Products covered in this document comply with European Council electromagnetic compatibility directive 2004/108/EC and electrical safety directive 2006/95/EC.

In order to consistently bring you the highest quality, full-featured products, we reserve the right to change our specifications and designs at any time. The latest version of this manual can be found at www.fwmurphy.com.

**Warranty** - A limited warranty on materials and workmanship is given with this Murphy product. A copy of the warranty may be viewed or printed by going to www.fwmurphy.com/support/warranty.htm
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Hardware Installation

The following instructions will guide you through installing the PowerView display.

Inspecting Package Contents

Before attempting to install the product, it is recommended that you ensure all parts are accounted for and inspect each item for damage (which sometimes occurs during shipping). The items included in the box are:

- PV350 or the PV380 unit
- Dash gasket
- Installation manual – P/N 00-02-0998

The PV350 and PV380 R2 Operations Manual can be found online at www.fwmurphy.com/PV380
Dash-Mounted Installation

Tools needed

- Jig saw or
- 3.5” Hole saw or
- 3.5” knockout (chassis) punch

Preparing the Dash

Determine the location of the PowerView in the dash. Refer to the Mounting Hole Options sheet at the end of this document for the appropriate opening sizes.

Mounting the Unit

1. Place the dash gasket over the prepared dash opening.
2. Place the back side of the display through the opening in the dash.
3. Push the unit through the opening until the case is flush.
4. Place the screw-on type mounting clamp behind the dash and install on the unit until it is hand tight.
Dimensions, cont.

Legend:
Inches [Millimeters]

Note: Pinout depicted is the PV380
Wiring Information

Pin Specifications for PV350

PV350 Back View
Pin Specifications for PV380

PV380 Connector Pin Outs (Back View)
PV350 Mating Connector Part Numbers:

- Deutsch DT06-12SA plug housing
- Deutsch DT06-6S plug housing
- W6S and W12S wedge locks
- Deutsch 0462-201-16141 contact (socket)
- M12 (Micro-C) 5-pin male plug compatible with NMEA 2000 thin backbones (light cable)

PV380 Mating Connector Part Numbers:

- Deutsch DT06-12SA plug housing
- Deutsch DT06-6S plug housing
- W6S and W12S wedge locks
- Deutsch 0462-201-16141 contact (socket)
Wiring Diagram for PV350

PV350

KEY SW

BATT +

1

ECU

CAN H

2

CAN L

3

MATING CONNECTOR

DEUTSCH DT06-6S
w/ WEDGELOCK W6S

4

DIGITAL OUT 500mA

LOAD

5

RESISTIVE SENDER IN

BATT -

6

BATTERY

NMEA 2000

SHIELD

1

NET-S

2

(BATT)

NET-C

3

GND

NET-H

4

(CAN H)

NET-L

5

(CAN L)
PV350 and PV380 Features and Operations
Flat Screen Display

A 3.8” QVGA monochrome LCD screen displays gauges, soft key commands and fault messages as well as menu options for setup and configuration.

Soft Keys and Commands

The five tactile push buttons on the bottom of the display correspond to the options available for the screen being displayed.

Alarms

Red and amber warning LEDs; set point triggered output for external piezo buzzer or shut-down relay.

Operations Manual

### Specifications

#### Electrical

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>3.8” monochrome LCD</td>
</tr>
<tr>
<td>Resolution</td>
<td>QVGA, 320 x 240 pixels</td>
</tr>
<tr>
<td>Orientation</td>
<td>Landscape</td>
</tr>
<tr>
<td>Backlighting</td>
<td>LED, white</td>
</tr>
<tr>
<td>Flash Memory</td>
<td>2Mb</td>
</tr>
<tr>
<td>RAM</td>
<td>256kb</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>6 - 36 VDC, protected against reverse polarity and load-dump</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>10 W max</td>
</tr>
<tr>
<td>Communications</td>
<td>PV350: (2) CAN 2.0B NMEA 2000 isolated (second port)</td>
</tr>
<tr>
<td></td>
<td>PV380: (1) CAN 2.0B</td>
</tr>
<tr>
<td></td>
<td>(1) RS485 serial (Modbus)</td>
</tr>
<tr>
<td>Protocols</td>
<td>J1939, FreeForm CAN</td>
</tr>
</tbody>
</table>
| **Connection** | PV350: 6 pin Deutsch connector and 5 pin M12 connector  
PV380: 6 pin and 12 pin Deutsch DT series connectors |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Keyboard</strong></td>
<td>5 tactile buttons</td>
</tr>
</tbody>
</table>
| **Inputs**    | PV350: (1) resistive analog (backlight control)  
PV380: (4) resistive analog  
(3) analog, 0-5V / 4-20 mA  
(1) frequency, 2-10,000 Hz, 3.6-120 VAC |
| **Output**    | PV350: (1) 500 mA; switched low-side  
PV380: (2) 500 mA; switched low-side |

**Environmental**

| **Operating Temperature** | -40° C to +85° C |
| **Storage Temperature**   | -40° C to +85° C |
| **Protection**            | IP67, front and back, IP66 panel seal |
# Standards Compliance

| Standards Compliance | Electrical Safety: 2006/95/EC  
Electromagnetic Compatibility:  
• 2004/108/EC:  
  • EN 61000-6-4:2001 (emission)  
  • EN 61000-6-2:2001 (immunity)  
  • EN 50121-3-2 and EN 12895  
  • SAE J1113/2, 4, 11, 12, 21, 24, 26 and 41 |

| Vibration | Random vibration, 7.86 Grms (5.2000 Hz), 3 axes |
| Shock     | +/- 50G in 3 axes |

## Mechanical

| Case Material | PC/ABS |
Mounting Hole Options

MOUNTING HOLE OPTIONS

PV350/380

Ø 3.375
[85.7]

OR

3.285
[85.4]

1.610
[40.9]

0.125
[3.2]

R.063
[1.6]
ENOVATION CONTROLS CORPORATE HEADQUARTERS
5311 S 122ND EAST AVENUE
TULSA, OK 74146

ENOVATION CONTROLS – SAN ANTONIO OFFICE
5757 FARINON DRIVE
SAN ANTONIO, TX 78249

ENOVATION CONTROLS – HOUSTON OFFICE
105 RANDON DYER RD
ROSENBERG, TX 77471

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ISO 9001 Quality Management

FM 28221 (Tulsa, OK - USA)
FM 620667 (San Antonio, TX - USA)
FM 28221 (Rosenberg, TX - USA)
FM 29422 (UK)

ISO 9001 Quality Management

FM 523851 (China) TS 16949 Automotive Quality Management

TS 589322 (China)