE	Air pressure, in Hectopascal.
Humidity	HUMID	Relative humidity, in percentage.
Wind chill temperature	CHILL	Wind chill temperature, in °C or °F.
Dew point	DEW	Dew point, in °C or °F.

Autopilot category

Display title	Indication	Function
Rudder angle	RUDDER	Rudder angle, in degrees either P(ort) or S(tarboard).

Engine category

Display title	Indication	Function
Trip fuel used	TOTAL	Total fuel consumption, in liters or gallons.
Fuel rate	RTE (L/H)	Amount of fuel consumed in hour, in liters/hour (L/H) or gallons/hour (G/H).
Engine RPM	RPM	Engine speed per minute.

Note: In case of multiple engines, the data of desired engine number (max. eight, E0-E7) can be selected with the **SELECT/CLEAR** key.

Scrolling speed and scrolling direction

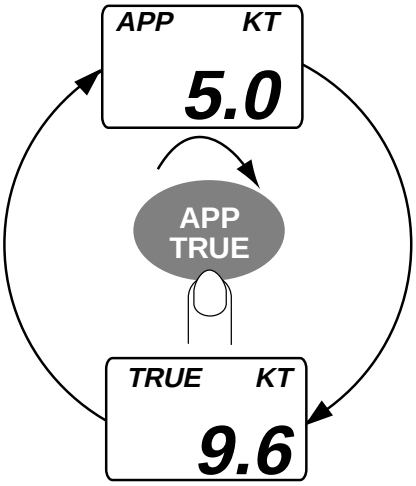
Display scrolling speed and direction can be changed by the length of key push.

Short push: Scroll in forward order.
Medium push: Go back one display. Several beeps sound and then the previous display appears.
Hold down: Rapid scrolling, in forward direction. Several beeps sound and then speed is changed.

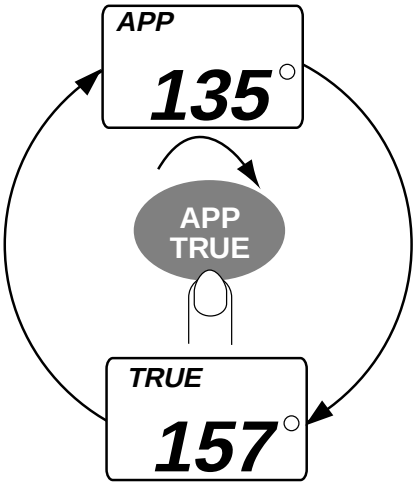
1.5 Selecting Apparent or True Wind Angle, Wind Speed

You can show wind angle and wind speed in apparent or true wind. The **apparent wind** is the actual flow of air acting upon a sail, or the wind as it appears to the sailor. **True wind** is the wind seen by a stationary observer in velocity and direction.

WIth a wind angle or wind speed indication displayed, press the **APP/ TRUE** key to change the wind angle or wind speed to apparent and true alternately. A beep sounds after the change is completed. (Wind angle and wind speed displays are mutually changed.) True wind requires boat speed input. If there is no speed input three dashes appear.



Apparent and true wind speeds



Apparent and true wind angles

1.6 Resetting Counters and Indications

You can reset the following counters and indications:

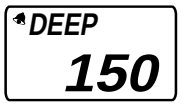
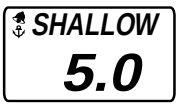
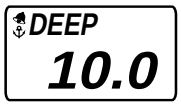
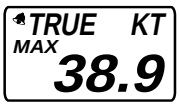
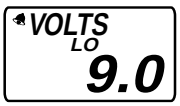
- Trip
- Course made good
- Distance made good
- Average speed
- Average SOG
- Maximum speed
- Maximum SOG
- Average heading
- Maximum true wind speed

Select the applicable display and press and hold down the **SELECT/ CLEAR** key. A short beep sounds, the counter or indication flashes twice and then a long beep sounds to indicate that resetting is completed.

1.7 Alarms

There nine conditions which trigger audio and visual alarms: Shallow alarm, Deep alarm, Shallow anchor alarm, Deep anchor alarm, Max. true wind speed alarm, Low true wind speed alarm, High apparent wind angle alarm, low apparent wind angle alarm, and low battery voltage alarm.

1. Use the **DISP** and **MODE** keys to select desired alarm page, referring to the illustration below for alarm location.

Display category	Available alarms			
DEPTH	 Shallow alarm	 Deep alarm	 Shallow anchor alarm	 Deep anchor alarm
WIND	 Max. true wind speed alarm	 Low true wind speed alarm	 High apparent wind angle alarm	 Low apparent wind angle alarm
ENVIRON-MENT	 Low voltage alarm			

*S (Starboard) or P (Port)

.

Alarm description

Alarm	Alarms released when;	Setting range
Shallow alarm	depth is shallower than this threshold.	0.0-303 m
Deep alarm	depth is deeper than this threshold.	0.1-304 m
Shallow anchor alarm	anchor depth is shallower than this threshold.	depth is shallower than this threshold.
Deep anchor alarm	anchor depth is greater than this threshold.	depth is deeper than this threshold.
Max. true wind speed alarm	max. true wind speed is greater than this threshold.	0.1-999 kts
Low true wind speed alarm	true wind speed is lower than this threshold.	0-998 kts
High apparent wind angle alarm	apparent wind angle is higher than this threshold.	S0°-S179° (High) S180°-P1° (Low) (S=Starboard, P=Port)
Low apparent wind angle alarm	apparent wind angle is lower than this threshold.	

Alarm description

Alarm	Alarms released when;	Setting range
Low battery voltage alarm	battery voltage is lower than this threshold.	5.0 - 20.0 volts

2. If the selected alarm page shows “Off,” press and hold down the **SELECT/CLEAR** key until an alarm setting appears.
3. Press the **APP/TRUE** and **SELECT/CLEAR** keys together to enable adjustment. The alarm setting starts flashing.
4. Press the **APP/TRUE** key to lower the setting; the **SELECT/CLEAR** key to raise it.

   Note: A low alarm cannot be set higher than its affiliated high (max.) alarm.
5. Press the **APP/TRUE** and **SELECT/CLEAR** keys together to confirm setting and restore normal operation.

When an alarm is violated, the buzzer sounds and the alarm icon () flashes. You can silence the buzzer with the **SELECT/CLEAR** key. The icon continues flashing until the offending alarm is disabled.

While the icon is flashing you can switch between alarm display and current display alternately by pressing the **DISP** and **SELECT/CLEAR** keys together.

1.8 Timers

Three timers are provided:

- Count-up timer (stopwatch)
- Count-down timer (two provided)

Time is displayed in seconds or minutes, depending on counter values.

Once you have set a timer, you can leave that page and select any other display. The counter continues to run in the background.

Count-up timer

The count-up timer functions like a stop watch, counting time upward, to 99 hours, 99 minutes and 59 seconds.

Count-down timers

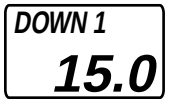
The two count-down timers count down from a time between 15 minutes and one minute. When these timers have counted down to zero, they then start counting up. The timers beep at preset intervals to alert you to specific points in time.

- Two beeps every minute
- Three beeps at the start of the last 30 seconds
- One beep/second for each of the last 10 seconds
- Two-second beep at zero

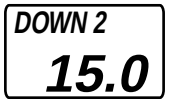
How to set the timers

1. Press the **MODE** key to show the desired timer display.

Count-up timer



Count-down timer 1



Count-down timer 2

2. Do one of the following depending on timer type selected:

   Count-up timer:

   Press the **SELECT/CLEAR** key to start the timer. A long beep sounds and the timer starts counting upward.

   Count-down timer:

   To start the timer from the time shown, press the **SELECT/CLEAR** key. To set a different start time, press the **APP/TRUE** and **SELECT/CLEAR** keys together to enable adjustment. Use the **APP/TRUE** key to lower the value; **SELECT/CLEAR** key to raise it. Press the **APP/TRUE** and **SELECT/CLEAR** keys together to confirm setting. Press the **SELECT/CLEAR** key to start the timer.

To stop or restart the timer, press the **SELECT/CLEAR** key momentarily. A short beep sounds when the timer is stopped or restarted.

To stop and reset the timer to start value, press the **SELECT/CLEAR** key until you hear a long beep. The timer is stopped and reset to start value.

The timer settings are reflected on any timer-equipped instrument in the network which is set up for synchronization.

2. MAINTENANCE, TROUBLESHOOTING

This chapter provides the information necessary for keeping your equipment in good working order.

⚠ WARNING

Do not open the equipment.

Only qualified personnel should work inside the equipment.

2.1 Preventive Maintenance

Following the recommended procedures below will help maintain performance.

Check item	Check point	Remedy
Cabling	Check that all cabling is securely fastened and is free or rust and corrosion.	Reconnect if necessary. Replace if damaged.
Cabinet	Dust on cabinet	Remove dust with a soft, lint-free cloth. **NOTICE** **Do not apply paint, anti-corrosive sealant or contact spray to coating or plastic parts of the equipment.** Those items contain organic solvents that can damage coating and plastic parts, especially plastic connectors.

2.2 Troubleshooting

If you feel the equipment is not functioning properly, follow the procedures in the table below to try to restore normal operation. If normal operation cannot be restored, do not attempt to check inside the cabinet. There are no user-serviceable parts inside.

Troubleshooting

Problem	Possible cause	Remedy
Display is blank. Panel is not lit.	• Power supply • Cabling disconnected or damaged.	• Check power supply. • Check cabling.
Power is on but no or some data.	Sensor is turned off. Cable from sensor is disconnected or damaged.	• Turn on sensor. • Check cabling.
Inaccurate data	• Electromagnetic field generating equipment is in operation.	• Turn off all electromagnetic field generating equipment. Turn them on and off one by one. Check the display. Relocate offending equipment or this instrument as appropriate.
	• Cabling from sensor is damaged.	• Check cabling.
	• Sensor is improperly aligned (where applicable).	• Check installation. If installation is proper, an offset may be applied to certain data. For details, see section 1.7.

3. INSTALLATION

NOTICE

Do not apply paint, anti-corrosive sealant or contact spray to coating or plastic parts of the equipment.

Those items contain organic solvents that can damage coating and plastic parts, especially plastic connectors.

3.1 Equipment Lists

Standard supply

(FI-504)

Name	Type	Code No.	Qty	Remarks
Display Unit	FI-504	-	1	
Installation Materials	CP26-00600	000-011-744	1 set	See packing list at end of manual for details.

(FI-507)

Name	Type	Code No.	Qty	Remarks
Display Unit	FI-507	-	1	
Installation Materials	CP26-00800	000-015-730	1 set	See packing list at end of manual for details.

Optional supply

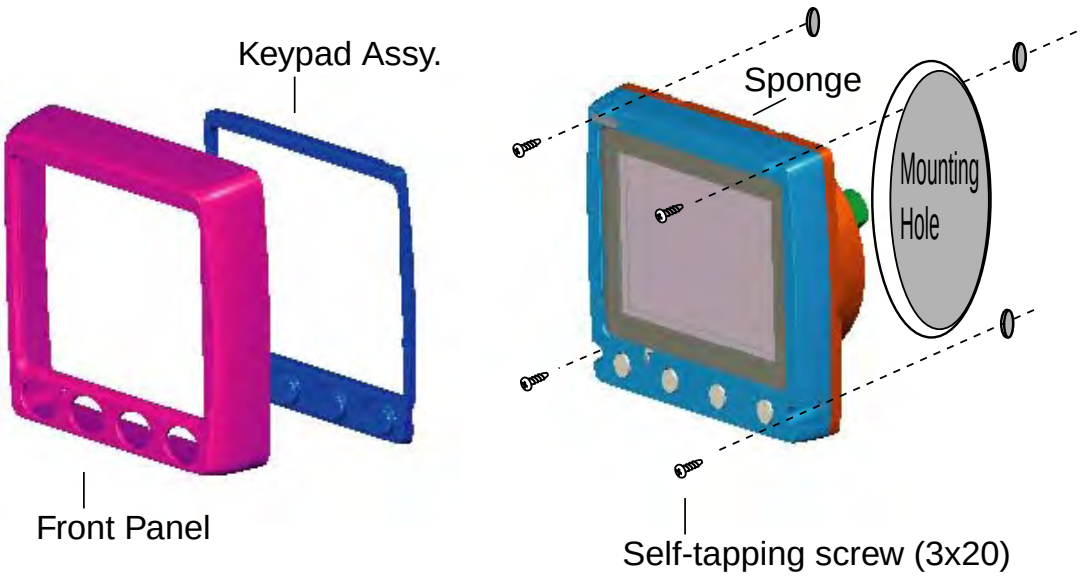
Name	Type	Code No.	Qty	Remarks
Cable Assy.	FI-50-DROP	000-166-945-10	1	
	FI-50-CHAIN-0.3M	000-166-949-10	1	
	FI-50-CHAIN-5M	000-166-951-10	1	
	FI-50-CHAIN-1M	000-166-950-10	1	
	FI-50-CHAIN-10M	000-166-952-10	1	
	FI-50-CHAIN-20M	000-166-953-10	1	
Flush Mount Kit	FI-50-FLUSH-KIT	000-010-619	1 set	For FI-504
	FI-507-FLUSH-KIT	000-015-722		For FI-507
Junction Box	FI-5002	000-010-765	1 set	
Smart Sensor	DST-800	000-168-850-10	1	

3.2 Mounting

The display unit can be installed two ways: surface mount (fixed at front panel or fixed from rear panel) and flush mount (optional kit required). This section covers surface mounting. For flush mounting, see the flush mounting instructions, issued separately.

Surface mount 1: Fix instrument from front panel

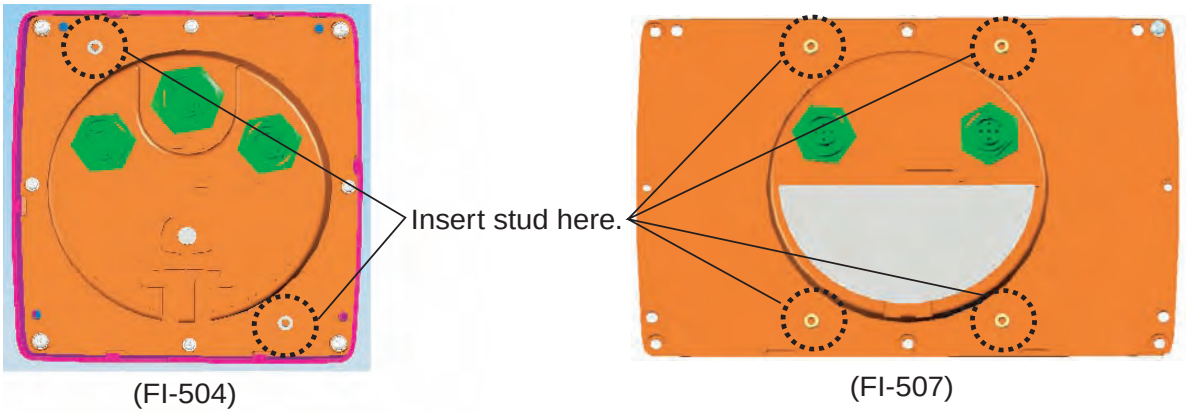
1. Using the applicable template at the back of this manual, open a mounting hole in the installation site.
2. Detach the front panel together with the keypad assy. Attach sponge (supplied) to rear of display unit.
3. Set the display unit to the mounting hole, and fix it with four self-tapping screws (3×20, supplied).
4. Attach the front panel and keypad assy. to the display unit.



(ex. FI-504)

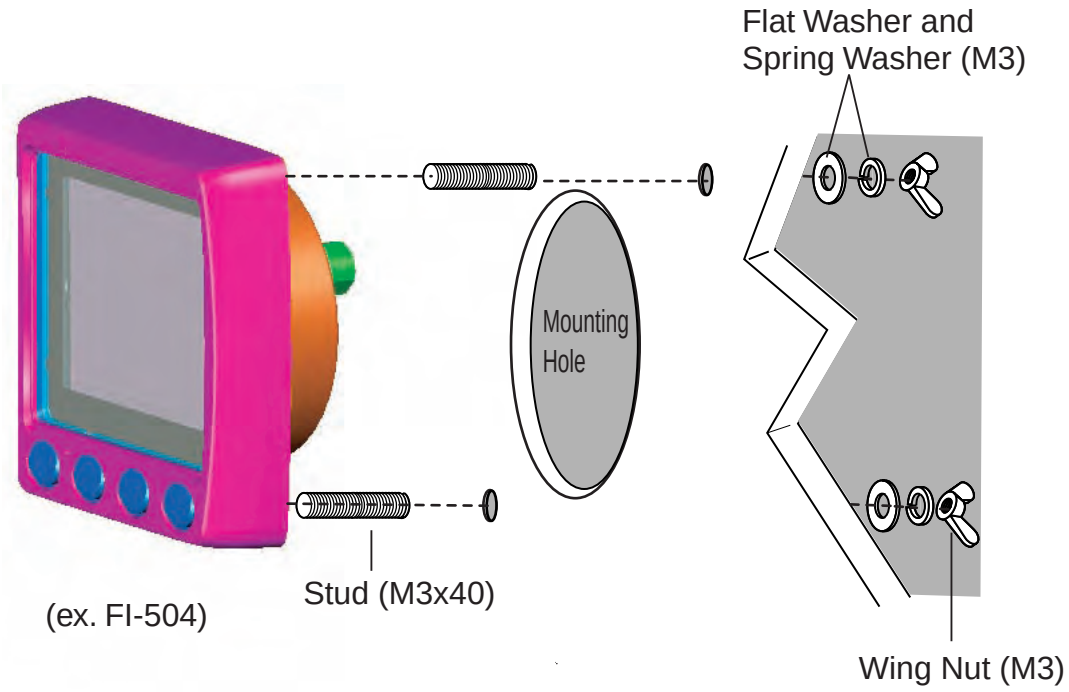
Surface mount 2: Fix instrument from rear panel

1. Using the applicable template at the back of this manual, open a mounting hole in the installation site.
2. Insert studs (M3×40, 2 pcs. (FI-504) or 4 pcs. (FI-507), supplied) in the holes shown below. (Use only the studs supplied.)



Display unit, rear view

3. Set the display unit to the mounting hole, inserting studs through respective holes. Fix the display unit with spring washers, flat washers and wing nuts (M3, supplied).

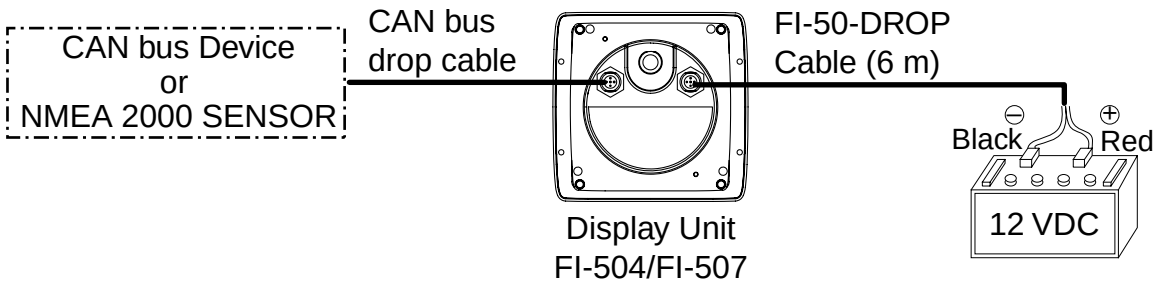


3.3 Wiring

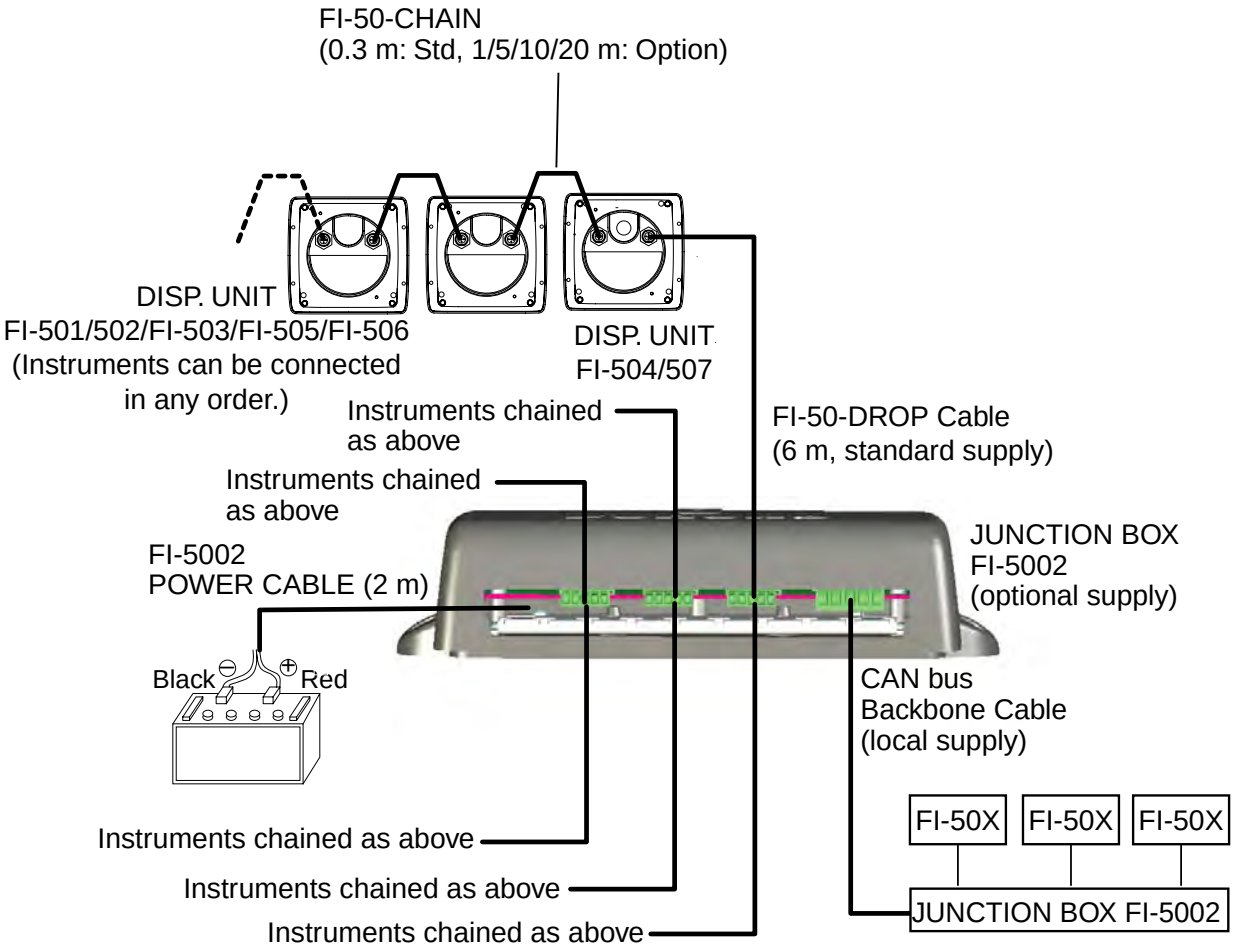
For detailed information about CAN bus wiring, see “Furuno CAN bus Network Design Guide (TIE-00170-*) on Tech-Net.

3.3.1 Standalone configuration

For standalone configuration the junction box is not necessary; connect the instrument directly to the power supply.



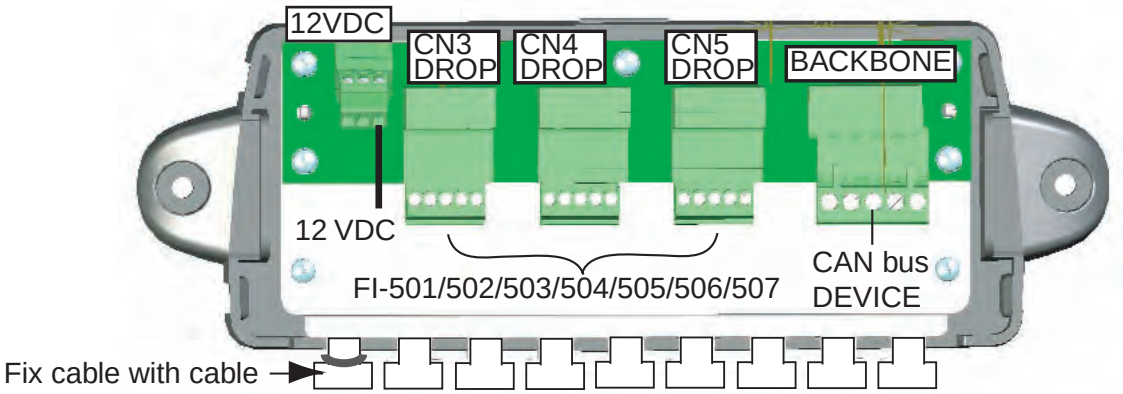
3.3.2 Multi-instrument configuration



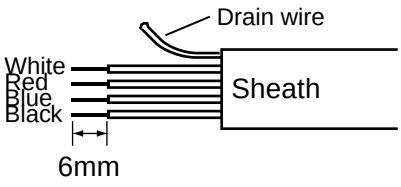
The total length of drop cables and backbone cables must be within 80 m.

Junction box (option)

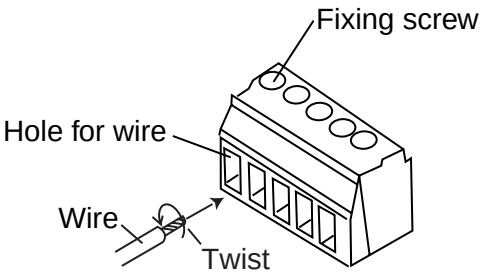
The junction box is required when connecting CAN bus network. This section covers wiring of the junction box. For how to mount the junction box, see its installation instructions, issued separately.



CH3 DROP - CH5 DROP and BACKBONE are socket-and-plug-type terminal blocks. Detach plug to connect wiring to it, by rocking it back and forth with your fingers. Remove approx. 6 mm of the sheath from the end of wires and twist wires. Loosen fixing screw in the plug, insert wire into hole and tighten fixing screw. Set plug to socket.



How to fabricate cable

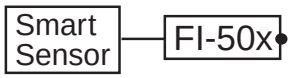


How to insert wire

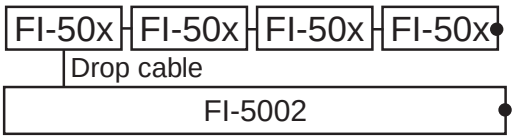
Terminal resistor

The illustration below show various system configurations and what units to activate the terminal resistor.

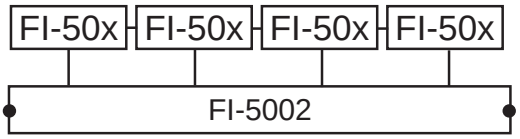
Smart sensor+FI-50x



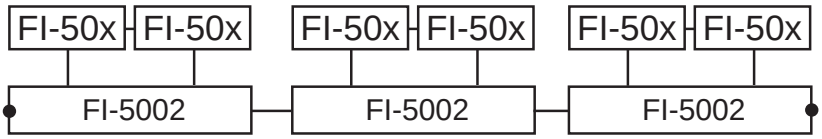
Multiple FI-50 series instruments, FI-5002, drop cabling



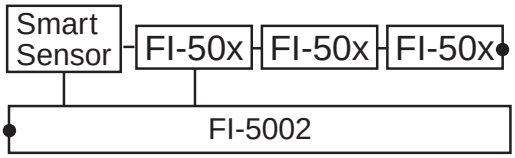
Multiple FI-50 series instruments, FI-5002



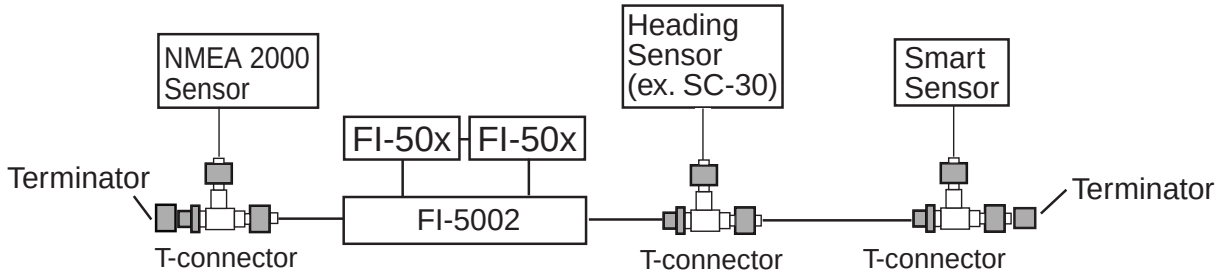
Multiple FI-50 series instruments, multiple FI-5002



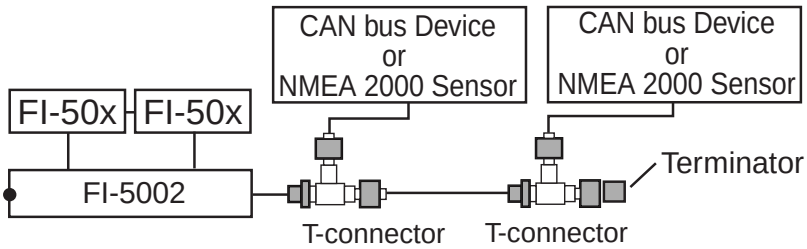
Multiple FI-50 series instruments, FI-5002, smart sensor



Multiple FI-50 series instruments, FI-5002, heading sensor, smart sensor

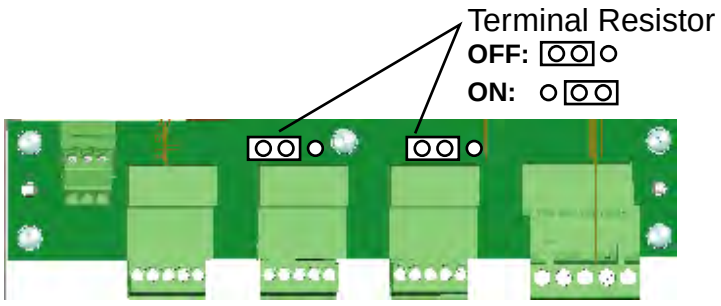


Multiple FI-50 series instruments, FI-5002, NMEA 2000, CAN bus sensors



● = Terminal resistor ON

Turn on the terminal resistor in the junction box when the FURUNO CAN bus and/or NMEA 2000 sensor(s) connected to it do not have a terminal resistor.



For how to turn on the terminal resistor in a FI-50 series instrument, see paragraph 3.4.2 “Setup2 menu”.

3.4 Setting Up

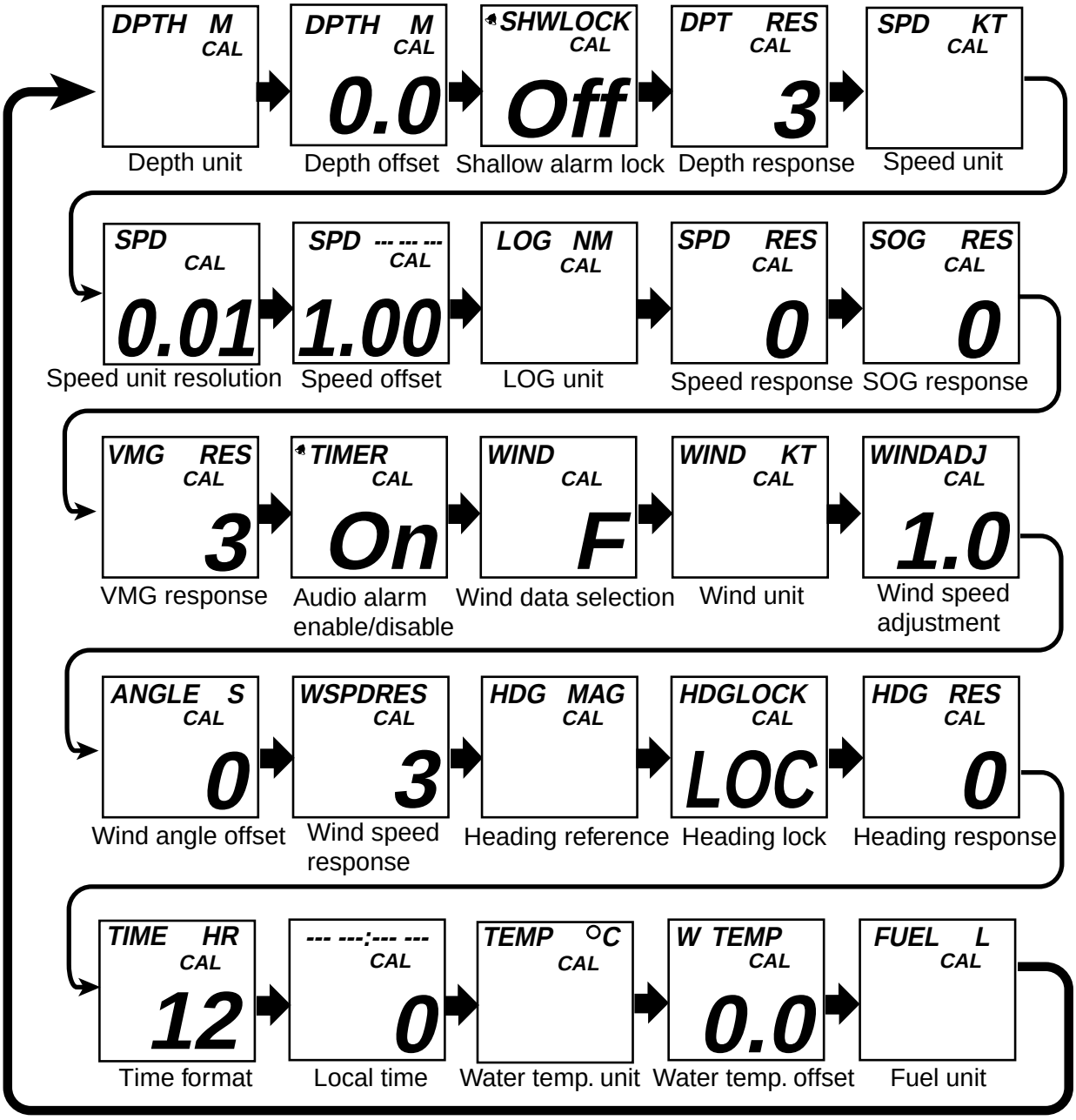
Your instrument is pre-programmed with factory default settings, which may or may not be suited to your vessel. Therefore, it is necessary to initialize the instrument for use with your vessel. This should be done immediately after completion of the installation.

Two sets of setup menus are provided: setup1 and setup2. The setup1 menu provides system parameters and the setup2 menu has user settings.

3.4.1 Setup1 menu

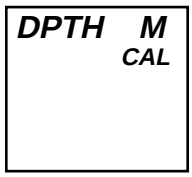
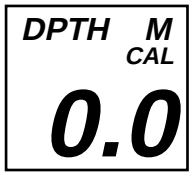
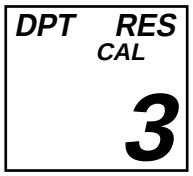
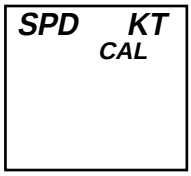
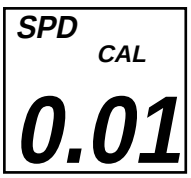
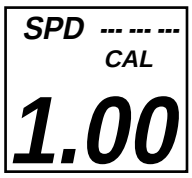
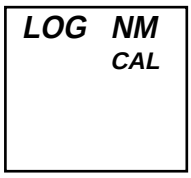
The setup1 menu contains system parameters which optimize the instrument for use on your vessel. Follow the procedure below to access and set parameters.

1. Press the **APP/TRUE** and **SELECT/CLEAR** keys momentarily to enable the setup1 menu. The Depth unit selection screen appears, with the depth unit flashing. (See the illustration on the next page.)
2. Use the **DISP** key to select a menu item. Each press of the key changes the menu item in the sequence shown in the illustration on the next page.

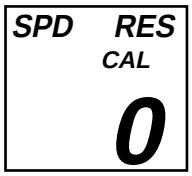
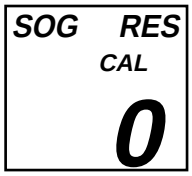
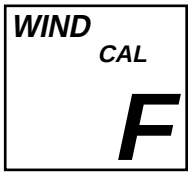
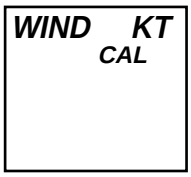
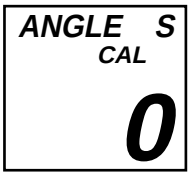


3. Use the **APP/TRUE** or **SELECT/CLEAR** key to set value or select option.
   VMG key: Decrement value
   SELECT/CLEAR key: Increment value or select option.
4. To continue, press the **DISP** key to select another menu item.
5. To save settings and restore normal operation, press the **APP/TRUE** and **SELECT/CLEAR** keys together.

Setup1 menu items

Display	Function	Setting range or options	Default setting
	Select depth unit.	M (Meter), FT (Feet)	M
	Set depth offset.	-99 - +99	0.0
	Lock/unlock shallow alarm setting.	ON, OFF	OFF
	Set depth response. The lower the setting the faster the response to change in depth.	0 - 12	3
	Select speed unit.	KT (Knot), MPH (Miles/Hour), KMH (Kilometers/Hour)	KT
	Select speed resolution. Select number of places to show after decimal point.	0.01, 0.1	0.01
	Set speed adjustment. (STW only)	0.30- 2.50	1.00
	Select log unit.	NM (Nautical Mile), SM (Statute Mile), KM (Kilometer)	NM

Setup1 menu items

Display	Function	Setting range or options	Default setting
	Set speed response. The lower the setting the faster the response to change in speed.	0 - 12	0
	Set SOG response. The lower the setting the faster the response to change in speed over ground.	0 - 12	0
	Set VMG response. The lower the setting the faster the response to change in velocity made good.	0 - 12	3
	Enable/disable the timer alarm's audio alarm.	ON, OFF	ON
	Select source of wind data. Select "r" for second unit.	F: For FI-5001 (Furuno Sensor), r: repeater	F
	Select wind unit.	KT (Knot), M/S (Meters/Second)	KT
	Set wind speed adjustment.	0.3 - 2.5	1.0
	Set wind angle offset.	S 0° - 180° P 1° - 179°	0
	Set wind speed response. The higher the setting the faster the response to change in wind speed.	0 - 12	3

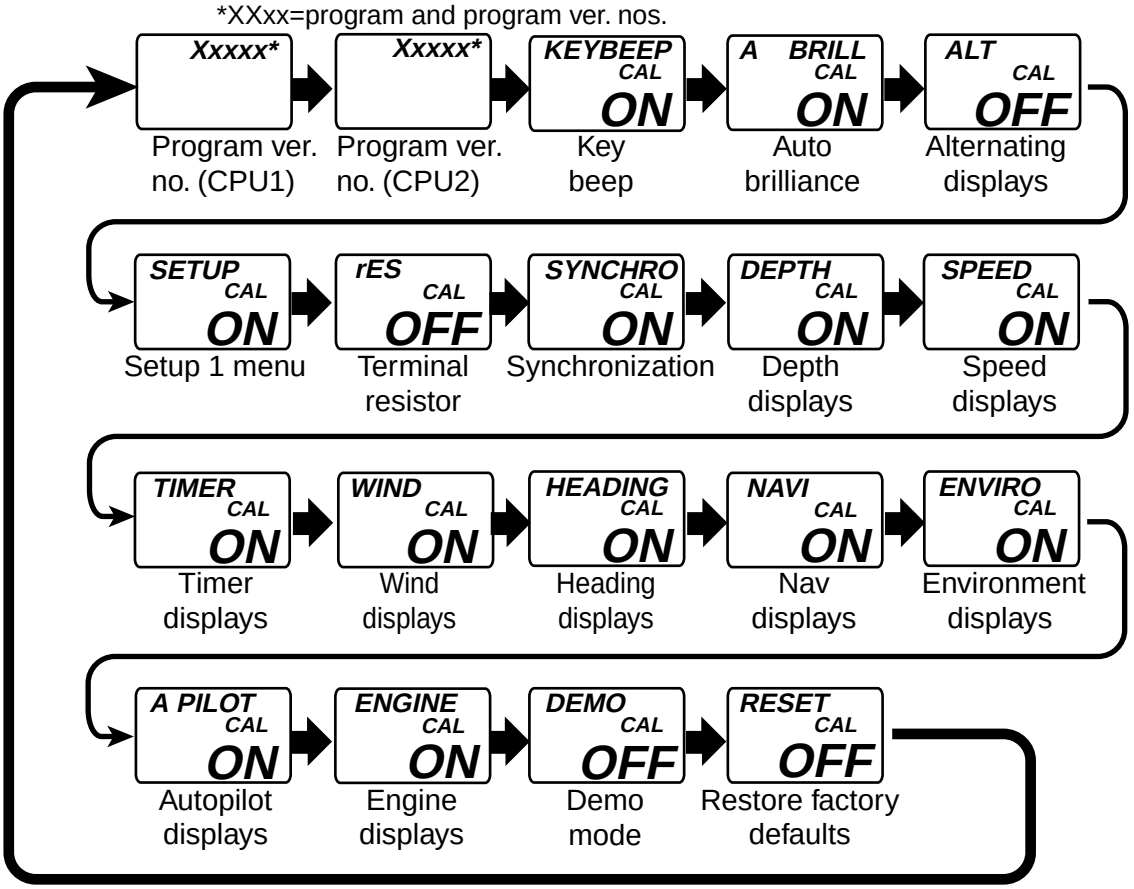
Setup1 menu items

Display	Function	Setting range or options	Default setting
HDG MAG CAL	Select true or magnetic bearing.	MAG (Magnetic), TRU (True	MAG
HDGLOCK CAL LOC	Select heading type to display when activating locked heading.	LOC (Locked), CUr (Current)	LOC
HDG RES CAL 0	Set heading response. The lower the setting the faster the response to change in heading.	0 - 12	0
TIME HR CAL 12	Select time format.	12, 24 (hour)	12
--- ---:--- --- CAL 0	Use local time. Enter time difference between local time and GMT to use local time.	-12 - +12	0
TEMP °C CAL	Select water temperature unit.	°C, °F	°C
W TEMP CAL 0.0	Set water temperature offset.	-99 - +99	0
FUEL L CAL	Select fuel unit.	L (Liter), G (Gallon)	L

3.4.2 Setup2 menu

The setup 2 menu contains user settings which once preset do not require frequent adjustment.

1. Press and hold down the **APP/TRUE** and **SELECT/CLEAR** keys together (about 5-6 seconds) to enable the user settings menu. The software version of CPU1 appears. (See the illustration below.)
2. Press the **DISP** key to choose menu item. Each press of the key changes the menu item in the sequence shown below.



3. Use the **SELECT/CLEAR** key to select setting.
4. To continue, press the **DISP** key to select another item.
5. To save settings and restore normal operation, press the **APP/TRUE** and **SELECT/CLEAR** keys together.

Setup2 menu items

Display	Function	Setting range or options	Default setting
Xxxxx	Software version of CPU1. X=program no. and xxxx=program version no.	-	-
Xxxxx	Software version of CPU2. X=program no. and xxxx=program version no.	-	-
KEYBEEP CAL ON	Turn key beep on/off.	ON, OFF	ON
A BRILL CAL ON	Auto brilliance on/off.	ON, OFF	ON
ALT CAL OFF	Enable/disable alternating displays.	OFF 1: Depth/boat spd 2: Boat spd/water temp. 3: Depth/water temp. 4: Depth/boat spd/water temp. 5: Roll/pitch 6: Latitude/Longitude	OFF
SETUP CAL ON	Enable/disable access to the setup1 menu.	ON, OFF	ON
rES CAL OFF	Turn the terminal resistor on/off.	ON, OFF	OFF
SYNCHRO CAL ON	Turn on/off synchronization of FI-50 series instruments.	ON: Synchronize FI-50 instruments having this setting. OFF: Turn off synchronization. A: Synchronize FI-50 instruments having this setting. b: Synchronize FI-50 instruments having this setting.	ON
DEPTH CAL ON	Turn depth displays on/off.	ON, OFF	ON
SPEED CAL ON	Turn speed displays on/off.	ON, OFF	ON

Setup2 menu items

Display	Function	Setting range or options	Default setting
	Turn timer displays on/off.	ON, OFF	ON
	Turn wind displays on/off.	ON, OFF	ON
	Turn heading displays on/off.	ON, OFF	ON
	Turn navigation displays on/off.	ON, OFF	ON
	Turn environmental displays on/off.	ON, OFF	ON
	Turn autopilot displays on/off.	ON, OFF	ON
	Turn engine displays on/off.	ON, OFF	ON
	Demo mode. To enable, press the **SELECT/CLEAR** key. Depth is shown. To disable and return to this menu, press and hold down the **SELECT/CLEAR** key.	ON, OFF	OFF
	Restore factory defaults. To restore factory defaults, press and hold down the **SELECT/CLEAR** key to show ON. Press the key again. A beep sounds upon completion.	ON, OFF	OFF

SPECIFICATIONS OF FI-504 MULTI

1 GENERAL

1.1	Indication system	Segment LCD
1.2	Brilliance	4 steps
1.3	Contrast	3 steps
1.4	Display Contents	Depth, speed, wind speed, wind angle, timer, environmental information (water temperature, air temperature, air pressure, dewpoint, wind chill temperature), rudder angle
1.5	Number of Port	CAN bus, 2 ports
1.6	Mount Method	Surface or flush mount

2 JUNCTION BOX (OPTION)

2.1	Number of Port	CAN bus Drop: 6 ports, CAN bus Backbone: 2 ports
2.2	Circuit Protection	Reverse, short, over current

3 POWER SUPPLY AND POWER CONSUMPTION

3.1	Display Unit	12 VDC, less than 0.1 A
3.2	Junction Box	12 VDC, less than 1 A, max. 2A connectable

4 ENVIRONMENTAL CONDITIONS

4.1	Useable Temperature Range	-15°C - +55°C
4.2	Relative Humidity	Less than 95% (+40°C)
4.3	Waterproofing	
	Display Unit	IP56
	Junction Box	IPX0
4.4	Vibration	- 2 Hz-5 Hz and up to 13.2 Hz with an excursion of ±1 mm ±10% (7 m/s^2 maximum acceleration at 13.2 Hz); - above 13.2 Hz and up to 100 Hz with a constant maximum acceleration of 7 m/s^2

5 COATING COLOR

5.1	Display Unit	N2.5
5.2	Junction Box	N2.5

SPECIFICATIONS OF
FI-507 MULTI XL

1 GENERAL

1.1	Indication system	Segment LCD
1.2	Brilliance	4 steps
1.3	Contrast	3 steps
1.4	Display contents	Depth, Ship's speed, Wind speed/angle, Date, Time, Bearing Environmental information*1, Navigational information, Rudder angle, Engine information*2
1.5	Number of port	CAN bus: 2 port
1.6	Mount method	Surface or flush mount

*1) Battery voltage, date, time, water temperature, air temperature, air pressure, humidity, wind chill temperature and dew point

*2) Fuel consumption, fuel efficiency and engine speed

2 JUNCTION BOX

2.1	Number of port	CAN bus drop: 6, CAN bus backbone: 2
2.2	Circuit protection	Reverse, short, over current

3 POWER SUPPLY

3.1	Main unit	12 VDC: 0.1 A
3.2	Junction box	12 VDC: 1 A

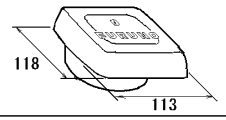
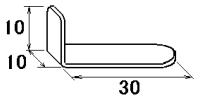
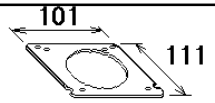
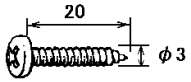
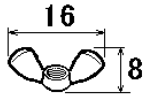
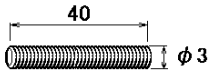
4 ENVIRONMENTAL CONDITION

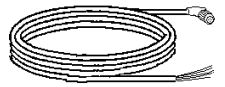
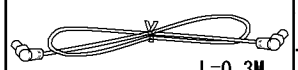
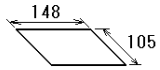
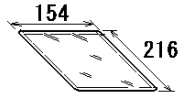
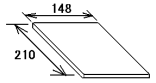
4.1	Ambient temperature	-15°C to +55°C
4.2	Relative humidity	95% at 40°C
4.3	Degree of protection	
	Main unit	IP56
	Junction box	IPX0
4.4	Vibration	- 2 Hz-5 Hz and up to 13.2 Hz with an excursion of ±1 mm ±10% (7 m/s^2 maximum acceleration at 13.2 Hz); - above 13.2 Hz and up to 100 Hz with a constant maximum acceleration of 7 m/s^2

5 COATING COLOR

5.1	Main unit	N2.5
5.2	Junction box	N2.5

PACKING LIST FI-504

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
表示部 MONITOR UNIT		FI-504 000-011-745-00	1
工事材料 INSTALLATION MATERIALS		**CP26-00600**	
ﾊﾟﾈﾙﾘﾑｰﾊﾞｰ PANEL REMOVER		19-028-3124-1 100-340-471-10	1
ｻｰﾌｪｽﾏｳﾝﾄｽﾎﾟﾝｼﾞ SPONGE		TZ7583002A0 000-167-832-10	1
+ﾅﾍﾞﾀｯﾋﾟﾝﾈｼﾞ 1ｼｭ SELF-TAPPING SCREW		3X20 SUS304 000-163-884-10	4
ﾊﾞﾈ座金 SPRING WASHER		M3 SUS304 000-167-404-10	2
ﾐｶﾞｷ丸平座金 FLAT WASHER		M3 SUS304 000-167-453-10	2
蝶ﾅｯﾄ WING NUT		M3 SUS304 000-167-826-10	2
寸切ﾎﾞﾙﾄ BOLT		M3X40 SUS304 000-167-804-10	2

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ｹｰﾌﾞﾙ組品 CABLE ASSY.		FI-50-DROP 000-166-945-11	1
ｹｰﾌﾞﾙ組品0.3M CABLE ASSY.		FI-50-CHAIN-0.3M 000-166-949-11	1
図書 DOCUMENT			
内部終端ﾉ設定 INTERNAL RESISTOR SETTING		C72-00705-* 000-168-501-1*	1
操作要領書 OPERATOR'S GUIDE		OS*-72690-* 000-167-295-1* **	1
取扱説明書 OPERATOR'S MANUAL		OME-72690-* 000-167-334-1*	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

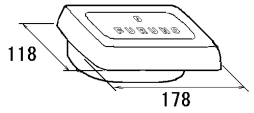
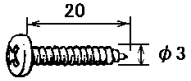
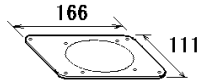
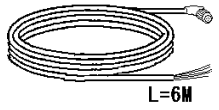
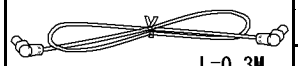
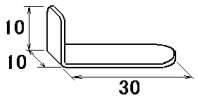
A-1

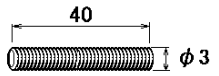
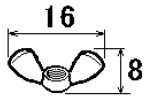
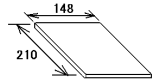
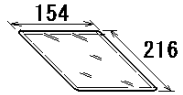
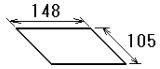
(略図の寸法は、参考値です。DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

PACKING LIST FI-507

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
表示部 MONITOR UNIT		FI-507 000-015-729-00	1
工事材料 INSTALLATION MATERIALS		**CP26-00800**	
+ナベタッピンネジ 1シュ SELF-TAPPING SCREW		3X20 SUS304 000-163-884-10	4
Sマウントスポンジ XL SPONGE		TZ7583059A0 000-170-617-10	1
ケーブル組品 CABLE ASSY.		FI-50-DROP 000-166-945-11	1
ケーブル組品0.3M CABLE ASSY.		FI-50-CHAIN-0.3M 000-166-949-11	1
パネルリムーバー PANEL REMOVER		19-028-3124-1 100-340-471-10	1
バネ座金 SPRING WASHER		M3 SUS304 000-167-404-10	4
ミガキ丸平座金 FLAT WASHER		M3 SUS304 000-167-453-10	4

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
寸切ボルト BOLT		M3X40 SUS304 000-167-804-10	4
蝶ナット WING NUT		M3 SUS304 000-167-826-10	4
図書 DOCUMENT			
取扱説明書(英) OPERATOR'S MANUAL		OME-72690-* 000-167-334-1*	1
操作要領書 (英) OPERATOR'S GUIDE (EN)		OSE-72770-* 000-170-641-1*	1
内部終端ノ設定 INTERNAL RESISTOR SETTING		C72-00705-* 000-168-501-1*	1

A-2

(略図の寸法は、参考値です。DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

型式/コード番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

FURUNO

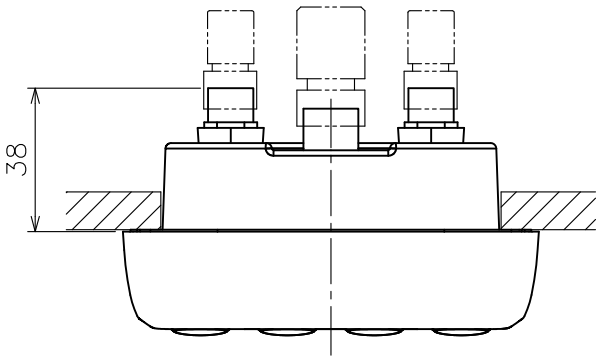
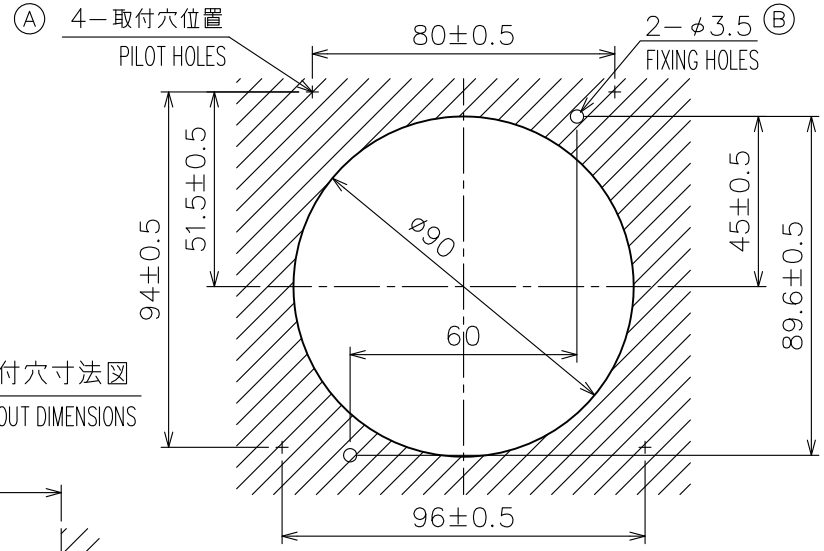
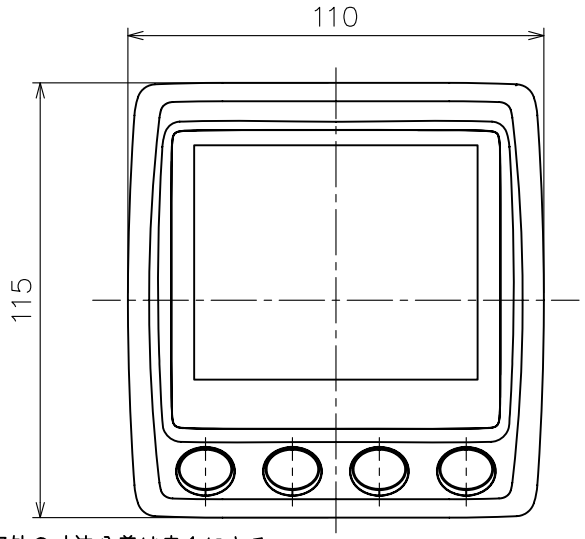


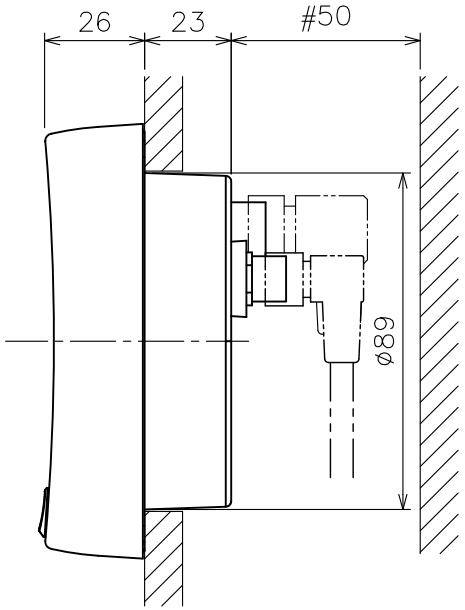
表1 TABLE 1

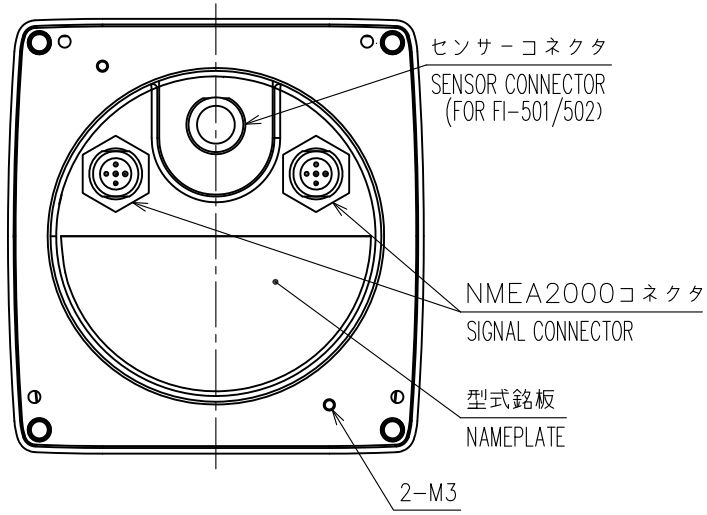
寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3



取付穴寸法図
CUTOUT DIMENSIONS







注　記
1）指定外の寸法公差は表1による。
2）＃印寸法は最小サービス空間とする。
3）取付方法は次の2種類から選択する。
　Ⓐ：ナベタッピンネジ呼び径3×20を使用のこと。
　Ⓑ：M3×40寸切りボルト、M3平座金／バネ座金／蝶ナットを使用のこと。

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. SELECT FIXING METHOD FROM FOLLOWINGS;
　Ⓐ : USE TAPPING SCREWS ø3x20.
　Ⓑ : USE M3 STUD BOLT, P.W. / S.W. / WING NUT, SCREW LENGTH: 40.

DRAWN Sep. 27 '07 T.YAMASAKI		TITLE	FI-501/502/503/504/505/506
CHECKED Sep. 27 '07 T.TAKENO		名称	インスツルメント（サーフェスマウント）
APPROVED Sep.28'07 R.Esumi			外寸図
SCALE	MASS 0.3 ±10% kg 質量はケーブルを含まず。MASS W/O CABLE.	NAME	INSTRUMENT (SERFACE MOUNT)
DWG.No. C7266-G02- B	REF.No. 26-001-102G-2		OUTLINE DRAWING

D-1

FURUNO ELECTRIC CO., LTD.

FURUNO

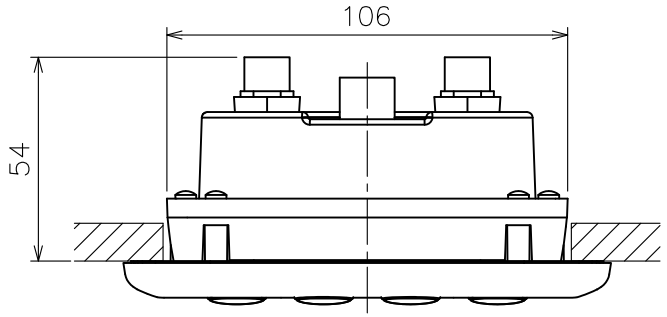
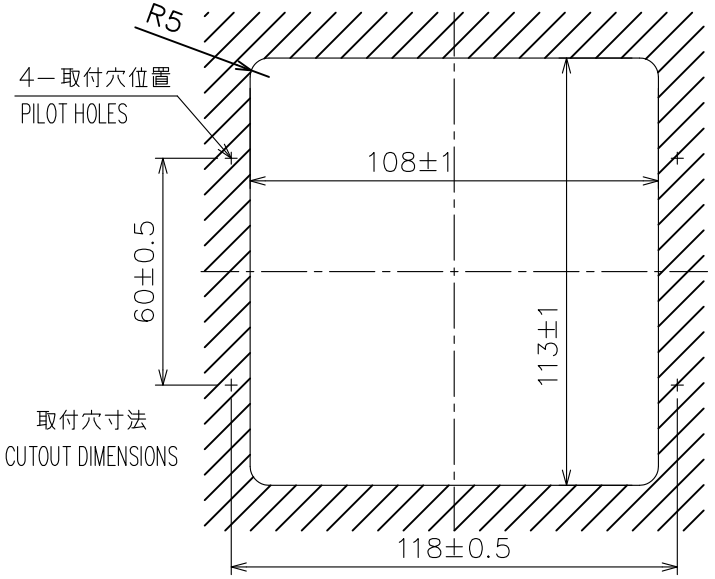
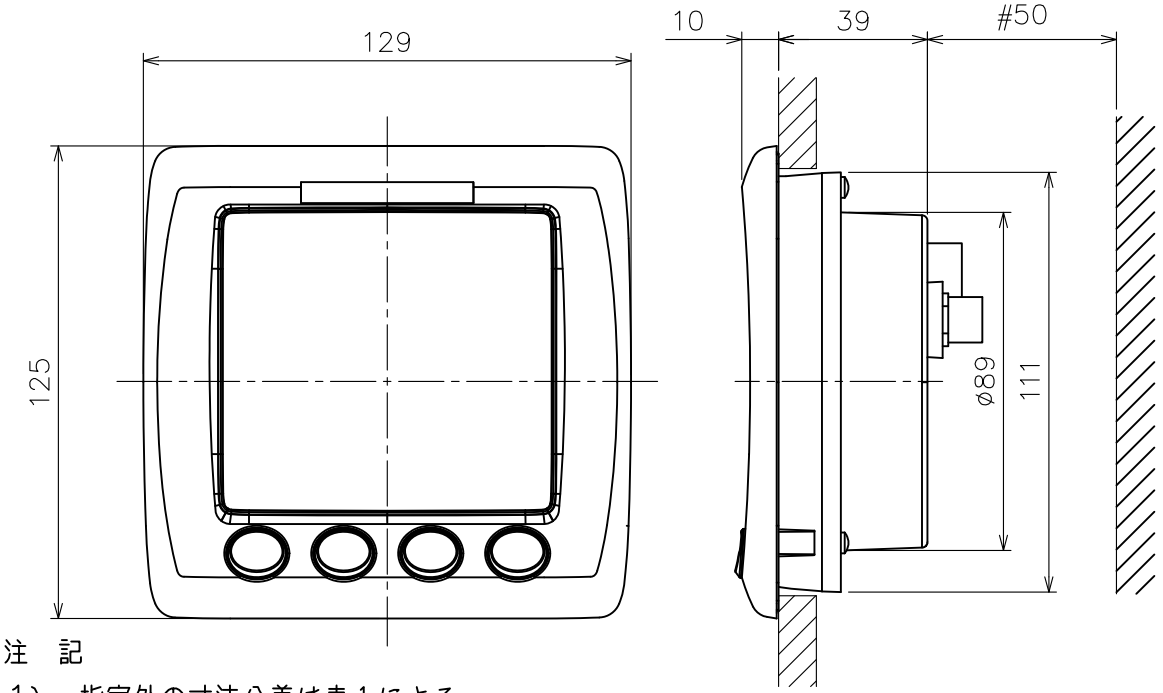
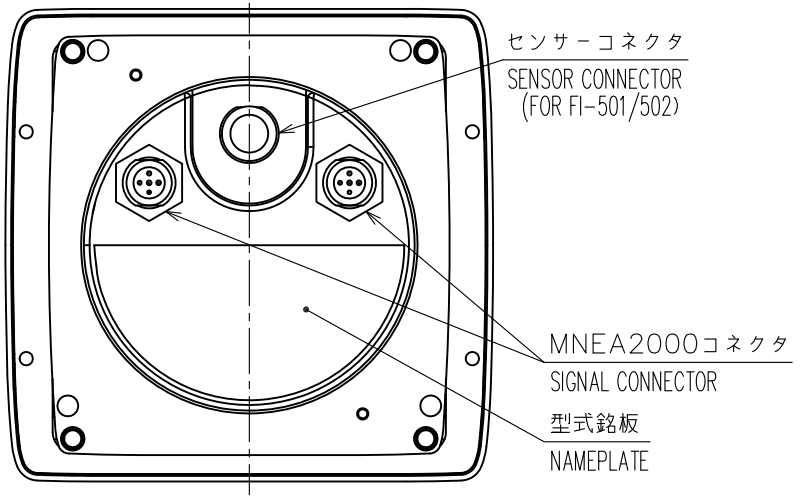


表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3







注　記

1）　指定外の寸法公差は表１による。

2）　取付用ネジはナベタッピンネジ呼び径3×20を使用のこと。

NOTE

1.　TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

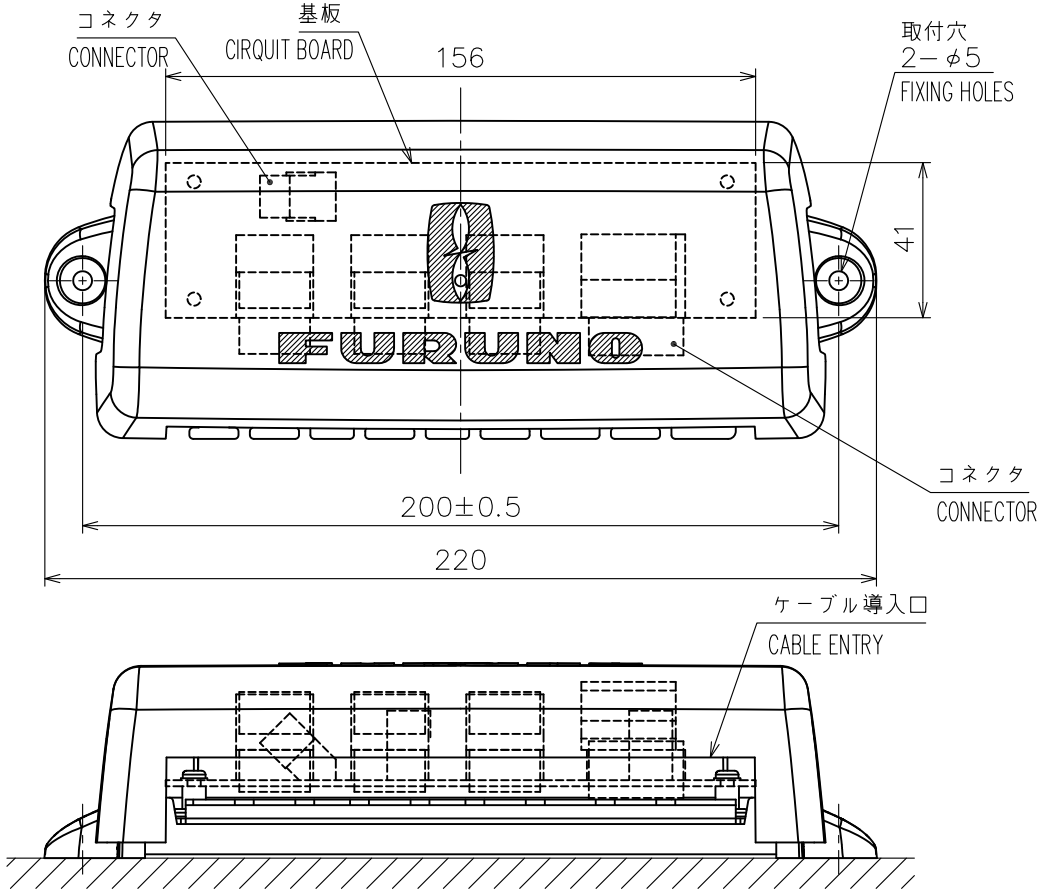
2.　USE TAPPING SCREWS ø3x20 FOR FIXING THE UNIT.

DRAWN Jul. 19 '07 T.YAMASAKI		TITLE	FI-501/502/503/504/505/506
CHECKED Jul. 19 '07 T.TAKENO		名称	インスツルメント（フラッシュマウント）
APPROVED Jul.24'07 R.Esumi			外寸図
SCALE / MASS 0.3 ±10% kg		NAME	INSTRUMENT (FLUSH MOUNT)
DWG.No. C7266-G01- A	REF.No. 26-001-101G-0		OUTLINE DRAWING

D-2

FURUNO ELECTRIC CO., LTD.

FURUNO



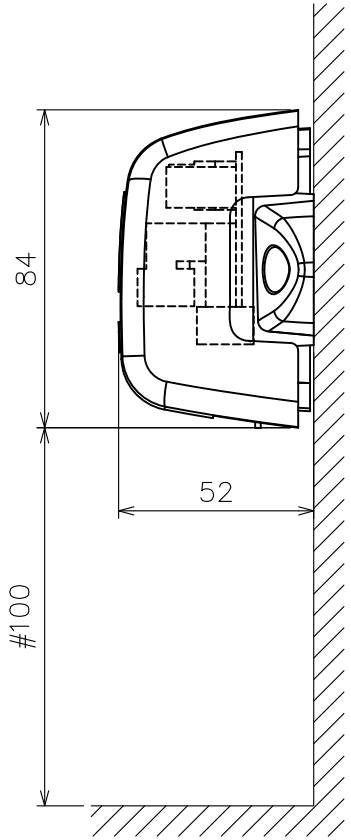


表1　TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

注　記

1）　#印寸法は最小サービス空間寸法とする。
2）　指定外の寸法公差は表１による。
3）　取付用ネジはトラスタッピンネジ呼び径4×20を使用のこと。

NOTE

1. #: MINIMUM SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
3. USE TAPPING SCREWS ø4x20 FOR FIXING THE UNIT.

DRAWN Jul. 19 '07 T.YAMASAKI		TITLE	FI-5002
CHECKED Jul. 19 '07 T.TAKENO		名称	ジャンクションボックス
APPROVED Jul.24'07 R.Esumi			外寸図
SCALE	MASS 0.3 ±10% kg	NAME	JUNCTION BOX
DWG.No. C7268-G01- A	REF.No. 26-001-103G-0		OUTLINE DRAWING

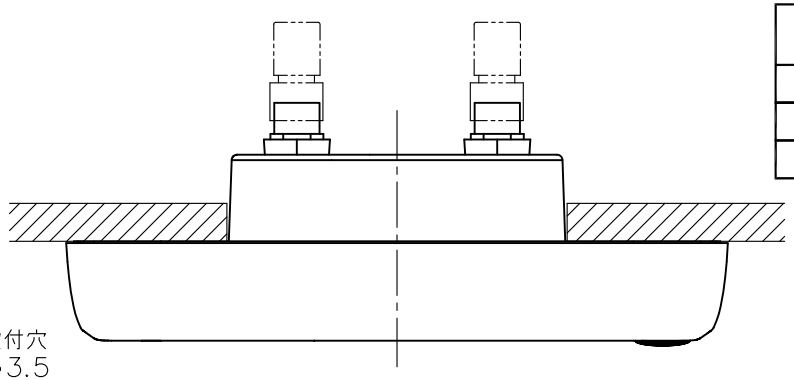
D-3

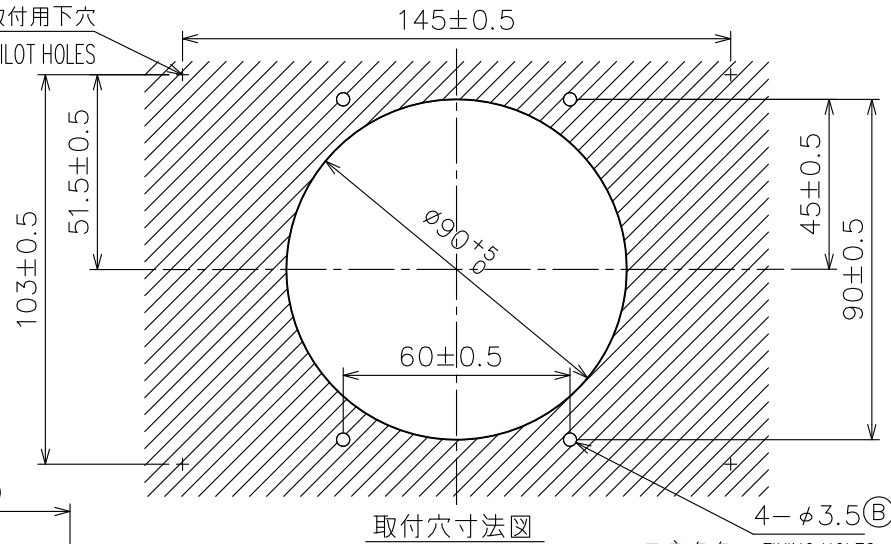
FURUNO ELECTRIC CO., LTD.

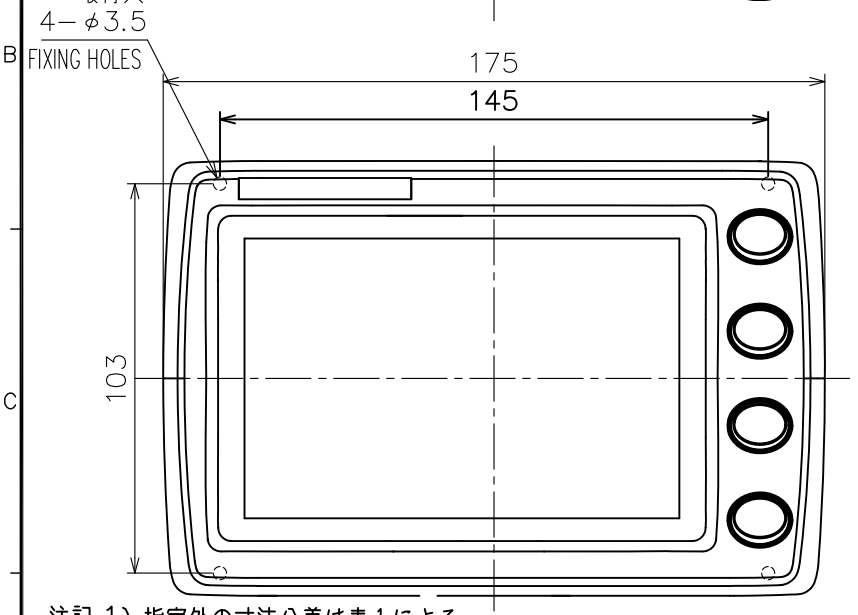
FURUNO

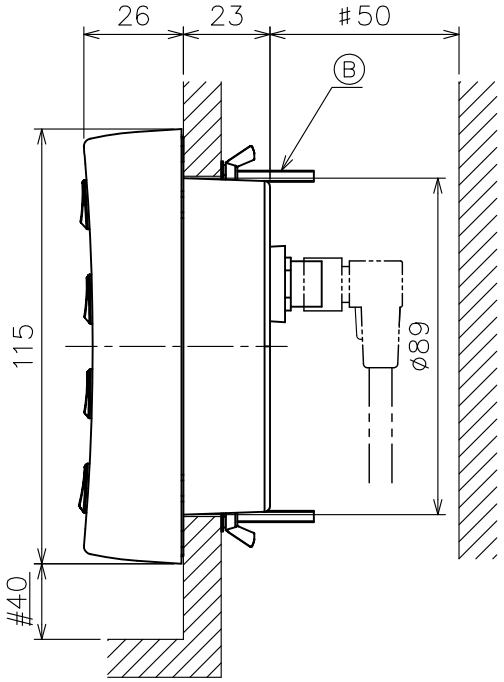
表1 TABLE 1

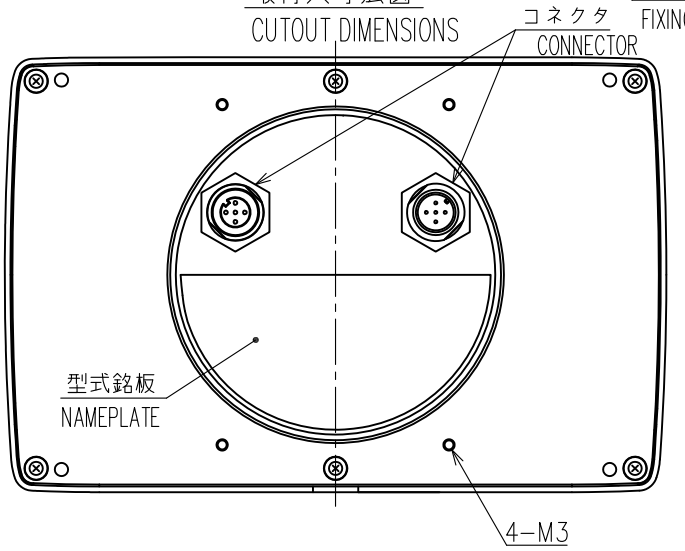
寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3











注記 1）指定外の寸法公差は表１による。
2）＃印寸法は最小サービス空間寸法とする。
3）取付方法は2種類から選択のこと。
Ⓐの場合、ナベタッピンネジ呼び径3×20を使用のこと。
Ⓑの場合、M3x40寸切ボルト、M3平座金・バネ座金・蝶ナットを使用のこと。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. SELECT FOLLOWING METHOD FOR FIXING THE UNIT;
Ⓐ: USE TAPPING SCREWS ø3×20.
Ⓑ: USE M3x40 STUD BOLTS, M3 P.W./S.W./WING NUTS.

DRAWN 2/Dec/08 T.YAMASAKI		TITLE	FI-507
CHECKED 3/Dec/08 T.TAKENO		名称	インスツルメント（サーフェスマウント）
APPROVED 9/Dec/08 R.Esumi			外寸図
SCALE 1/2	MASS 0.46 ±10% kg	NAME	INSTRUMENT (SURFACE MOUNT)
DWG.No. C7277-G02- A	REF.No. 26-001-201G-0		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

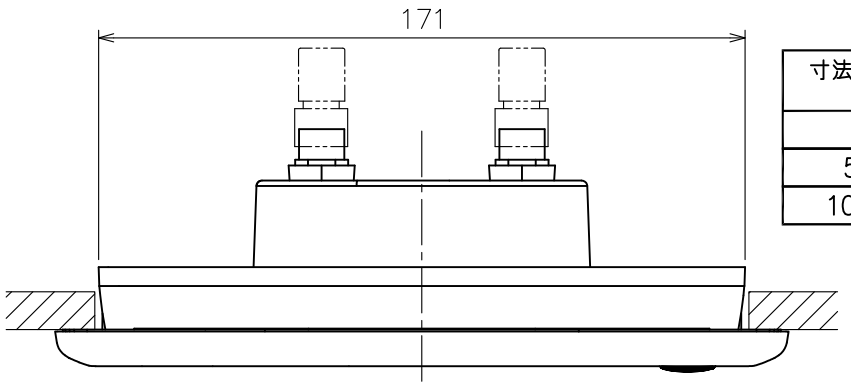
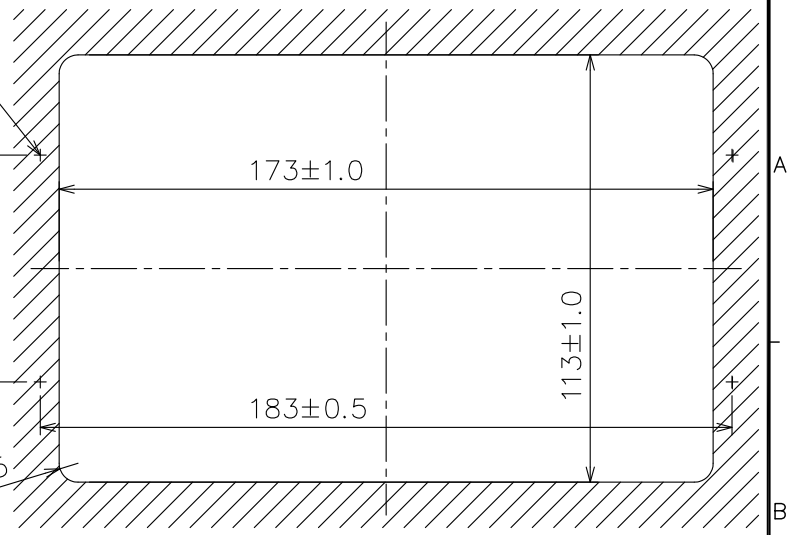
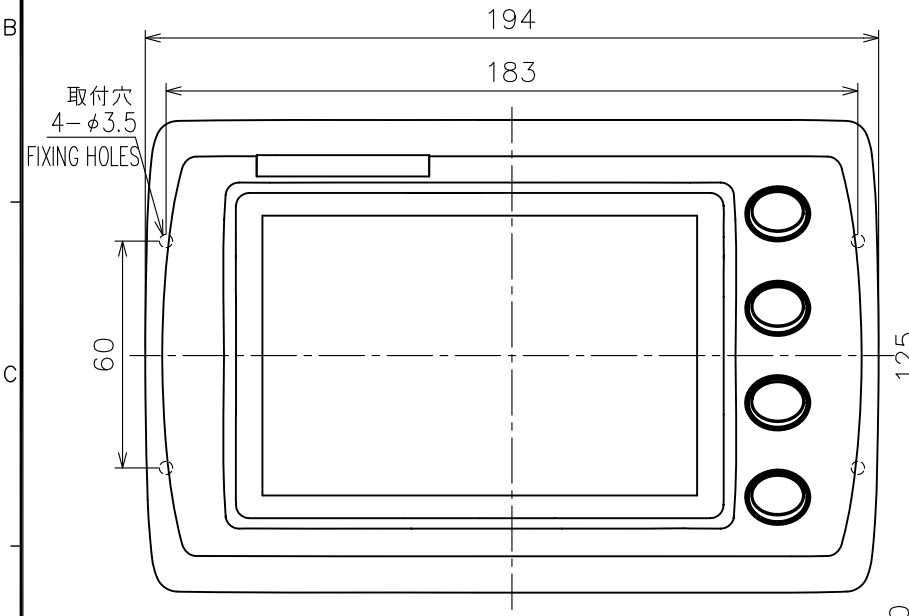


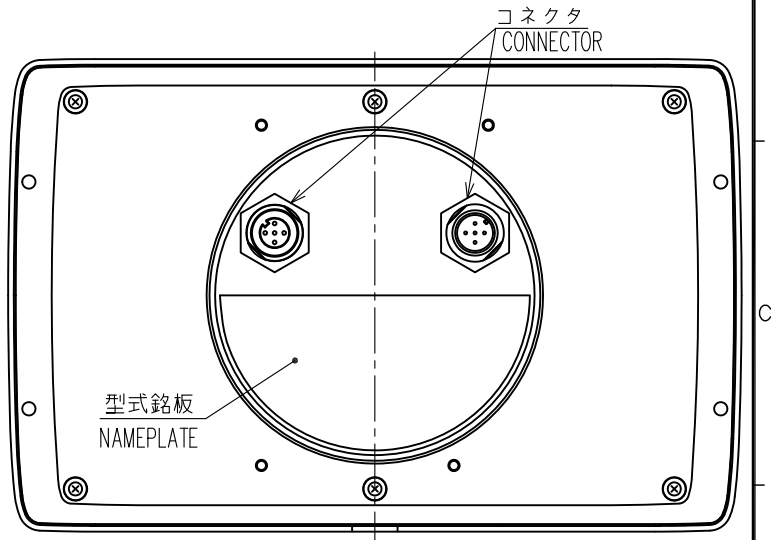
表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3



取付穴寸法図
CUTOUT DIMENSIONS





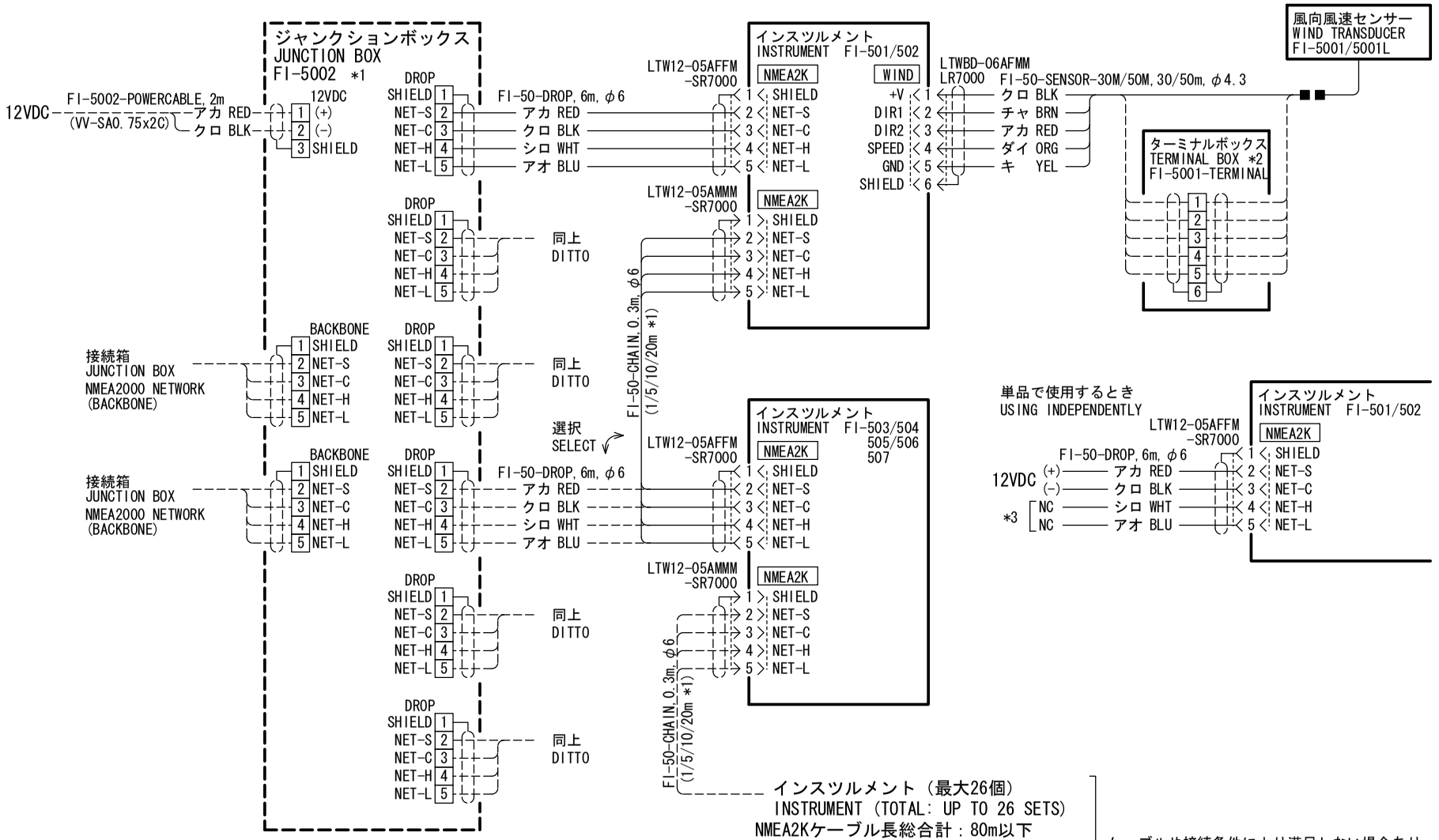
注記 1） 指定外の寸法公差は表１による。
2） ＃印寸法は最小サービス空間寸法とする。
3） 取付用ネジはナベタッピンネジ呼び径3×20を使用のこと。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS ø3×20 FOR FIXING THE UNIT.

DRAWN 3/Dec/08 T.YAMASAKI		TITLE	FI-507
CHECKED 4/Dec/08 T.TAKENO		名称	インスツルメント（フラッシュマウント）
APPROVED 9/Dec/08 R.Esumi			外寸図
SCALE 1/2	MASS 0.45 ±10% kg	NAME	INSTRUMENT (FLUSH MOUNT)
DWG.No. C7277-G01- A	REF.No. 26-001-200G-0		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

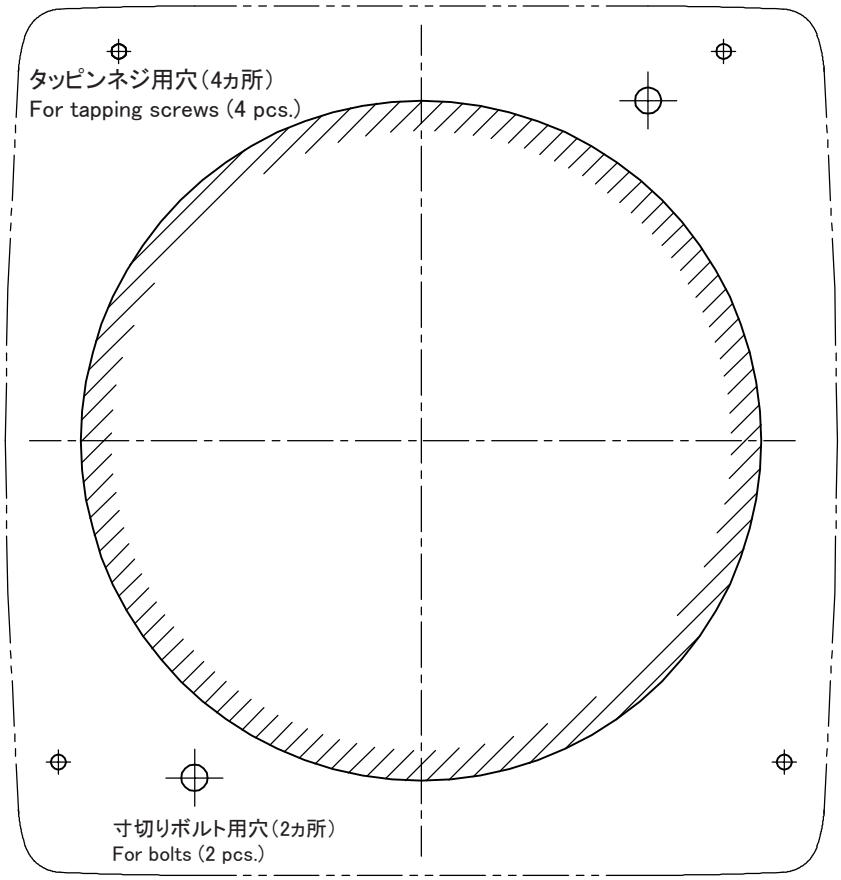


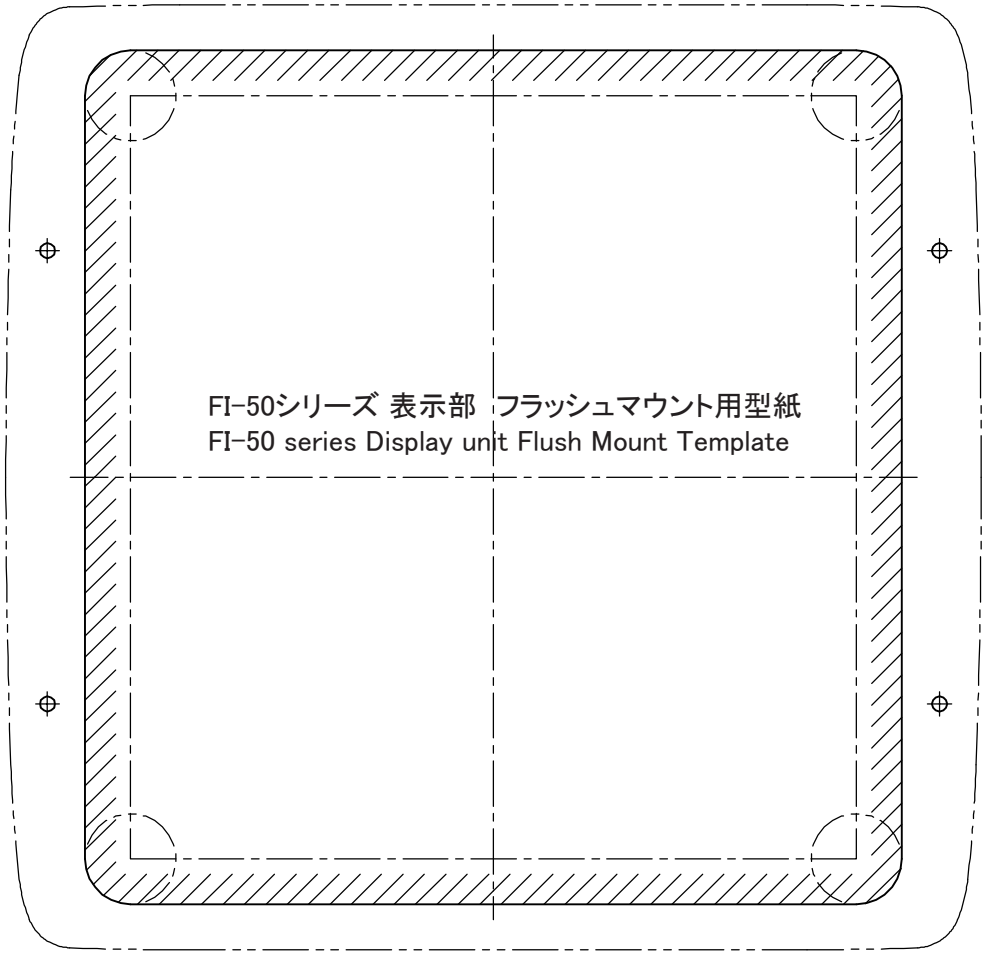
注記
＊１）オプション。
＊２）ケーブルを切断する場合は、ターミナルボックス（非防水）を使用のこと。
＊３）短絡しないように、端末を処理する。

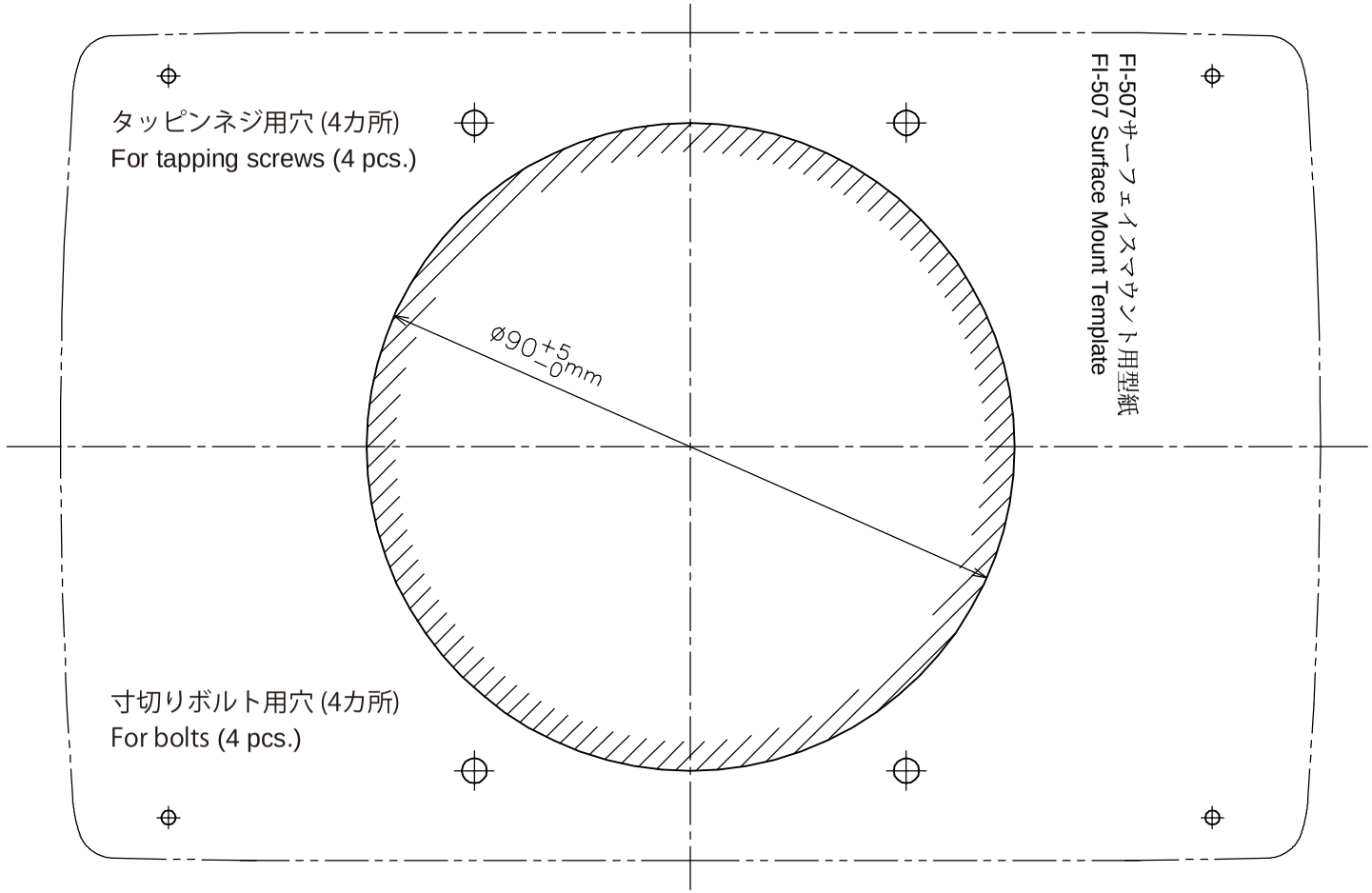
NOTE
*1: OPTION.
*2: USE A TERMINAL BOX (NO-PROTECTION) WHEN THE SUPPLIED CABLE IS CUT.
*3: PROTECT CABLE ENDS TO PREVENT SHORT-CIRCUIT.

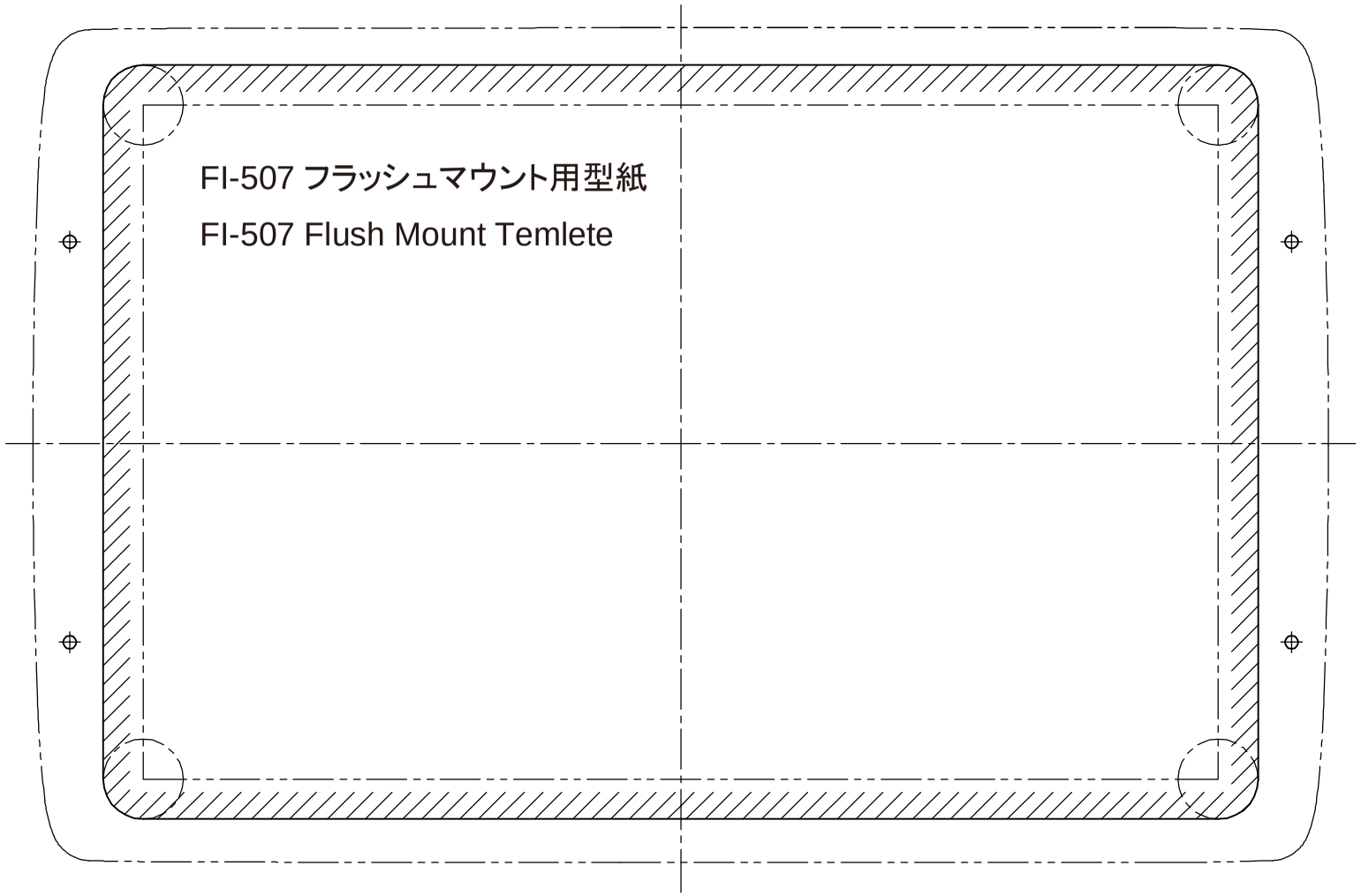
DRAWN 30/Jan/09 T.YAMASAKI		TITLE	FI-501/502/503/504/505/506/507
CHECKED 30/Jan/09 T.TAKENO		名称	インスツルメント
APPROVED 5/Feb/09 R.Esumi			相互結線図
SCALE / MASS kg		NAME	INSTRUMENT
DWG.No. C7266-C01- F	REF.No.		INTERCONNECTION DIAGRAM

FURUNO ELECTRIC CO., LTD.


タッピンネジ用穴（4ヵ所）
For tapping screws (4 pcs.)
寸切りボルト用穴（2ヵ所）
For bolts (2 pcs.)


FI-50シリーズ 表示部 フラッシュマウント用型紙
FI-50 series Display unit Flush Mount Template


タッピンネジ用穴 (4カ所)
For tapping screws (4 pcs.)
ø90+5
−0mm
寸切りボルト用穴 (4カ所)
For bolts (4 pcs.)
FI-507サーフェイスマウント用型紙
FI-507 Surface Mount Template


FI-507 フラッシュマウント用型紙
FI-507 Flush Mount Temlete