

FURUNO

Full-Circle Color Scanning Sonar

Model **FSV-25 MARK-2**



Photo: 19" Marine Display MU Series Monitor
(Customer Supply)



More info at
www.furuno.com



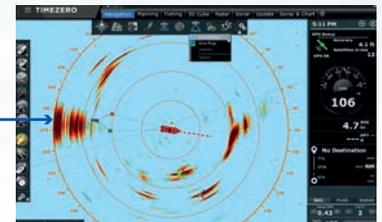
Next-Level Performance & Amazing Range With The FSV-25 MARK-2



NEW FEATURES

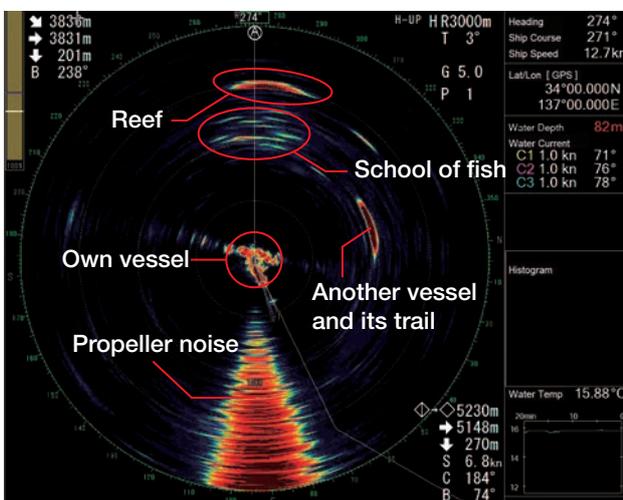
- ▶ [Fish mark 2] newly added. Maximum of 20 fish marks can be entered per mark type
 - Fish mark 1
 - ◇ Fish mark 2
- ▶ New Control Unit and Remote Controller for quick and easy operation
- ▶ Export of echo data to TZ Professional software

Overlay echo data on TZ Professional chart



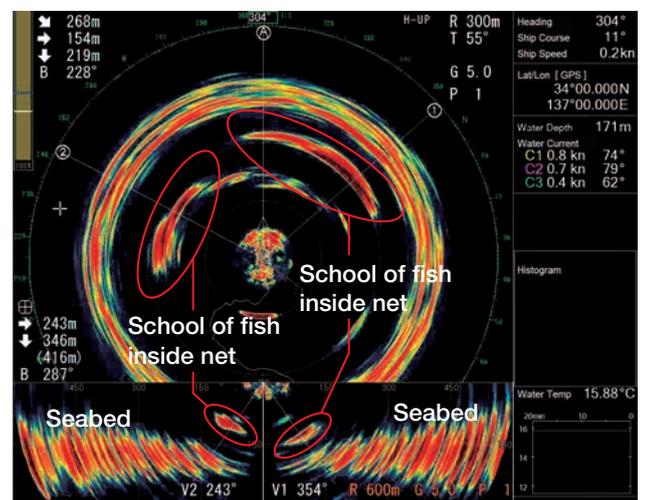
Learn more about TZ Professional at <https://mytimezero.com/>

Long-range detection



(3000 m range) A school of fish 2000 m ahead. The fish school appears to swim close to a reef.

Close-range detection



(300 m range) Two schools of fish can be seen right after the purse-line has been pulled and the net has been closed.

KEY FEATURES

Fully extend the transducer in just 12 seconds for 1200 mm stroke and in 16 seconds for 1600 mm stroke

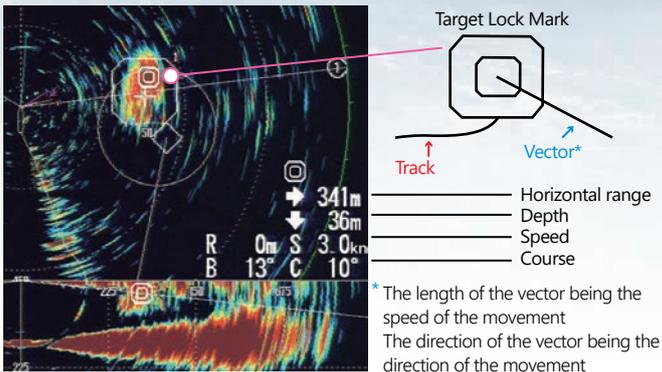
A transducer "throw" time of just 12/16 seconds (respectively) places the FSV-25 MARK-2 among one of the fastest hull units available. You can extend and retract the transducer rapidly for smooth operation.

Extended detection range to identify schools of fish at great distances

Thanks to recent advancements in low-frequency transducer elements, signal processing and increased transmission power, the detection range has been greatly improved (by about 30%) with the FSV-25 and FSV-25 MARK-2 series. You can instantly spot and follow schools of fish from several kilometers away.

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

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



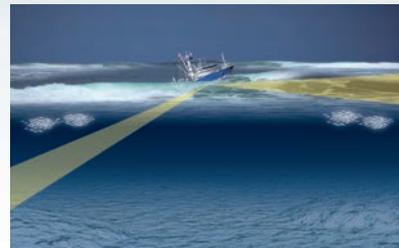
Wired Remote and Sub Control Unit available



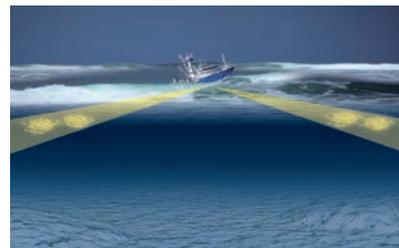
Remote Controller
FSV-854-MK-2

Stabilization function for unwavering performance

The stabilizer ensures that echoes are stable when received, regardless of transducer attitude, counteracting the rolling and pitching motions at sea.



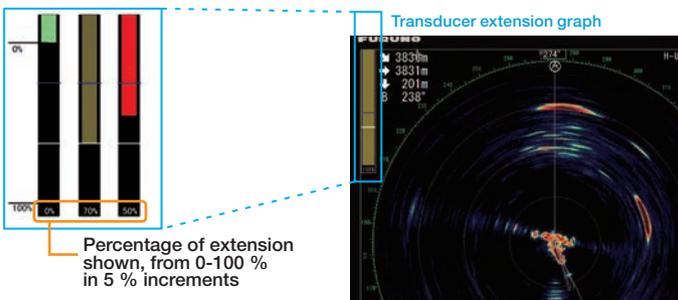
Stabilizer OFF



Stabilizer ON

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 is completely retracted
- Stopped in a position between "completely retracted" and "fully extended"
- Transducer is being raised or lowered

Indicator changes color depending on position and movements of the transducer.

Stop function when extending and retracting transducer

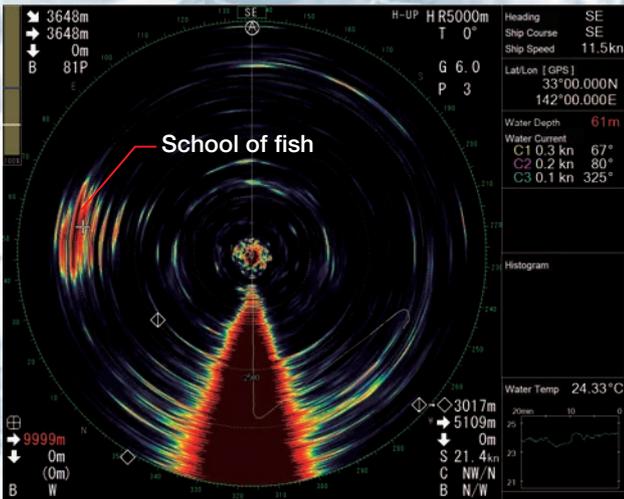
In order to avoid collisions with drift wood and other material, the transducer can be lowered to the desired position.

Echo strength distribution histogram

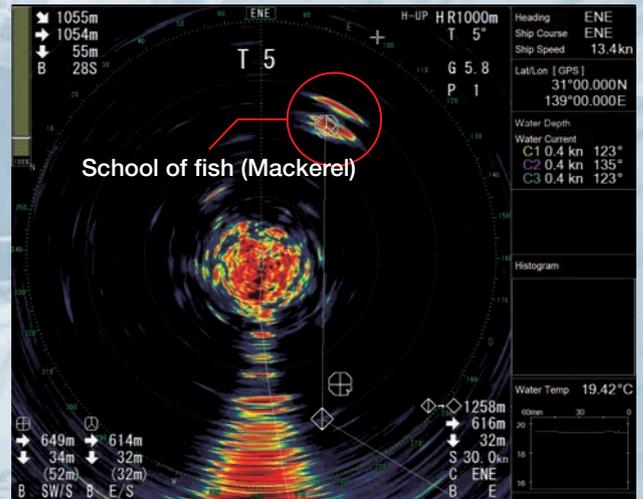
Auto filter for clear and uninterrupted performance

Advanced noise reduction for clear echoes

Easily spot schools of fish at great distances around your vessel



(5000 m range) A school of bait fish can be seen on the port side of the vessel.

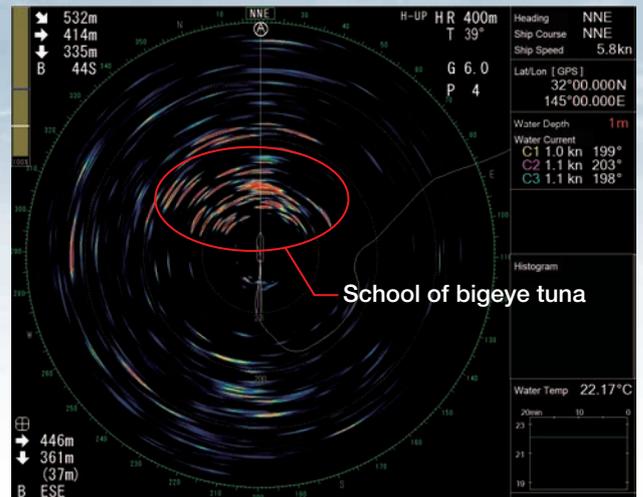


(1000 m range) Targeted school of fish 650 meters away.

Improved resolution with new signal compression algorithms

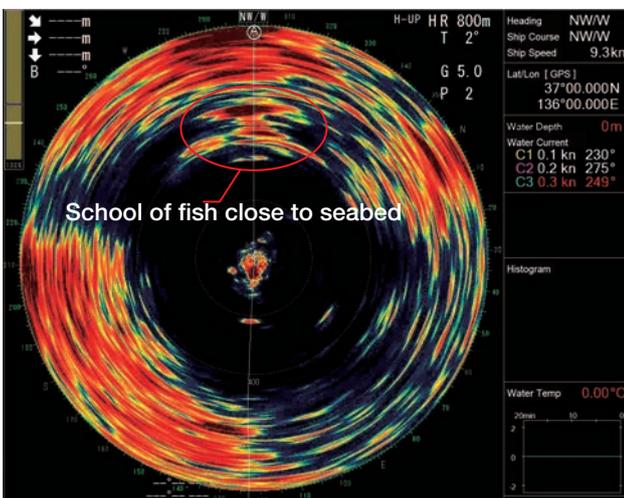


(150 m range) Schools of tuna and skipjack tuna spotted.



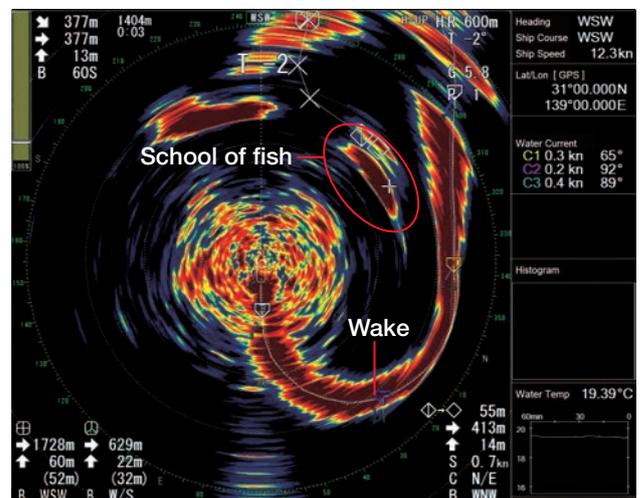
(400 m range) Individual bigeye tuna can be seen in this fish school.

Accurately spot bottom feeders



(800 m range) A school of fish close to the seabed can be distinguished clearly.

View fish movements within your net



(600 m range) Increase your catch by observing how schools of fish move within your net.

Model SPECIFICATIONS OF FSV-25 MARK-2

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 m

Audio search: 30°, 60°, 90°, 180°, 330° (selectable)
Audio output: Audio terminal (requires speaker with amplifier)

DISPLAY UNIT (Customer Supply)

Screen resolution: SXGA(1280×1024), UXGA(1600×1200), WUXGA(1920×1200)

Picture color: 32 colors (sonar picture), 6 colors (marks)
Orientation: Head-up, North-up*, Course-up* and True Motion*
 *External sensor required.

Presentation modes:

Horizontal, Horizontal combination,
 Vertical 1 combination, Vertical 2 combination

Features: Custom mode, Interference rejecter, Echo Average, 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

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)

HULL UNIT

Model name	FSV-253	FSV-254
Stroke	1200 mm	1600 mm
Raise/Lower time (Full)	12 sec.	16 sec.

Speed limitations

Transducer extension	Stable	Raising/Lowering
0 to 1100 mm	20.0 kn	14.5 kn
1100 to 1300 mm	18.0 kn	13.5 kn
Over 1300 mm	16.0 kn	12.0 kn

INTERFACE

(1)Ports
NMEA0183: 5 Ports (Ver1.5/2.0/3.0/4.0/4.1)
Video: 2 Ports, HDMI, SXGA
External KP: 1 Port, current loop or contact signal (input: 5-15V, output: 12V)
USB: 4 Ports (USB2.0: 2) (USB3.0: 2)

(2) I/O sentences

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

Output: TLL

(3) CIF sentences: System clock, Position, Bearing, First layer current data, Water depth, Water temperature, Sonde depth, Ship's speed/course data, Multi-layer current data, Net depth, Wind speed/direction, Sonde number

POWER SUPPLY

Processor unit: 12-24 VDC:10-5 A

Power supply unit: 100/110/115/220/230 VAC: 14 A max, 1 phase, 50/60

Raise/lower control box:

200 - 220 VAC:16 A max, 3 Phase, 50/60 Hz

Rectifier (option): 100/110/115/220/230 VAC, 1 Phase, 50/60 Hz

ENVIRONMENTAL CONDITIONS

Ambient temperature:

Processor Unit: 0 °C to +45 °C
Transducer: -5 °C to +35 °C
Control Unit: -15 °C to +55 °C
Others: 0 °C to +50 °C

Relative humidity: 93 % max at +40 °C

Waterproofing:

Control Unit: IPX2 (panel), IPX0 (chassis)
Processor Unit, Interface Unit, Remote control Unit: IPX0
Transceiver Unit, Power Supply Unit, Junction Box: IPX2
Hull Unit: IPX2
Transducer: IPX8

Vibration:

IEC60945 Ed.4

EQUIPMENT LIST

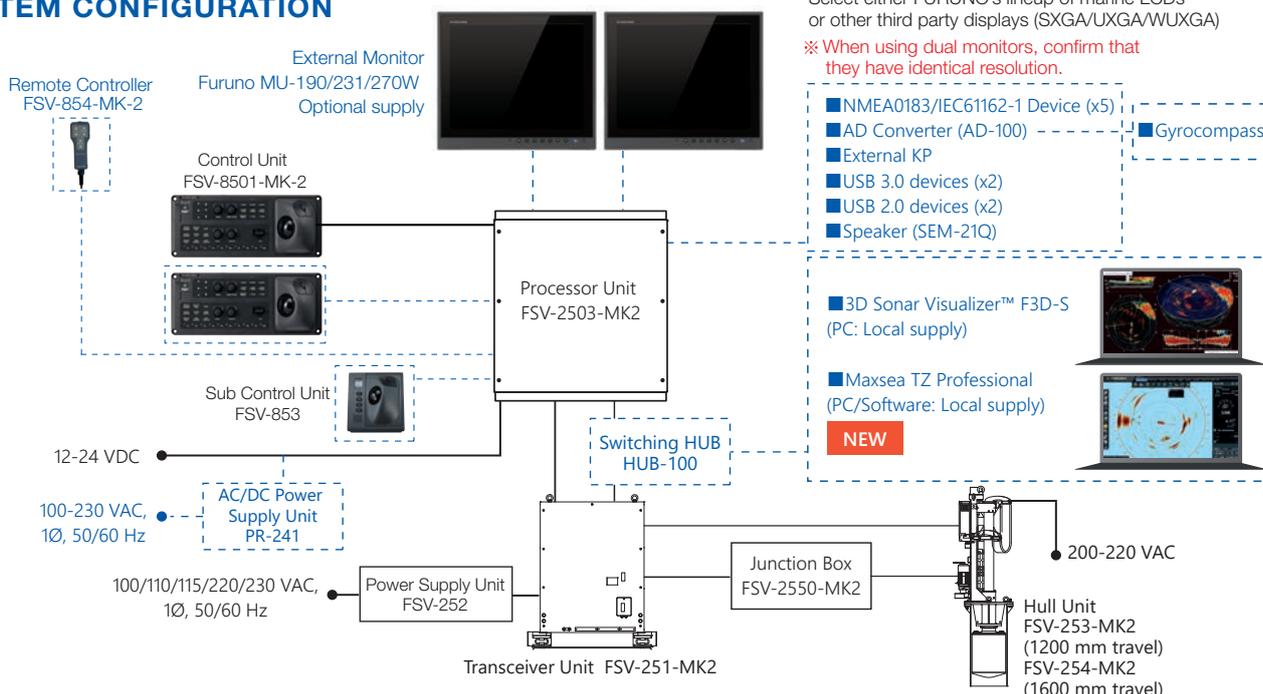
Standard

- Control Unit FSV-8501-MK-2
- Junction Box FSV-2550-MK2
- Power Supply Unit FSV-252
- Hull Unit FSV-253-MK2
- Processor Unit FSV-2503-MK2
- Transceiver Unit FSV-251-MK2
- Installation Materials
- Spare Parts

Option

- Control Unit
- Sub Control Unit FSV-853
- Rectifier
- Remote Control
- Retraction Tank
- Attachment Kit
- Attachment Flange
- Fixing Materials
- Flush Mount Kit
- Control Box Extension Box
- 8 Core Cable
- Cables
- Installation Materials (LAN cable 10/20/30/50/100 m)
- Junction Box

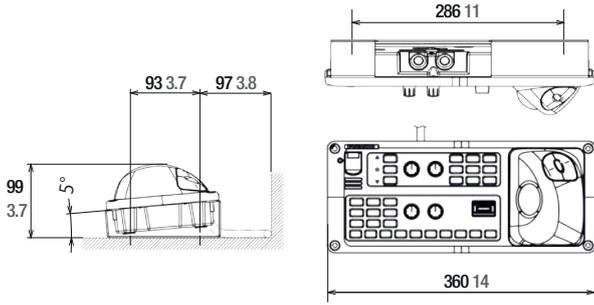
SYSTEM CONFIGURATION



※ The distance between the Raise/Lower Control Box and the Hull Unit can be extended with the optional Control Box Extension Box FSV-2560.

Control Unit FSV-8501-MK2

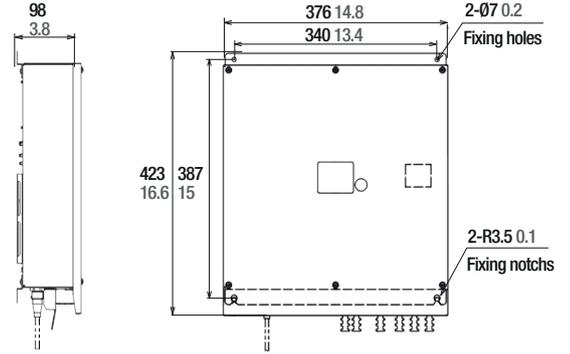
3.8 kg 8.3 lbs



*When using the standard mounting bracket
*For recessed installations, the mounting hole dimensions are different.

Processor Unit FSV-2503-MK2

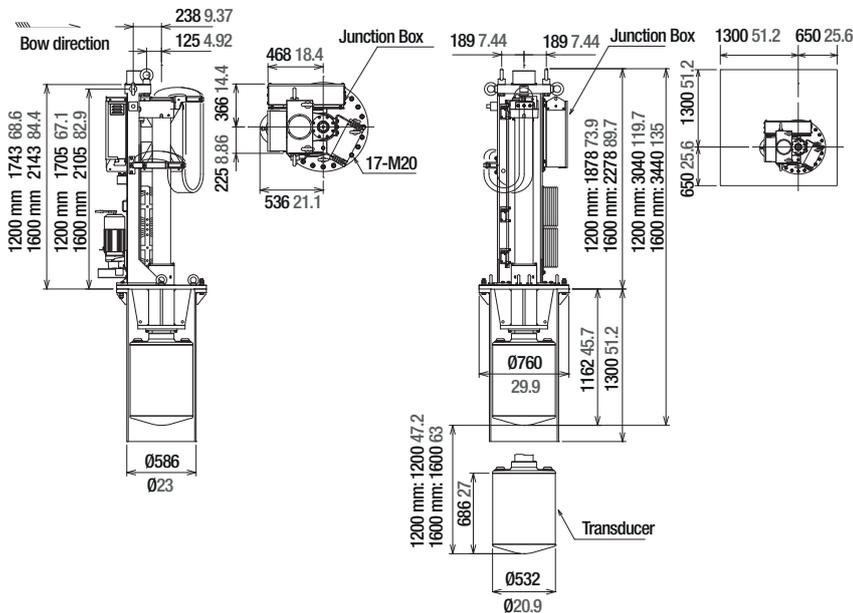
7.6 kg 33 lbs



Hull Unit FSV-253/254-MK2

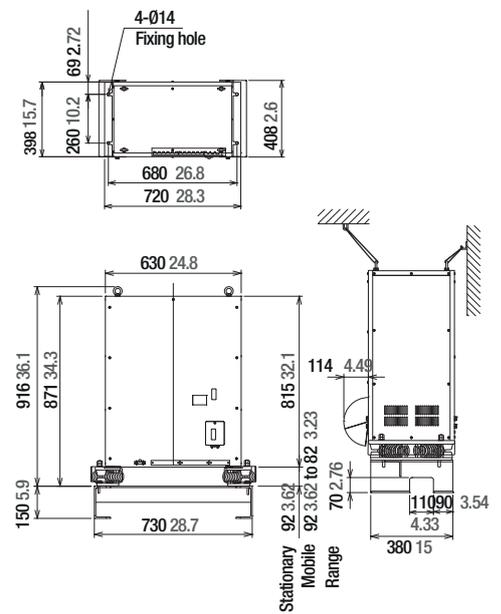
FSV-253 (1200mm stroke) 1390 kg 3064 lbs

FSV-254 (1600mm stroke) 1440 kg 3175 lbs
(Excluding Junction Box and Tank)



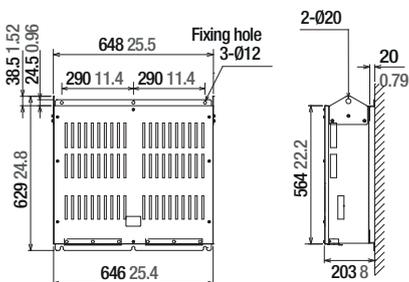
Transceiver Unit FSV-251-MK2

138 kg 304 lbs



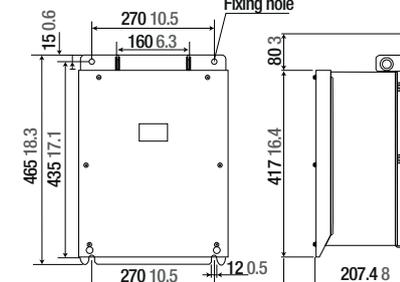
Junction Box FSV-2550-MK2

46 kg 101.4 lbs



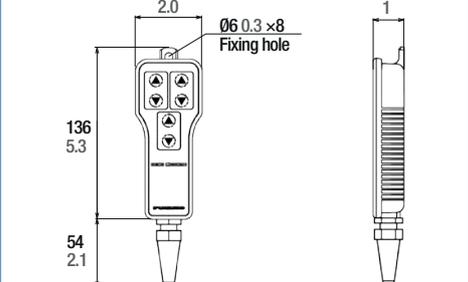
Power Supply Unit FSV-252A

27 kg 59.5 lbs



Remote Control Unit FSV-854-MK-2

0.47 kg 1 lbs



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