

The Eaton logo, featuring the word "EATON" in a bold, sans-serif font with a stylized dot on the letter "O".The Cutler-Hammer logo, featuring the words "Cutler-Hammer" in a bold, sans-serif font.

PanelMate® ePro™ PS OD Operator Interface Models 7685T-12OD and 7685ST-12OD

Product Focus

Outdoor Readable
Outdoor Rugged
Performance and Flexibility

Ethernet and Serial
Communications plus OPC
Innovation with Migration

Introduction

The Cutler-Hammer® PanelMate ePro PS OD (Outdoor Series) is a high performance yet cost-effective operator interface from Eaton's electrical business. The OD is based on the PanelMate ePro PS platform which sets the standard for hybrid OI systems by combining the flexibility of Microsoft® Windows® XP Embedded technology with the stability and reliability achieved through the solid-state hardware design and exclusive Protect Mode™ that provides protection for the operating system and software.

The OD models provide additional features that make the ePro PS suitable for direct sunlight readability, as well as extend the environmental ratings for harsh outdoor applications. Using passive display enhancement technology, the OD Series achieves temperature and shock ratings which allow it to be used in applications where other displays will not survive. Plus built-in anti-glare, anti-reflective and anti-UV coatings provide superb visibility in direct sunlight.

Performance and Flexibility

The PanelMate ePro PS OD has the performance and flexibility of a PC-based operator interface without the associated complexity of a PC. With integrated high-speed Ethernet, serial ports, USB ports, optional removable CompactFlash®, PCMCIA and an optional PCI expansion

adapter, the ePro PS OD can be adapted for a wide variety of application requirements.

In addition, the OD supports many third-party software packages including Visual Basic®, which can interface directly to the runtime software. Support for wireless Ethernet and cell phone cards, Modem cards, a multitude of non-volatile memory and input devices make the ePro PS OD the most flexible OI device in the outdoor display market.

Communications and Convenience

The ePro PS OD comes standard with over 80 OPC drivers for both Ethernet and serial connectivity to virtually any PLC platform or network, as well as a wide array of drives, motion controllers and databases. No additional fees or activation are required for connecting directly to the OPC server engine and drivers, you just load the configuration and go. With PCMCIA and PCI availability, you have a wide selection of both proprietary and open network interfaces from DeviceNet and PROFIBUS® to Data Highway Plus, ControlNet and Modbus® Plus.

Protect Mode

With the built-in Protect Mode feature you can be confident that the ePro PS OD will be secure from unexpected changes or corruption and that the integrity of the system will remain intact. Protect Mode locks out all unauthorized

modifications to the operating system in addition to protecting your critical application programs and drivers. This means that you don't suffer from the common problems associated with industrial PCs. As a result, you can treat the ePro PS OD like your PLC instead of your PC.

Configuration Tools

The ePro PS OD is configured with the ePro Canvas® editing software. The ePro Canvas editor supports a modern suite of graphical templates, called controls, for replacing hard-wired panel devices such as pushbuttons, indicator lights, bars, readouts and message displays. These new controls allow existing PanelMate users to upgrade the look of their applications while keeping the same familiar user interface that has made PanelMate the preferred operator interface by operators worldwide.

The ePro PS OD's multi-language support allows you to create a single configuration supporting any combination of languages and supports on-the-fly online language changes.

The editor comes in two versions: ePro Canvas and ePro Canvas Professional. Both versions support application development for the complete PanelMate ePro PS family of products including the OD and EE models.

Rugged Design/Global Standards

The PanelMate ePro PS OD carries UL®, cUL®, CSA® Class I Div 2, and CE Mark certification and it meets NEMA® 4, 4X, 12 and IP65 ratings when installed in a correspondingly rated enclosure. The ePro PS OD operates from 24 Vdc power which is an emerging standard for global installations. An array of 24 Vdc power supplies is available from Eaton to accommodate installations requiring 120/240 Vac power.



Application Examples

Whether replacing hardwired pilot devices and pushbuttons or providing machine control and even SCADA functions such as data archiving, recipe management and Internet browsing, the ePro PS OD can fit from both a form and functional standpoint. In monitoring and diagnostic applications, as well as operator controls for critical start/stop, ramp/jog, and set point adjustments, the ePro PS OD offers a reliable and safe interface for a wide range of outdoor, industrial and military applications:

- Agricultural, mining and drilling applications
- Oil platform monitoring and control in the petroleum industry
- Water and wastewater treatment control panels
- Fixed mounted installations on mobile platforms such as trucks, ships and construction equipment
- Monitoring and control panels for local facilities/air handling equipment
- Discrete manufacturing machine diagnostics and controls
- Industrial and commercial power house controls; building HVAC controls
- Material handling and palletizing monitoring and control
- Plus many more!

For over 20 years, Eaton's PanelMate products have offered users "Innovation with Migration." The PanelMate ePro PS OD continues the tradition by offering a powerful and flexible operator interface in a rugged package.

General Features and Capabilities

- Display
 - 12.1 inch (307.3 mm), color TFT display, 16 million colors
 - Resolution: SVGA (800 x 600)
 - Backlight: Field replaceable, 50,000 hours typical life
 - Auto dimming
- Operator Entry
 - Touchscreen interface with resistive technology for gloved-hand operation
 - Pop-up, on-screen alphanumeric keypad support
- Hardware
 - Single piece design for easy panel mounting
 - Powder coat steel or stainless steel front panel
- Powerful OI Capabilities
 - Supports ePro Canvas controls and templates
 - Built-in two-touch control
 - Full math and logic expressions
- Communications and I/O Capabilities
 - 1 Integrated Ethernet port: 10/100Base-T
 - 2 Serial ports: 1-RS-232, 1-RS-232/422/485 optically isolated
 - 4 USB ports (2 - V1.1, 2 - V2.0)
 - 1 CompactFlash memory card slot
 - 2 PCMCIA Type II slots (or 1 Type III)

- Support for optional PCI adapter
- Built-in OPC Client/Server support

Product Specifications

- Voltage
 - 24 Vdc
- Power Consumption
 - 32 watts
- Heat Output
 - 32 watts (109 BTU/hour)
- Current
 - 1.5 A
- Peak Inrush Current
 - 7.0 A
- Installation Rating
 - The ePro PS OD models are approved for use in Type 4, 4X, 12 and IP65 installations when properly mounted in a correspondingly rated enclosure
- System Ambient Temperature
 - Operating: 0 – 60°C (32 – 140°F) 0 – 50°C (32 – 122°F) with optional PCI adapter
 - Non-operating: -25 – 70°C (-13 – 158°F)
- System Vibration
 - Operating: 1G from 5 – 500 Hz
 - Non-Operating: 1G from 5 – 500 Hz
- System Shock
 - Operating: 100G
 - Non-operating: 100G
- Relative Humidity
 - Operating: 20 – 95% non-condensing
 - Non-operating: 20 – 95% non-condensing
- Altitude
 - Operating: 10,000 ft Above Sea Level (3,048 m)
 - Non-operating: 40,000 ft Above Sea Level (12,192 m)
- Emissions
 - CISPR 22 Class A- Radiated and Conducted
- Noise Immunity
 - IEC 801-2,3,4,6,8
 - IEC 6100-4-2,3,4,5,6,8
- Agency Certifications
 - CE Mark
 - UL/cUL and CSA Class I, Div 2, Groups A, B, C, D

MODEL NUMBER	OVERALL DIMENSIONS H X W X D	CUTOUT DIMENSIONS H X W	WEIGHT
7685T-120D ¹	11.60 x 15.90 x 3.90 in. (295 x 404 x 99 mm)	10.12 x 14.34 in. (257 x 364 mm)	14.0 lbs (6.35 kg)
7686ST-120D			

¹ Add 1.30 in. (33 mm) to depth for optional PCI adapter.

MODEL NUMBER	DESCRIPTION
76PCI	PCI Adapter Module for 12", 15" and Blind Node
76MLPSD	Restore Kit for PanelMate ePro PS and PS OD Display Models

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