

EAT•N

Powerware

Intelligent Power Vertical IPV Series



Enclosure Power Distribution Units (ePDU™)

Intelligent Power Vertical IPV 42 & 70 Series



- Secure HTTPS
- Encrypted Password Protection
- Ping Watchdog



- Telnet Control
- Web Browser Control
- SNMP
- Serial And Ethernet



- Current Monitoring
- Voltage Monitoring
- E-mail Alerts of Events



- Temperature Monitoring
- Humidity Monitoring
- Contact Closure (door/water)



- Outlet Control
- Outlet Grouping and Naming
- Up to 24 Outlets On/Off/Reboot Control



Network and
Serial Connections
located at the
top of the unit.

PHYSICAL

- Vertical mount
- **V42:** Height 42" Including mounting brackets
Height 38" without mounting bracket attached
Width 2.0" x Depth 1.89"
- **V70:** Height 70" including mounting brackets
Height 66" without mounting bracket attached. Width 2.0" x Depth 1.89"
(3.5" at circuit breaker cover)
- 18 gauge steel, powder coat black with white silkscreen
- Detachable mounting brackets allow for several mounting options

POWER INPUT

- Power cable with plug is attached at the bottom of the unit through a cable grip
- Power cable is UL type SOOW or SJT
- NEMA style power input plug is attached
- AB versions have a C20 power inlet to allow for various power cables to be used with the unit

OVERLOAD CIRCUIT PROTECTION (C1, C5, F3 ONLY)

- Electromagnetic circuit breakers to prevent temperature from affecting the trip point
- Long time delay curve to prevent nuisance tripping from power supply or motor start up surges
- Rated for use as a switch for off/on control
- Easily reset after an overload or fault
- Circuit breaker trip guards are provided to prevent accidental tripping
- UL listed branch circuit breaker are provided where required by UL 60950-1 standards

**POWER OUTLETS**

- IPV42 has (8) and IPV70 has (16) or (24) outlets depending on the version
- IEC C13 "computer style" or NEMA 5-15 "standard 3-prong" depending on the version

CURRENT MONITORING

- Front panel display shows current draw of connected equipment
- Two digit display shows current from 0-30 amps with true RMS accuracy
- Monitor will help to prevent system overload and ease installation

INDICATOR LIGHT

- One LED indicator light per circuit breaker
- Light illuminates when the circuit breaker is in the on position and power is present at the input
- One LED indicator per outlet, on when the outlet power relay is on

OUTLET CONTROL

- Individual on/off/reboot outlet control via software interface to control equipment remotely
- Auto scheduler allows for scheduling power on/off/reboot events (daily and weekly events)
- Outlets can be controlled based on temperature, humidity, current, voltage or switch thresholds

SOFTWARE SECURITY

- User name/password security
- Settings allow the administrator to disable unused interfaces

ENVIRONMENTAL

- Monitor temperature at 2 locations and humidity with optional sensors
- Contact closure inputs to monitor switch open or closure

SOFTWARE INTERFACES

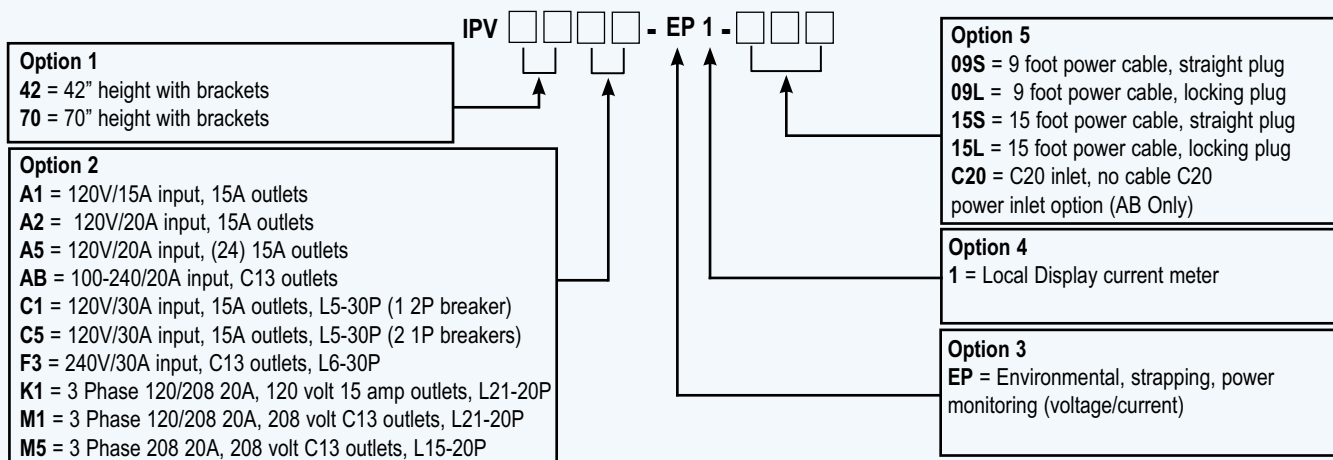
- Web interface provides a graphic control interface through a web browser (IE, Netscape, Mozilla)
- Telnet interface provides a text menu control interface with any terminal emulation software
- SNMP allows read/write capability with trapping
- E-mail notification system provides e-mail alerts or logs showing user activity
- Serial interface provides a text menu control interface with any terminal emulation software
- FTP utility allows firmware upgrades

SOFTWARE FEATURES

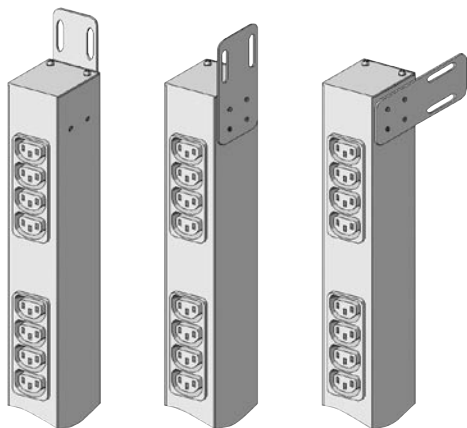
- Administrator and multiple users can be configured
- User level access can be limited to specific outlets
- Unit and outlet names can be configured
- Outlet groups can be created to perform an action on multiple outlets at once
- Outlet control includes individual, group and all outlet global control
- Outlet actions include on/off and reboot
- Global sequence allows all the outlets to be turned on or off in a preset sequence up to 999 seconds
- Outlet reboot automatically turns an outlet off and back on with one command at a preset time up to 999 seconds
- E-mail notification allows up to two e-mail addresses to receive notifications of alerts or events

AUTO-EVENT SCHEDULING

- Administrator can configure on or off events for outlets or groups. The event occurs at the preset time daily or weekly

IPV "Design Your Own" part number guide

Mounting



*SUB-HRDWARE-017 brackets come attached to IPV units.

Option 1: Chassis Size

Choose either 42" tall or 70" tall. Both package styles are 2" wide by 1.89" deep. The 42" option is 38" tall without the mounting bracket attached and the 70" option is 66" tall without the mounting bracket attached.

42"

A1 = (8) NEMA 5-15R 120 volt, 15 amp outlets

A2 = (8) NEMA 5-15R 120 volt, 15 amp outlets

AB = (8) IEC 60320 C13 100-240 volt, 15 amp outlets

C1, F3, K1, M1 not available in 42" version

70"

A1 = (16) NEMA 5-15R 120 volt, 15 amp outlets

A2 = (16) NEMA 5-15R 120 volt, 15 amp outlets

A5 = (24) NEMA 5-15R 120 volt, 15 amp outlets

AB = (16) IEC 60320 C13 100-240 volt, 15 amp outlets

C1 = (16) NEMA 5-15R 120 volt, 15 amp outlets

C5 = (16) NEMA 5-15R 120 volt, 15 amp outlets

F3 = (16) IEC 60320 C13 200-240 volt, 15 amp outlets

K1 = (24) NEMA 5-15R 120 volt, 15 amp outlets

M1 = (24) IEC 60320 C13 208 volt, 15 amp outlets

M5 = (24) IEC 60320 C13 208 volt, 15 amp outlets

Option 2: Voltage and Current Configuration: The following chart shows the available input/output voltage and current configurations. Most options have a choice of straight blade or twistlock connectors. This selection is made in options 2 and 5.

IPV42 & IPV70 Version	Voltage/Current Input/Output	Circuit Breakers	Input Connectors		Output Connectors Straight Blade
			Straight Blade	Twist Lock	
A1	120V/15A 12A Output	NA	 5-15P	 L5-15P	 5-15R
A2	120V/20A 16A Output	NA	 5-20P	 L5-20P	 5-15R
A5	120V/20A 16A Output	NA	 5-20P	 L5-20P	 5-15R
AB	100-240V/20A 16A Output	NA	 C20	NA	 C13
C1	120V/30A 24A Output	2 pole 15A UL489	NA	 L5-30P	 5-15R
C5	120V/30A 24A Output	(2) 1 pole 15A UL489	NA	 L5-30P	 5-15R
F3	240V/30A 24A Output	(2) 2 pole 15A UL489	NA	 L6-30P	 C13
K1	120/208V/20A 16A Output Per Phase	NA	NA	 L21-20P	 5-15R
M1	120/208V/20A 16A Output Per Phase	NA	NA	 L21-20P	 C13
M5	208 V/20A 16A Output Per Phase	NA	NA	 L15-20P	 C13

Option 3: Environmental-Strapping

This provides for external temperature, humidity and contact closure environmental sensing. An optional temperature and humidity probe can be ordered separately to read temperature at two locations and humidity at one location. The contact closure can be connected to any standard normally-open or normally-closed switch, such as a cabinet door or water sensor switch. There is the capability to set thresholds and receive either e-mail alerts or SNMP traps to notify the user of events.

Strapping allows for multiple IPV units to be connected together in an RS485 serial configuration. Standard network cables are used to interconnect Pulizzi IPV units. Up to 23 units can be connected to one master controller. ONLY the master controller is required to have a network connection. The other devices are accessed through the master unit via serial, telnet, or web interfaces.

Power Monitoring / Current Metering

This allows for power monitoring of both current and voltage. The voltage is only displayed in the software interface. The current meter is a true RMS meter capable of 0.1A resolution. This allows the user to properly load balance the power distribution unit. Thresholds can be set for over/under current and voltage. The unit can send e-mail alerts or SNMP traps to alert the user of the condition. In addition, outlet on/off actions can be performed based off the thresholds.

Option 4: Local Current Meter Display

A local two digit LED display outputs the total current per section. For units with more than one 8-outlet section, the display cycles between sections. The super-bright large digit display can be read from up to 20 feet away.

Option 5: Cable Length/Plug Type

The IPV has two options for attached power cable length, 9 feet or 15 feet. The user can also select a straight blade or twist lock plug for power input. Only the AB versions are available with IEC C20 inlets. Several power cable options are available for North American and European use. The power cables must be ordered separately.

Screen Captures From Interface:

SCREENSHOT 1: CURRENT OUTLET STATUS

Unit Name: Room 20 - Rack 220 (0) User Name: Admin
IP: 192.9.230.66 Up Time: 0 day(s) 0 hour(s) 1 minute(s)
Time: 11:17 Date: 01/08/2007

Outlet Section 1	Voltage	Current	Power
100.1V	5.7A	504.8W	

SCREENSHOT 2: NETWORK SETTINGS

Use DHCP: ☐
 Unit IP Address: 192.9.230.66
 Subnet Mask: 255.255.255.0
 Default Gateway: 192.9.230.1
 MAC Address: 00:04:F3:00:00:00

SCREENSHOT 3: ENVIRONMENTAL CONFIGURATION

Unit Name: Room 20 - Rack 220 (0) User Name: Admin
IP: 192.9.230.66 Up Time: 0 day(s) 0 hour(s) 3 minute(s)
Time: 11:20 Date: 01/08/2007

Name	Enabled	High Threshold	Low Threshold	Outlet Group Name	Outlet Group To On
Temp 1	☐	71.4F	71.2		
Temp 2	☐	71.2	71.2		

SCREENSHOT 4: TELNET

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Pulizzi IPV1000
Version 2.0.1
Time: 01/08/2007
Up Time: 0 day(s) 0 hour(s) 11 minute(s)
Unit Name: Admin
IP: 192.9.230.66
Subnet Mask: 255.255.255.0
Default Gateway: 192.9.230.1
MAC Address: 00:04:F3:00:00:00

-- Main Menu --
1- Outlet Control
2- Outlet Configuration
3- Outlet Environmental Status
4- Help
5- Logout

-- Outlet Control Sub Menu --
1- Outlet Control
2- Outlet Configuration
3- Outlet Environmental Status
4- Help
5- Logout

-- Outlet Configuration Sub Menu --
1- Outlet Configuration
2- Outlet Environmental Status
3- Outlet Control
4- Help
5- Logout

-- Outlet Environmental Status Sub Menu --
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Accessories

Optional Environmental Rack Monitoring Accessories



Smoke Detector/Alarm,
220VAC, IEC C-13
P/N 103005779



Door Contact Sensor
P/N 103005781



Water Leak Detector, 3 ft.
P/N 103005780



Water Leak Detector, 12 ft.
P/N 103005894



Smoke Detector/Alarm,
110VAC, NEMA 5-15
P/N 103005890



Vibration Sensor
P/N 103005782



SENSOR-T1H1-10
10', (1) Temp., (1) Humidity

SENSOR-T1-10
10', (1) Temp.

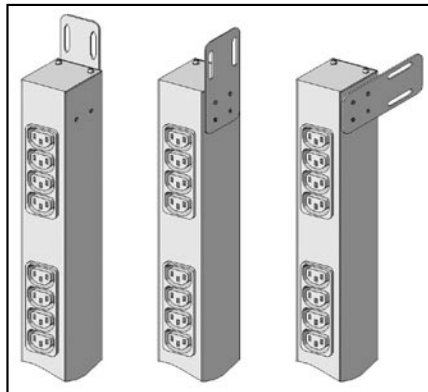
SENSOR-T2-10
10', (2) Temp.

Environmental

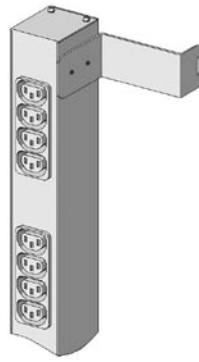
Operating Temperature is 0 to 50 C
Storage Temperature is -40 to 70 C
Altitude Maximum 10,000 ft.
Relative Humidity is 95%
Max Non-Condensing

Optional Bracket Kits for Vertical Units

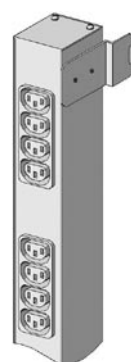
Each kit contains 2 brackets and mounting hardware



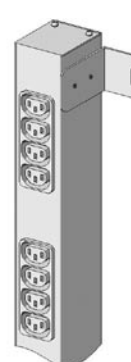
SUB-HRDWARE-017 - Included



SUB-HRDWARE-014



SUB-HRDWARE-018



SUB-HRDWARE-019

Tool-less Mounting



SUB-HRDWARE-038

Optional

Power Cables

010-9334:
C19 to NEMA 5-15P
125V, 15A Straight Blade
8 foot, 14AWG/3wire



010-9335:
C19 to NEMA 5-20P
125V, 20A Straight Blade
8 foot, 12AWG/3wire



010-9339:
C19 to NEMA L5-20P
125V, 20A Twist-Lock
8 foot, 12AWG/3wire



010-9341:
C19 to NEMA L6-20P
250V, 20A Twist-Lock
8 foot, 12AWG/3wire



010-9343:
CEE7-7 to C19
250V, 16A EUROPE (Schuko)
2.5M, 1.5mm/3wire Harmonized



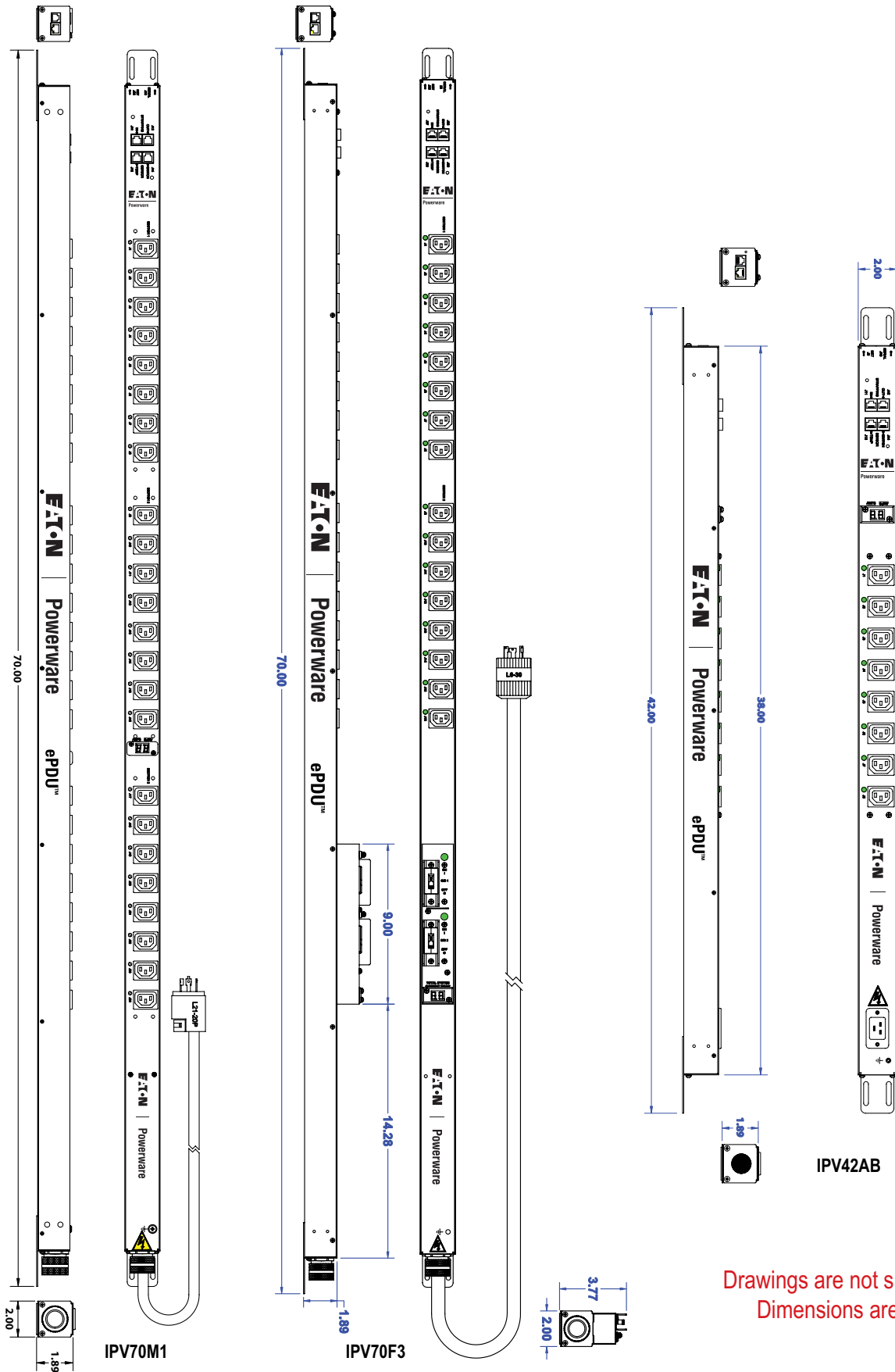
010-0025: 8 foot
C13 to C14 Harmonized, 1mm/3wire
100-240V rated



Optional Cable Restraint
001-2550



C13 Outlet Cap
035-0113



Drawings are not shown to scale
Dimensions are in inches