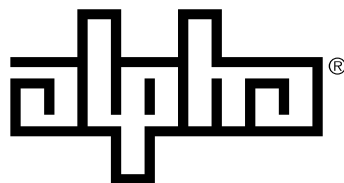


# Remote Power Packages

## ORDERING GUIDE



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## Remote Power Packages

Alpha, the leader in powering wireless and wired networks, has been remotely powering Optical Network Terminals (ONTs) for over 10 years with over 100,000 active line-powered circuits. We have developed solutions to power ONTs both indoors and outdoors, meeting all safety certifications, dramatically lowering the cost and improving the reliability of these networks.

As the demand for bandwidth continues to increase many venues are installing Passive Optical LANs (POL) which provide the ability to run a high capacity, converged network. Alpha pioneered a new POL power architecture that uses centralized power systems to supply current over composite fiber/copper cables to energize the remote nodes.

Alpha's POL power architecture focuses on maintaining NEC Class 2 compliance, allowing for surface mount deployment of the cable and not requiring installation by a licensed electrician. All of Alpha's Class 2 products have passed CSA/UL certification which is a requirement for NEC Class 2 compliance.

Alpha's POL Packages are designed for ease of ordering and installation. The packages are based on the number of output channels required, which will translate to the number of ONTs or other devices being supported. These packages are designed for small POL deployments and have a maximum of 36 output circuits. If your project requires a higher ONT count please contact Alpha at 1.800.667.8743 or sales@alpha.ca for a custom designed solution.



### Alpha Technologies Ltd.

Canada: Burnaby, British Columbia T: 604.436.5900 F: 604.436.1233  
United States: Bellingham, Washington T: 360.647.2360 F: 360.671.4936

For more information visit [www.alpha.com](http://www.alpha.com)

#0470209-00 Rev D (04/2019)

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There are two components to the Alpha POL Package. The first component is the Chassis System which is common in all packages. This includes the shelves and connecting cables for the 1.2kW rectifier & eLimiter+ shelf.

The second component is the Module Component which will be selected based on the number of outputs required. Any package that is not initially fully outfitted with the maximum of 36 output circuits can be expanded in the future.

## Major Components



### Cordex HP™ 1.2kW Front Access Rectifier Shelf System

Designed specifically for restricted space installations, this 48Vdc power and distribution system incorporates reliable 48V, 1.2kW Cordex rectifier modules and a complete front access design, allowing for all connections in front of the rack channel.



### eLimiter+ 100VA Class 2 Distribution System

eLimiter+ is a unique, modular line powering solution that meets the NEC requirements for both Class 2 outputs and communications circuits. The system can be used to distribute -57Vdc in data cable raceways to remotely power network equipment without the need to utilize conduit. This dramatically reduces CAPEX costs, simplifies installation of equipment and increases overall speed of deployment.

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# Pick your System

## The Alpha POL Kits are comprised of two components.

**1. Chassis Kit** – This includes both the 1.2kW 2RU -48Vdc Shelf & eLimiter+ Shelf as well as cables for interconnection and breakers. This item is required for all Alpha POL kits.

Chassis Kit (KIt, PON/POL Chassis Kit)	P/N: 0380455-001
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**2. Channel/Output Kit** – This portion of the kit will be based on the number of output circuits required for your applications. The kit will include the rectifiers, DC/DC modules, blanks and other variable components required to meet the specified output circuit quantity. **The maximum number of circuits for our kits is 32.**

### Choose one:

36 Channel Kit (KIt, PON/POL 36 Channel Kit)	P/N: 0380456-001
32 Channel Kit (KIt, PON/POL 32 Channel Kit)	P/N: 0380457-001
28 Channel Kit (KIt, PON/POL 28 Channel Kit)	P/N: 0380458-001
24 Channel Kit (KIt, PON/POL 24 Channel Kit)	P/N: 0380459-001
20 Channel Kit (KIt, PON/POL 20 Channel Kit)	P/N: 0380460-001
16 Channel Kit (KIt, PON/POL 16 Channel Kit)	P/N: 0380461-001
12 Channel Kit (KIt, PON/POL 12 Channel Kit)	P/N: 0380462-001

## Additional Items

### A. Equipment Rack

19" Equipment Rack	P/N: 030-510-20-119
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**B. Batteries** – Please contact your local Alpha representative for assistance in sizing a battery string to meet your specific runtime.



# Distance Calculations

The charts below show the approximate maximum distance in feet that each load can be supported to supply the IEEE standard minimum input voltage for PoE & PoE+ devices. These distances are for estimation purposes only and full voltage drop calculations should be performed for all designs and installations.

## Max Distance to ONT Supporting PoE+

LOAD (WATTS)	CABLE GAUGE (AWG)				
	20	18	16	14	12
90	100	160	250	400	640
80	150	250	400	625	1000
70	175	275	450	725	1150
60	200	325	525	850	1350
50	250	400	625	1000	1600
40	300	500	800	1250	2050
30	400	650	1050	1700	2700

## Max Distance to ONT Supporting PoE

LOAD (WATTS)	CABLE GAUGE (AWG)				
	20	18	16	14	12
90	100	160	250	400	640
80	225	375	600	975	1550
70	300	500	800	1275	2050
60	350	575	940	1500	2400
50	425	700	1125	1800	2875
40	550	875	1400	2250	3600
30	740	1175	1875	3000	4800
20	1100	1775	2850	4550	7225

If you have a pressing powering challenge, contact us with your specific requirements at 1.800.667.8743 or email sales@alpha.ca.

Visit us online at [www.alpha.com](http://www.alpha.com)