DATA SHEET

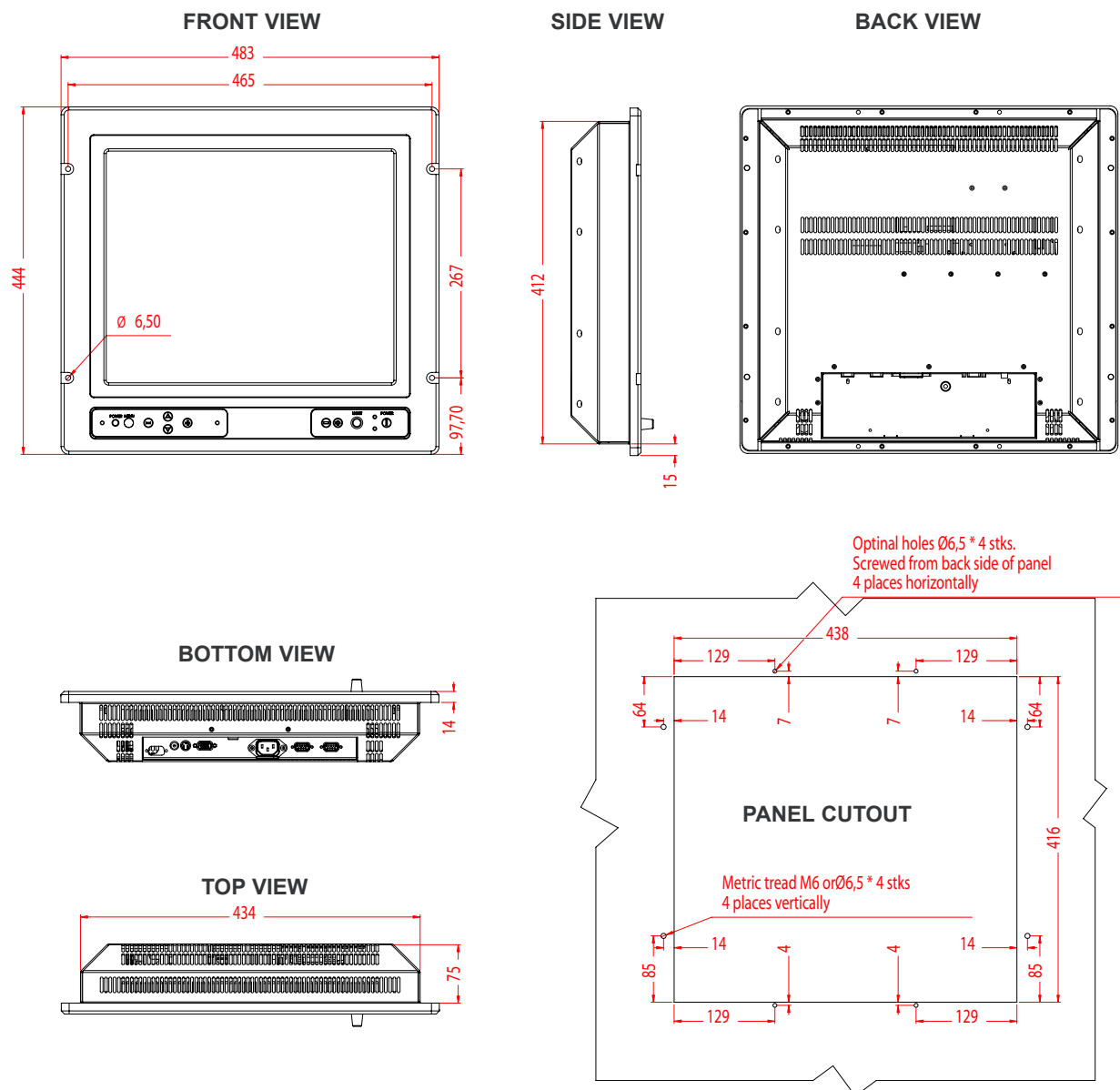|	
Manufacturer:	**Jakob Hatteland Display AS**
Product:	**18.1 inch Maritime Multi Display (MMD)**
Type:	**JH 18T04 MMD**

jhd HATTELAND™ DISPLAY

18.1 inch Maritime Multi Display (MMD)

Features:

The color display described in this Data Sheet is an industrialized version of a high quality (NEC TFT) based display with XtraView technology. The display allows you to display professional applications with clarity and enhanced color and image quality. The MMD have RGB Input, Video Input (Composite/SVHS) and PiP (Picture in Picture) functions. The VGA controller and the high light intensity in combination with the high contrast and wide backlight adjustment control, allow the product to be used in many environments.

Brightness is adjustable from 0 to 100%

FRONT VIEW   **SIDE VIEW**   **BACK VIEW**

483
465
444
267
97,70
Ø 6,50
412
15

BOTTOM VIEW

14

TOP VIEW

434
75

Optinal holes Ø6,5 * 4 stks.
Screwed from back side of panel
4 places horizontally

PANEL CUTOUT

Metric tread M6 orØ6,5 * 4 stks
4 places vertically

438
129   129
64   164
14   7   7   14
416
85   85
14   4   4   14
129   129

Due to dimensions without decimals, the tolerance on drawings is +/- 1mm (For accurate measurements, measure in AutoCAD)
Technical drawings (.DWG format) are found on our internet site: http://www.hatteland.com

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

TECHNICAL DESCRIPTION

TFT Technology:
- 18.1 inch viewable image size
- Thin Film Transistor (TFT)
- a-Si TFT Active Matrix

TFT Characteristics:
- Pixel Number   : 1280 x 1024
- Pixel Pitch (RGB)   : 0.2805 (H) x 0.2805 (V) mm
- Response Time   : 40 ms (typical), "black" to "white"
- Contrast Ratio   : 300:1 (typical)
- Light Intensity   : 200 cd/m2 (typical)
- Viewable Angle   : +/- 85 deg. (typical) (Up/Down/Left/Right)
- Active Display Area : 359.04 (H) x 287.232 (V) mm *
- Max Colors   : 16.7 millions (depending on graphics card)
- Video Signal   : Analog RGB 0,7Vp-p
-                  : Input Impedance 75 Ohm

* Factory setting

Synchronisation:

Sync Signal:
- Digital separate synchronisation
- Composite synchronisation
- Synchronisation on green.
- Auto detects VGA -> SXGA, interlaced and non interlaced

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

Supported Signal Inputs:

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 *

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

* Recommended for optimum picture quality

Power Specifications:

Power Supply Options:
- 115VAC/60Hz or 230VAC/50Hz   : Model JH 18T04 MMD A1
- 24 VDC   : Model JH 18T04 MMD A2

Power Consumption:
- Operating   : 75 W (typ)

MECHANICAL DESCRIPTION

Physical Dimensions:
- 483 (W) 444 (H) 75.57 (D)
- Weight: 11.50 kg (approx w/bracket)

Input Signal Terminal:
- RGB (PC) signal   : 15pin mini D-SUB (female)
- Composite Video   : RCA Phono plug
- S-Video signal   : S-Video (SVHS) plug
- AC Power signal   : Std IEC Inlet   Model JH 18T04 MMD A1
- DC Power signal   : Screw terminal   Model JH 18T04 MMD A2

Accessories:
- Touchscreen   : 1 x D-SUB 9P Connector (female)
- Remote Control   : 2 x D-SUB 9P Connectors (female)

User Controls:

On front bezel:
- Power On/Off (push button)
- Brightness Control
- 2 x hotkeys
- Mode Status LED

Behind hatch:
- On Screen Display control (OSD/OSM)

Environmental Considerations:
- Operating   : Temperature -15 deg. C to +55 deg. C
                          Humidity 30% to 93% (non condensing)
- Storage   : Temperature -20 deg. C to +60 deg. C
                          Humidity 10% to 90% (non condensing)

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 Options:
- JH MMD BR   = Bracket *
- JH MMDRO   = Rotary Bracket *
- JH 18TSV   = Sun Visor *
- JH VESA 18T04 = Vesa Bracket *
- JH VBUF   = Video Buffer **(1)**
- JH SCOM   = Remote Control
- JH XPR   = External Power Relay
- ECDIS Version   = JH 18T04 MMD E1
- Touch Screen   = Factory mounted

*Option: Standard or custom logo and color
*Option: See separate datasheet for specifications on bracket options.

(1) The JHVBUF is 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)

APPROVALS & CERTIFICATES

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

EN60945 3rd (IEC945 3rd)
EN61174 (IEC1174) - Bundesamt für Seeschiffahrt und Hydrographie (BSH)
ABS - American Bureau of Shipping
DNV - Det Norske Veritas
EN60529 (IP66) (Applies only for flush mounting)

LRS - Lloyd's Register of Shipping
ClassNK - Nippon Kaiji Kyokai
GL - Germanischer Lloyd
BV - Bureau Veritas