

MSI470

Mariner Kit for use with the HP EliteDisplay E232 23-inch Monitor (Desk mount)



The HP EliteDisplay E232 23-inch Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI470.

The MSI470 Mariner Kit is designed to fit onto any horizontal surface and affords protection against the effects of vibration and shock experienced in the offshore marine environment. The combination has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors (see below right for test details).

This marine type approved combination of hardware and Mariner Kit can be used as the platform for your critical navigation, control, loading and general purpose applications.

Please note that although the monitor does retain its standard functionality we do not offer an automatic dimming function and it cannot therefore be used in the front of the bridge where it may affect night vision. However, the monitor can be used in any area where night vision is not an issue.

**“Steer the right course
with Mariner Systems”**



KEY FEATURES OF THE HP ELITEDISPLAY E232 23-INCH MONITOR

- ◆ Enjoy sharp Full HD resolution with 178-degree viewing angles from In-Plane Switching (IPS) technology
- ◆ Connect to your choice of PC or device with HDMI, DisplayPort, VGA and USB inputs
- ◆ Crisp, clear content on this 23-inch diagonal, 16:9 aspect ratio screen from the high 5,000,000:1 dynamic contrast ratio
- ◆ Native 1920 x 1080 resolution with over 16 million colours
- ◆ The on-screen display button controls on the monitor front allow quick and easy adjustment of brightness, contrast and numerous other settings
- ◆ Design the screen for how you work with HP Display Assistant software
- ◆ Get an intelligent, energy-efficient design that is ENERGY STAR® certified, EPEAT® Gold registered, and meets TCO Certified Edge requirements with 85% Post-Consumer Recycled plastics
- ◆ The monitor utilises arsenic-free display glass, mercury-free display backlighting and a low halogen design
- ◆ 98.0% recyclable when properly disposed of at end of life
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2002/95/EC
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2002/96/EC
- ◆ Three-year standard limited warranty

This Mariner system has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors and is therefore accepted by the following Classification Societies:

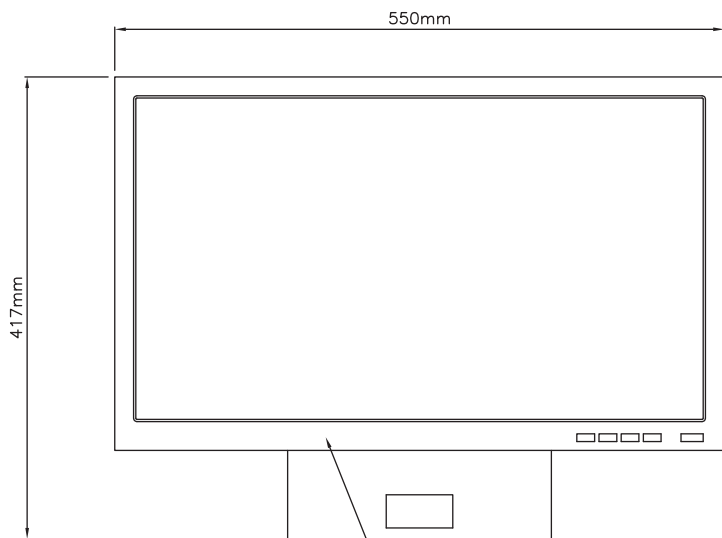
ABS, BV, CCS, CRS, DNV GL, KR, LR, NKK, PRS, RINA, RS

Tests included within the requirements are as follows:

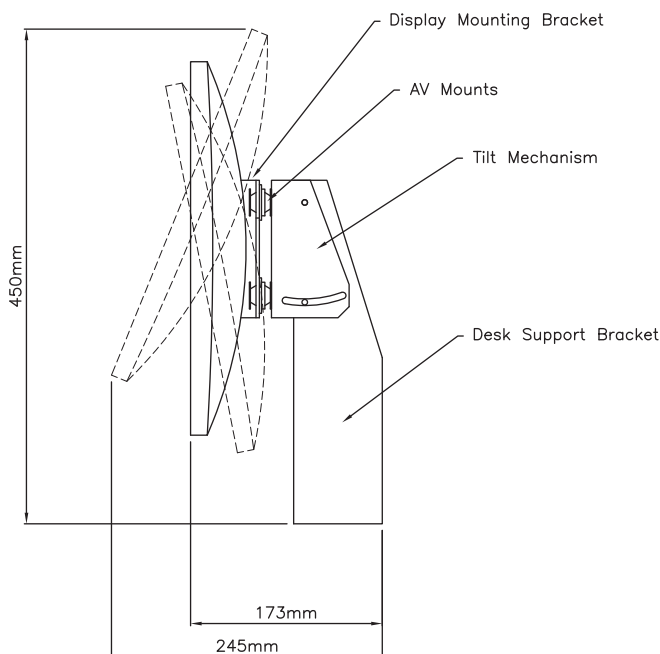
- > Vibration, Shock, Static and Dynamic Inclination
- > Dry & Damp Heat, Low Temperature
- > Acoustic Noise, Compass Safe Distance
- > High Voltage, Power Supply Variation & Power Supply Failure
- > Conducted LF & RF, Electromagnetic Field
- > Radiated & Conducted Emissions, Electrostatic Discharge
- > Insulation Resistance, Burst/Fast Transients
- > Surge Immunity, Access to Dangerous Voltages

MSI470

Mariner Kit for use with the HP EliteDisplay E232 23-inch Monitor (Desk mount)



HP EliteDisplay E232 23" Monitor



Mariner Systems (UK) Limited

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OPERATING GUIDELINES

Although all our equipment is tested against extreme environmental conditions for the purposes of marine type approval, installation should take into account the following guidelines:

- > Keep the monitor away from excessive moisture, direct moisture and the extremes of heat and cold to ensure, where possible, that the unit is within the following operating/non-operating ranges:

	Operating	Non-operating
Temperature	+5° to +35°C (+41° to +95°F)	-20° to +60°C (-4° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (38.7°C max wet-bulb)

- > Leave clearance on all vented sides of the monitor to permit the required airflow
- > Never restrict airflow into the monitor by blocking any vents or air intakes
- > If the monitor is to be operated within a separate enclosure, suitable ventilation should be provided

By following these guidelines you will maximise the life of your equipment and minimise service costs.

STATISTICS

Overall Fitted Dimensions (max)	550mm (w) x 450mm (h) x 245mm (d)
Weight (Mariner Kit only)	1.4 kg
Weight (including hardware)	4.8 kg
Panel Type	IPS with LED backlight
Viewable Image Area (diagonal)	23 in (58.42 cm)
Panel Active Area (w x h)	20.05 x 11.27 in (50.92 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	1920 x 1080 @ 60 Hz
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time	7 ms (grey to grey)
Pixel Pitch	0.265 (H) x 0.265 (V) mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons or Switches	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort 1.2, HDMI, VGA; HDCP support on DisplayPort and HDMI
USB 2.0 Hub	Three ports (one upstream, two downstream)
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	28 W
Maximum Power Consumption	35 W
Mariner Kit Tilt Range	10 degrees down; 20 degrees up

BASIC JAPAN

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Design and specifications are subject to change without notice. E&OE.

Version I

MSI475

Mariner Kit for use with the HP EliteDisplay E232 23-inch Monitor (Wall mount)



KEY FEATURES OF THE HP ELITEDISPLAY E232 23-INCH MONITOR

- ◆ Enjoy sharp Full HD resolution with 178-degree viewing angles from In-Plane Switching (IPS) technology
- ◆ Connect to your choice of PC or device with HDMI, DisplayPort, VGA and USB inputs
- ◆ Crisp, clear content on this 23-inch diagonal, 16:9 aspect ratio screen from the high 5,000,000:1 dynamic contrast ratio
- ◆ Native 1920 x 1080 resolution with over 16 million colours
- ◆ The on-screen display button controls on the monitor front allow quick and easy adjustment of brightness, contrast and numerous other settings
- ◆ Design the screen for how you work with HP Display Assistant software
- ◆ Get an intelligent, energy-efficient design that is ENERGY STAR® certified, EPEAT® Gold registered, and meets TCO Certified Edge requirements with 85% Post-Consumer Recycled plastics
- ◆ The monitor utilises arsenic-free display glass, mercury-free display backlighting and a low halogen design
- ◆ 98.0% recyclable when properly disposed of at end of life
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2002/95/EC
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2002/96/EC
- ◆ Three-year standard limited warranty



The HP EliteDisplay E232 23-inch Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI475.

The MSI475 Mariner Kit is designed to fit onto any vertical surface and affords protection against the effects of vibration and shock experienced in the offshore marine environment. The combination has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors (see below right for test details).

This marine type approved combination of hardware and Mariner Kit can be used as the platform for your critical navigation, control, loading and general purpose applications.

Please note that although the monitor does retain its standard functionality we do not offer an automatic dimming function and it cannot therefore be used in the front of the bridge where it may affect night vision. However, the monitor can be used in any area where night vision is not an issue.

“Proven solutions for a demanding environment”



This Mariner system has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors and is therefore accepted by the following Classification Societies:

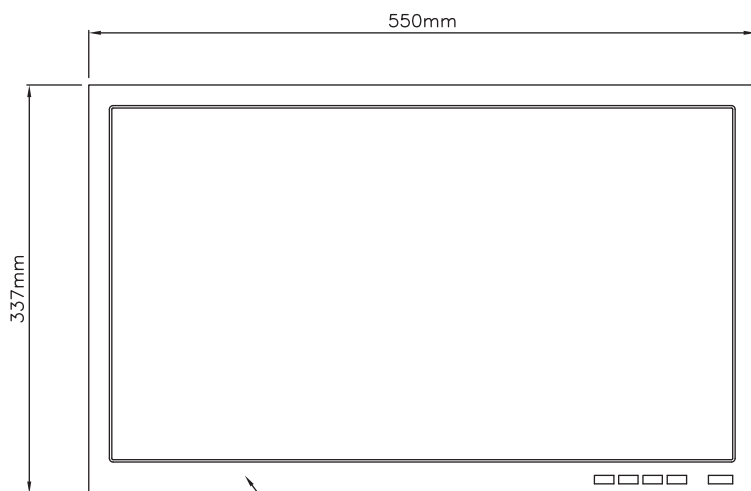
ABS, BV, CCS, CRS, DNV GL, KR, LR, NKK, PRS, RINA, RS

Tests included within the requirements are as follows:

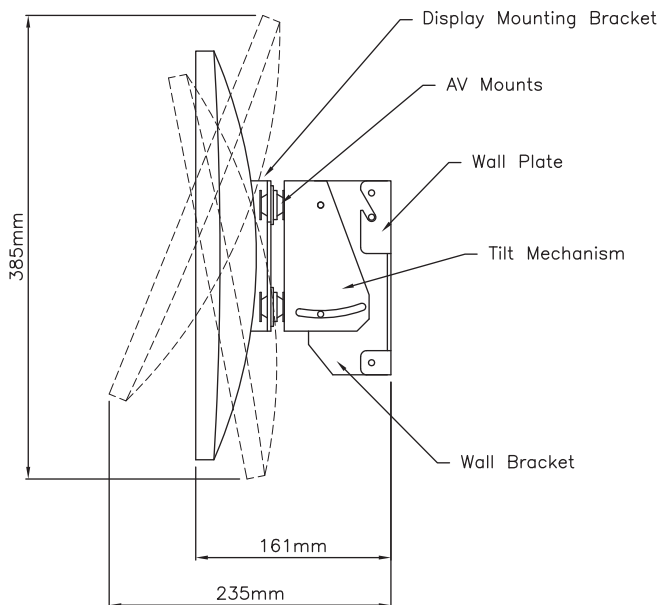
- > Vibration, Shock, Static and Dynamic Inclination
- > Dry & Damp Heat, Low Temperature
- > Acoustic Noise, Compass Safe Distance
- > High Voltage, Power Supply Variation & Power Supply Failure
- > Conducted LF & RF, Electromagnetic Field
- > Radiated & Conducted Emissions, Electrostatic Discharge
- > Insulation Resistance, Burst/Fast Transients
- > Surge Immunity, Access to Dangerous Voltages

MSI475

Mariner Kit for use with the HP EliteDisplay E232 23" Monitor (Wall mount)



HP EliteDisplay E232 23" Monitor



Mariner Systems (UK) Limited

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OPERATING GUIDELINES

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- > Keep the monitor away from excessive moisture, direct moisture and the extremes of heat and cold to ensure, where possible, that the unit is within the following operating/non-operating ranges:

	Operating	Non-operating
Temperature	+5° to +35°C (+41° to +95°F)	-20° to +60°C (-4° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (38.7°C max wet-bulb)

- > Leave clearance on all vented sides of the monitor to permit the required airflow
- > Never restrict airflow into the monitor by blocking any vents or air intakes
- > If the monitor is to be operated within a separate enclosure, suitable ventilation should be provided

By following these guidelines you will maximise the life of your equipment and minimise service costs.

STATISTICS

Overall Fitted Dimensions (max)	550mm (w) x 385mm (h) x 235mm (d)
Weight (Mariner Kit only)	1.2 kg
Weight (including hardware)	4.6 kg
Panel Type	IPS with LED backlight
Viewable Image Area (diagonal)	23 in (58.42 cm)
Panel Active Area (w x h)	20.05 x 11.27 in (50.92 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	1920 x 1080 @ 60 Hz
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time	7 ms (grey to grey)
Pixel Pitch	0.265 (H) x 0.265 (V) mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons or Switches	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort 1.2, HDMI, VGA; HDCP support on DisplayPort and HDMI
USB 2.0 Hub	Three ports (one upstream, two downstream)
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	28 W
Maximum Power Consumption	35 W
Mariner Kit Tilt Range	10 degrees down; 20 degrees up

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MSI480

Mariner Kit for use with the HP EliteDisplay E232 23-inch Monitor (Console mount)



The HP EliteDisplay E232 23-inch Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI480.

The MSI480 Mariner Kit is designed to fit into a console cut-out and affords protection against the effects of vibration and shock experienced in the offshore marine environment. The combination has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors (see below right for test details).

This marine type approved combination of hardware and Mariner Kit can be used as the platform for your critical navigation, control, loading and general purpose applications.

Please note that although the monitor does retain its standard functionality we do not offer an automatic dimming function and it cannot therefore be used in the front of the bridge where it may affect night vision. However, the monitor can be used in any area where night vision is not an issue.

**“World leading
type approved
computer hardware”**



KEY FEATURES OF THE HP ELITEDISPLAY E232 23-INCH MONITOR

- ◆ Enjoy sharp Full HD resolution with 178-degree viewing angles from In-Plane Switching (IPS) technology
- ◆ Connect to your choice of PC or device with HDMI, DisplayPort, VGA and USB inputs
- ◆ Crisp, clear content on this 23-inch diagonal, 16:9 aspect ratio screen from the high 5,000,000:1 dynamic contrast ratio
- ◆ Native 1920 x 1080 resolution with over 16 million colours
- ◆ The on-screen display button controls on the monitor front allow quick and easy adjustment of brightness, contrast and numerous other settings
- ◆ Design the screen for how you work with HP Display Assistant software
- ◆ Get an intelligent, energy-efficient design that is ENERGY STAR® certified, EPEAT® Gold registered, and meets TCO Certified Edge requirements with 85% Post-Consumer Recycled plastics
- ◆ The monitor utilises arsenic-free display glass, mercury-free display backlighting and a low halogen design
- ◆ 98.0% recyclable when properly disposed of at end of life
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2002/95/EC
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2002/96/EC
- ◆ Three-year standard limited warranty

This Mariner system has been tested in accordance with the EU Mutual Recognition Technical Requirements for Display Monitors and is therefore accepted by the following Classification Societies:

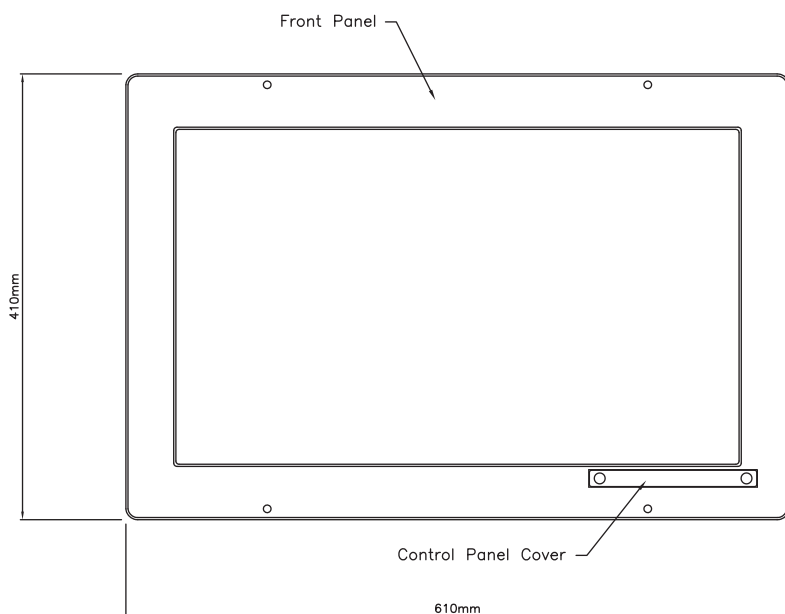
ABS, BV, CCS, CRS, DNV GL, KR, LR, NKK, PRS, RINA, RS

Tests included within the requirements are as follows:

- > Vibration, Shock, Static and Dynamic Inclination
- > Dry & Damp Heat, Low Temperature
- > Acoustic Noise, Compass Safe Distance
- > High Voltage, Power Supply Variation & Power Supply Failure
- > Conducted LF & RF, Electromagnetic Field
- > Radiated & Conducted Emissions, Electrostatic Discharge
- > Insulation Resistance, Burst/Fast Transients
- > Surge Immunity, Access to Dangerous Voltages

MSI480

Mariner Kit for use with the HP EliteDisplay E232 23-inch Monitor (Console mount)



OPERATING GUIDELINES

Although all our equipment is tested against extreme environmental conditions for the purposes of marine type approval, installation should take into account the following guidelines:

- > Keep the monitor away from excessive moisture, direct moisture and the extremes of heat and cold to ensure, where possible, that the unit is within the following operating/non-operating ranges:

	Operating	Non-operating
Temperature	+5° to +35°C (+41° to +95°F)	-20° to +60°C (-4° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (38.7°C max wet-bulb)

- > Leave clearance on all vented sides of the monitor to permit the required airflow
- > Never restrict airflow into the monitor by blocking any vents or air intakes
- > If the monitor is to be operated within a separate enclosure, suitable ventilation should be provided

By following these guidelines you will maximise the life of your equipment and minimise service costs.

STATISTICS

Overall Fitted Dimensions	610mm (w) x 410mm (h) x 104mm (d)
Weight (Mariner Kit only)	7.2 kg
Weight (including hardware)	10.6 kg
Panel Type	IPS with LED backlight
Viewable Image Area (diagonal)	23 in (58.42 cm)
Panel Active Area (w x h)	20.05 x 11.27 in (50.92 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	1920 x 1080 @ 60 Hz
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time	7 ms (grey to grey)
Pixel Pitch	0.265 (H) x 0.265 (V) mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons or Switches	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort 1.2, HDMI, VGA; HDCP support on DisplayPort and HDMI
USB 2.0 Hub	Three ports (one upstream, two downstream)
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	28 W
Maximum Power Consumption	35 W
Mariner Kit Tilt Range	Not applicable



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