

BPL Series of Bench-top Programmable

Why Choose the BPL Series?

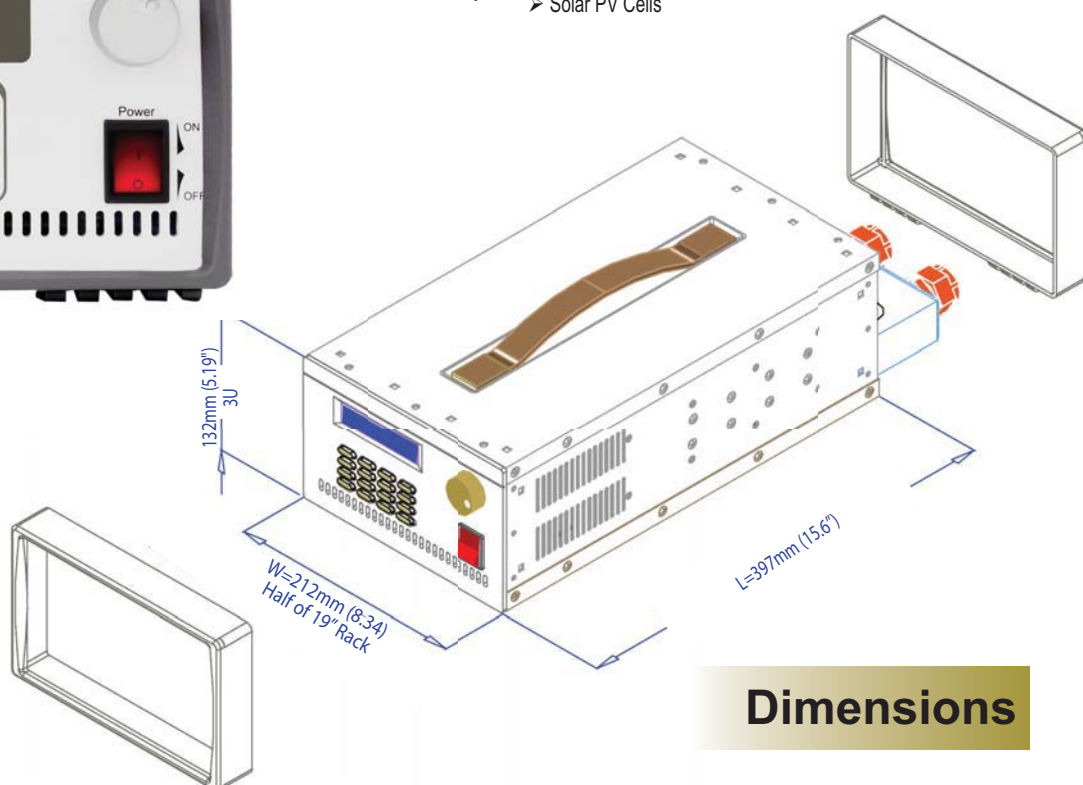
The BPL Bench-top eLoad strikes the perfect balance between value, features, and ROI. Built on dual current shunt architecture, the BPL provides accurate current readings for high-currents up to 200Adc and low-current readings down to the micro-amps.

AMREL's BPL Series of "Bench-top" dc Electronic eLoads offers high-end performance, the industry's highest power-density and current-rating, fast response time and unparalleled current measurement accuracy in a 3U ½ rack package. The BPL is a full-featured, powerful, ultra-compact, and user-friendly bench-top eLoad.



Markets and Applications:

- Power Electronics Testing
 - dc-dc Converters
 - ac-dc Power Supplies
 - Switching Power Supplies
 - POL (Point of Load)
- Power Electronic Components Testing
- Battery Chargers & Load Profile Simulation
- Battery Testing and Characterization
- Laboratories, Universities and R&D
- Defense/Aerospace/Avionics/Industrial ATE and Integrated Test Systems
- Portable Applications
- dc Power Sources/Energy Storage
 - Batteries
 - Fuel Cells
 - Ultracapacitors
 - Solar PV Cells



Dimensions

BPL SELECTOR GUIDE

BPL XXX - YY - ZZZ - AA and OPTIONS*
XXX - POWER | YY - VOLTAGE | ZZZ - CURRENT

EFU-L = Field Upgradeable Ethernet & USB Available*

Series	Model #	Power (W)	Voltage (Vdc)	Current (Adc)	V _{MIN} at I _{MAX} (Vdc)	Size (Height, Depth)
BPL	BPL400-60-150	400W	60	150	0.75	3U, 17.2"D
BPL	BPL400-120-75	400W	120	75	1.5	3U, 17.2"D
BPL	BPL400-400-30	400W	400	30	3	3U, 17.2"D
BPL	BPL400-600-20	400W	600	20	8.4	3U, 17.2"D
BPL	BPL400-800-15	400W	800	15	7.2	3U, 17.2"D
BPL	BPL800-60-200	800W	60	200	0.75	3U, 17.2"D
BPL	BPL800-120-150	800W	120	150	1.5	3U, 17.2"D
BPL	BPL800-400-60	800W	400	60	3	3U, 17.2"D
BPL	BPL800-600-40	800W	600	40	8.4	3U, 17.2"D
BPL	BPL800-800-30	800W	800	30	7.2	3U, 17.2"D
		Voltage Range: 10Vdc ~ 800Vdc Rating Current Range: 1Adc ~ 200Adc Rating Power Range: 150W ~ 800W Rating Custom-tailored Ranges Available				

Key Features and Benefits:

- **Broadest Model Selection:** 400W, 800W, or Custom-tailored Power Rating
- **Exclusive High-voltage Models:** Standard 60V, 120V, 400V & 600V Voltage Ratings and Widest Selection of Exclusive 800Vdc Models
- **Ideal for Unique Test Applications:** Custom-tailored Ratings & Features Available
- **Ultra-current Precision & Accuracy:** Dual-current Shunt Architecture Provides Ultra-accurate Current Measurements and Essentially Two eLoads in a Single Package
- **Save Bench Space:** BPL Models Offer Ultra-compact Footprint [15.65"(L) x 8.35"(W) x 5.20"(H)] and Boasts the Industry's Highest Power Density
- **Maximize ROI:** On-bench Closed-case Calibration without 3rd Calibration Lab
- **Ultra-low Compliance Voltage:** Ultra-low Voltage Operation @ Up to 200 Amps
- **Reliable:** Individual FET Protection to Isolate Power Stage Failures
- **Maximized Uptime:** Redundant Over-temperature and Over-power Protection
- **Ultra-quiet Operation:** Fan Speed Control for Reduced Acoustic Noise Under Light Load Conditions.
- **Fast Response:** 25µs independently Programmable Rise/Fall Time
- **Flexible Test Platform:** Five Modes of Operation: CC, CR, CV, CP and Pulse Load Shaping
- **Intuitive Front Panel Control:** User-friendly Function Hot Keys, Full Keypad & Digital Encoder
- **Integrated DMM:** 14-bit Five Digit Voltage and Current Measurement Display
- **Two Loads in One:** Ultra-low Current Range Option for Optimized Accuracy
- **More Ranges:** Three Full Scale Ranges (100%, 50% & 10%)
- **More Protections:** Anti-oscillation & Programmable Protections: OV, UV, OC, UC, OP, & UP
- **More Interfaces:** Co-resident GPIB/RS-232 and Optional Field-upgradeable Ethernet/USB
- **ATE Ready:** Standard LabWindows and LabVIEW Drivers and SCPI Command Set
- **Test Automation Ready:** Four Profiles; 32 Step Points per Profile
- **Fuel Cell Application Ready:**
 - Impedance Measurement via Frequency Response Analyzer (FRA)
 - Current Interruption Mode for Fuel Cell Testing
 - Ultra-low Compliance (0.1Vdc) Voltage to Operate at High-current
 - Virtual Panel Provides Polarization Curve Sweep and Voltage/Current Cycling Capability
- **0 ~ 10Vdc PLC or DAQ Control Ready:**
 - 0~10Vdc External Analog Programming
 - External On/Off Control
 - External Mode Selection
 - Front Panel Key Lockout Prevents Unwanted Key Entry
- **More System Integration Features & Options:**
 - Standard Remote Inhibit (RI) for Interlock Capability
 - Standard Dry Contact Fault for Redundant System Protection
 - Isolated Analog Control/Monitor Option
 - External dc Contactor Option
 - Reverse Polarity/Isolation Relay Option
- **Battery Testing:** "C" Operand for Battery Testing.

BPL SPECIFICATIONS

CV MODE SPECIFICATIONS		CC MODE SPECIFICATIONS	
CVL RANGE	0 ~ 10% of V_{MAX}	CCL RANGE	0 ~ 10% of I_{MAX}
CVM RANGE	0 ~ 50% of V_{MAX}	CCM RANGE	0 ~ 50% of I_{MAX}
CVH RANGE	0 ~ 100% of V_{MAX}	CCH RANGE	0 ~ 100% of I_{MAX}
ACCURACY	0.05% of Value \pm 0.1% of Rating	ACCURACY	0.05% of Value \pm 0.1% of Rating
RESOLUTION	1/16000 of Rated Voltage	CCUL RANGE	0 ~ 10% of I_{MAX}
TRANSIENT TIME (SLOW)	0.250 ~ 255.9 (ms)	CCUL ACCURACY	0.05% of Value \pm 0.05% of Range
TRANSIENT TIME (FAST)	0.250 ~ 25.59 (ms)	RESOLUTION	1/16000 of Rated Current
CR and CP MODE SPECIFICATIONS		TRANSIENT TIME (SLOW)	0.250 ~ 255.9 (ms)
Please reference website datasheet for details		TRANSIENT TIME (FAST)	0.025 ~ 25.59 (ms)
GENERAL SPECIFICATIONS		PROTECTION	
REMOTE INTERFACES	RS-232, GPIB & USB/ETHERNET	OVER POWER PROTECTION	110% * P_{MAX}
ANALOG PROGRAMMING	0 ~ 10Vdc	OVER VOLTAGE PROTECTION	105% * V_{MAX}
ACCURACY	Mode Accuracy \pm 0.1% of Rating	OVER CURRENT PROTECTION	110% * I_{MAX}
VMON ACCURACY	0.10% of RDG \pm 0.1% of Rating	OVER TEMPERATURE PROTECTION	90°C \pm 5°C
IMON ACCURACY	0.10% of RDG \pm 0.1% of Rating	REMOTE INHIBIT (RI)	Short
IMON (CCUL) ACCURACY	CCUL Mode Accuracy \pm 0.1% of Rating	FAULT INDICATOR	SPDT Relay
FREQUENCY RANGE	0.1Hz ~ 20kHz	Other Programmable Protections: OPP, OVP, OCP, UVL & Anti-Oscillation	
ACCURACY	0.10%	DIELECTRIC STRENGTH	
AC INPUT	95~240Vac 48 ~ 62Hz	Primary Circuit to Chassis	1500Vac for 1 Minute
OPERATING TEMPERATURE	5°C ~ 40°C	Primary Circuit to Load Terminal	1500Vac for 1 Minute
DIMENSIONS	15.65" (L) x 8.35" (W) x 5.20" (H)	Load Terminal to Chassis	1500Vdc for 1 Minute
WEIGHT	22 lbs		