

Eaton DC Power Solutions

OPS2, 48V 1.2kW

Outdoor Pole Solution

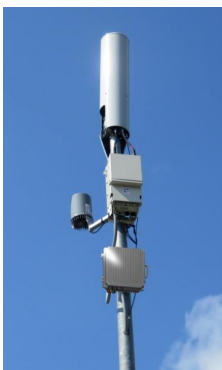
5G Power



Power Module

Features

- IP65 sealed die cast aluminum enclosure
- Designed for pole or wall mounting
- Wide temperature operating range
- -48V (nominal) dc output
- Load & battery electronic controlled outputs
- Optional battery backup module
- Optional battery temperature sensor
- AC surge protection modules
- Inbuilt web server
- Pre-configured software
- Remote monitoring & control options via Ethernet, RS232 (TCP/IP), and voltage free relay contacts
- Site monitoring option via inbuilt digital I/O
- Plug replacement modules
- Battery and load LVD programmable
- Uses Eaton Energy Saver (ES) rectifiers



48V Secure DC power up to 1.2kW

The Eaton® OPS2 Outdoor Pole Solution is intended to power telecom 4G & 5G remote radio units (RRU's) and industrial IoT equipment and be mounted on poles, towers, or buildings close to the critical loads. These power system modules are compact and provide highly efficient AC-DC power conversion and battery backup.



Example deployments

Typical RRU's can demand up to 600W, so depending on the site configuration, a single OPS2 will support 1~2 RRU's and have sufficient capacity to properly recharge batteries. More lower powered RRU's could be supported from a single OPS2 if battery backup was not required.

The OPS2 can have either Sealed Lead-Acid or Lithium batteries added to produce a fully battery backed DC-UPS.

For superior operating efficiency to further reduce operating costs, the OPS2 utilize the Eaton Energy Saver (ES) 48V Access power rectifier which provides operating efficiency in excess of 96%.

The system includes an EFX48-01 controller and integrated electronic load/battery distribution module. Temperature compensation sensor is available for charging control.

The EFX48-01 system controller provides advanced control and monitoring features including AC & DC voltages, system power & current, temperature and battery status. Inbuilt data and event logs are included to aid maintenance.

The EFX48-01 offers a complete array of communications options with Ethernet or voltage free contacts. It includes an inbuilt web server for simple remote monitoring.

Other applications for the OPS2 include providing secure power backup for CCTV POE cameras, Industrial IoT, and WiFi access points.

The OPS2 Outdoor Power Solutions are pre-configured and all system settings are fully adjustable in software and stored in transferable configuration files for repeatable and quick, one-step system set-up.

Technical Specifications

Input	
AC Supply	220 – 240V, 50 – 60Hz (nominal) 90 – 275V up to +50°C [122°F]
Power Factor	>0.99 (50 – 100% Output Current)
Efficiency	APR48-ES : >96% peak, 95% (20% to 100% load, 230Vac)
AC Connection*	1 * single phase, hardwired to internal terminal blocks.
Surge Protection	AC input. L-N, N-E 60kA 8/20uSec

Output	
DC Output Voltage Range	43-57.5V (nominal 48V) Typical output 54.5V
DC Output Power (maximum)*	48V: 1.20kW (25A) 100% duty cycle 48V: 1.5kW (31A) short <10% duty cycle (reduced temp)
	* Total rectifier capacity (not including recharge) * Typical operating load 0.8 – 1.0kW

Environmental	
Operating Temperature Range*	External Ambient -10°C to +45°C including full sun * Battery not included. Refer to battery data sheets.

Mechanical	
Dimensions L,W,H	355mm, 352mm, 150mm * Additional clear space is required behind and around for convection cooling and cable access.
Weight	13kg (fully equipped power module, inc. rect + efx), 9kg (pole mount kit only)
IP Protection	IP65 IEC60529:2001 Fully sealed & protected from dust and water jets and rain. Not submersible.
Impact Protection	IK08 IEC62262:2002

System	
System Controller	EFX48-01
DC Distribution Module	load: 3*25A electronic fuse (adjustable 5~25A) battery: 1*50A electronic fuse (adjustable 10~50A) Load distribution can be increased to optional 6 off. Load – 300A max fault, 10kA thermal in-line fuse. Battery distribution cab be increased to optional 2 off. Battery – 550A max fault, 10kA thermal in-line fuse. Battery – Maximum 200Ah string per connection.
Communication Features	RJ45, 100BaseT Ethernet, TCP/IP, SNMP and on-board web server, HTTP/S
Battery Shunt	Electronic 2*50A
LVD	Battery Low Volts Disconnect - Programable
Temp Comp	Battery temperature compensation - Programable
Remote Reboot	Remote Power Cycling of Load Circuits
Metering	KWhr meters for load circuits
Priority Loads	Load Priority Shutdown - Programable
Battery Test	Periodic battery test function - Programable

Input / Output Standard	
Digital Inputs	Optional 5 x TTL level compatible inputs, all common return. 2 x inputs can be configured as analogue voltage
Digital Outputs	Optional (5) x relays (2 x isolated commons) normally open
Software	
Web	HTTP or HTTPS, Firefox, Chrome
Configuration	DU-X-GUI Configuration Software

User Display/Input	
User Display	128*32 Dot matrix display
Keypad	5-way navigation control
System inputs	Temperature (battery) Sensor

Certifications	
All products comply with international standards.	

In the interests of continual product improvement all specifications are subject to change without notice.



Internal Control & Distribution



External View

