



Hope Industrial Systems, Inc.

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Data Sheet: Panel Mount Monitors and Touch Screens IP65/IP66, NEMA 12/4/4X 12"/15"/17"/19"/19.5"/22"/23.8"

Features

- ▶ IP65/IP66 Rated
- ▶ Bright, high contrast, and ultra-wide viewing angle displays
- ▶ Long-life backlights – up to 60,000 hours brightness half-life
- ▶ Field-proven MTBF of more than 250,000 hours
- ▶ Touch Screen, Glass, Acrylic, and Food Protection window options
- ▶ Stainless steel, carbon steel, and edge-to-edge bezel options
- ▶ Only 46 mm to 56 mm deep
- ▶ Panel mount without drilling stud holes
- ▶ Cable lengths from 1.5 m to 300 m
- ▶ Industrial Certifications: CE, UKCA, IEC 60721-3, UL 508A, UL 50E, UL/EN/IEC62368-1, UL Recognised Component

Product Description

Hope Industrial Systems' Panel Mount Industrial Monitors are designed to provide the industrial user with excellent picture quality and rugged design for reliable continuous operation.

A unique single-cutout, stud-free design and depths of only 46 mm to 56 mm make them a snap to install. Options like touch screens and KVM Extenders make these displays highly versatile.

These monitors are backed by industrial certifications (including 3rd-party environmental testing) and an industry-leading 5-year warranty.

Optional Accessories

- ▶ Industrial Keyboards (IP65/IP66 rated)
- ▶ Screen Protectors (all sizes)
- ▶ Extended cable options up to 300 m
- ▶ KVM Extenders

RoHS CE cUL US



Rear view of 19" Panel Mount Monitor.



Panel Mount workstation configuration with monitor and industrial keyboard.



About Hope Industrial Systems

Hope Industrial provides industrial flat panel monitors and touch screens with superior quality and up-to-date features that are relevant to industrial applications.

We house this advanced technology in a variety of rugged enclosures that allow the user to put their displays wherever they are needed in the factory. We assure our customers of high reliability over time and back it up with an industry-leading warranty.

We provide all of these benefits at a price that is significantly less than comparable industrial offerings. And finally, we offer the best sales, support and service in the industry:

- ▶ 5-year limited warranty on all monitors, return shipping included
- ▶ 24-48-hour repair turnaround (most models)
- ▶ Same day dispatch lead time (most models)
- ▶ 30-day money-back guarantee



Optional KVM Extender allows monitor to be placed up to 300 m away from computer.



Optional Screen Protector guards touch screens from scratches and wear.

Panel Mount Industrial Monitors and Touch Screens Specifications: 12"-19"

Model No. (Revision):	HIS-ML12 (Rev. F)	HIS-ML15 (Rev. I)	HIS-ML17 (Rev. I)	HIS-ML19 (Rev. I)
Display				
Type	Thin-film transistor (TFT) Active Matrix Liquid Crystal, LED Backlit			
Size	307 mm (12.1") diagonal	381 mm (15") diagonal	432 mm (17") diagonal	483 mm (19") diagonal
Image Size (WxH)	246 x 184.5 mm	304 x 228 mm	338 x 270 mm	375 x 300 mm
Native Resolution	SVGA (800 x 600 @ 60 Hz)	XGA (1024 x 768 @ 60 Hz)	SXGA (1280 x 1024 @ 60 Hz)	
Aspect Ratio	4:3		5:4	
Pixel Pitch	0.308 mm x 0.308 mm	0.297 mm x 0.297 mm	0.264 mm x 0.264 mm	0.293 mm x 0.293 mm
Number of Colours	16.7 million			
Brightness (white)	450 nits (cd/m ²)	400 nits (cd/m ²)	250 nits (cd/m ²)	
Viewing Angle (Hori/Vert)	178° / 178°	170° / 170°	178° / 178°	
Contrast Ratio	1000:1	1500:1	1000:1	
Backlight Brightness half-life	60,000 hours		50,000 hours	40,000 hours
Video				
Input Connectors	DVI-I, DisplayPort			
Inputs using Adapter	HDMI, HDMI Mini, HDMI Micro, DisplayPort Mini, VGA, BNC			
Input Signal Formats	RGB Analogue, Sync Types: Separate, Composite, Sync-on-Green; DVI; DisplayPort			
Horizontal Scan	31-60 kHz		31-80 kHz	
Vertical Scan	50-75 Hz		49-76 Hz	50-75 Hz
Response Rate	12 ms	35 ms	14 ms	
Electrical				
Monitor Input	100 to 240 VAC, 0.4/0.2A, 60/50 Hz or 9.6-36.6 VDC, 2.5 to 0.65 A	100 to 240 VAC, 1.5/0.75 A, 60/50 Hz or 9.6 to 36.6 VDC, 2.5 to 0.65 A	100 to 240 VAC, 0.6/0.3 A, 60/50 Hz and 10.8 to 26.4 VDC, 2.3 to 0.9 A	
Power Consumption	~10.3 W	~13.5 W	~12 W	~13.3 W
Power (Standby mode)	< 1.2 W		< 2 W	< 1.5 W
Environmental				
Operating Temperature	0° to 50°C			
Storage Temperature	-20° to 60°C			
Humidity	20% to 90% non-condensing			
Operating Shock	15 g, 6 msec, half-sine			
Operating Vibration (sine)	1.0 g, swept sine 9-500 Hz			
Transport Vibration (random)	0.1g ² Hz, 10-200 Hz; 0.03g ² / Hz, 200-2000 Hz			
Altitude	Operating: up to 3.05 km; Non-operating: up to 12.2 km			
Functional				
Control Panel Buttons	Power On/Off button, Control Function buttons			
On-Screen Display Menus	Picture, Color, Image, OSD, Setup, Information (other options depending on model)			
Physical				
Enclosure Type	Panel mount; rear collar compresses gasket against panel (7.9 mm maximum panel thickness); held by M5 studs			
Bezel Material	Black powder-coated carbon steel or stainless steel faceplate			
Panel Rating (with proper installation)	Black powder-coated carbon steel: IP65/IP66; NEMA/UL Type 12/4 Stainless steel: IP65/IP66; NEMA/UL Type 12/4/4X			
Depth behind Front Edge of Panel	50.3 mm	49.6 mm	49.7 mm	55.6 mm
Bezel Dimensions (WxHxD)	338 mm x 296 mm x 7 mm	438 mm x 354 mm x 7 mm		483 mm x 399 mm x 7 mm
Cutout Dimensions (WxH)	308 mm x 263 mm	406.9 mm x 323.1 mm		453.4 mm x 366.8 mm
Net / Shipping Weight	3.86 kg / 5.17 kg	6.35 kg / 8.16 kg		8.16 kg / 9.98 kg
Window Options	Single-Touch Resistive Touch Screen, Tempered Glass window (non-touch), or Acrylic window (non-touch) Glass-armoured touch screen with sulphur gas protection also available (call for details)			
Compliances and Certifications				
Electrical	CE, UKCA, UL/EN/IEC62368-1, UL/EN/IEC60950-1, UL Recognized Component for US and Canada, UL 508A, CAN ICES-3A/NMB-3A, FCC Class A, NOM			
Enclosure, Environmental	UL 50E, IEC 60721-3 (Reliability), WEEE			

Panel Mount Industrial Monitors and Touch Screens Specifications: 19.5"-23.8"

Model No. (Revision):	HIS-ML19.5 (Rev. C)	HIS-ML22 (Rev. D)	HIS-ML23.8 (Rev. B)
Display			
Type	Thin-film transistor (TFT) Active Matrix Liquid Crystal, LED Backlit		
Size	495 mm (19.5") diagonal	559 mm (22") diagonal	605 mm (23.8") diagonal
Image Size (WxH)	435 mm x 239 mm	474 mm x 296 mm	527 mm x 296 mm
Native Resolution	HD 1080p (1920 x 1080 @ 60 Hz)	WSXGA+ (1680 x 1050 @ 60Hz)	HD 1080p (1920 x 1080 @ 60Hz)
Aspect Ratio	16:9	16:10	16:9
Pixel Pitch	0.2265 mm x 0.221 mm	0.282 mm x 0.282 mm	0.2745 mm x 0.2745 mm
Number of Colours	16.7 million		
Brightness (white)	350 nits (cd/m ²)	250 nits (cd/m ²)	350 nits (cd/m ²)
Viewing Angle (Hori/Vert)	170° / 170°	170° / 160°	178° / 178°
Contrast Ratio	3000:1	1000:1	
Backlight Brightness half-life	50,000 hours		40,000 hours
Video			
Input Connectors	DVI-I, DisplayPort		
Inputs using Adapter	HDMI, HDMI Mini, HDMI Micro, DisplayPort Mini, VGA, BNC		
Input Signal Formats	RGB Analogue, Sync Types: Separate, Composite, Sync-on-Green; DVI; DisplayPort		
Horizontal Scan	31-80 kHz		
Vertical Scan	50-73 Hz	48-78 Hz	50-75 Hz
Response Rate	20 ms	5 ms	13 ms
Electrical			
Monitor Input	100 to 240 VAC, 0.6/0.3 A, 60/50 Hz and 10.8 to 26.4 VDC, 2.3 to 0.9 A	100 to 240 VAC, 1.5/0.75 A, 60/50 Hz or 9.6 to 36.6 VDC, 2.5 to 0.65 A	100 to 240 VAC, 0.6/0.3 A, 60/50 Hz and 10.8 to 26.4 VDC, 2.3 to 0.9 A
Power Consumption	~27 W	~13 W	~21 W
Power (Standby mode)	< 2 W		
Environmental			
Operating Temperature*	0° to 50°C		
Storage Temperature	-20° to 60°C		
Humidity*	20% to 90% non-condensing		
Operating Shock	15 g, 6 msec, half-sine		
Operating Vibration (sine)	1.0 g, swept sine 9-500 Hz		
Transport Vibration (random)	0.1g ² Hz, 10-200 Hz; 0.03g ² / Hz, 200-2000 Hz		
Altitude	Operating: up to 3.05 km; Non-operating: up to 12.2 km		
Functional			
Control Panel Buttons	Power On/Off button, Control Function buttons		
On-Screen Display Menus	Picture, Color, Image, OSD, Setup, Information (other options depending on model)		
Physical			
Enclosure Type	Panel mount; rear collar compresses gasket against panel (7.9 mm maximum panel thickness); held by M5 studs		
Bezel Material	Edge-to-edge window or stainless steel faceplate	Black powder-coated carbon steel or stainless steel faceplate	Edge-to-edge window or stainless steel faceplate
Panel Rating (with proper installation)	Edge-to-edge: IP65/IP66/IP69/IP69K; NEMA/UL Type 12/4/4X Stainless steel: IP65/IP66; NEMA/UL Type 12/4/4X	Black powder-coated carbon steel: IP65/66; NEMA/UL Type 12/4 Stainless steel: IP65/IP66; NEMA/UL Type 12/4/4X	Edge-to-edge: IP65/IP66/IP69/IP69K; NEMA/UL Type 12/4/4X Stainless steel: IP65/IP66; NEMA/UL Type 12/4/4X
Depth behind Front Edge of Panel	Edge-to-edge: 46.3 mm Stainless: 47.5 mm	50.1 mm	Edge-to-edge: 46.1 mm Stainless: 47.9 mm
Bezel Dimensions (WxHxD)	Edge-to-edge: 530 mm x 332.5 mm x 9 mm Stainless: 528 mm x 328.5 mm x 9 mm	559 mm x 375 mm x 7 mm	Edge-to-edge: 597 mm x 377 mm x 8.9 mm Stainless: 595.5 mm x 373 mm x 9.8 mm
Cutout Dimensions (WxH)	497.8 mm x 298.5 mm	528.7 mm x 342.3 mm	566.7 mm x 342.4 mm
Net / Shipping Weight	5.83 kg / 8.16 kg	8.62 kg / 10.43 kg	7.71 kg / 13.61 kg
Window Options	Single-Touch Resistive Touch Screen, Multi-Touch PCAP Touch Screen, Glass window (non-touch), or Food Protection window (non-touch)	Single-Touch Resistive Touch Screen, Tempered Glass window (non-touch), or Acrylic window (non-touch)	Single-Touch Resistive Touch Screen, Multi-Touch PCAP Touch Screen, Glass window (non-touch), or Food Protection window (non-touch)
Compliances and Certifications			
Electrical	CE, UKCA, UL/EN/IEC62368-1, UL/EN/IEC60950-1, UL Recognized Component for US and Canada, UL 508A, CAN ICES-3A/NMB-3A, FCC Class A, NOM		
Enclosure, Environmental	UL 50E, IEC 60721-3 (Reliability), WEEE		

* Consult factory for the 23.8" resistive touch screen if the operating environment exceeds 70% humidity at maximum temperature spec of 50°C or exceeds 40°C at the maximum humidity spec of 90% humidity.