

MSI610

Mariner Kit for use with the HP E23 G4 FHD
23-inch Monitor (Desk mount)



The HP E23 G4 FHD Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI610.

The MSI610 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 type tested against IACS Unified Requirement E10 and the relevant sections of IEC60945 (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 retains its standard functionality it is not fully dimmable and it cannot therefore be used in the front of the bridge where it may affect night vision. The monitor can however be used in any area where night vision is not an issue.

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



PRODUCT FEATURES

- ◆ Work comfortably and stay focused with the optimised ergonomics and Full HD resolution of the HP E23 G4 FHD Monitor with HP Eye Ease
- ◆ 3-sided micro-edge, flicker-free 23-inch diagonal screen that reveals more of your work, and Full HD resolution for crisp visuals from any angle
- ◆ Keep your eyes comfortable through the work day with HP Eye Ease, HP's first built-in, always-on blue light filter that presents your vivid content with zero impact on your colour accuracy
- ◆ Connect to your most frequently-used devices with VGA, HDMI, and DisplayPort™
- ◆ Energy efficiency is built into every ENERGY STAR® certified, EPEAT® 2020 registered, and low halogen display
- ◆ Rest assured that this monitor has been vigorously tested for compatibility across HP PCs and workstations
- ◆ Supported by HP's three-year standard limited warranty
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2011/65/EU
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2012/19/EU

This Mariner Systems solution is tested against the consolidated, 'worst-case' requirements of all the following major international marine Classification Societies:

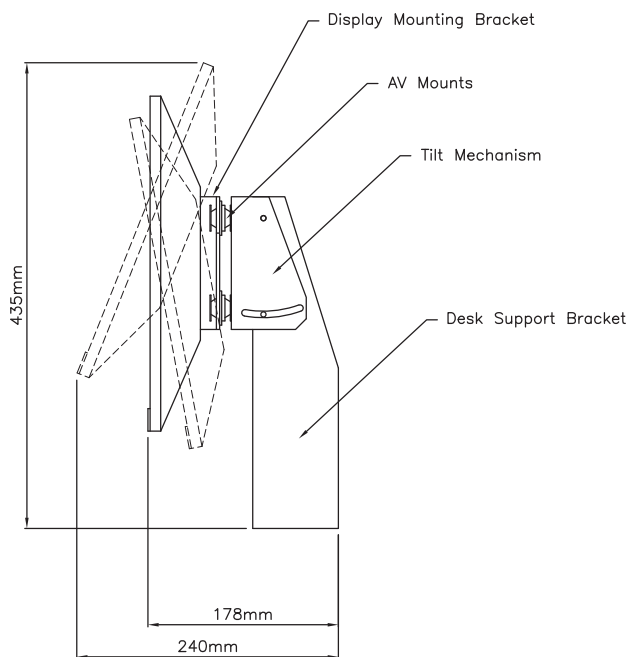
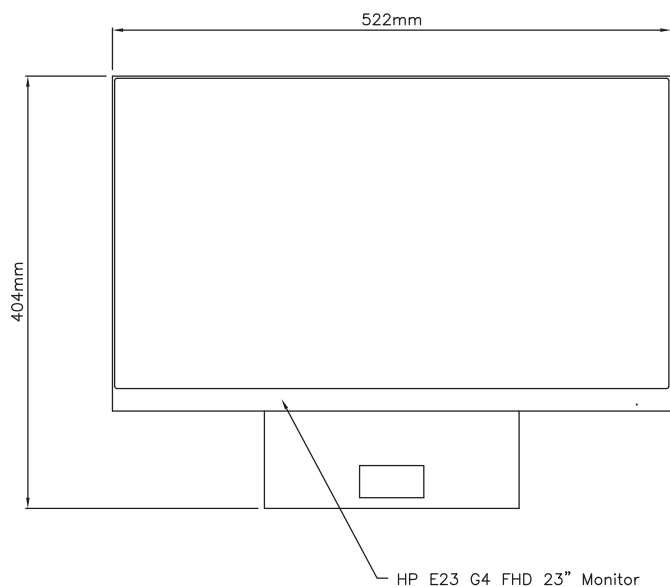
ABS, BV, CCS, ClassNK, DNV, KR, LR, PRS, RINA

Tests included within the test programme 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

MSI610

Mariner Kit for use with the HP E23 G4 FHD 23-inch Monitor (Desk mount)



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OPERATING GUIDELINES

Although all of our solutions are 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 sunlight and the extremes of heat and cold. Wherever possible, ensure that the unit is operated within the manufacturer's recommended operating range:

	Operating	Non-Operating
Temperature	+5° to +35°C (+41° to +95°F)	-34° to +60°C (-29° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (non-condensing)

- Leave clearance on all vented sides of the monitor to permit sufficient 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 monitor and minimise service costs.

STATISTICS

Overall Fitted Dimensions (max)	522mm (w) x 435mm (h) x 240mm (d)
Weight (Mariner Kit only)	1.4 kg
Weight (including hardware)	4.5 kg
Panel Type	IPS
Viewable Image Area (diagonal)	23 in (58.4 cm)
Panel Active Area (w x h)	20.04 x 11.27 in (50.91 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	FHD (1920 x 1080 @ 60 Hz)
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m ²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time (typical)	5 ms GtG (with overdrive)
Pixel Pitch	0.2652 mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort™ 1.2, HDMI 1.4, VGA; HDCP support on DisplayPort™ and HDMI
USB Ports	1 x USB Type-B; 4 x USB-A 3.2 Gen I
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	26W
Maximum Power Consumption	51W
Mariner Kit Tilt Range	10 degrees down; 20 degrees up

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

Version I

MSI615

Mariner Kit for use with the HP E23 G4 FHD
23-inch Monitor (Wall mount)



PRODUCT FEATURES

- ◆ Work comfortably and stay focused with the optimised ergonomics and Full HD resolution of the HP E23 G4 FHD Monitor with HP Eye Ease
- ◆ 3-sided micro-edge, flicker-free 23-inch diagonal screen that reveals more of your work, and Full HD resolution for crisp visuals from any angle
- ◆ Keep your eyes comfortable through the work day with HP Eye Ease, HP's first built-in, always-on blue light filter that presents your vivid content with zero impact on your colour accuracy
- ◆ Connect to your most frequently-used devices with VGA, HDMI, and DisplayPort™
- ◆ Energy efficiency is built into every ENERGY STAR® certified, EPEAT® 2020 registered, and low halogen display
- ◆ Rest assured that this monitor has been vigorously tested for compatibility across HP PCs and workstations
- ◆ Supported by HP's three-year standard limited warranty
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2011/65/EU
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2012/19/EU



The HP E23 G4 FHD Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI615.

The MSI615 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 type tested against IACS Unified Requirement E10 and the relevant sections of IEC60945 (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 retains its standard functionality it is not fully dimmable and it cannot therefore be used in the front of the bridge where it may affect night vision. The monitor can however be used in any area where night vision is not an issue.

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



This Mariner Systems solution is tested against the consolidated, 'worst-case' requirements of all the following major international marine Classification Societies:

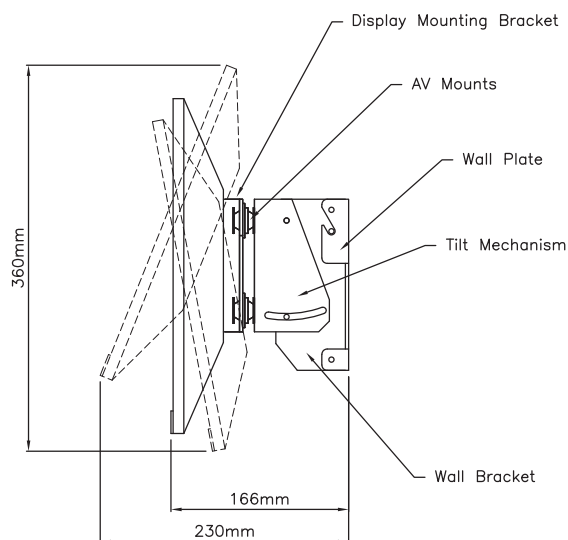
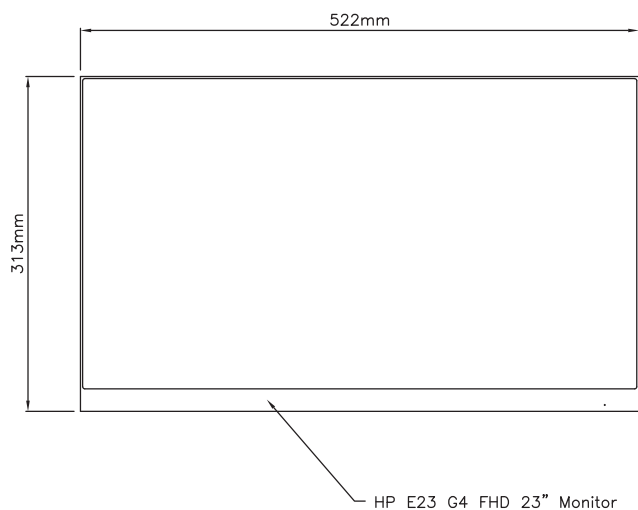
ABS, BV, CCS, ClassNK, DNV, KR, LR, PRS, RINA

Tests included within the test programme 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

MSI615

Mariner Kit for use with the HP E23 G4 FHD 23-inch Monitor (Wall mount)



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OPERATING GUIDELINES

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- Keep the monitor away from excessive moisture, direct sunlight and the extremes of heat and cold. Wherever possible, ensure that the unit is operated within the manufacturer's recommended operating range:

	Operating	Non-Operating
Temperature	+5° to +35°C (+41° to +95°F)	-34° to +60°C (-29° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (non-condensing)

- Leave clearance on all vented sides of the monitor to permit sufficient 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 monitor and minimise service costs.

STATISTICS

Overall Fitted Dimensions (max)	522mm (w) x 360mm (h) x 230mm (d)
Weight (Mariner Kit only)	1.2 kg
Weight (including hardware)	4.3 kg
Panel Type	IPS
Viewable Image Area (diagonal)	23 in (58.4 cm)
Panel Active Area (w x h)	20.04 x 11.27 in (50.91 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	FHD (1920 x 1080 @ 60 Hz)
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m ²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time (typical)	5 ms GtG (with overdrive)
Pixel Pitch	0.2652 mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort™ 1.2, HDMI 1.4, VGA; HDCP support on DisplayPort™ and HDMI
USB Ports	1 x USB Type-B; 4 x USB-A 3.2 Gen 1
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	26W
Maximum Power Consumption	51W
Mariner Kit Tilt Range	10 degrees down; 20 degrees up

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Version I

MSI620

Mariner Kit for use with the HP E23 G4 FHD
23-inch Monitor (Console mount)



The HP E23 G4 FHD Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MSI620.

The MSI620 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 type tested against IACS Unified Requirement E10 and the relevant sections of IEC60945 (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 retains its standard functionality it is not fully dimmable and it cannot therefore be used in the front of the bridge where it may affect night vision. The monitor can however be used in any area where night vision is not an issue.

**“Proven solutions for
a demanding environment”**



PRODUCT FEATURES

- ◆ Work comfortably and stay focused with the optimised ergonomics and Full HD resolution of the HP E23 G4 FHD Monitor with HP Eye Ease
- ◆ 3-sided micro-edge, flicker-free 23-inch diagonal screen that reveals more of your work, and Full HD resolution for crisp visuals from any angle
- ◆ Keep your eyes comfortable through the work day with HP Eye Ease, HP's first built-in, always-on blue light filter that presents your vivid content with zero impact on your colour accuracy
- ◆ Connect to your most frequently-used devices with VGA, HDMI, and DisplayPort™
- ◆ Energy efficiency is built into every ENERGY STAR® certified, EPEAT® 2020 registered, and low halogen display
- ◆ Rest assured that this monitor has been vigorously tested for compatibility across HP PCs and workstations
- ◆ Supported by HP's three-year standard limited warranty
- ◆ Compliant with the Restrictions of Hazardous Substances (RoHS) directive – 2011/65/EU
- ◆ Designed to comply with the Waste Electrical and Electronic Equipment (WEEE) directive – 2012/19/EU

This Mariner Systems solution is tested against the consolidated, 'worst-case' requirements of all the following major international marine Classification Societies:

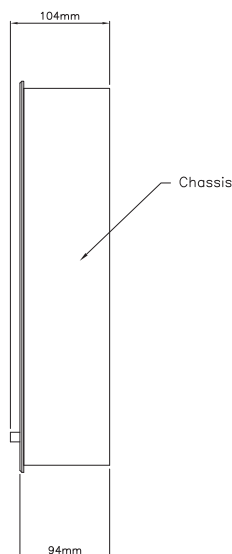
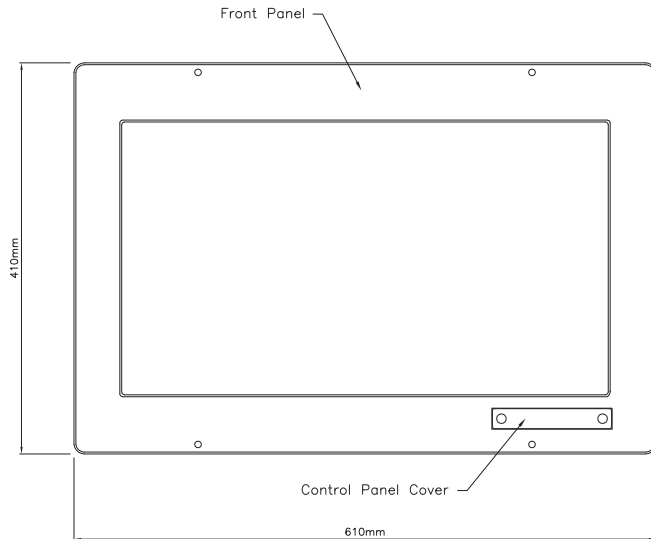
ABS, BV, CCS, ClassNK, DNV, KR, LR, PRS, RINA

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- > 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

MSI620

Mariner Kit for use with the HP E23 G4 FHD 23-inch Monitor (Console mount)



OPERATING GUIDELINES

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- Keep the monitor away from excessive moisture, direct sunlight and the extremes of heat and cold. Wherever possible, ensure that the unit is operated within the manufacturer's recommended operating range:

	Operating	Non-Operating
Temperature	+5° to +35°C (+41° to +95°F)	-34° to +60°C (-29° to +140°F)
Humidity	20% to 80% (non-condensing)	5% to 95% (non-condensing)

- Leave clearance on all vented sides of the monitor to permit sufficient 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 monitor and minimise service costs.

STATISTICS

Overall Fitted Dimensions (max)	610mm (w) x 410mm (h) x 104mm (d)
Weight (Mariner Kit only)	7.0 kg
Weight (including hardware)	10.1 kg
Panel Type	IPS
Viewable Image Area (diagonal)	23 in (58.4 cm)
Panel Active Area (w x h)	20.04 x 11.27 in (50.91 x 28.64 cm)
Aspect Ratio	16:9
Native Resolution	FHD (1920 x 1080 @ 60 Hz)
Viewing Angle	Up to 178 degrees horizontal and 178 degrees vertical
Brightness	250 cd/m ²
Contrast Ratio (typical)	1000:1
Dynamic Contrast Ratio (typical)	5,000,000:1
Response Time (typical)	5 ms GtG (with overdrive)
Pixel Pitch	0.2652 mm
Backlight Lamp Life (to half brightness)	30,000 hours minimum
Buttons	Menu, Function and Power
Plug and Play	Yes
Input Connectors	DisplayPort™ 1.2, HDMI 1.4, VGA; HDCP support on DisplayPort™ and HDMI
USB Ports	1 x USB Type-B; 4 x USB-A 3.2 Gen 1
Input Power	100 to 240 VAC 50/60 Hz
Typical Power Consumption	26W
Maximum Power Consumption	51W



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