

# FURUNO®

## DOPPLER SONAR CURRENT INDICATOR Model **CI-68**

High-performance current indicator displays accurate speed and current data on a 10.4" color TFT or virtually any VGA monitor utilizing the BlackBox system



The future today with FURUNO's electronics technology.

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Catalogue No. M-1530b

TRADE MARK REGISTERED  
MARCA REGISTRADA

# Obtain highly accurate water current measurement using Furuno's reliable acoustical technology.



The FURUNO CI-68 is a new Doppler Sonar Current Indicator designed for various types of fish and hydrographic survey vessels.

The CI-68 displays tide speed and direction at three depth layers and ship's speed on a high definition 10.4" color LCD. Using this information, you can predict net shape and plan when to throw your net.

The CI-68 has a triple-beam emission system for providing highly accurate current measurement. This system greatly reduces the effects of the rolling, pitching and heaving motions, providing a continuous display of tide information.

When ground (bottom) reference is not available acoustically in deep water, the CI-68 can provide true tide current information by receiving position and speed data from a GPS navigator and heading data from the satellite (GPS) compass SC-60/120 or gyrocompass. In addition, navigation information, including position, course and ship's track, can also be displayed.

The CI-68 consists of a display unit, processor unit and transducer. The control unit and display unit can be installed separately for flexible installation. A BlackBox configuration (without monitor) is also available. CI-60G users can easily upgrade without drydocking to CI-68 since it uses the same transducer as the CI-60G.

- **Compact 3-unit design for ease of installation and maintenance**
- **High definition 10.4" color LCD**
- **Blackbox system configuration allows use of optional CRT or LCD monitors**
- **Continuous display of tide speed and direction at the three depth selected layers**
- **Triple-beam system for less error in tide current detection**
- **True tide current presentation with external GPS navigator and Gyrocompass**

## TIDE VECTOR

### TEXT



Ship's speed and course

Tide speed/direction

Tide differences



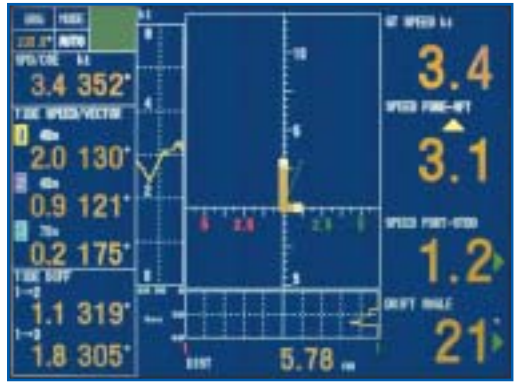
Echo level

Tide vectors for tide differences between Layer 1 and 2, Layer 1 and 3

Tide vectors for speed and direction at Layer 1, 2 and 3

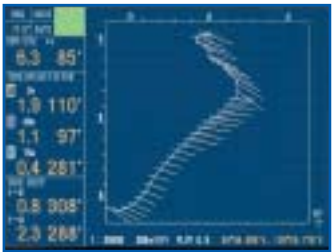
Water temperature (external temp. sensor required)

Tide speed and direction for the three depth layers are displayed with vectors. The depth of each layer can be set manually in 1 m intervals. Other information such as tide differential between the reference and one of the two other layers, heading and course can also be displayed in large text.



### SHIP'S SPEED

Displays the speed components for fore-aft and port-stbd. The synthesized vector (green line) intuitively shows drift direction. The speed source is selectable on the menu from ground tracking or water tracking.

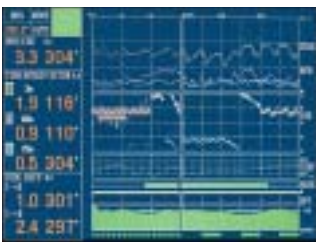


### TRACK

Tide vectors can be shown on the ship's track in user specified intervals.

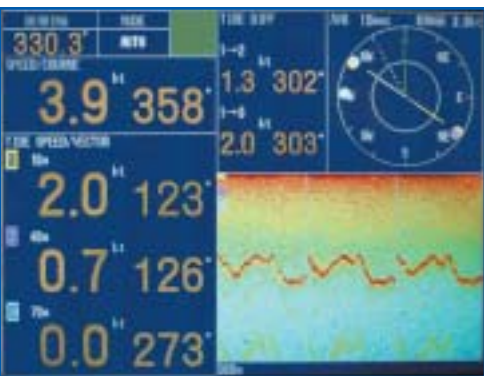
### TIDE LOG

Displays the tide information over the past twelve hours.



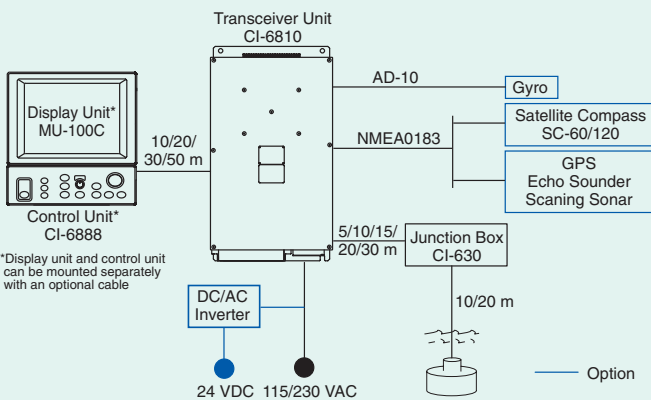
### ECHO LEVEL

Displays echogram obtained from each beam. It helps evaluate the concentration or distribution of fish school or seabed at three directions simultaneously.

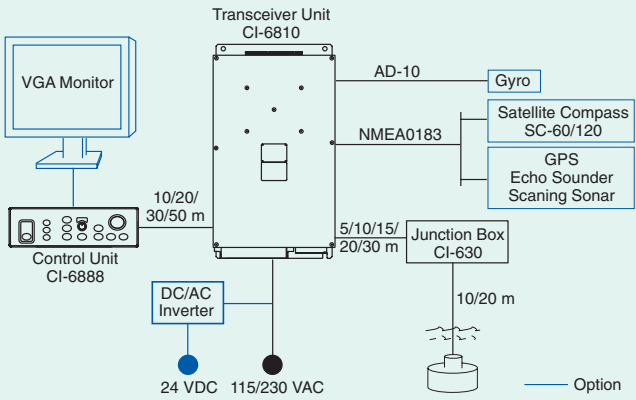


## INTERCONNECTION DIAGRAM

### Standard configuration (with standard LCD monitor)



### BlackBox configuration (with custom monitor)



\*Display unit and control unit can be mounted separately with an optional cable

# SPECIFICATIONS OF CI-68

## Display

10.4" TFT color LCD, 640 x 480 pixels

## Measurements

### Current

Speed: 0 to 9.9 kt  
 Direction: 360°  
 Number of layers: 3 layers

### Ship

Speed: -10 to 30 kt (fore-aft)  
 -9.9 to +9.9 kt (port-starboard)  
 Direction: 360°

### Depth Range

For current measurement

2 to 75% of water depth up to 150 m  
 (Over 22 m of water depth is required in Ground tracking mode. Over 40 m water depth is required in Water Tracking mode)

For ground tracking

2 to 300 m

### Accuracy

Current: ± 2% of ship's speed + 0.2 kt  
 Ship's speed: ± 1% + 0.1 kt

### Number of Beams

Three beams

### Tilt

75° each

### System Frequency

244 kHz

### Data Interface (NMEA 0183 Ver.1.5/2.0/3.0, IEC 61162)

#### Inputs:

DBT, DPT (Depth), GGA, GLL, RMA, RMC (L/L),  
 HDG, HDM, HDT (Compass), MTW (Water temperature),  
 VTG (SOG, COG), ZDA (UTC)

#### Outputs:

CUR (Water current layer), VBW (Dual Ground/Water Speed), VDR (Set and Drift), VHW (Water speed and heading), VLW (Distance travelled through the water), VTG (SOG, COG)

### POWER SUPPLY (IEC 60945 test method)

Temperature Display Unit: -15° to +55°  
 Control Unit: -15° to +55°  
 Transceiver Unit: -15° to +55°

Waterproofing Display Unit: IPX0 (IEC 60529)  
 Control Unit: IPX2 (IEC 60529)  
 Transceiver Unit: IPX0 (IEC 60529)

### POWER SUPPLY

115/230 VAC

### EQUIPMENT LIST

#### Standard

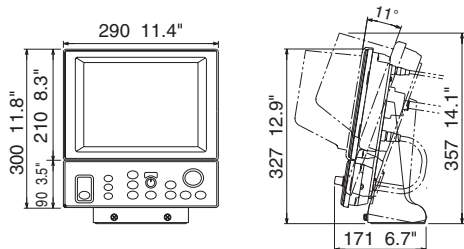
- |  |        |
|--|--------|
| 1. Display/Control Unit MU-100C/CI-6888  | 1 unit |
| 2. Transceiver Unit CI-6810  | 1 unit |
| 3. Transducer CI-620-1-68 with 10 m cable or CI-620-2-68 with 20 m cable (Specify when ordering) | 1 unit |
| 4. Transducer Tank CI-620-T-S (for Steel hull)   | 1 unit |
| 5. Through-hull Pipe CI-620-K-S (for Steel hull)   | 1 unit |
| 6. Installation materials and spare parts  | 1 set  |
| 7. Junction Box CI-630   | 1 pc   |

#### Option

- DC/AC Inverter TR-2451 for 24 VDC mains
- Transducer Tank CI-620-T-F (for FRP hull)
- Through-hull Pipe CI-620-K-F (for FRP hull)
- Cable for Transceiver - Junction box Z-6FUNV-SX-C 3P+1P, 5/10/15/20/30 m
- Cable for Display - Control Unit 66S1249-0, 5/10 m

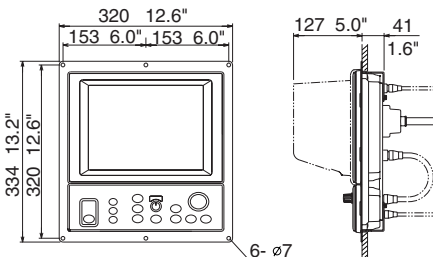
## Display/Control Unit

MU-100C/CI-6888 5.7 kg, 12.6 lb



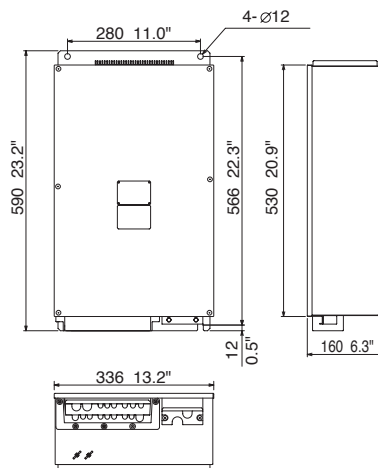
## Flush Mount Type

4.2 kg, 9.3 lb



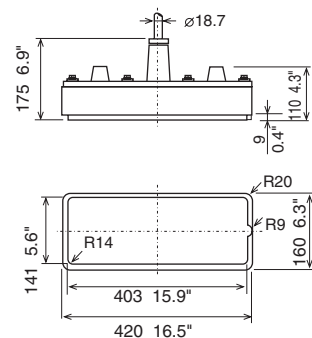
## Transceiver Unit

CI-6810 17.0 kg, 37.5 lb



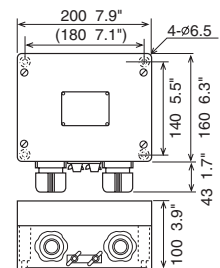
## Transducer

CI-620-1-68 with 10 m cable 21 kg, 46.3 lb  
 CI-620-2-68 with 20 m cable 26 kg, 57.3 lb



## Junction Box

CI-630 2.0 kg, 4.4 lb



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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