

FURUNO

Full-Circle Color Scanning Sonar

Model ***FSV-25 MARK-2***

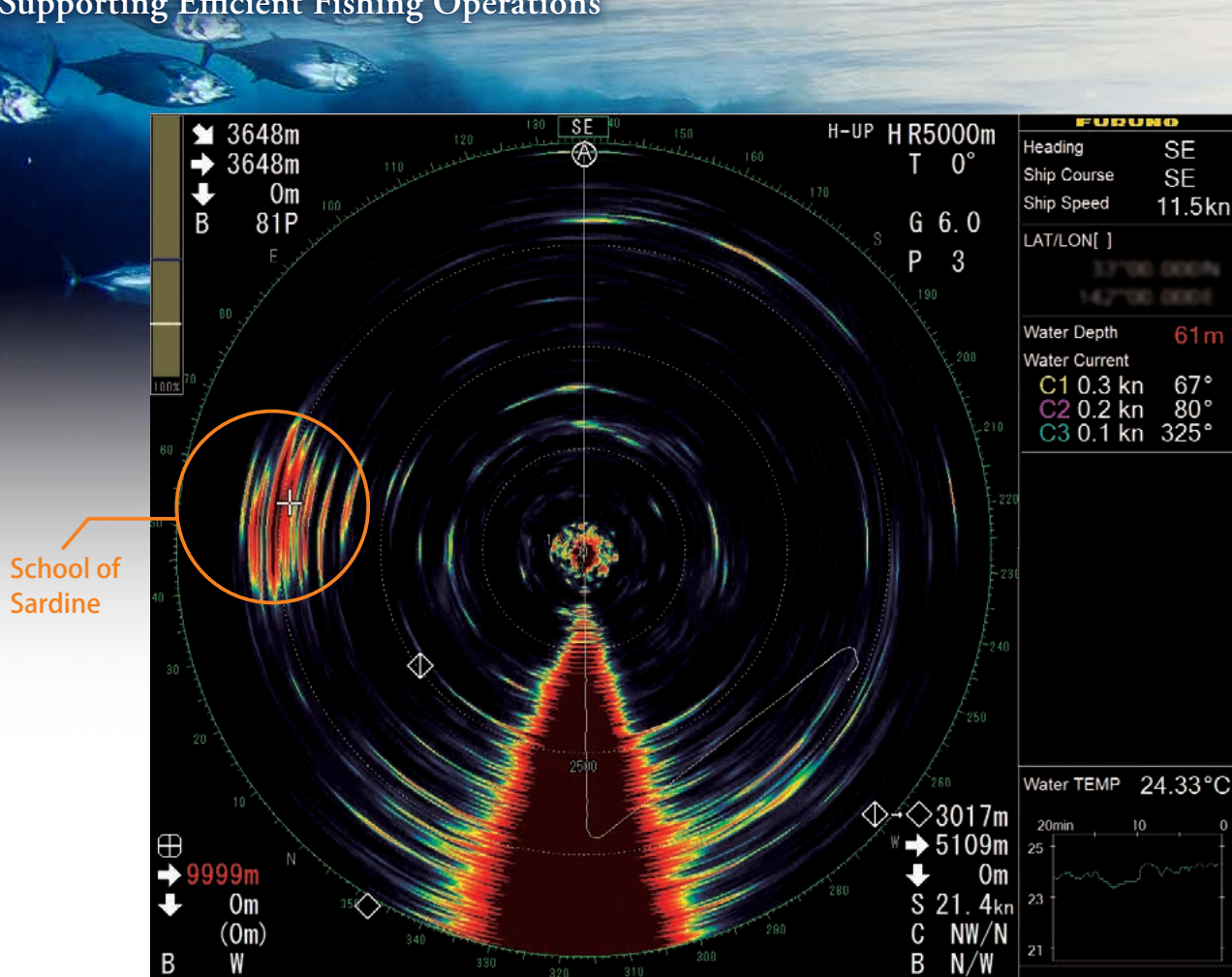


Monitor : Customer Supply

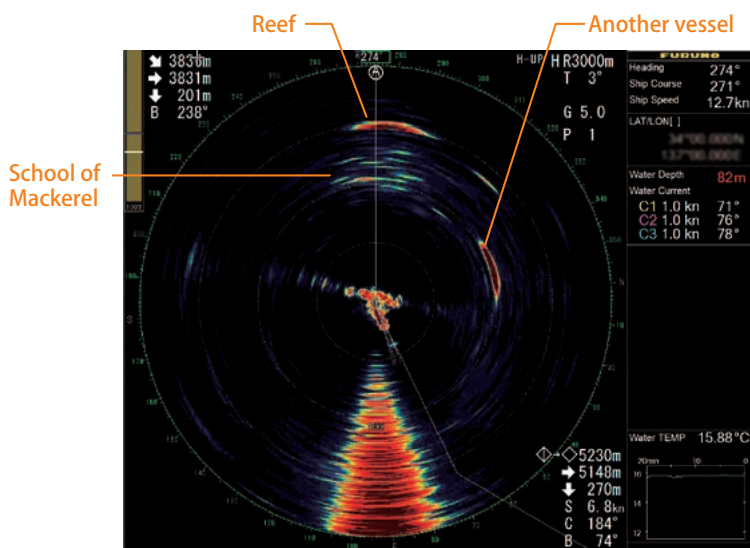
www.furuno.com

360° Full Coverage Detection. No Fish Missed.

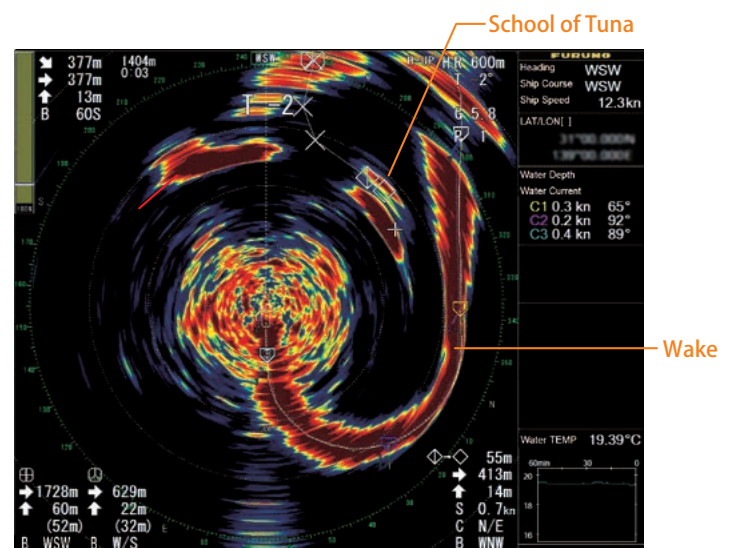
Enhanced long-range detection enables the identification of fish schools over wider areas.
Supporting Efficient Fishing Operations



Detected a school of sardine 4,000 meters from the vessels



(3,000 m range) School of Mackerel



(1,000 m range) School of Tuna and the wake of a fishing vessel

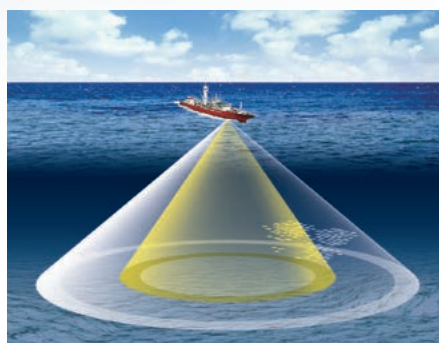
► Search for fish schools horizontally (range) and vertically (depth) with four display modes

Horizontal

Display a 360° search area around the vessel on a horizontal screen.

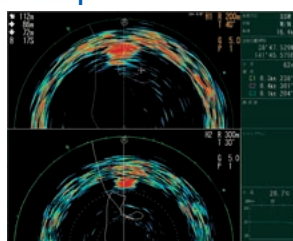
Horizontal combination

Support three display options: split top/bottom, split left/right, and zoom-out view. Allow comparison of detection screens with different settings.

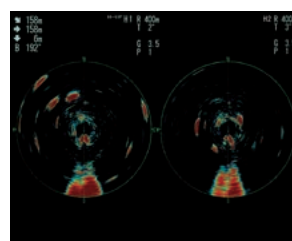


Horizontal combination display image

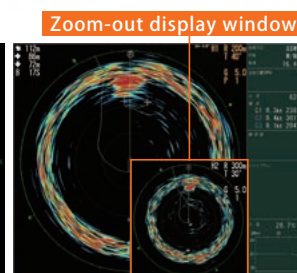
Examples



Split top/bottom



Split left/right



Zoom-out display window

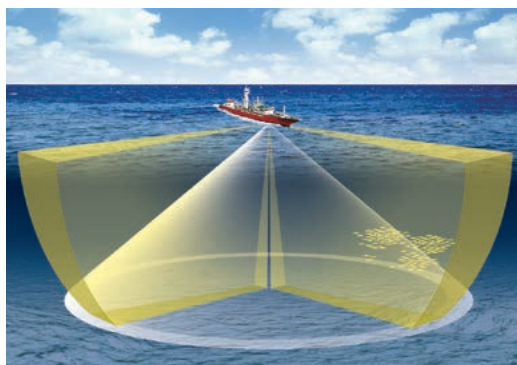
Zoom-out view

Vertical 1 combination

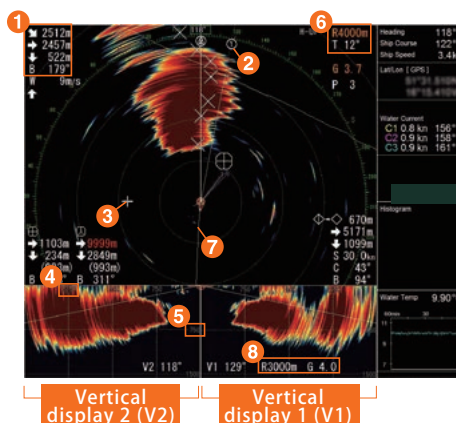
Enable vertical cross-section detection in any direction (0 - 60°). The vertical view is useful for capturing fast-moving fish schools.

Vertical 2 combinations

Display two vertical cross-section screens.



Vertical 2 combinations display image



Vertical display 2 (V2)

Vertical display 1 (V1)

- 1 Linear distance, horizontal distance, depth and bearing to the cursor
- 2 Bearing marker for vertical display 1 (V1)
- 3 Cursor
- 4 Horizontal distance of the vertical display
- 5 Depth range of the vertical display
- 6 Range and tilt of the horizontal display
- 7 Vessel wake
- 8 Range and gain of the vertical display

Dual Display mode

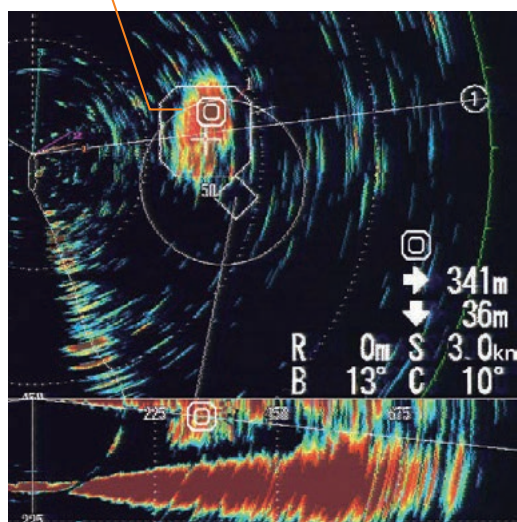
In dual-display mode, individual screens can be shown in full size on the main and sub monitors.



► Automatic target lock function for easy tracking of fast-swimming fish

The FSV-25 MARK-2 will automatically lock onto schools of fish, and display estimates of distance, depth, speed and angle of target. Target lock is also available for stationary position (speed and heading information required).

Target lock mark



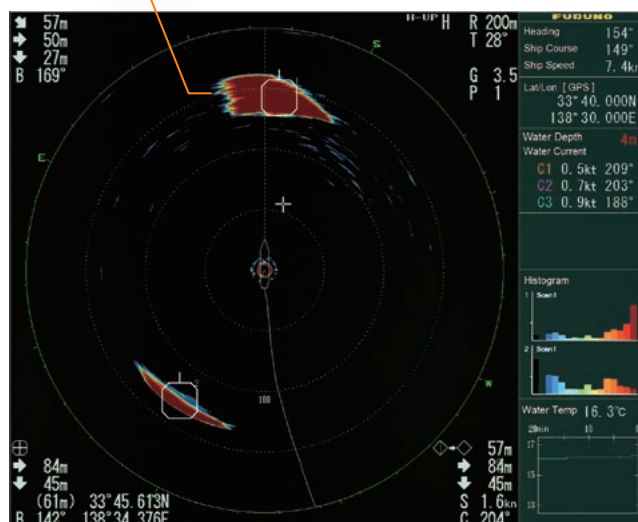
Example of target lock mark

► “Fish estimate mark” and “Histogram” to support cast netting

Linked with target lock function, the quantity of the marked fish schools can be displayed as a histogram. Up to two indicators can be set on the screen.

Fish estimate mark

Histogram



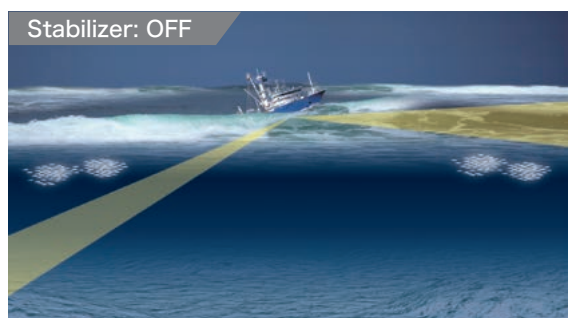
Example of fish estimate mark and histogram

► Noise reduction function for interference suppression

Suppress weak echoes (surface reflections, plankton and distant seabed) for clearer fish school display.

► Stabilization function

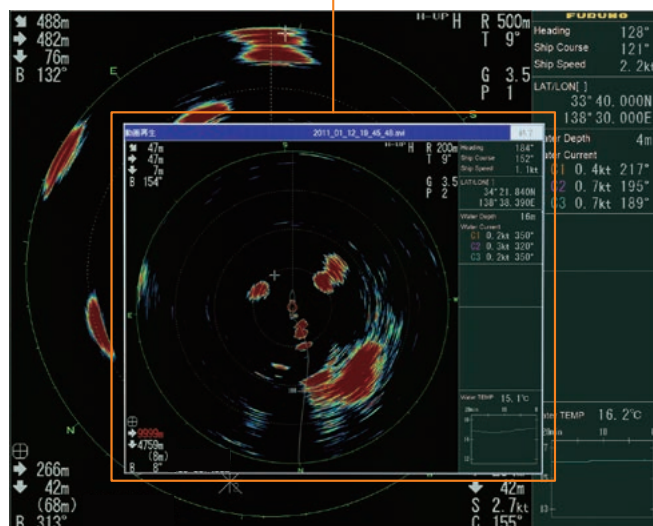
Correct the effects of rolling and pitching, enabling stable image display even in rough sea conditions.



► Sonar image recording and playback function

Sonar images can be recorded not only as still images but also as video. This feature helps preserve and pass on operational techniques and know-how.

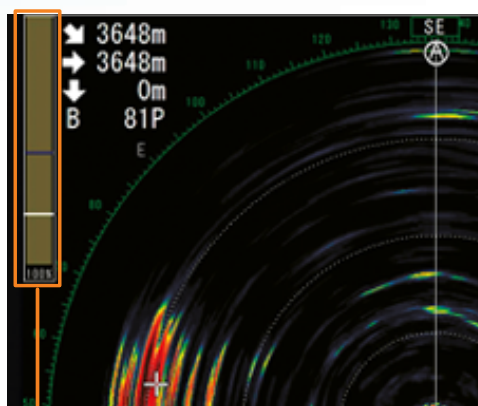
Recorded video is displayed in a pop-up window.



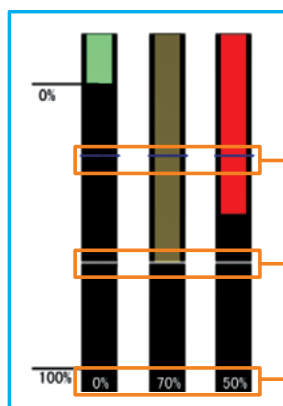
Example of sonar image playback function

► Graphical hull-unit indicator

See exactly how much the transducer is lowered directly on your display with a simple graphical interface. Instantly spot if and how much the transducer is lowered or retracted, helping you avoid accidents and increase safety at sea.



Transducer extension graph



Transducer is completely retracted

Stopped in a position between "completely retracted" and "fully extended"

Transducer is being raised or lowered

TX start point

TX starts when the transducer is projecting below this mark

Mid protrusion mark

Position where transducer stops after mid protrusion key is operated

Current projection distance indicated by percentage

Completely retracted: 0% Completely extended: 100%

► Adjustable transducer stop position

In situations such as contact with floating debris, the protrusion can be minimized to help prevent accidents at sea.

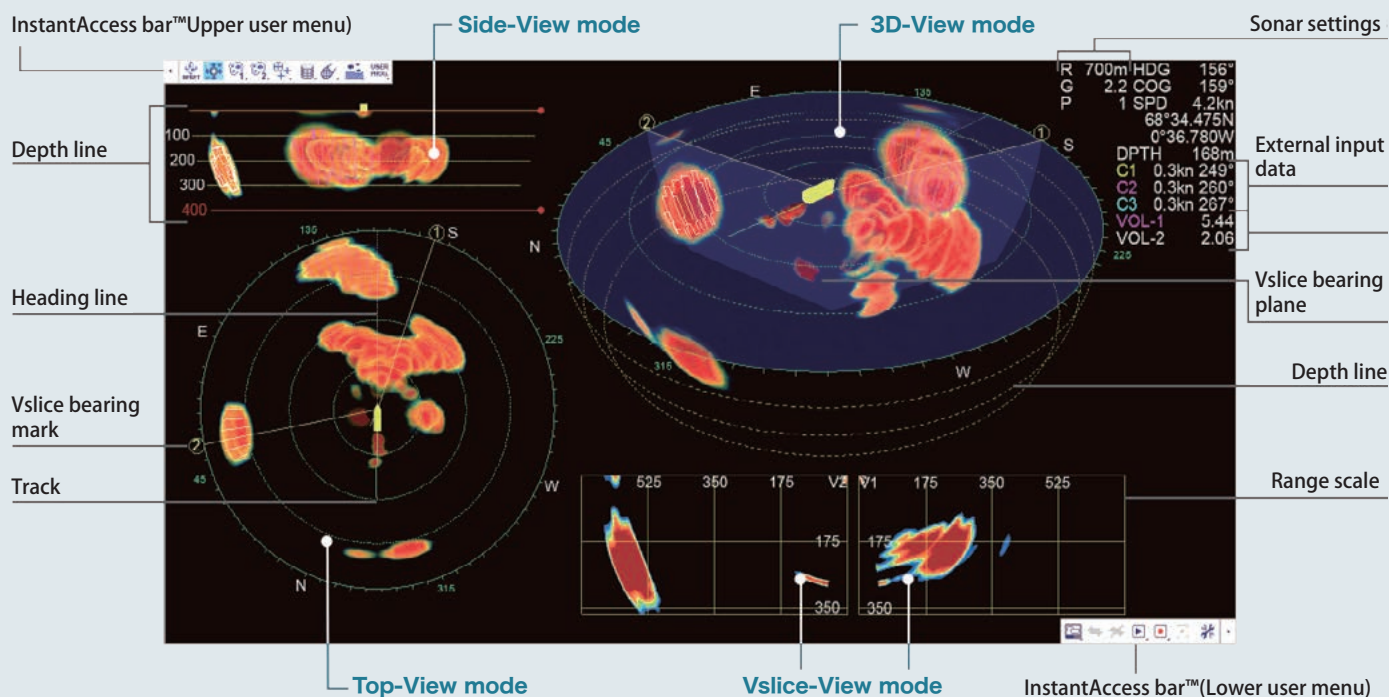
► Just 12 seconds to retract the hull unit* Top-class speed in the industry.

*Based on a 1200mm stroke. 16 seconds for a 1600mm stroke.

Option

3D Sonar Visualizer™ - Capturing fish schools in three dimensions

3D Sonar Visualizer™ F3D-S is a software that works in conjunction with the FSV-25 MARK-2 to show fish and sonar information in 3 dimensions. It uses the hull unit of your existing sonar but then processes the information in a unique way to show fish, peaks and sea floor data in a 3 dimensional "rear world" view.



3D Sonar Visualizer™
Model **F3D-S**

Access here
for more details

Product page



Promotion video



► Easily switch between frequently used settings and menu with a single button or knob on the control panel



Control Unit

Model: FSV-8501-MK2

- 1 Adjust the screen brilliance Monitor must be a Furuno's MU series.
- 2 Selects user-programmed settings (P1 to P10) Save settings tailored to fishing areas and target species.
- 3 Function Key (Up to 10 settings) Recall frequently used menu settings with a single push.

Put the cursor at the bottom of the screen to show the settings.



Software Function Key

Functions assigned to the function keys (F1 – F10) on the control unit can be accessed with a single click from the screen.

► Optional sub control unit, dedicated remote controller, and small switch box



Sub Control Unit
Model: FSV-853



Remote Controller
Model: FSV-854-MK2



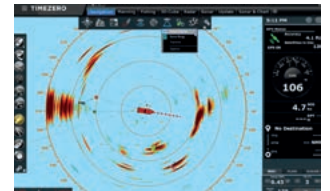
Remote Controller (Bluetooth)*
Model: SCU-001
*Bluetooth® adapter: Local supply



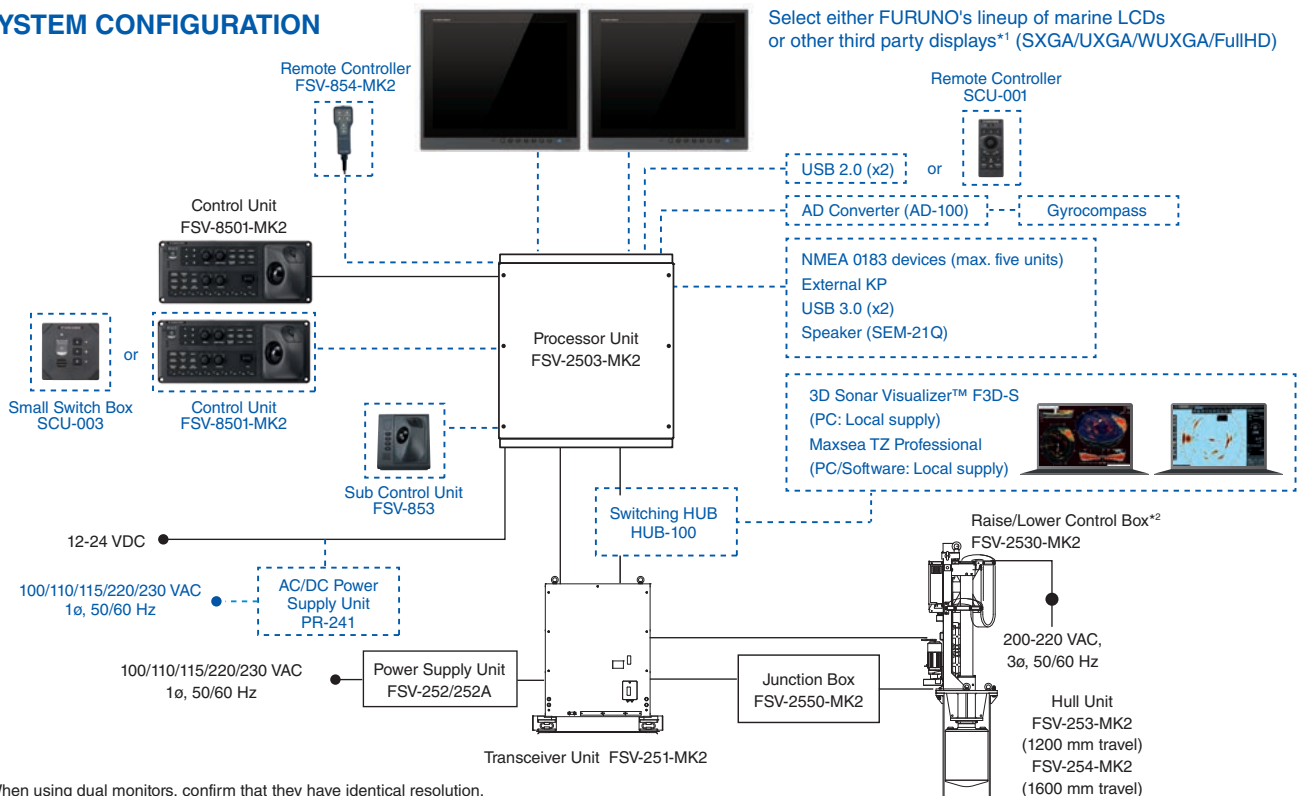
Small Switch Box
Model: SCU-003

► Integration with TZ Professional

TimeZero can be connected to the FSV-25 MARK-2 via Ethernet interface to display the sonar picture directly in TimeZero, but also control some basic parameters (TX/STBY, Range and Tilt) of the sonar.



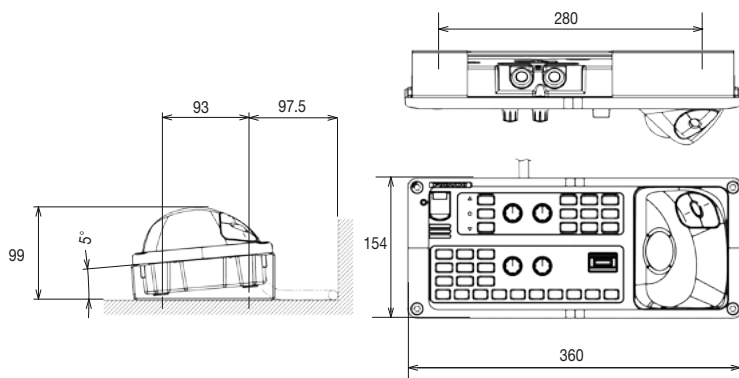
SYSTEM CONFIGURATION



*The images used in this catalog may differ from the actual FSV-25 MARK-2.

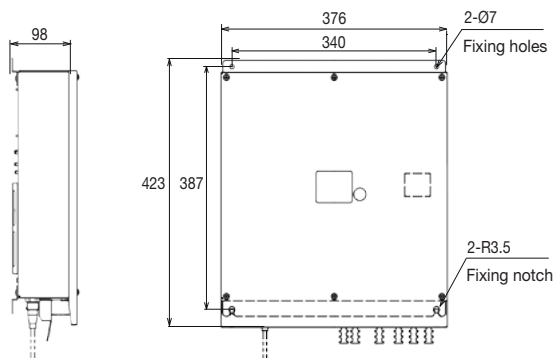
Control Unit FSV-8501-MK2

3.5 kg 7.7 lbs



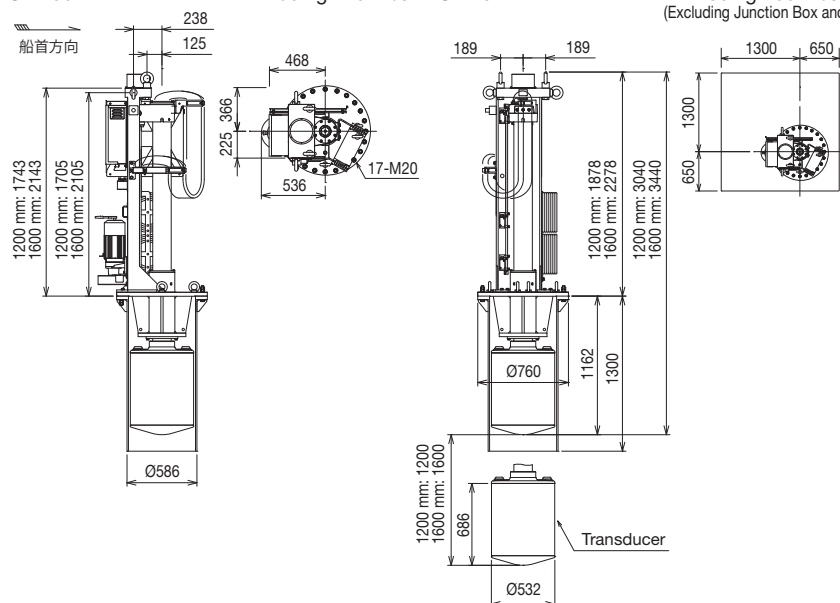
Processor Unit FSV-2503-MK2

7.6 kg 16.8 lbs



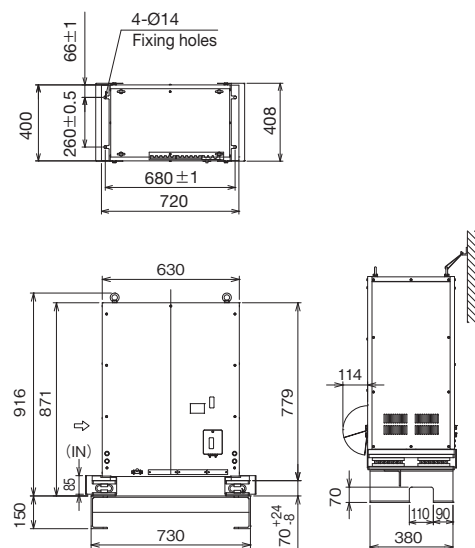
Hull Unit FSV-253/254-MK2

FSV-253-MK2 (1200 mm stroke): 1130 kg 2491 lbs FSV-254-MK2 (1600 mm stroke): 1180 kg 2601 lbs
(Excluding Junction Box and Tank)



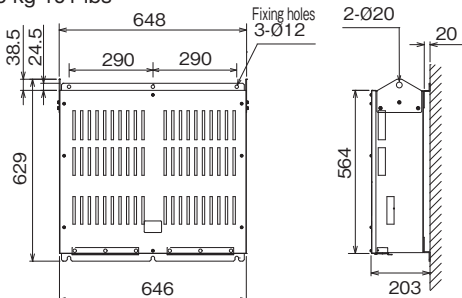
Transceiver Unit FSV-251-MK2

138 kg 304 lbs



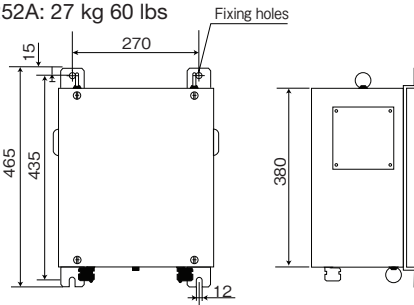
Junction Box FSV-2550-MK2

46 kg 101 lbs



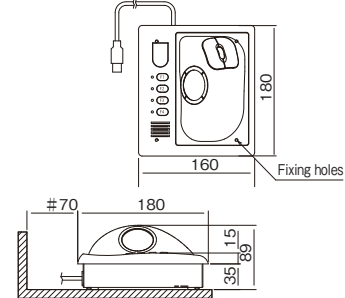
Power Supply Unit FSV-252/252A

252: 37.5 kg 82.7 lbs
252A: 27 kg 60 lbs



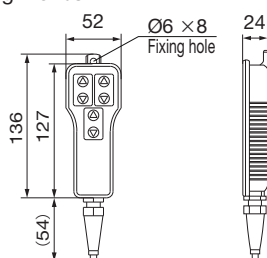
Sub Control Unit FSV-853 *Option

1.4 kg 3.1 lbs



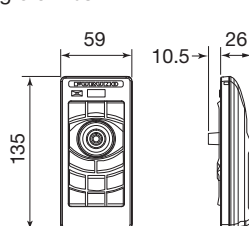
Remote Controller FSV-854-MK2 *Option

0.46 kg 1.0 lbs



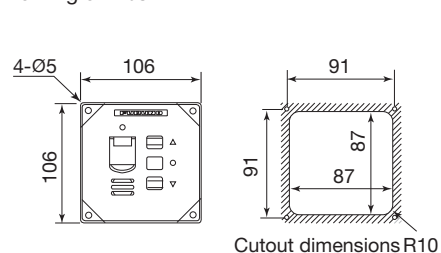
Remote Controller SCU-001 *Option

0.14 kg 0.31 lbs



Small Switch Box SCU-003 *Option

0.2 kg 0.4 lbs



Full-Circle Color Scanning Sonar

Model **FSV-25 MARK-2**

SPECIFICATIONS

1. GENERAL

Scanning method	Full digital beam forming
Frequency	20 kHz
Range	60, 100, 150, 200, 300, 400, 500, 600, 800, 1000, 1200, 1600, 2000, 2500, 3000, 3500, 4000, 5000
Audio search	30°, 60°, 90°, 180°, 330° selectable
Audio output	Audio terminal

2. PROCESSOR UNIT

Picture color	32 colors (sonar picture), 6 colors (marks)
Resolution	SXGA(1280×1024), UXGA(1600×1200), WUXGA(1920×1200) FullHD(1920×1080)
Orientation	Head-up, North-up*, Course up* and True motion* *: sensor required
Presentation mode	Horizontal, Horizontal combination, Vertical 1 combination, Vertical 2 combination
Features	Custom mode, Interference rejecter, After-glow, Noise limiter, Signal level, Auto-tilt, Automatic target tracking (target lock), Fish alarm, AGC, Reverberation suppression, Noise suppression, Transducer stop location control, Over-voltage warning, Unretracted transducer warning

3. TRANSCIVER UNIT

Transmitter	PDM half-bridge
Receiving method	Straight amplifier, full digital beam forming
H-mode beam-width	TX: 360° x 7°, RX: 12° x 10° (-3 dB full width) TX: 360° x 10°, RX: 16° x 14° (-6 dB full width)
V-mode beam-width	TX: 360° x 29°, RX: 12° x 10° (-3 dB full width) TX: 360° x 47°, RX: 18° x 13° (-6 dB full width)
Tilt angle	-5° to 60° (downward)
Vertical search range	0° to 60° (downward)

4. HULL UNIT

(1) Raise/lower period (full projection)

FSV-253-MK2 (1200 mm travel)	FSV-254-MK2 (1600 mm travel)
12 s	16 s

(2) Ship's speed allowance

Projection of transducer (mm)	Stable	Raise/lower operation
1100 or less	20.0 kn	14.5 kn
1100 to 1300	18.0 kn	13.5 kn
Over 1300	16.0 kn	12.0 kn

5. INTERFACE

(1) Number of port	Video output	: 2 ports, HDMI
	NMEA 0183	: 5 ports (V1.5/2.0/3.0/4.0/4.1)
	External KP	: 1 port, current loop or contact signal (input: 5-15V, output: 12V)
	Audio output	: 1 port, 10W, 4 ohms, monaural
	Gyrocompass	: 1 port, AD-10
	Contact signal	: 1 port, for external switch
	USB	: 4 ports (USB2.0: 2, USB3.0: 2)
	LAN	: 2 ports, Ethernet 1000Base-T

(2) I/O sentences

Input	CUR, DBS, DBT, DPT, GGA, GLL, GNS, HDG, HDM, HDT, MDA, MTW, MWV, RMC, THS, VBW*, VDR, VHW, VTG, VWR, VWT, ZDA *1: Fore-aft and port-stbd speeds required.
Output	TLL

6. POWER SUPPLY

Processor unit	12-24 VDC: 4.0-2.0 A
Power supply unit	100/110/115/220/230 VAC: 14 A max, 1 phase, 50/60 Hz Output for transceiver unit: 200 VAC, 1 phase, 50/60 Hz
Raise/lower control box	200-220 VAC: 16 A max, 3 phase, 50/60 Hz
AC/DC power supply unit (option)	PR-241: 100-230 VAC, 1 phase, 50-60 Hz

7. ENVIRONMENTAL CONDITIONS

Ambient temperature	Processor/ Control unit	-15°C to +55°C
	Transducer	-5°C to +35°C
	Remote controller/ Small switch box	-15°C to +55°C
	Others	0°C to +50°C
Relative humidity		93% or less at +40°C
Degree of protection	Control unit	IP22 (panel), IP20 (chassis)
	Processor/Transceiver unit	IP22
	Remote controller	IPX4(FSV-854-MK2), IP56 (SCU-001)
	Small switch box	IP56 (front), IP22 (rear)
	Power supply unit/ Junction box	IP22
	Hull unit	IPX2
	Transducer	IPX8
Vibration		IEC60945 Ed.4

EQUIPMENT LIST

Standard

Control Unit	x1	Junction Box	x1
Processor Unit	x1	Hull Unit	x1
Transceiver Unit	x1	Installation Materials	
Power Supply Unit	x1	Spare Parts	

Option

Control Unit, Remote Controller, Small Switch Box, Sub Control Unit,
Control Box Extension Box, AC/DC Power Supply Unit, External Loudspeaker,
Retraction Tank, Attachment Flange, Attachment Kit, Data Recording Kit,
Calibration Ball, Ferrite Core, 5-Pair Cable, Cable Assembly,
Installation Materials, Flushmount Kit, 3D Sonar Visualizer, Operator's Manual

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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