

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

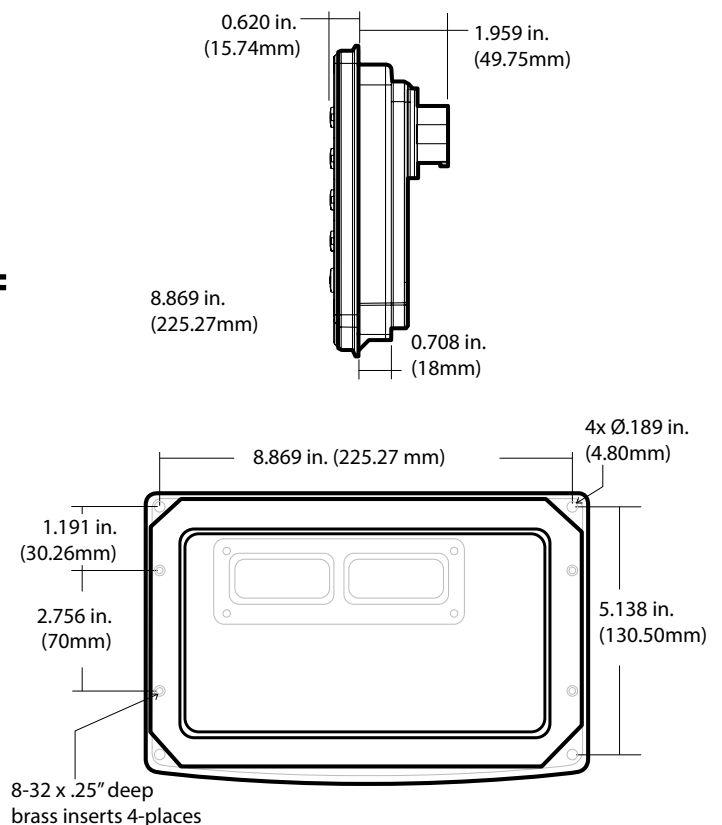
Shock: ±50G in 3 axes

Specifications are continued on the next page.



CE

Dimensions



Specifications - continued

Technical

Display: Bonded print/glare-free glass and 7" (178mm) color transmissive TFT LCD

Resolution: WVGA, 800 x 480 pixels, 16-bit color

Viewing Angle: ±65° horizontal, +55°/-65° 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)

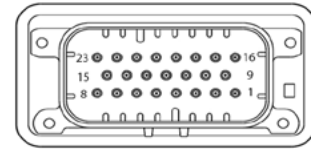
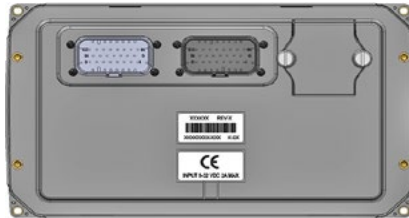
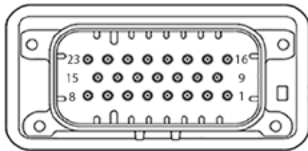
Case Material: PC/ABS, ISO 3795 (SAE J369, FMVSS 302) rated

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	13	Frequency Input
2	Video Input 2	14	Frequency Return
3	Video Input 3	15	no connect
4	RS-485 High	16	USB D-
5	RS-485 Low	17	USB D+
6	no connect	18	USB 5V
7	no connect	19	USB GND
8	no connect	20	USB Shield
9	Video Input 1 GND	21	no connect
10	Video Input 2 GND	22	no connect
11	Video Input 3 GND	23	no connect
12	USB ID		

Connector 1 (Black)			
Pin	Description	Pin	Description
1	Digital Input 1	13	Digital Input 2
2	Analog Input 3	14	Frequency Output 1
3	Analog Input 2	15	Ignition In
4	Analog Input 1	16	no connect
5	CAN 1 L	17	no connect
6	CAN 1 H	18	CAN 2 L
7	Battery	19	CAN 2 H
8	Ground	20	Digital Input 4
9	Analog Input 3 GND	21	Digital Input 5
10	Analog Input 2 GND	22	Digital Output
11	Analog Input 1 GND	23	no connect
12	Digital Input 3		

How To Order

Part number	Description	Note
78700560	PV780 Display, Murphy Standard Configuration	Displays
78700564	PV780 Touch Display (no configuration; bootloader only)	
78090098	Programming Kit, PV780	Accessories
78051181	Cover, PV780	
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	