MD-124 Series

24-inch Full HD marine display

> 24-inch Full-HD display, 16:9 aspect ratio
> LED backlighting
> Dual power supplies (AC & DC)
> Picture-in-Picture (PIP) and Picture-by-Picture (PBP)
> ECDIS color calibration (by request)
> IP66 (front) and IP22 (rear) rating
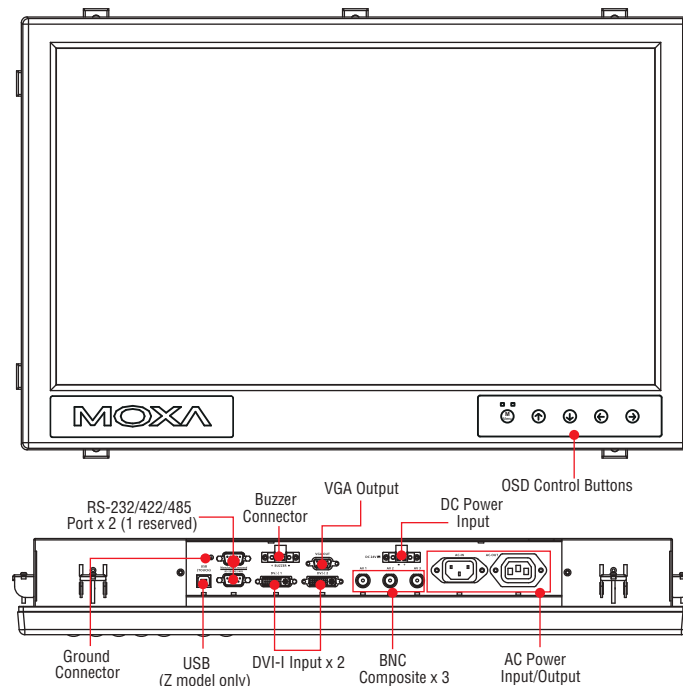> Surface capacity touch (Z model)

Overview

MD-124 marine displays are designed to meet the great requirements of industrial-grade maritime service. The 24 inch screen has a 16:9 aspect ratio and 1920 x 1080 pixel resolution, and features PIP (Picture-In-Picture) and PBP (Picture-By-Picture) functions to allow a variety of display configurations. With full range dimming and wide angle views, the MD-124 is ideal not only for ECDIS displays, but for
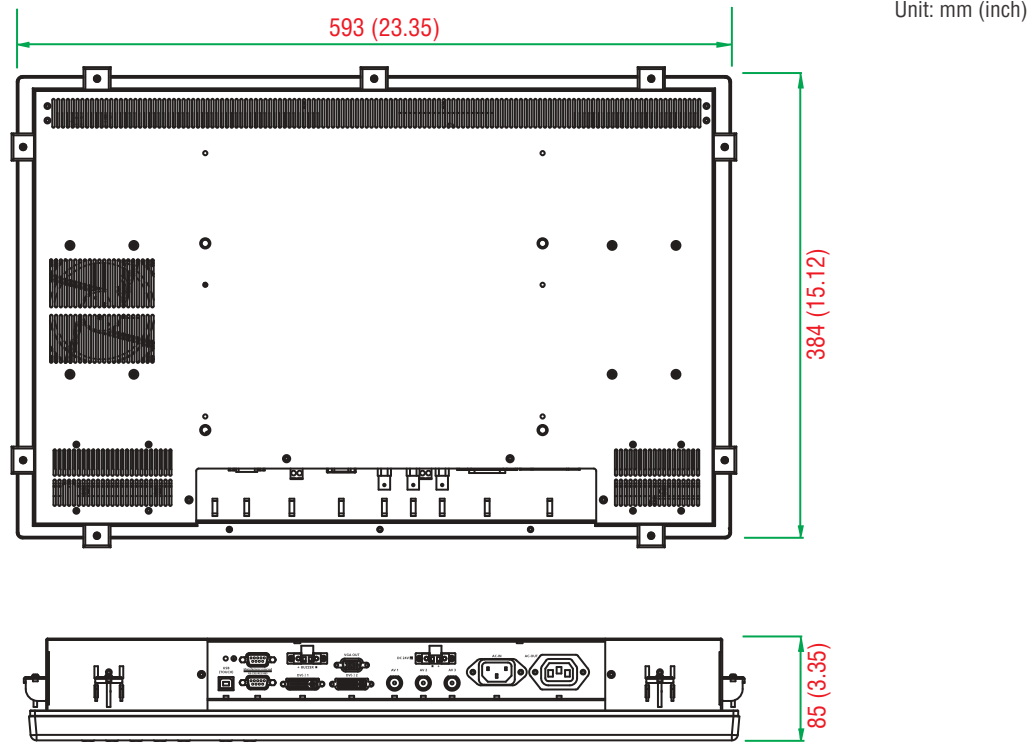
any other bridge application, as well. Finally, the MD-124 also comes with both AC and DC power inputs, making it ready for installation on any ship's bridge.

In addition, the MD-124 displays are IEC-60945 compliant.

Appearance

- Ground Connector
- USB (Z model only)
- DVI-I Input x 2
- BNC Composite x 3
- AC Power Input/Output
- RS-232/422/485 Port x 2 (1 reserved)
- Buzzer Connector
- VGA Output
- DC Power Input
- OSD Control Buttons

Dimensions

Unit: mm (inch)

593 (23.35)

384 (15.12)

85 (3.35)

Specifications

Display
Panel Size: 24'' wide viewable image size
Panel Type: MVA
Aspect Ratio: 16:9
Pixels: 1920 x 1080 (WSXGA+)
Pixel Pitch (RGB): 0.282 (H) x 0.282 (V) mm
Response Time: 8 ms (gray to gray)
Contrast Ratio: 5000:1
Light Intensity: 300 cd/m^2
Viewing Angles: 178° x 178°
Active Display Area: 531.36 (H) x 298.89 (V) mm
Max. No. of Colors: 16.7M (8 bits/color)
Display Interface: VGA x 1, DVI-I x 2, BNC composite x 3
Resolution:
• VGA: 640 x 480
• SVGA: 800 x 600
• XGA: 1024 x 768
• SXGA: 1280 x 1024
• WSXGA+: 1920 x 1080 (optimal setting)

Serial Interface
Serial Standards: 1 RS-232/422/485 ports, software-selectable (DB9 male)

Serial Signals
RS-232: TxD, RxD, DTR, DSR, RTS, CTS, DCD, GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485-4w: TxD+, TxD-, RxD+, RxD-, GND
RS-485-2w: Data+, Data-, GND

Front Panel
Panel Control Buttons: 1 Power, 4 OSD controls
LEDs: Status, Power

Physical Characteristics
Housing: Aluminum sheet metal
Weight: 12 kg
Dimensions: 95 x 647 x 414 mm (3.74 x 25.47 x 16.30 in)
Mounting: Console mounting

Environmental Limits
Operating Temperature: -15 to 55°C (5 to 131°F)
Storage Temperature: -20 to 60°C (-4 to 140°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)
Anti-Vibration:
• 0.7 g @ DNV 2.4 (Class A), sine wave, 2-100 Hz, 1 Oct./min., 1.5 hr per axis
• 1 g @ DNV 2.4, random wave, 3-100 Hz, 2.5 hr per axis
• 2.1 g @ DNV 2.4 (Class C), sine wave, 2-50 Hz, 1 Oct./min., 1.5 hr

Power Requirements
Input Voltage:
• 24 VDC (with tolerance from 18 to 36 VDC, 2-pin terminal block)
• 110 to 230 VAC, 50/60 Hz
Power Consumption: 75 W (standard) to 90 W (full-loading)
• 6.21 A @ 18 VDC
• 4.55 A @ 24 VDC
• 2.95 A @ 36 VDC

Standards and Certifications
Safety: UL 60950-1, CCC
EMC: EN 55032/24, CISPR 32, FCC Part 15B Class A
Green Product: RoHS, cRoHS, WEEE

Warranty
Warranty Period: 1 year
Details: See www.moxa.com/warranty

We recommend taking the following precautions to minimize heat build-up within the display:

- Position the display within ±40° of the vertical.
- Install an external fan to increase airflow upwards through the display if (a) the display is not positioned within ±40° of the vertical, (b) the ambient temperature exceeds 25°C, or (c) the display is used in a location with minimal ventilation.

Important Safety Precaution:
Even though the display is rated to operate within the IEC 60945 standard of -15 to 55°C, it is best to ensure that the ambient temperature does not exceed 25°C. Doing so will increase the life of your display and minimize service costs.

Ordering Information

Available Models
MD-124X: 24-inch tape bonded marine display with 16:9 aspect ratio, full HD (1920x1080), LED backlighting, multi-power supply (AC/DC)
MD-124Z: 24-inch marine touch-screen display with 16:9 aspect ratio, full HD (1920x1080), LED backlighting, multi-power supply (AC/DC)

Optional Accessories (can be purchased separately, for AC power input)
PWC-C13US-3B-183: Power cord with 3-pin connector, USA plug
PWC-C13EU-3B-183: Power cord with 3-pin connector, Euro plug
PWC-C13UK-3B-183: Power cord with 3-pin connector, British plug
PWC-C13AU-3B-183: Power cord with 3-pin connector, Australian plug
PWC-C13CN-3B-183: Power cord with 3-pin connector, Chinese plug

Package Checklist
- MD-124 panel
- VGA cable
- USB cable
- DVI cable
- DVI-to-VGA connector
- Rubber waterproofing cushion
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card