Product Data Sheet

Product Description

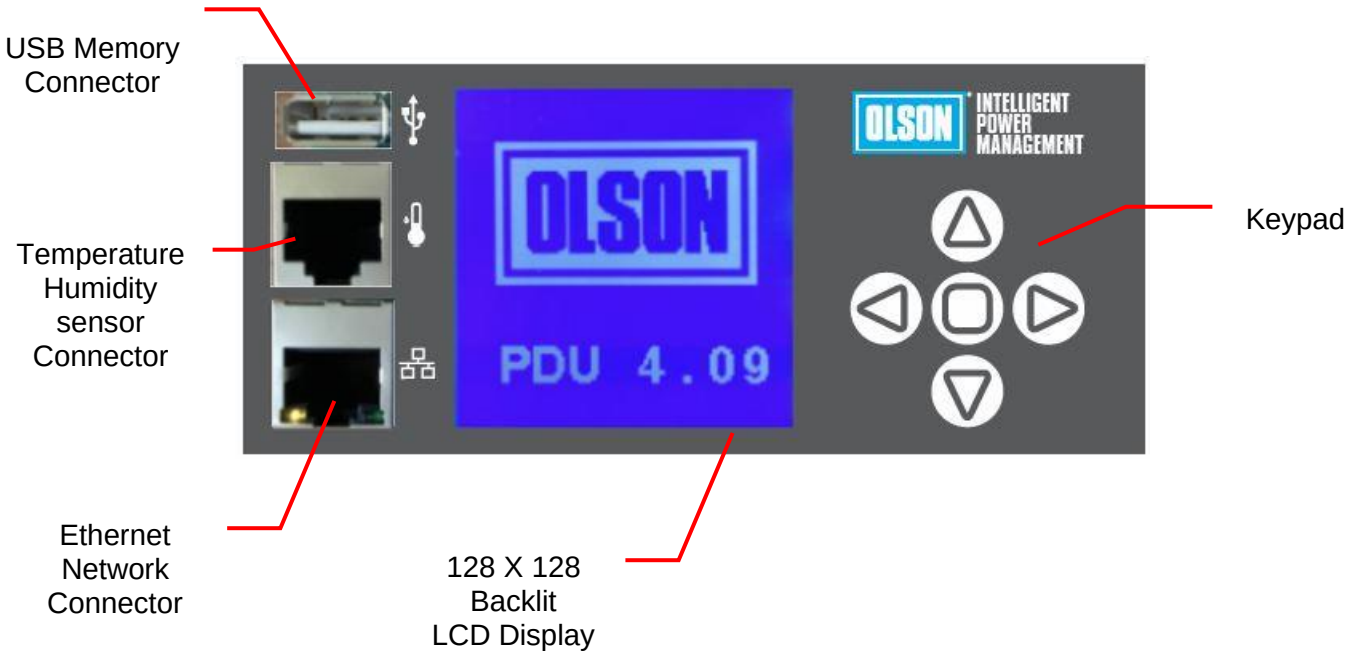
The Olson intelligent remote monitoring and control PDU is a modular system which comprises a main AC monitor module with a built-in graphical display and keypad with the option to connect, via a 4-wire control bus, up to four 8 output switching modules allowing a total of 32 16A switched outputs to be controlled.

The PDU controller with optional switching modules can be incorporated into any of Olson's existing vertical zero U or 19" rack mounting PDU range or a bespoke PDU design.

Without switching modules, the PDU controller module can be used to locally display volts, amps, power, power factor, frequency and KWh consumption of a locally connected AC load.
In addition, the module has a built-in web server allowing remote display of the measured values on any web browser. Email alarm sending to up to 5 recipients is also supported.
Built-in SNMP functionality enables measured values to be read remotely using an SNMP network management system. Other features such as external temperature* and humidity* measurement and the ability to load and save configuration data via USB memory stick are also provided.

In addition to the PDU controller module the system also supports the connection of up to four 8 output, 16A 250VAC switching modules* giving the capability to control and monitor up to 32 AC outlets, either locally from the PDU keypad, or remotely via a web browser or SNMP network management system.
Metering of each outlet is also provided. Load current, power and KWh consumption is displayed either locally or remotely for each switched outlet.
*Option requiring additional hardware

PDU Controller front Panel



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PDU Monitor Module Product Features

Remote Monitor Module Features

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Local Display	Display of all measured values on local 2.5" graphical display. Display configurable to operate in 4 different orientations.
Local Configuration	Local configuration of settings via keypad and local display
AC Monitor	Voltage, Current, True Power, Power Factor, Frequency & KWh
E**nvironmental**	Internal Temperature, external temperature & humidity monitor compatible with the 1-wire interface standard.
Web Server	Internal web server for remote display of all monitored values in standard web browser and remote management of settings and configurations User login password protected
SNMP	Allows remote SNMP based network management system to retrieve all measured values and manage configuration. SNMP trap capability for sending alarms if measured values fall outside of programmable limits
Email	Allows sending of alarm email notifications if measured values fall outside of programmable limits
FTP	Remote update of configuration and firmware update capability
Network	RJ45 Ethernet connector, auto detect 10/100 Mbps
USB	Firmware updating and configuration saving and loading available via local USB interface
Switching Module Control*	Controls up to four 8 output switching modules.

*Option requiring additional hardware

Switching Module Features

Output Control	Individual control of 8 16A AC outputs with total output load capability of 32A
Output Monitor	Individual monitoring of output current, power & KWh
Breaker/Fuse	Individual monitoring of fuse/breaker state
Total module	Monitor module configurable to display total PDU power & energy
Power & Energy	readings from monitor module power meter or alternatively from the aggregate of all switching modules. This allows total power and energy to be monitored if switching modules are powered directly, rather than via the monitor module.
Sequential Start	Programmable sequential start on power up. Programmable sequence delay Programmable opt in/out
Power on state	Programmable output state on power up: All On, All off, Previous state
UPS Active Signal	All outputs can be selected to be enabled or disabled when the UPS is active to save UPS power
Local Display	Local control of switched outputs via display and keypad on monitor module
Web Server	Remote control and state of all output switches via web server or SNMP on monitor module
Loss of Control Module	The state of the switch outputs will remain indefinitely if the control signal is lost from the master module. e.g. during master module swop or failure.
Switching Module bus	4 wire control bus for connection to master (monitor) module

Specifications

PDU Controller Module

Display

Type	White on Blue backlit LCD graphic display
Size	2.5" square aspect
Orientation	0º, 90º, 180º or 270º - configurable,

Keypad

Type	Tactile membrane, incorporated into front panel graphic overlay
Keys	5, 4 cursor + enter

AC measurements

Volts (RMS):	000.0 to 299.9
Amps (RMS):	00.00 to 49.99
Power (W):	0000 to 9999
Energy (KWh)	000000.0 to 999999.9 (15.5 years @ full 32A load) with reset to zero function.
Frequency	40 to 70Hz
Power Factor	.00 to .99
Accuracy	1% maximum error

Internal Temperature Measurement

Range	0-99ºC
Accuracy	3%

External Temperature & Humidity Port

Interface	Conforms to 1-Wire standard
Sensor Type	Configurable for various sensor types.

Network Port

Ethernet	10/100baseT auto sensing.
Connector	RJ45 with speed and data indicator LEDs
IP Address	Configurable static, or dynamic using DHCP protocol
Protocols	IP, ARP, DHCP, DNS, TCP, UDP, HTTP, TFTP, SNMP, SMTP

Web Server

Internal web server for remote display of all monitored values in standard web browser and remote management of settings and configurations. User login password protected

SNMP

Monitor & Control	SNMP V1 & V2c supported. Allows remote SNMP based network management system to retrieve all measured values and manage configuration.
Traps	SNMP trap capability for sending alarms if measured values fall outside of programmable limits

Specifications

Alarms

General	High/Low AC Volts, High/Low AC current, High internal temperature, High external Temperature* High external humidity* Outlet Fault
Email	Any of the above alarms can send an alarm notification email
SNMP	Any of the above alarms can send an SNMP V1/V2c trap alarm notification

USB Port

Type	USB 2.0
Connector	USB Type A
Format	FAT 16/32
Functions	USB Memory stick support for saving and loading configuration files, Firmware updates, Web server updates.

Switching Module Control Port

Type	4 wire multi-drop bus supporting up to 4 switching modules

Mains Input

90-260 VAC, 50/60Hz, 32A maximum load

Environmental

Operating Temperature	0-55ºC
Operating Humidity	10-90%

*Option requiring additional hardware

Specifications

PDU Switching Module*

Mains Outputs

Number	8
Current	16A maximum load per circuit – Inrush Current 80A / 20ms**
Type	Relay
Total Load	Total maximum load for all 8 outputs combined 32A

**** Important Note - some phone, tablet and laptop chargers can have extremely high inrush currents and will weld the switching relay contacts together. Olson can supply a High-Power Switching Module with an inrush current rated at 120A for 20ms. Please contact Olson Sales for more details and prices. It is the user's responsibility to check the inrush current of devices before connecting them to the Switching Module as any damage caused by over current will not be covered by the warranty.**

Switching

Control	On/Off control via local keypad, Web Interface or SNMP
Power On	All outputs can be configured to be ON, OFF or previous state following a power fail
Sequential Start	Programmable sequential start delay after power fail Individual outputs can be configured to opt in or out of sequential start

Monitoring

Measurements	Individual measurement of output current (A) and power (W) and Energy (KWh)
Fuse/Breaker	Individual status of each output fuse/breaker

Alarms

Switching Module	Fuse/Breaker open alarm and relay stuck alarm for each output.
Email	Any of the above alarms can send an alarm notification email
SNMP	Any of the above alarms can send an SNMP V1/V2c trap alarm notification

Switching Module Control Port

4 wire multi-drop bus supporting for connecting switching module to monitor (master) module.

Mains Input

90-260 VAC, 50/60Hz, 32A maximum load

Environmental

Operating Temperature	0-55^{o}C
Operating Humidity	10-90%

*Option requiring additional hardware

All specifications correct at time of issue and subject to change without notice