# MS1840

Mariner Kit for use with the HP Series 5 Pro 524pf 23.8-inch FHD Monitor (Console mount)





The HP Series 5 Pro 524pf 23.8-inch FHD Monitor is marine type approved when it is installed in conjunction with our Mariner Kit MS1840.

The MS1840 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.

## **PRODUCT FEATURES**

- ◆ Focus on the finer details and enjoy sharp visuals and crystal clear images with the 1920 x 1080 FHD resolution on the 23.8-inch diagonal monitor
- No matter where you are, IPS technology ensures image accuracy and consistency across wide 178-degrees horizontal and vertical viewing angles
- With a 100 Hz refresh rate this monitor is capable of clear details, smoothly moving from frame to frame, allowing for fast split-second reaction time
- See the nuanced differences of colour, shadow, and highlights thanks to the enhanced 1,500:1 contrast ratio
- → 350 nits of brightness lets you see clearly
- Enjoy highly accurate colours on screen with 100% sRGB. This HP monitor provides ideal colour reproduction with minimal effort
- → More ports means more capabilities. With HDMI 1.4, DisplayPort™ 1.2, USB-B (upstream), and 4 USB-A 3.2 ports, you can connect multiple devices
- → HP Eye Ease is an always-on, low-blue light filter that helps keep your eyes comfortable throughout the day by reducing blue light without impacting colour accuracy or adding a yellow colour shift
- Customise your monitor with the intuitive HP Display
   Centre that lets you tailor your settings, partition
   screens, and more all through the host PC
- → HP is committed to helping protect our shared future by minimising the energy their monitors consume to help reduce energy demand. This monitor is held to the highest energy saving standard with an ENERGY STAR® rating and EPEAT® Gold Registration
- ◆ 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
- Supported by HP's three-year limited warranty

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

Refer to individual Classification Society type approval certificates for any restrictions  ${\it I}$  limitations.

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

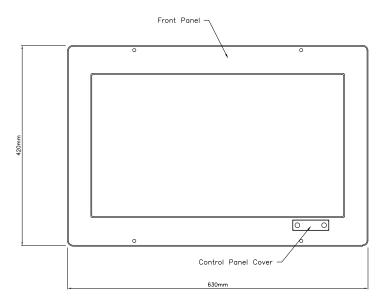
"World leading type approved computer hardware"

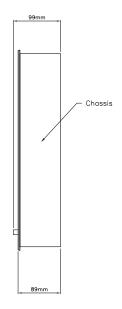




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#### **OPERATING GUIDELINES**

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)	-40° to +65°C (-40° to +149°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)	630mm (w) x 420mm (h) x 99mm (d)	
Weight (Mariner Kit only)	7.9 kg	
Weight (including hardware)	10.8 kg	
Panel Technology	IPS	
Display Size (diagonal)	23.8 in (60.5 cm)	
Panel Active Area (w x h)	20.75 × 11.67 in (52.70 × 29.65 cm)	
Aspect Ratio	16:9	
Native Resolution	FHD (1920 x 1080)	
Viewing Angle (typical)	Up to 178 degrees horizontal and 178 degrees vertical	
Brightness (typical)	350 nits	
Contrast Ratio (static)	1,500:1	
Dynamic Contrast Ratio	10,000,000:1	
Response Time (typical)	5 ms GtG (with overdrive)	
Pixel Pitch	0.2745 x 0.2745 mm	
Backlight Lamp Life (to half brightness)	30,000 hours minimum	
Input Connectors	DisplayPort $^{TM}$ I.2, HDMI I.4, HDCP support on DisplayPort $^{TM}$ and HDMI	
USB Ports	I x USB Type-B; 4 x USB Type-A 3.2 (I charging)	
Input Power	100 to 240 VAC 50/60 Hz	
Typical Power Consumption	22W	
Maximum Power Consumption	58W	