

# MIL SPEC MONITOR 10.4" TFT LCD DISPLAY COMPOSITE VIDEO INPUT. MODEL (DMM1040V)



iTech Mil Spec Monitor (DMM) is a ruggedized LCD display, designed to operate under the most extreme environments such as high performance jet aircraft, off-road and tracked vehicles, and marine and submarine vessels. The ruggedized displays are capable of operating in environments with extended temperature options, extreme shock and vibration, explosive atmosphere, NVIS, high altitude avionics, or marine and submarine environments.

Housed in a milled billet aluminum case, the DMM is light weight and watertight, with a fully sealed, military grade connector. Front-mounted controls and various mounting options makes the monitor user-friendly. The DMM is fully sunlight readable and MIL-STD-3009 making it viewable under any lighting conditions.

## Standard Features

- Auto Sensing NTSC/PAL
- (3) Composite Video Input
- (1) Composite Video Input
- 10.4" TFT AM LCD SVGA (800 x 600)
- Sunlight Readable
- Transflective Enhancement
- Antireflective/Antiglare Surface Treatments
- Tactile Button OSD User Interface (MIL-PRF-22885; 1 million+ actuations)
- Milled AL Case, sealed to IP67 / NEMA 6
- Military Grade Sealed Connectors
- Wide Range Input (8-36 VDC)
- Protected against Internal Short Circuit, Load Dump, Over Voltage and Reverse Polarity
- 20 Watts Maximum Power Consumption

## Optional Features

- 10.4" TFT AM LCD XGA (1024 x 768)
- (1) S-Video Input
- (1) Composite Video Input
- LED Backlight (1000:1 Dimming Ratio)
- Night Vision Goggle Filter (MIL-STD-3009)
- Flush Mount Bezel, IP67 Sealed
- Panel Mount, IP67 Sealed
- 19" Rack Mount



i-Tech Company LLC

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| TECHNICAL SPECIFICATIONS     |                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------|
| Display                      | 10.4" TFT AM, SVGA, LCD, 262k Colors                                                                       |
| Sunlight Readable*           | 1,100 nits (optional LED)                                                                                  |
| Contrast Ratio               | 500:1 , 300:1 (optional XGA)                                                                               |
| Dimming Ratio                | 100:1, 1000:1 (optional LED)                                                                               |
| Viewing Angle                | 140° (H) x 110° (V) , 120° (H) x 105° (V) (optional XGA)                                                   |
| Video Input                  | NTSC/PAL (B,D,G,I,K)                                                                                       |
| Mounting                     | Flush, Panel, 19" Rack or RAM Mount                                                                        |
| Power Conditioning           | Internal Short Circuit Protection Load Dump Protection Over Voltage Protection Reverse Polarity Protection |
| Power Consumption            | 20 Watts Max                                                                                               |
| ENVIRONMENTAL SPECIFICATIONS |                                                                                                            |
| IP Rating                    | IP67 (NEMA 6 Submersible)                                                                                  |
| Operating Temperature        | -10°C to 70°C (14°F to 158°F) -30°C to 70°C (-22°F to 158°F) (optional LED)                                |
| Storage Temperature          | -20°C to 80°C (-4°F to 176°F)                                                                              |
| Humidity                     | 0-100%                                                                                                     |
| Shock                        | 50 G                                                                                                       |
| Vibration                    | 5.8 G (5-500 Hz)                                                                                           |
| Altitude                     | 45,000 ft.                                                                                                 |
| MILITARY SPECIFICATIONS      |                                                                                                            |
| MIL-STD-461E                 | EMI                                                                                                        |
| MIL-STD-810F                 | Method 501.4 II-Op; High Temperature                                                                       |
| MIL-STD-810F                 | Method 502.4 II-Op; Low Temperature                                                                        |
| MIL-STD-810F                 | Method 514.5; Procedure I, General Vibration                                                               |
| MIL-STD-810F                 | Method 516.5; Procedure I, Functional Shock                                                                |
| MIL-STD-1275D                | Wide Range DC Power Input 8-36 VDC (12, 24, 28 VDC nominal)                                                |
| MIL-STD-3009*                | NVIS Compliance                                                                                            |
| MIL-PRF-22885G               | Sunlight Readability for Buttons                                                                           |
| MIL-PRF-22750F               | Housing Milled Aluminum, Black Finish                                                                      |
| MIL-DTL-38999                | Connector (Qualified)                                                                                      |
| MIL-DTL-26482                | Connector (Qualified)                                                                                      |

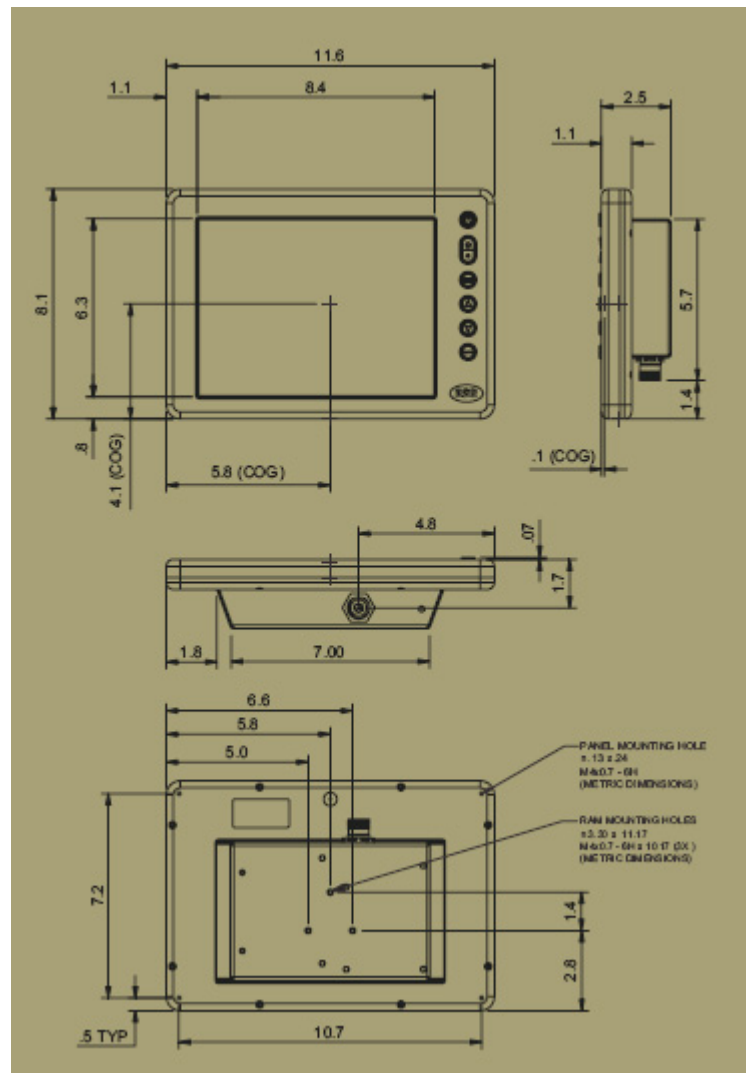


The DMMR (MIL-SPEC Monitor) Series Military Grade Sealed Connectors

| DIMENSIONS        | MILLIMETERS                       | INCHES |
|-------------------|-----------------------------------|--------|
| Height            | 206 mm                            | 8.10"  |
| Width             | 295 mm                            | 11.60" |
| Depth (Main Case) | 30 mm                             | 1.10"  |
| Overall Depth     | 64 mm                             | 2.50"  |
| Weight            | 4.3 lbs ± .25 lbs<br>2 kg ± .1 kg |        |

| STANDARD<br>MIL-DTL-38999 SERIES III 13 PIN CONNECTOR |                       |
|-------------------------------------------------------|-----------------------|
| PIN                                                   | SIGNAL                |
| 1                                                     | NTCS/PAL VIDEO SIGNAL |
| 2                                                     | NTCS/PAL VIDEO GND    |
| 3                                                     | NTCS/PAL VIDEO SIGNAL |
| 4                                                     | NTCS/PAL VIDEO GND    |
| 5                                                     | NTCS/PAL VIDEO SIGNAL |
| 6                                                     | NTCS/PAL VIDEO GND    |
| 7                                                     | +28 VDC               |
| 8                                                     | +28 VDC               |
| 9                                                     | +28 VDC GND           |
| 10                                                    | +28 VDC GND           |
| 11                                                    | CHASSIS               |
| 12                                                    | VIDEO OUT SIGNAL      |
| 13                                                    | VIDEO OUT GND         |

| S-VIDEO OPTION<br>MIL-DTL-38999 SERIES III 13 PIN CONNECTOR |                       |
|-------------------------------------------------------------|-----------------------|
| PIN                                                         | SIGNAL                |
| 1                                                           | S- VIDEO C SIGNAL     |
| 2                                                           | S- VIDEO C SIGNAL GND |
| 3                                                           | S- VIDEO Y SIGNAL     |
| 4                                                           | S- VIDEO Y SIGNAL GND |
| 5                                                           | NTCS/PAL VIDEO SIGNAL |
| 6                                                           | NTCS/PAL VIDEO GND    |
| 7                                                           | +28 VDC               |
| 8                                                           | +28 VDC               |
| 9                                                           | +28 VDC GND           |
| 10                                                          | +28 VDC GND           |
| 11                                                          | CHASSIS               |
| 12                                                          | NC (NO CONNECTION)    |
| 13                                                          | NC (NO CONNECTION)    |



Please note cables are not included

\* iTech integrated NVIS options either produce near zero color shift or slight color shift for full sunlight readability. The integrated NVIS is MIL-STD-3009 compliant, and can be viewed with NVGs (Night Vision Goggles) through the entire brightness range. Dimming is not necessary to meet MIL-STD-3009, Class B NVIS requirements. Brightness levels will be reduced with the NVIS option.



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