

Note: All specifications are subject to change without prior notice!

TECHNICAL DESCRIPTION

TFT Technology:

- High Quality FUJITSU TFT
- 23.1 inch viewable image size
- Active Matrix, Thin Film Transistor (TFT)
- MVA (Multi-domain Vertical Alignment) LCD Technology

TFT Characteristics:

- Pixel Number : 1600 x 1200
- Pixel Pitch (RGB) : 0.294 (H) x 0.294 (V) mm
- Response Time : 10 ms (typical)
- Contrast Ratio : 500:1 (typical)
- Light Intensity : 250 cd/m2 (typical)
- Viewable Angle : +/- 85 deg. (typical) (Up/Down/Left/Right)
- Active Display Area : 470.4 (H) x 352.8 (V) mm
- Max Colors : 16.7 millions

Synchronisation:

Sync Signal:

- Digital separate synchronisation
- Composite synchronisation
- Synchronisation on green.
- Auto detects VGA -> SXGA, interlaced and non interlaced
- Video Signal : Analog RGB 0,7Vp-p
- Input Impedance 75 Ohm

Synchronisation Range:

- Horizontal : 31,5 kHz to 91,1 kHz
- Vertical : 60 Hz* to 85 Hz

* Recommended for optimum picture quality

Supported Signals:

Resolutions:

- VGA : 640 x 480 (including 640 x 350)
- SVGA : 800 x 600 (including 720 x 400)
- XGA : 1024 x 768
- SXGA : 1280 x 1024
- UXGA : 1600 x 1200*

* Recommended for optimum picture quality. (60 Hz only)

Video Signals:

- Interlaced NTSC and PAL/SECAM video
- Composite video
- S-Video

Power Specifications:

Power Supply:

- 115 & 230VAC - 50 / 60Hz - JH 23T12 MMD-Axx-xxxx
- 24 VDC - JH 23T12 MMD-Dxx-xxxx

Power Consumption:

Operating : TBD (max)

Common Type Numbers:

- JH 23T12 MMD-xxx-xxxA = Standard version (Also ECDIS + Buzzer Options)
- JH 23T12 MMD-xxx-xxxC = With Capacitive Touch Screen Option
- JH 23T12 MMD-xxx-xxxR = With Resistive Touch Screen Option
- For more options, please review our typenumber datasheet found on our website.

PRELIMINARY

MECHANICAL DESCRIPTION

Physical Considerations:

- 584 (W) x 534 (H) x 85 (D) mm - Weight: 15 kg (approx)

Input Signal Terminals:

- DVI-I Signal IN : 1 x 29p DVI Female (or as RGB IN with adapter)
- RGB Signal IN : 1 x 15p HD D-SUB (female)
- RGB Signal OUT : 1 x 15p HD D-SUB (female)*
- HATTELAND I/O : 1 x 160p D-SUB (female) - Also see table below
- USB I/O : 1 x TYPE B Connector (female) - TBD
- AC Power IN : 1 x Std IEC Inlet
- AC Power OUT : 1 x Std IEC Outlet
- DC Power IN : 1 x 2p D-SUB Connector (male) - Amphenol FCC17

*Tested at resolutions up to 1600 x 1200. Both separate sync and composite sync is supported. The VGA output signal is at same resolution and sync as the input. The output is working even if the main display is turned off. (Power supply must be connected though)

HATTELAND I/O Cable:

The factory standard HATTELAND® I/O cable is delivered with the following connectors. Cable length is TBD meters. Custom cable solutions is possible.

- Remote Control : 2 x 9p D-SUB (female) - RS232/422/485
- Composite Video IN : 3 x BNC (female)
- S-Video/S-VHS IN : 1 x 4p S-Video (female)
- COM1 : 1 x 9p D-SUB (female) - For Touch Screen
- USB : 1 x Type B USB (female)

User Controls:

On front bezel - Button control (IP65) xxx-xxAx models:

- Power On/Off and On Screen Display Menu (push button)
- Brightness Control (up/down - push buttons)
- Hotkeys (left/right - push buttons)
- Mode Status Red/Green LED-Ring Indicator

On front bezel - Potmeter control (IP22) xxx-xxBx models:

- Power On/Off and On Screen Display Menu (push button)
- Brightness Control (rotary control)
- Hotkeys (left/right - push buttons)
- Mode Status Red/Green LED-Ring Indicator

Environmental Considerations:

- Operating : Temperature -15 deg. C to +55 deg. C
- Humidity 30% to 90% (non condensing)
- Storage : Temperature -20 deg. C to +60 deg. C
- Humidity 10% to 90% (non condensing)
- IP Rating : EN60529 (IP65) (Applies for flush mount)
- Compass Safe Dist. : JH 23T12 MMD - Std: TBD Steering: TBD

Safety Considerations:

Even although the test conditions for bridge units provide for a maximum operating temperature of 55°C, continuous operation of all electronic components should, if possible, take place at ambient temperatures of only 25°C. This is a necessary prerequisite for long life and low service costs.

Available Accessories:

- I/O Cable = Customized I/O Cable to support more signals
- JH 23TBRT01 = Bracket (Review bracket datasheet/user manual)
- JH MMDRO = Rotary Bracket (Review bracket datasheet/manual)
- JH 23TSV = Sun Visor (Review user manual)
- JH VESA 23T01 = Vesa Bracket (Review user manual)

TESTING / APPROVALS & CERTIFICATES

This product have been tested / type approved by the following classification societies: