

# PowerView™ PV780

## Engine and Diagnostic Display

The PowerView 780 display is a full-featured, configurable display that shows integrated engine, transmission and diagnostic information in an easy-to-read operator interface. Equipment functionality can be further integrated through the available I/O and controlled via the CAN bus.

The PV780 features a full-color, 7-inch bonded LCD for brighter, smoother graphics and best-in-class sunlight readability. The rugged design makes this display a great solution for extreme environments.

The PV780 display is compatible with PowerVision Configuration Studio® which allows users to edit CAN parameters, add OEM branding and create custom equipment screens for a unique and sophisticated user interface.

Features include:

- CAN-based display with rich, full-color graphics
- Compatible with both mechanical and electronic engines
- Rugged design for extreme environments
- Multiple languages

## Specifications

### Tier 4 / Euro Stage IV Ready

#### Environmental

**Operating Temperature:** -40°F to +185°F (-40°C to +85°C)

**Storage Temperature:** -40°F to +185°F (-40°C to +85°C)

**Protection:** IP66 and 67, front and back.

#### EMC/EMI:

- 2004/108/EC and 2006/95/EC directives
- EN 61000-4-3 (radiated EMF immunity radiated)
- EN 61000-4-4 (EFT immunity power and I/O lines)
- EN 61000-4-5 (surges power lines)
- EN 61000-4-6 (RF immunity)
- EN 61000-4-8 (magnetic field immunity)
- EN 60945 (ESD)
- EN 60945 (conducted emissions)
- HYBRID EN 60945 CISPR 11 CLASS B (radiated emissions)

#### Electrical:

- J1113-2, -4, -11, -13, -21, -26 and -41

**Vibration:** Random vibration, 7.86 Grms (5-2000 Hz), 3 axes

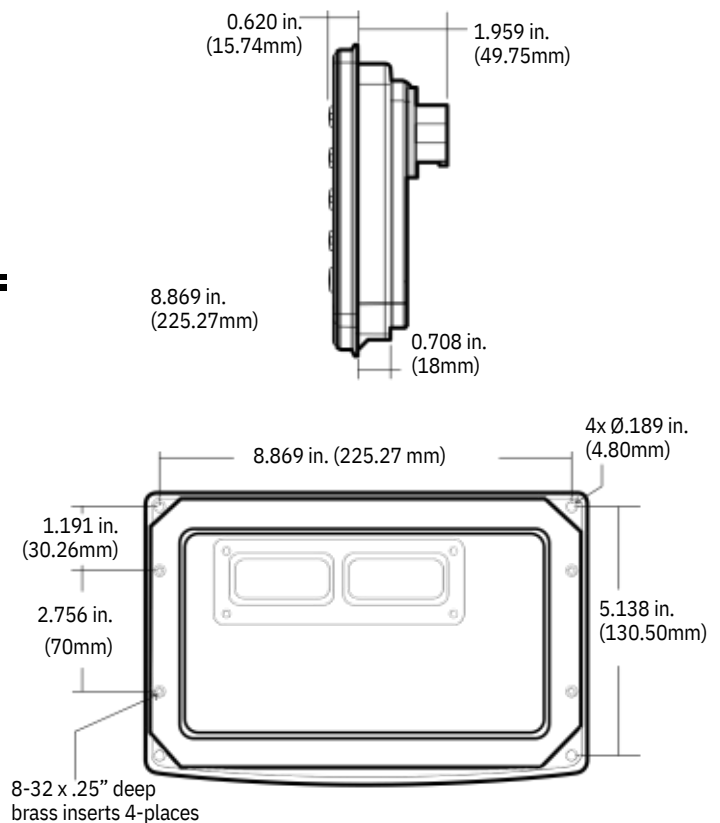
**Shock:** ±50G in 3 axes

Specifications are continued on the next page.



CE

## Dimensions



# Specifications - continued

**Technical Display:** Bonded anti-glare free glass and 7" (178mm) color transmissive TFT LCD **Resolution:** WVGA, 800 x 480 pixels, 16-bit color **Viewing Angle:** ±65o horizontal, +55o/-65o vertical **Orientation:** Landscape or portrait **Backlighting:** LED, 1000 nit typical brightness 40,000 hr. minimum **Contrast Ratio:** 400:1 **Refresh Rate:** 60 Hz **Microprocessor:** Freescale™ i.MX357, 32 bit, 532 MHz, ARM11 core QNX® Realtime Operating System **Flash Memory:** 2 GB **RAM:** 128 Mbytes SRAM **Operating Voltage:** 6-36 VDC, reverse polarity protected **Video Inputs:** 3 NTSC/PAL (single channel viewable) **Connectors:** 2 AMPSEAL 23 Pin (AMP 770680-1 and AMP 770680-4) **Keyboard:** 10 tactile pushbuttons with white LED backlight **Touchscreen:** (optional) projected capacitive **USB:** (1) USB 2.0 host (full speed) **Real time clock:** with Li-ion rechargeable battery backup

## Communications:

- (2) CAN 2.0B according to ISO-11898-2; J1939 and CANopen protocols; proprietary messaging
- (1) RS-485 serial (MODBUS master/slave or PVA gage)
- (1) USB host

## Outputs:

- (1) 500mA switched low-side
- (1) Frequency Out (2Hz - 3 kHz, Vbat rms square wave) for tach

## Inputs:

- (3) Analog 0-5VDC, 4-20 mA, or resistive, 10-bit resolution
- (5) Discrete Digital, Active High
- (1) Frequency In (2Hz - 10 kHz), 5Vpk-pk min, 120Vpk-pk max

## Mechanical

**Dimensions:** 8.37 x 6.0 in. (212.5 x 152.3 mm) landscape

**Unit Depth:** 3.57 in. (90.8 mm)

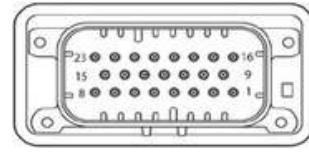
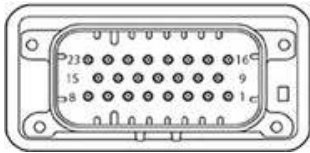
**Case Material:** PC/ABS, ISO 3795 (SAE J369, FMVSS 302) rated

**Mounting Options:** Front mount, back mount or RAM mount

## Certifications:

- CE
- E-mark capable

# Pinout



| Connector 2 (Gray) |                   |     |                  |
|--------------------|-------------------|-----|------------------|
| Pin                | Description       | Pin | Description      |
| 1                  | Video Input 1     | 1   | Frequency Input  |
| 2                  | Video Input 2     | 3   | Frequency Return |
| 3                  | Video Input 3 RS- | 4   | no connect       |
| 4                  | 485 High RS 485   | 4   | USB D-           |
| 5                  | Low no connect no | 5   | USB D+           |
| 6                  | connect no        | 5   | USB 5V           |
| 7                  | connect Video     | 1   | USB GND          |
| 8                  | Input 1 GND Video | 6   | USB Shield       |
| 9                  | Input 2 GND       | 7   | no connect       |
| 10                 | Video Input 3 GND | 1   | no connect       |
| 11                 | USB ID            | 8   | no connect       |
| 12                 |                   | 1   |                  |
|                    |                   | 2   |                  |
|                    |                   | 3   |                  |
|                    |                   | 4   |                  |

| Connector 1 (Black) |                    |     |                    |
|---------------------|--------------------|-----|--------------------|
| Pin                 | Description        | Pin | Description        |
| 1                   | Digital Input 1    | 1   | Digital Input 2    |
| 2                   | Analog Input 3     | 3   | Frequency Output 1 |
| 3                   | Analog Input 2     | 1   | Ignition In no     |
| 4                   | Analog Input 1     | 4   | connect no connect |
| 5                   | CAN 1 L            | 1   | CAN 3 L CAN 3 H    |
| 6                   | CAN 1 H            | 5   | Digital Input 4    |
| 7                   | Battery            | 1   | Digital Input 5    |
| 8                   | Ground             | 6   | Digital Output     |
| 9                   | Analog Input 3 GND | 1   | no connect         |
| 10                  | Analog Input 2 GND | 7   |                    |
| 11                  | Analog Input 1 GND | 1   |                    |
| 12                  | Digital Input 3    | 8   |                    |
|                     |                    | 1   |                    |
|                     |                    | 9   |                    |
|                     |                    | 2   |                    |
|                     |                    | 3   |                    |
|                     |                    | 4   |                    |

## How To Order

| Part number | Description   | Note        |
|-------------|---|-------------|
| 78700560    | PV780 Display, Murphy Standard Configuration            | Displays    |
| 78700564    | PV780 Touch Display (no configuration; bootloader only) | 2           |
| 78090098    | Programming Kit, PV780                                  | 3           |
| 78051181    | Cover, PV780  | Accessories |
| 78001053    | Bracket Kit (screws included)                           |             |
| 78001055    | Harness, Gray Connector, USB                            |             |
| 78001056    | Harness, Gray Connector, Flying Leads                   |             |
| 78001057    | Harness, Black Connector, Flying Leads                  |             |
| 78001017    | Harness, Black Connector, Development                   |             |
| 78001018    | Harness, Gray Connector, Development                    |             |
| 78090069    | Harness, PV750 Conversion, Power/CAN                    | Service     |
| 78051180    | Bezel, PV780  |             |

# SALES CONTACT

## CONTACT

✉ sales@rajkotmarinelc.ae

☎ +971 6 7487580

🌐 www.rajkotmarine.com

## RAJKOT MARINE LLC

Jerf Industrial Area 1,

P.O Box 5861

Ajman, UAE

