Bulletin 1606 — Power Supplies∗❄

- Quick mounting and connecting, innovative DIN-Rail mount, smallest in class
- UL Listed NEC Class 2; Class 1, Div. 2; Semi F47; ODVA Approved
- Low inrush current limiting
- PFC Active or Passive
- Wide range input; auto select input
- Superior overload design (continuous current, no hiccup)
- NEC Class 2 'Limited Power' options
- Selectable operating mode (single/parallel)
- Superior efficiency and temperature rating

Special Modules

- Brownout buffer, DC to DC converter, N+1 redundancy, DC UPS

Standards Compliance

- World-wide Certifications
- NEC Class 2
- Class 1 Div. 2 (T3A)
- cULus, CE, C-Tick, ATEX
- SEMI F47 Compatible
- ABS/GL/RINA (Marine)

Certifications

CE cULus LISTED cULus N223

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∗ Not all features apply to all power supplies; see individual power supply descriptions for specifics
❄ A more detailed list of performance specifications can be found at the Allen-Bradley web site http://www.ab.com/industrialcontrols/products/power_supplies/index.html

How to Select a Bulletin 1606 Power Supply

The Bulletin 1606 line of Power Supplies is designed with "reserve power" thereby eliminating the need to oversize your power supply to start high inrush loads.

Steps to size a Power Supply

1. Determine the "Average" continuous current of the load and the typical inrush current.

2. Select a power supply where the rated load is at/or below the current of the device and the Peak Current is less than the short-circuit rating of the power supply.

Notes:

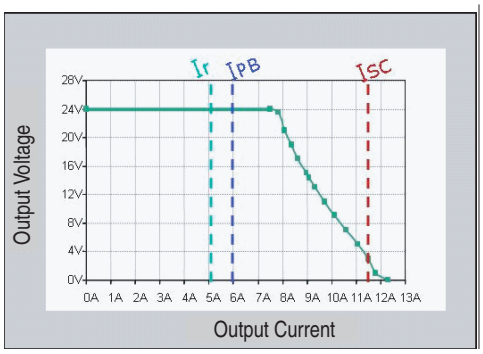
- ReservePower will deliver up to 25% additional current continuously.
- PowerBoost will deliver 150% of rated current for up to 5 s.

Example:

Application: Single Phase 120V input, 24V output, 5 A continuous current with 7.5 A inrush current

Solution: 1606-XLS120E

Output Characteristic for XLS120E (5 A) Power Supply



I_{RATED}: 5 A
$I_{SHORT\ CIRCUIT}$: >9 A
$I_{POWER\ BOOST}$: 7.5 A

Cat. No.	I_{RATED} [A]	$I_{SHORT\ CIRCUIT}$ (25 °C) [A]	$I_{POWER\ BOOST}$ or $I_{RESERVEPOWER}$ [A]
1606-XLS80E	3.3	5.2	5.4§
1606-XLS120E	5	9	7.5§
1606-XLS240E	10	21	15§
1606-XLS480E	20	30	30§
1606-XLS480E-3	20	29	30§
1606-XLSDNET4	3.8	4	—
1606-XLSDNET8	8	7	—
1606-XLE80E	3.3	5.5	3.6
1606-XLE120E	5	11	6
1606-XLE240E	10	16	12

§ Products with ReservePower.
♣ Short circuit current values are temperature dependent for the selected product; i.e., the higher the ambient temperature, the lower the short circuit current.
➢ Hiccup Overload design.

Three-Phase

Input Voltage	Output Power [W]	Output Voltage	Output Current [A]	Input Circuit Protection	Steady State Input Current 400...480 [V AC]	Parallel Operation	DC OK Relay	Cat. No.
380…480V AC, 600V DC	480	24…28	20	6 A Slow Blow Fuse or **Cat. No. 1489-A3C060**	3 x 0.65	Yes	✓	**1606-XLS480E-3**
380…480V AC, 600V DC	480	24…28	20			Yes	✓	➢ **1606-XLS480E-3C**
360…900V DC	480	24…28	20		3 x 0.85	Yes	✓	**1606-XLS480E-D**
380…480V AC, 600V DC	480	48…56	10		3 x 0.65	Yes	✓	**1606-XLS480F-3**
380…480V AC, 600V DC	480	36…42	13.3			Yes	✓	**1606-XLS480G-3**
380…480V AC, 600V DC	960	24…28	40		3 x 1.35	Yes	✓	**1606-XLS960E-3**
380…480V AC, 600V DC	960	48...54	20			Yes	✓	**1606-XLS960F-3**

1606-XLE Essential — Single-Phase

Input Voltage	Output Power [W]	Output Voltage	Output Current [A]	Input Circuit Protection	Steady State Input Current 120/230 [V AC]	Parallel Operation ✦	DC OK Relay	Cat. No.
100…120/200…240V AC	80	24…28	3.3	10 A Slow Blow Fuse or **Cat. No. 1489-A1C100/20♣**	1.5/0.68	No	—	**1606-XLE80E**
100…120/200…240V AC	120	24…28	5		2.34/1.23	No	—	**1606-XLE120E**
100…120/200…240V AC		24…28	5		2.34/1.23	No	—	➢ **1606-XLE120EC**
90…132V AC		24…28	5		1.23/—	No	—	**1606-XLE120EN**
180…264V AC		24…28	5		—/1.17	No	—	**1606-XLE120EE**
100…120/200…240V AC	240	24…28	10		4.34/2.23	No	—	**1606-XLE240E**
90…132V AC		24…28	10		3.73/—	Yes	—	**1606-XLE240EN**
180…264V AC		24…28	10		—/2.20	No	—	**1606-XLE240EE**
100…120/200…240V AC		24…28	10		4.34/2.00	No	—	**1606-XLE240EP**
100…120/200…240V AC		48…52	5		4.34/2.23	No	—	**1606-XLE240F**

1606-XLE Essential — Three-Phase

Input Voltage	Output Power [W]	Output Voltage	Output Current [A]	Input Circuit Protection	Steady State Input Current 400...480 [V AC]	Parallel Operation ✦	DC OK Relay	Cat. No.
380…480V AC, 600V DC	96	12...15	8	6 A Slow Blow Fuse or **Cat. No. 1489-A3C060**	2 x 0.56	No	—	**1606-XLE96B-2**
380…480V AC, 600V DC	120	24…28	5		3 x 0.60			**1606-XLE120E-2**
380…480V AC, 600V DC	240	24…28	10		0.68			**1606-XLE240E-3**
380…480V AC, 600V DC	240	48...56	5		3 x 0.60			**1606-XLE240F-3**
480V AC	960	24	40		3 x 1.40			**1606-XLE960DX-3N**
480V AC	960	48	20		3 x 1.40			**1606-XLE960MX-3N**

♣ Unit has internal (not accessible/replaceable) input fuse. Additional protection is not required if used on branch circuits ≤ UL test levels.
‡ Single/parallel operation (inclined characteristic) selectable (jumper). Consult local codes and regulations for installation.
✦ Parallel use for 1 + 1 redundancy only.
➢ The **C** suffix in the Cat. No. indicates that the product has **conformal coating**.