

FURUNO

MU-DISPLAY^{series}

MARINE DISPLAY





Need a bright idea? How about using FURUNO marine grade monitors in your helm!

The FURUNO MU-Display series is a multi-purpose marine LCD that features the unmatched quality and reliability that you have learned to depend on.

The MU-Display series employs bright color TFT LCDs with a special AR (anti-reflective) glass filter to cut down on annoying glare. With its bright colors, excellent contrast and wide viewing angles, the monitor is perfect for any tropical sunlight or low light conditions. Furthermore, the LCDs and the glass are bonded to ensure fog free operation on open fly-bridge installations*.

These units feature a wide range of interface options that include: RGB analog, DVI (Digital Video Interface) and composite video inputs.

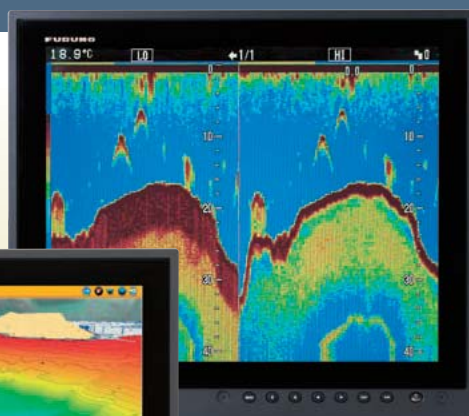
These displays may be used as either the main or remote display for a variety of marine equipment such as BlackBox Radar, Sounder, Sonar and NavNet series. They can also be used for displaying images from security cameras, DVD player, computers, etc.

*except MU-151C/170C/190/190V/201C/231

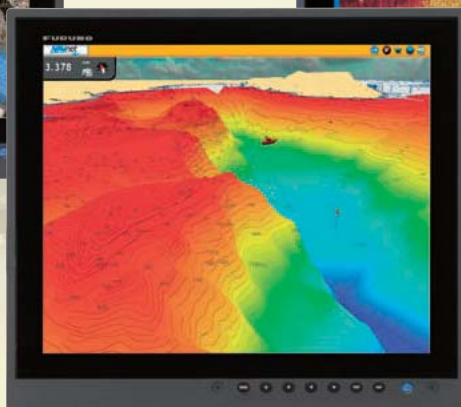
MU-DISPLAY^{series}



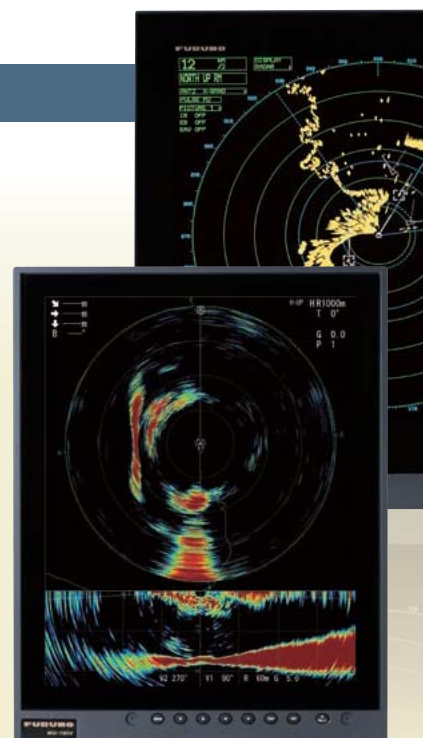
MU-150HD



MU-190



MU-190HD



MU-190V



Crystal clear marine grade monitors for use as main or remote display

Bonded LCD provides clear view in any weather condition and avoids concerns such as dew condensation

Available in table top or flush mount (Mounting bracket is optional)

Automatic dimmer sensor adjusts the display brightness as lighting conditions change

Customizable input names for easy on-the-fly identification and switching between onboard Radar, Sonar, Sounder, Camera, etc.

Any of the composite inputs are PIP (Picture-In-Picture) capable, with adjustable size and screen location

Power ON/OFF automatically by the DVI signal

1,000 cd/m² brightness provides superior visibility even in direct sunlight

Built-in scaler allows accepting up to various resolutions

Selectable inputs including RGB analog, DVI (Digital Video Interface) and Composite

	MU-151C	MU-150HD	MU-170C	MU-190HD	MU-190	MU-190V	MU-201C	MU-231
Crystal clear marine grade monitors for use as main or remote display	✓	✓	✓	✓	✓	✓	✓	✓
Bonded LCD provides clear view in any weather condition and avoids concerns such as dew condensation	—	✓	—	✓	—	—	—	—
Available in table top or flush mount (Mounting bracket is optional)	✓	✓	✓	✓	✓	✓	✓	✓
Automatic dimmer sensor adjusts the display brightness as lighting conditions change	—	✓	—	✓	✓	✓	—	✓
Customizable input names for easy on-the-fly identification and switching between onboard Radar, Sonar, Sounder, Camera, etc.	✓	✓	✓	✓	✓	✓	✓	✓
Any of the composite inputs are PIP (Picture-In-Picture) capable, with adjustable size and screen location	—	✓	✓	✓	✓	✓	—	✓
Power ON/OFF automatically by the DVI signal	—	✓	—	✓	✓	✓	—	✓
1,000 cd/m ² brightness provides superior visibility even in direct sunlight	—	✓	✓	✓	—	—	—	—
Built-in scaler allows accepting up to various resolutions	VGA to XGA	VGA to SXGA	VGA to SXGA	VGA to SXGA	VGA to SXGA	VGA to SXGA	VGA to SXGA	VGA to UXGA
Selectable inputs including RGB analog, DVI (Digital Video Interface) and Composite	RGB only	✓	✓	✓	✓	✓	RGB and DVI only	✓



MU-231



MU-151C



MU-170C



MU-201C

Features

15"

XGA (1024 x 768)



MU-151C



XGA (1024 x 768)



MU-150HD



1000 cd/m²

17"

SXGA (1280 x 1024)



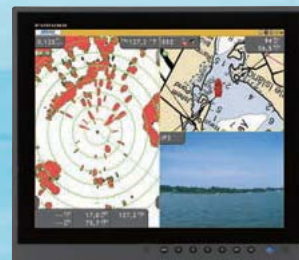
MU-170C



1000 cd/m²

19"

SXGA (1280 x 1024)



MU-190HD



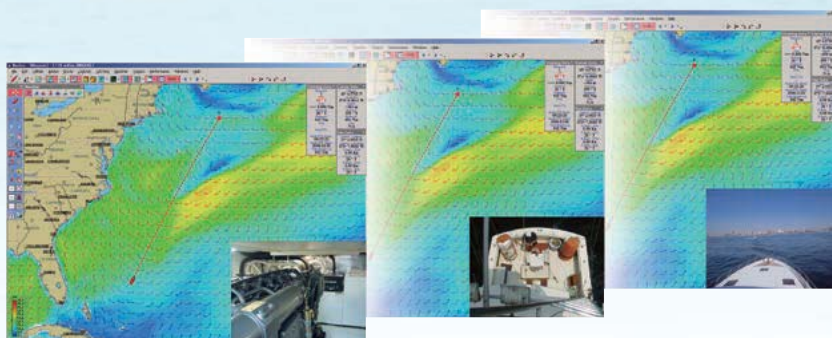
1000 cd/m²

Picture In Picture (PIP)

: MU-150HD/170C/190HD/190/190V/231

Composite video (NTSC/PAL) input is available for displaying video images from an onboard TV/DVD player.

For MU-150HD/170C/190HD with more than two Composite Video Inputs, the images in the PIP window automatically switch alternately.



Low power consumption

: MU-150HD/190HD/190/190V/231

Utilizing the latest LED backlight, the MU-Display series delivers sharp, high quality images with bright colors and all at very low power consumption.

Slim, lightweight and compact

: MU-150HD/190HD/190/190V/231

The MU-Display series is slim in depth, light weight and is so compact that it fits right into virtually any console.

It's space-saving design makes optimum use of your dashboard.

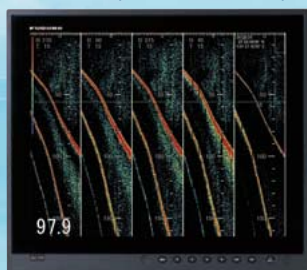
Waterproof : MU-151C/150HD/170C/190HD

The MU-151C/150HD/170C/190HD has a waterproof display and is built to stand up to tough marine conditions when mounted at fly bridge console. The display can be rinsed in water for easy, worry-free cleaning.



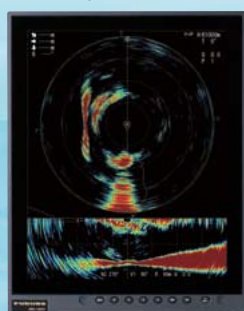
photo: MU-150HD/MU-190HD

SXGA (1280 x 1024)



MU-190

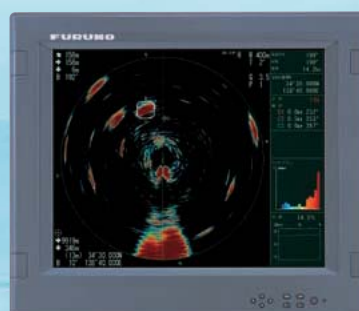
SXGA (1280 x 1024)



MU-190V

20.1"

SXGA (1280 x 1024)



MU-201C

23.1"

UXGA (1600 x 1200)



MU-231

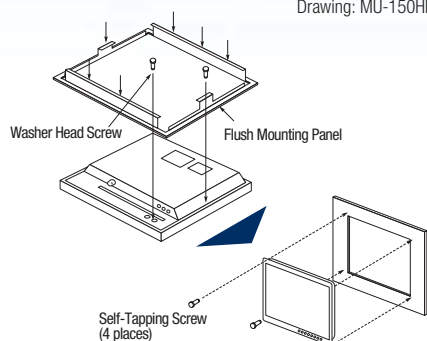
Flush mounting

For space-saving installation and additional security, flush mount installation is available for all the MU-Display series. The display unit can be fixed from either front or rear with the flush mount kit for MU-150HD/190HD/190/190V/231.

Flush mounting, fixed from front

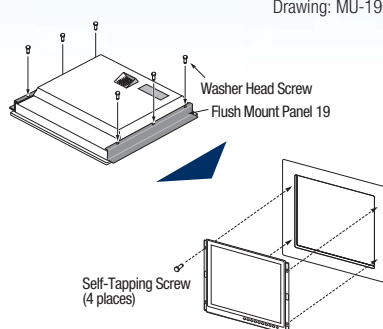
MU-150HD/190HD

Drawing: MU-150HD



MU-190/231

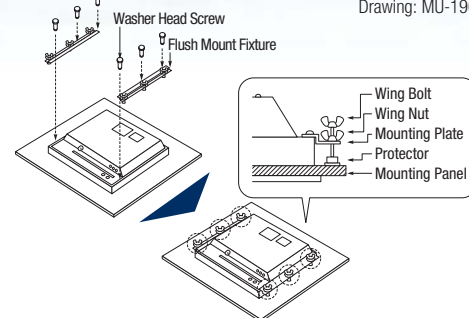
Drawing: MU-190



Flush mounting, fixed from rear*

MU-150HD/190HD/190/190V/231

Drawing: MU-190



* Optional for MU-190/231, standard for MU-150HD/190HD/190V

Connectable equipment

Equipment	Resolution	Signal
FCV-1200L/LM	VGA	Analog RGB, via IF-8000
CH-250/S	VGA	Analog RGB, via IF-8000
CH-270	VGA	Analog RGB, via IF-8000
CH-300	VGA	Analog RGB, via IF-8000
CSH-5L/8L	XGA	Analog RGB
FSV-24/BB	SXGA	Analog RGB
FSV-30/S-BB	SXGA	Analog RGB
FSV-84	SXGA	Analog RGB
FCV-30	SXGA	Analog RGB
CI-68/88	VGA	Analog RGB
FR-1510MK-3	XGA	Analog RGB, OP03-153 required
FR-21x5 series	SXGA	Analog RGB, OP03-162 required
FAR-21x7 series*	SXGA	DVI
FAR-28x7 series*	SXGA	DVI

Equipment	Resolution	Signal
FEA-2107*	SXGA	DVI
FEA-2807*	SXGA	DVI
FCR-21x7 series*	SXGA	DVI
FCR-28x7 series*	SXGA	DVI
NavNet vx2 series	VGA	Analog RGB, OP03-176 required
NavNet vx2 BB series	VGA	Analog RGB
MFD8 (NavNet 3D)	VGA	DVI
MFD12 (NavNet 3D)	SVGA	DVI
MFDDB (NavNet 3D)	SVGA	DVI
	XGA	
	SXGA	

Note 1: This equipment is used as a display for a Non-SOLAS Radar or ECDIS.

Note 2: Depends on resolution of the input source. A circle may be displayed as an ellipse because the aspect ratio differs.

SPECIFICATIONS OF MU-DISPLAYseries

DISPLAY CHARACTERISTICS	MU-150HD	MU-190HD
Screen Size	15 inches, landscape	19 inches, landscape
Resolution	XGA (1024 x 768)	SXGA (1280 x 1024)
Contrast Ratio (typical)	600 : 1	900 : 1
Viewing Angle (typical)	left/right and up/down: 80° or more	
Max Brightness (typical)	1000 cd/m ²	
Min Brightness (typical)	0.2 cd/m ² or less	

INTERFACE

Analog RGB (D-SUB/15 pins)	1 port	1 port
DVI (DVI-D)	2 ports	2 ports
Composite Video (NTSC/PAL)	3 ports	3 ports
Built-in Scaler	VGA to SXGA	VGA to SXGA
POWER SUPPLY	12-24 VDC 4.5 - 2.2 A	12-24 VDC 8.4 - 3.9 A

ENVIRONMENT (IEC 60945 test method)

Temperature	-15°C to +55°C
Waterproofing	IP56 (CFR46, front panel), IP22 (rear panel)

EQUIPMENT LIST

Standard	Option
1. Display Unit 2. Flush Mount Kit (for fixing at rear) 3. Installation Materials, Accessories and Spare Parts	1. Cable Assembly 2. Bracket Assembly (w/knobs) 3. Hood Assembly 4. Flush Mount Kit (for fixing at front)

DISPLAY CHARACTERISTICS	MU-190V	MU-190	MU-231
Screen Size	19 inches, portrait	19 inches, landscape	23.1 inches, landscape
Resolution	SXGA (1280 x 1024)	SXGA (1280 x 1024)	UXGA (1600 x 1200)
Contrast Ratio (typical)	900 : 1	900 : 1	600 : 1
Viewing Angle (typical)	left/right and up/down: 80° or more		
Max Brightness (typical)	500 cd/m ²	450 cd/m ²	400 cd/m ²
Min Brightness (typical)	0.2 cd/m ² or less		

INTERFACE

Analog RGB (D-SUB/15 pins)	1 port	1 port	1 port
DVI (DVI-D)	2 ports	2 ports	2 ports
Composite Video (NTSC/PAL)	1 port	1 port	1 port
Built-in Scaler	VGA to SXGA	VGA to SXGA	VGA to UXGA
POWER SUPPLY	12-24 VDC 5.0 - 2.5 A	100-230 VAC 0.7 - 0.4A	100-230 VAC 1.0 - 0.6 A

ENVIRONMENT (IEC 60945 test method)

Temperature	-15°C to +55°C
Waterproofing	IP22

EQUIPMENT LIST

Standard	Standard
1. Display Unit 2. Flush Mount Kit (for fixing at rear) 3. Installation Materials, Accessories and Spare Parts	1. Display Unit 2. Flush Mount Kit (for fixing at front) 3. Installation Materials, Accessories and Spare Parts
Option	Option
1. Cable Assembly 2. Bracket Assembly (w/knobs) 3. Hood Assembly	1. Cable Assembly 2. Bracket Assembly (w/knobs for MU-190) 3. Hood Assembly 4. Dust Cover 5. Flush Mount Kit (for fixing at rear)

DISPLAY CHARACTERISTICS	MU-151C	MU-170C	MU-201C
Screen Size	15 inches, landscape	17 inches, landscape	20.1 inches, landscape
Resolution	XGA (1024 x 768)	SXGA (1280 x 1024)	SXGA (1280 x 1024)
Contrast Ratio (typical)	400 : 1	500 : 1	300 : 1
Viewing Angle (typical)	left/right: 80°, up: 75°, down: 65°	left/right: 80° up/down: 75°	left/right and up/down: 85°
Max Brightness (typical)	350 cd/m ²	1,000 cd/m ²	200 cd/m ²
Min Brightness (typical)	0.3 cd/m ² or less	0.3 cd/m ² or less	3.5 cd/m ² or less

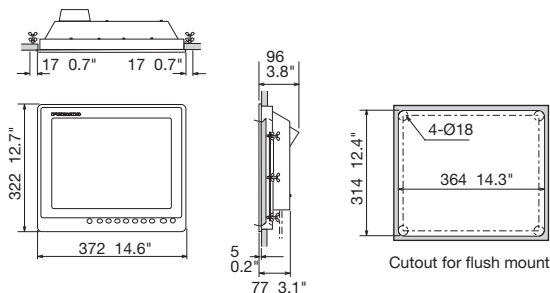
INTERFACE			
Analog RGB (D-SUB/15 pins)	1 port	2 port	1 port
DVI (DVI-D)	—	1 ports	1 port
Composite Video (NTSC/PAL)	—	3 ports	—
Built-in Scaler	VGA to XGA	VGA to SXGA	VGA to SXGA
POWER SUPPLY	100 - 220 VAC:0.5A or 12-24 VDC: 4.0 - 2.0 A	12-24 VDC: 6.0 - 3.0 A	100-230 VAC: 0.8 - 0.5 A

ENVIRONMENT (IEC 60945 test method)			
Temperature	-15°C to +55°C		
Waterproofing	IP25 (front panel), IP20 (rear panel)	IPX6 (front panel), IP20 (rear panel)	IPX0

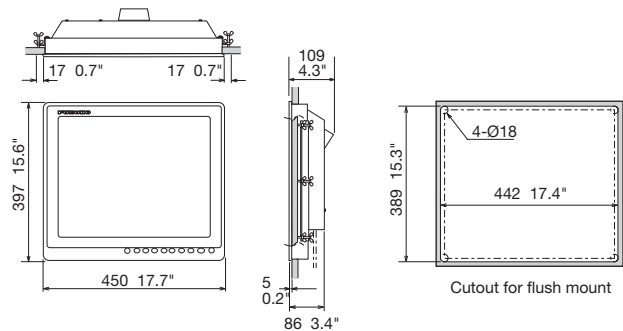
EQUIPMENT LIST	Standard	Standard	Standard
	1. Display Unit 2. Installation Materials, Accessories and Spare Parts Option 1. Cable Assembly 2. Bracket Assembly 3. Hood Assembly	1. Display Unit 2. Remote Control Unit 3. Installation Materials, Accessories and Spare Parts Option 1. Cable Assembly 2. Bracket Kit 3. Remote Control Unit 4. Hood Kit 5. Handgrip Assembly 6. Coupling Pedestal Kit	1. Display Unit 2. Installation Materials, Accessories and Spare Parts Option 1. Interface Unit 2. Cable Assembly 3. Bracket Assembly 4. Handgrip Assembly 5. Dust Cover

DIMENSIONS AND WEIGHT

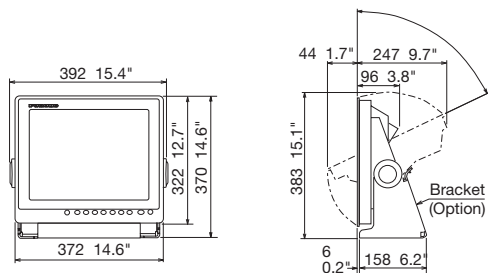
MU-150HD Flush Mount
5.4 kg 11.9 lb



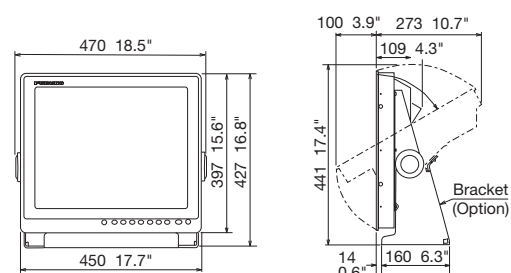
MU-190HD Flush Mount
8.2 kg 18.1 lb



MU-150HD Bracket Mount
7.4 kg 16.3 lb



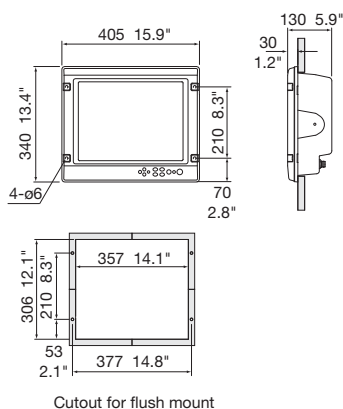
MU-190HD Bracket Mount
11 kg 24.3 lb



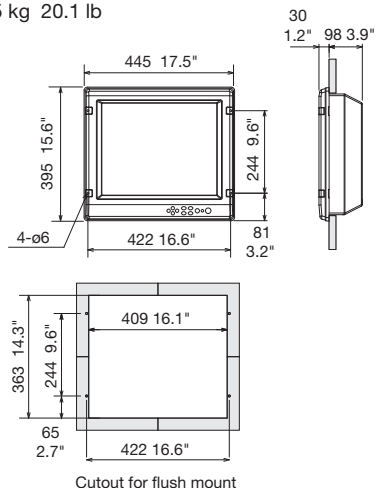
SPECIFICATIONS OF MU-DISPLAY series

DIMENSIONS AND WEIGHT

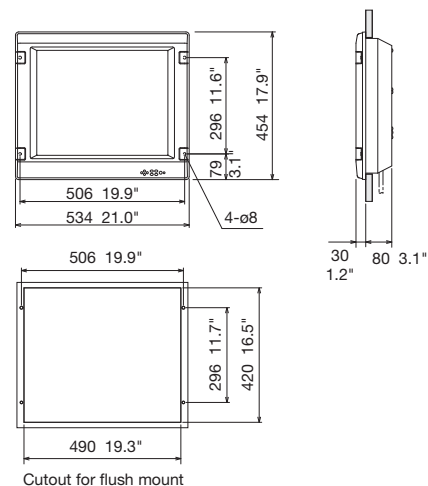
MU-151C Flush Mount
7.5 kg 17.4 lb



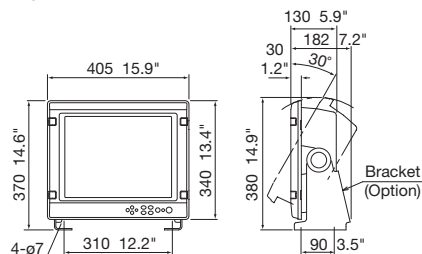
MU-170C Flush Mount
7.5 kg 20.1 lb



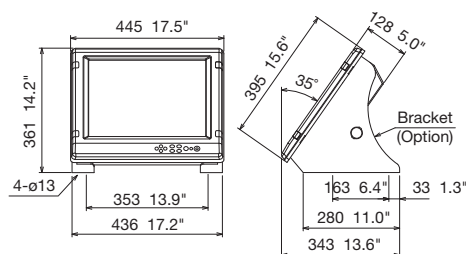
MU-201C
11.0 kg 24.3 lb



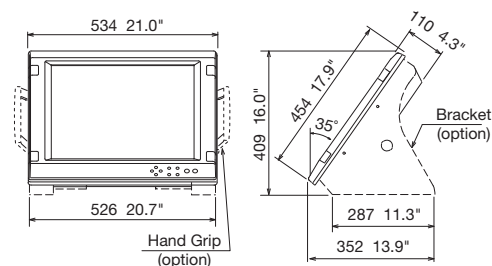
MU-151C Bracket Mount
8.6 kg 20.1 lb



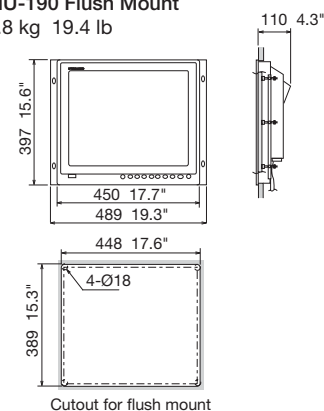
MU-170C Bracket Mount
12.9 kg 32 lb



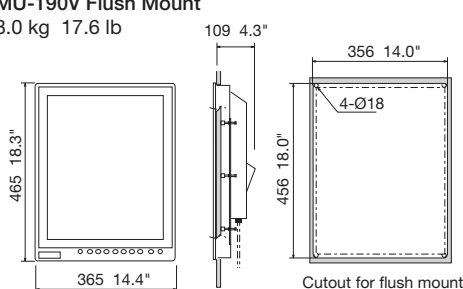
MU-201C Bracket Mount
17.0 kg 37.5 lb



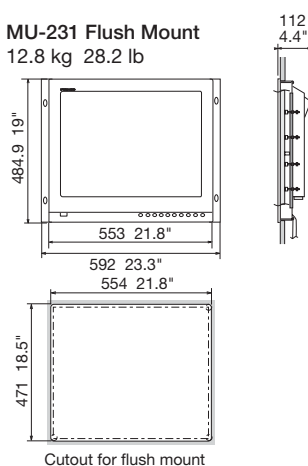
MU-190 Flush Mount
8.8 kg 19.4 lb



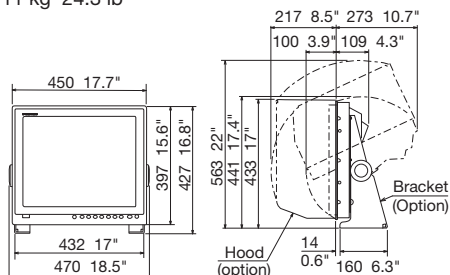
MU-190V Flush Mount
8.0 kg 17.6 lb



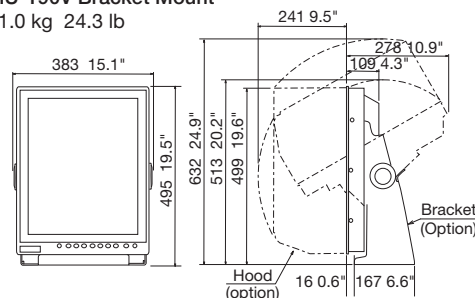
MU-231 Flush Mount
12.8 kg 28.2 lb



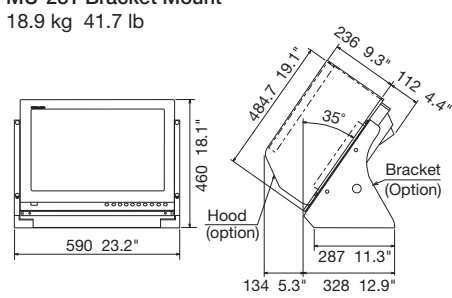
MU-190 Bracket Mount
11 kg 24.3 lb



MU-190V Bracket Mount
11.0 kg 24.3 lb



MU-231 Bracket Mount
18.9 kg 41.7 lb



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