Product Details and Certifications

Cross Reference RA Part Number: 1606-XLSDNET4 A

Product: 1606-XLSDNET4

Description: Performance Power Supply (for DeviceNet), 24-48V DC, 91 W, 120/240V AC / 110-300V DC Input Voltage

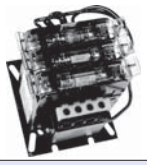
Representative Photo Only (actual product may vary based on configuration sections)

POWER SUPPLY DATA

Bulletin Number	1606 Switched Mode Power Supplies
Input Voltage	100…240V AC / 110…300V DC
Output Voltage	24V
Rated Output Watts	91 W
Operational Range	85…264V AC / 88…360V DC
Rated Input Current	1.1 A (100V AC) / 0.5 A (240V AC)
Rated Output Current	3.8 A

CERTIFICATIONS AND APPROVALS

UL	
CE	
IEC/EN	
EMC	
For UL Certifications Directory:	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

					
Bulletin	1606-XLP	1606-XL	1606-XLS	1609	1497
Type	**Switched Mode Power Supply Single Phase**	**Switched Mode Power Supply Single/Three Phase**	**Switched Mode Power Supply Single/Three Phase**	**Uninterruptible Power Supply**	**Control Circuit Transformer**
Features	• Low inrush current • Wide range input; auto select input • Superior overload design (continuous current, no hiccup) • NEC Class 2 "Limited Power" • Superior efficiency and temperature rating	• Low inrush current • PFC Choke • Wide range input; auto select input • Superior overload design (continuous current, no hiccup) • NEC Class 2 "Limited Power" • Selectable operating mode (single/parallel) • Superior efficiency and temperature rating • Output signals	• Ultra-small size • Extra-low inrush current • Active Power Factor Correction • Wide range AC/DC input; auto select input • Superior reserve power (can support 150% rated power for 3...5 seconds) • Superior efficiency and temperature rating • DC OK and Overload LED	• Rugged industrial design • DIN Rail or Back of Panel mountable • Elevated temperature performance (up to 50°C) • Comprehensive network management • Remote monitoring/configuration • "Dry contact" I/O • Line interactive • Pure sine wave output	• Wide VA range • Enclosed construction 63...350 VA • Terminal covers finger safe • Optional fuse covers available • Dual primary and secondary fuse block available to 500 VA • Class B insulation (130°C) • All welded construction
Output Power (Watts/VA)	25…100 W	60...960 W	80...480 W	325 W/500 VA	63..2000 VA
Input Voltage / Primary Voltage	85…264V AC 85…375V DC	85…132/176…264/340…576V AC 160...375/450…820V DC	85…276/323…552V AC 88…375/450…780V DC	120, 208/230V AC	208…600V
Efficiency	80...90%	87...93%	91.6...95%	96%	—
Output Voltage / Secondary Voltage	5, 10...12, 12, 15, 24, 48V DC	24, 36, 48V DC	24V DC	120, 208/230V AC	24…120V Multi-tap 115…230V (50 Hz)
Rated Output Current	1.3…4.2 A	2.5…40 A	3.4…20 A	4.2 A	—
Operating Temperature Range (Tamb)	-10…+70°C >60°C with derating	-10…+70°C >60°C with derating	-25…+70°C >60°C with derating	0…50°C	—
Non-Operating Temperature Range	-40…+85°C			-20…+60°C	—
Insulation	—	—	—	—	Class B 130°C
Certifications	cULs, CE	cULs, CE	cULs, CE	UL, CSA, CE	cULs, CE
Standards	EN 50081-1, EN 61000-6-2, EN 61000-3-2 (A14) UL 508 UL 1950	EN 55011 (Class B), EN 55022 (Class B), EN 61000-6-2, EN 61000-3-2 (A14), EN 50081-1 UL 508 UL 1950	EN 55011 (Class B), EN 55022 (Class B), EN 61000-6-2, EN 61000-3-2 (A14), EN 50081-1 UL 508 UL 1950	EN 50091-1-1, EN 50091-2 (Class 2) UL 1778	EN 60529
Special Application Products	• Compact Redundancy Module for 10…60V DC • 50 W Device with Removable Terminal Blocks • Buffer Module for Extended Ride-Through • Redundant Power Supplies • Redundancy Modules				
Product Selection	**Page 11**	**Page 11**	**Page 11**	**Page 23**	**Page 27**

Switched Mode Power Supplies

Product Overview/Product Sizing

Bulletin 1606 — Power Supplies ✶❄

- Quick mounting and connecting, innovative DIN-Rail mount, smallest in class
- 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

Standards Compliance

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

Table of Contents

Certifications

CE, cULus, cULus Listed, N223

✶ 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
‡ Dual UL rating with cURus 60950 relating to certified use in information technology.

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:

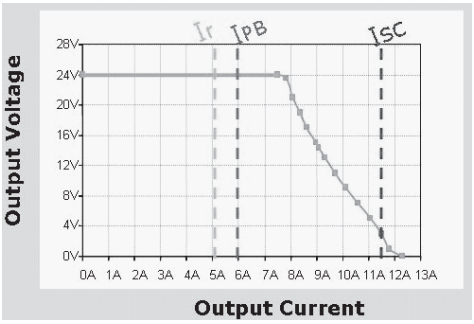
- PowerBoost will deliver up to 25% additional current continuously at 40 deg C or less.
- ReservePower will deliver 150% of rated current for up to 4 sec.

Cat. No.	I_{RATED}	$I_{SHORT\ CIRCUIT\ (25°C)}$	$I_{POWER\ BOOST}$ or $I_{RESERVEPOWER}$
1606-XLS80E	3.4 A	5.2 A	5.4 A§
1606-XLS120E	5.0 A	9.0 A	7.5 A§
1606-XLS240E	10 A	21 A	15 A§
1606-XLS480E-3	20 A	29 A	30 A§
1606-XLSDNET4	3.8 A	4.0 A	—
1606-XLSDNET8	8.0 A	7.0 A	—
1606-XLP25A	5.0 A	5.0 A	—
1606-XLP30B	3.0 A	4.0 A	—
1606-XLP30E	1.3 A	1.9 A	—
1606-XLP36C	2.8 A	2.0 A	—
1606-XLP50B	4.2 A	4.3 A	—
1606-XLP50E	2.1 A	3.1 A	—
1606-XLP50EZ	2.1 A	3.1 A	—
1606-XLP50F	1.0 A	1.7 A	—
1606-XLP72E	3.0 A	4.5 A	—
1606-XLP90B	8.0 A	8.0 A	—
1606-XLP95E	3.9 A	7.0 A	—
1606-XLP100E	4.2 A	7.1 A	—
1606-XLP100F	2.1 A	3.6 A	—
1606-XL60D	2.5 A	4.5 A♣	—
1606-XL120D	5.0 A	10 A♣	6.0 A
1606-XL180B	15 A	21 A♣	—

Example:

Application: Single Phase 120V input, 24V output, 6 A continuos current @ 35 °C, with 9 A inrush current **Solution:** 1606-XL120D

Output Characteristic for XL120D (5 A) Power Supply



I_{RATED}: 5 A
$I_{SHORT\ CIRCUIT}$: >10 A
$I_{POWER\ BOOST}$: 6 A

Cat. No.	I_{RATED}	$I_{SHORT\ CIRCUIT\ (25°C)}$	$I_{POWER\ BOOST}$ or $I_{RESERVEPOWER}$
1606-XL240E	10 A	18 A♣	12 A
1606-XL240EP	10 A	18 A♣	12 A
1606-XL240FP	5.0 A	10 A♣	6.0 A
1606-XL480E	20 A	N/A➢	25 A
1606-XL480EP	20 A	22 A	25 A
1606-XL480EPT	20 A	22 A	25 A
1606-XL480GP	13.3 A	12 A	16.6 A
1606-XL480F	10 A	24 A	12.5 A
1606-XL120E-3	5.0 A	11 A♣	6.0 A
1606-XL240E-3	10 A	22 A♣	12 A
1606-XL480E-3	20 A	N/A➢	25 A
1606-XL480E-3W	20 A	25 A	25 A
1606-XL480F-3H	10 A	N/A➢	12.5 A
1606-XL720E-3	30 A	N/A➢	33 A
1606-XL960E-3	40 A	44 A	45 A
1606-XL960E-3S	40 A	44 A	45 A
1606-XLDNET4	4.0 A	3.8 A♣	—
1606-XLDNET8	8.0 A	6.0 A♣	—
1606-XL60DR	2.5 A	4.5 A♣	—
1606-XL120DR	5.0 A	10 A♣	6.0 A
1606-XL240DR	10 A	18 A♣	12 A

§ 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.

Bulletin 1606-(number from table) ⌘ Power Supply Quick Guide

	30...40 W	50 W	60 W	72...80 W	90...100 W		180 W	240 W	480 W	720 W	960 W
5...5.5V	XLP25A	—	—	—	—	—	—	—	—	—	—
10...12V	XLP30B	—	—	—	—	—	—	—	—	—	—
12...15V	—	XLP50B	—	—	XLP90B	—	XL180B	—	—	—	—
(+/-)12 and 15V	XLP36C	—	—	—	—	—	—	—	—	—	—
24...28V 1-Ph	XLP30E	XLP50E XLP50EZ	XL60D	XLP72E XLS80E	XLP95E XLP100E	XLS120E XL120D	—	XLS240E XL240E XL240EP	XL480E XL480EP XL480EPT	—	—
24...28V 3-Ph	—	—	—	—	—	XL120E-3	—	XL240E-3	XLS480E-3 XL480E-3 XL480E-3W XL480F-3H	XL720E-3	XL960E-3 XL960E-3S
36...43V	—	—	—	—	—	—	—	—	XL480GP	—	—
48...56V	—	XLP50F	—	—	XLP100F	—	—	XL240FP	XL480F	—	—
24V Redundant	—	—	XL60DR	—	—	XL120DR	—	XL240DR XLPRED	XLSRED XLRED20-30	XLRED20-30	XLRED40
DeviceNet	—	—	—	—	XLSDNET4 XLDNET4		—	XLSDNET8 XLDNET8	—	—	—

⌘ Example: For a 24...28 Volt, 3-Phase, 120 Watt power supply, the Catalog Number would be 1606-XL120E-3.

Special Applications

Meets NEC Class 2

- 1606-XLP25A
- 1606-XLP30B
- 1606-XLP30E
- 1606-XLP36C
- 1606-XLP50B
- 1606-XLP50E
- 1606-XLP50EZ
- 1606-XLP50F
- 1606-XLP72E
- 1606-XLP90B
- 1606-XLP95E
- 1606-XL60D
- 1606-XLDNET4
- 1606-XL60DR
- 1606-XLSDNET4

Meets ABS/GL/RINA (Marine)

- 1606-XLP25A
- 1606-XLP30E
- 1606-XLP36C
- 1606-XLP50E
- 1606-XLP50EZ
- 1606-XLP72E
- 1606-XLP90B
- 1606-XLP100E
- 1606-XLP100F
- 1606-XLPRED

Meets Hazardous Location Rating, Class 1 Div. 2

- 1606-XLS80E
- 1606-XLS120E
- 1606-XLS240E
- 1606-XLS480E-3
- 1606-XLSDNET4
- 1606-XLSDNET8
- 1606-XLSRED
- 1606-XLP25A
- 1606-XLP30B
- 1606-XLP30E
- 1606-XLP50B
- 1606-XLP50E
- 1606-XLP50EZ
- 1606-XLP72E
- 1606-XLP90B
- 1606-XLP95E
- 1606-XLP100E
- 1606-XLPRED
- 1606-XL240E
- 1606-XL240EP

Meets Semiconductor F47 Sag Immunity Requirements

Product	Input Mains Voltage	Output Current Range
• 1606-XLS80E	Full Range	Full Range
• 1606-XLS120E	Full Range	Full Range
• 1606-XLS240E	Full Range	Full Range
• 1606-XLS480E-3	Full Range	Full Range
• 1606-XLSDNET4	Full Range	Full Range
• 1606-XLSDNET8	Full Range	Full Range
• 1606-XLP30E	AC 200V or higher	Full Range up to 1.3 A
• 1606-XLP50E	AC 200V or higher	Full Range up to 2.1 A
• 1606-XLP100E	AC 200V or higher	Full Range up to 4.2 A
• 1606-XL60D	AC 120V or higher	Full Range up to 2.5 A
• 1606-XL120D	AC 120V or higher	Full Range up to 5 A
• 1606-XLDNET4	AC 120V or higher	Up to 3 A
• 1606-XL480E	AC 200V or higher	Full Range up to 20 A

Meets ODVA Requirements

- 1606-XLSDNET4
- 1606-XLSDNET8

Bulletin 1606 Product Selection Table

	Output Power	Output Voltage	Output Current	Input Circuit Protection/UL Test Level	Inrush Current	Parallel Operation (inclined Characteristics)	Meets EN 61000-3-2 (PFC Harmonics)	Cat. No.
Performance Single and Three Phase	80 W	24…28V DC	3.4 A	6 A SLOW BLOW FUSE OR 1492-SPU1C060/20 A♣	<7.0 A	Yes	Yes	1606-XLS80E
	120 W	24…28V DC	5.0 A	6 A SLOW BLOW FUSE OR 1492-SPU1C060/20 A♣	<4.9 A	Yes	Yes	1606-XLS120E
	240 W	24…28V DC	10 A	6 A SLOW BLOW FUSE OR 1492-SPU1C060/20 A♣	<7.6 A	Yes	Yes	1606-XLS240E
	480 W	24…28V DC	20 A	6 A (X3) SLOW BLOW FUSE OR 1492-SP3C060	<4.0 A	Yes	Yes	1606-XLS480E-3
	91 W	24V DC	3.8 A	6 A SLOW BLOW FUSE OR 1492-SPU1C060/20 A♣	<4.9 A	Yes	Yes	1606-XLSDNET4
	192 W	24V DC	8.0 A	6 A SLOW BLOW FUSE OR 1492-SPU1C060/20 A♣	<7.6 A	Yes	Yes	1606-XLSDNET8
Compact Single Phase	25 W	5…5.5V DC	5.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP25A
	30 W	10…12V DC	3.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP30B
		24…28V DC	1.3 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP30E
	36 W	+/- 12/15V DC	2.8 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP36C
	50 W	12…15V DC	4.2 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP50B
		24…28V DC	2.1 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP50E
		24…28V DC	2.1 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP50EZ
		48…56V DC	1.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<18 A	—	N/A	1606-XLP50F
	72 W	24…28V DC	3.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<30 A	—	N/A	1606-XLP72E
	90 W	12…15V DC	8.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<30 A	Yes	Yes	1606-XLP90B
	95 W	24…28V DC	3.9 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<30 A	—‡	Yes	1606-XLP95E
	100 W	24…28V DC	4.2 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<30 A	Yes‡	Yes	1606-XLP100E
		48…56V DC	2.1 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/15 A♣	<30 A	Yes‡	Yes	1606-XLP100F
Standard Single Phase	60 W	24V DC	2.5 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A♣	<18 A	—	Yes	1606-XL60D
	120 W		5.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A♣	<11 A	—	Yes	1606-XL120D
	180 W	12…15V DC	15 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A♣	<21 A	—	No	1606-XL180B
	240 W	24…28V DC	10 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A♣	<21 A	—	No	1606-XL240E
				10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A♣	<21 A	—	Yes	1606-XL240EP
		48…56V DC	5.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A♣	<21 A	—	Yes	1606-XL240FP
	480 W	24…28V DC	20 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A♣	<23 A	Yes‡	No	1606-XL480E
				10 A SLOW BLOW FUSE OR 1492-SPU1C100	<18 A @ 25°C	Yes‡	Yes	1606-XL480EP
				10 A SLOW BLOW FUSE OR 1492-SPU1C100	<18 A @ 25°C	Yes‡	Yes	1606-XL480EPT
		36…43V DC	13.3 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100	<18 A @ 25°C	Yes‡	Yes	1606-XL480GP
		48…56V DC	10 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100	<18 A @ 25°C	Yes‡	No	1606-XL480F
Standard Three Phase	120 W	24…28V DC	5.0 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<25 A	—	Yes	1606-XL120E-3
	240 W		10 A	6 A (X3) SLOW BLOW FUSE OR 1492-SP3C060/15 A♣	<17 A	Yes‡	Yes	1606-XL240E-3
	480 W		20 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<11 A	Yes‡	Yes	1606-XL480E-3
			20 A	6 A (X3) SLOW BLOW FUSE OR 1492-SP3C060/16 A♣	<7 A	Yes‡	Yes	1606-XL480E-3W
		48…56V DC	10 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<15 A	Yes‡	Yes	1606-XL480F-3H
	720 W	24…28V DC	30 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<17 A	Yes‡	Yes	1606-XL720E-3
	960 W		40 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<30 A	Yes‡	Yes	1606-XL960E-3
			40 A	10 A (X3) SLOW BLOW FUSE OR 1492-SP3C100	<30 A	Active current sharing	Yes	1606-XL960E-3S
1606-XL Special Modules								
Special Modules	480 W	23…27.8V DC	20 A	N/A	—	—	N/A	1606-XLBUFFER
	40 W	5.1V DC	8.0 A	N/A	<5 A	—	No	1606-XLDC40A
	96 W	24V DC	4.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A♣	<11 A	—	Yes	1606-XLDNET4
	196 W	24V DC	8.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A♣	<21 A	—	No	1606-XLDNET8
	60 W	24V DC	2.5 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A✦♣	<18 A	Yes‡	N/A	1606-XL60DR
	120 W		5.0 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/16 A✦♣	<11 A	Yes‡	Yes	1606-XL120DR
	240 W		10 A	10 A SLOW BLOW FUSE OR 1492-SPU1C100/10 A✦♣	<21 A	Yes‡	No	1606-XL240DR
	720 W	V_{in} -.5V typ	30 A	N/A❄	N/A	—	N/A	1606-XLRED20-30
	960 W	V_{in} -.6V typ	40 A	N/A§	N/A	—	N/A	1606-XLRED40
	384 W	V_{in} 1 -.9V typ	16 A➢	N/A	N/A	—	N/A	1606-XLPRED
	480 W	V_{in} 1 -.9V typ	20 A➢	N/A	N/A	—	N/A	1606-XLSRED

✦ Used with a pair of identical power supplies to offer N+1 redundancy.
❄ To be used alongside 20, 30 and 40 A power supplies.
‡ Single/parallel operation (inclined characteristic) selectable (jumper).
§ To be used alongside 40 A power supplies (or smaller).
♣ Unit has internal (not accessible/replaceable) input fuse. Additional protection is not required if used on branch circuits ≤ UL test levels. Consult local codes and regulations for installation.
➢ See product specifications for proper use.

Accessories

Description	Cat. No.
Back of panel bracket for XL	1606-XLA
Back of panel bracket for XLS	1606-XLB

Switched Mode Power Supplies

Performance Specifications

1606-XLS Performance Specifications

				
	1606-XLS80E	**1606-XLS120E**	**1606-XLS240E**	**1606-XLS480E-3**
Output Volts/Watts	24…28V/80W	24…28V/120W	24…28V/120W	24…28V/480W
Input Voltage❄	AC 100…240V, DC 110...300V	AC 100…240V, DC 110...300V	AC 100…240V, DC 110...300V	3 AC 380…480V, DC 600V
Operational Range	85…276 V AC, 88…375 V DC	85…264 V AC, 88…360 V DC	85…276 V AC, 88…375 V DC	323…552 V AC, 450…780 V DC
Hold-up Time	27…174 ms	33…59 ms	27 ms	19 ms
Rated Input Current	8.0 A (AC 100V), 1.0 A (AC 240V)	1.4 A (AC 100V), 0.65 A (AC 240V)	2.8 A (AC 100V), 1.2 A (AC 240V)	0.9 A (AC 380V), 0.65 A (AC 480V)
Efficiency	typ. 90.0%	typ. 92.7%	typ. 91.8%	typ. 94.8%
Output Voltage	24…28V	24…28V	24…28V	24…28V
Rated Output Current	3.4 A (at 24V) 3.0 A (at 28V)	5 A (at 24V) 4.5 A (at 28V)	10 A (at 24V) 9 A (at 28V)	20 A (at 24V) 17.5 A (at 28V)
ReservePower (typ. 4 sec.)	5.4 A (at 24V) 5.0 A (at 28V)	7.5 A (at 24V) 6.7 A (at 28V)	15 A (at 24V) 13.5 A (at 28V)	30 A (at 24V) 26 A (at 28V)
Line/Load Regulation (typ.)	<0.036%/<0.18%			
Ripple/Noise	<100 mV_{PP}	<50 mV_{PP}	<50 mV_{PP}	<100 mV_{PP}
Operating Temperature Range (T_{amb})	-25...+70 °C >60 °C with derating			
Non-Operating Temperature Range	-40...+85 °C			
MTBF♣	>650 000 hours	>831 000 hours	>581 000 hours	>690 000 hours
Dimensions (W x H x D)	32 x 124 x 102 mm	40 x 124 x 117 mm	60 x 124 x 117 mm	65 x 124 x 127 mm
Weight	420 g	620 g	900 g	870 g
Certifications/Standards✶	1, 2, 3, 5, 6, 7			
Special Features	Active PFC; Class 1 Div. 2; Semi F47			

		
	1606-XLSDNET4	**1606-XLSDNET8**
Output Volts/Watts	24V/91W	24V/192W
Input Voltage❄	AC 100…240V; DC 110...300V	
Operational Range	85…264 V AC 88…360 V DC	85…276 V AC 88…375 V DC
Hold-up Time	43 ms (AC 120V) 77 ms (AC 240V)	38 ms (AC 120V) 41 ms (AC 240V)
Rated Input Current	1.1 A (AC 100V) 0.5 A (AC 240V)	2.3 A (AC 100V) 1.0 A (AC 240V)
Efficiency	typ. 92.4%	typ. 92.7%
Output Voltage	24V	
Rated Output Current	3.8 A	8 A
Line/Load Regulation (typ.)	<0.04%/<0.146%	
Ripple/Noise	< 50 mV_{pp}	
Operating Temperature Range (T_{amb})	-25...+70 °C >60 °C with derating	
Non-Operating Temperature Range	-40...+85 °C	
MTBF♣	>581 000 hours	>831 000 hours
Dimensions (W x H x D)	40 x 124 x 117 mm	60 x 124 x 117 mm
Weight	620 g	900 g
Certifications/Standards✶	1, 2, 3, 5, 6, 7	
Special Features	NEC Class 2 power supply; Active PFC; ODVA Approved; Class 1 Div. 2; Semi F47	Active PFC; ODVA Approved; Class 1 Div. 2; Semi F47

✶ 1) = CE, 2) = UL508 (cULus LISTED), 3) = UL1950 (cURus), 5) Safety standards = IEC/EN 60950, EN 50178, 6) EMC standards = EN 55011 (Class B), EN 55022 (Class B), EN 61000-6-2, 7) = EMC standards = EN 61000-3-2 (A14), EN 50081-1

❄ 47...63Hz

♣ MTBF determined by Siemens norm SN 29500 at full load current and 40 °C

Approximate Dimensions and Wire Size

Approximate dimensions are shown in inches (mm) unless otherwise indicated. Dimensions are not to be used for manufacturing purposes.

Bulletin 1606 Dimensions Table

Catalog Number	W	H	D*	Wire Size❄ (Input and Output unless otherwise noted)
1606-XLS80E	1.26 in (32 mm)	4.88 in (124 mm)	4.02 in (102 mm)	**Input❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²) **Output❄** Stranded 28...12 AWG (0.3...2.5 mm²) Solid 28...12 AWG (0.3...4 mm²)
1606-XLS120E	1.57 in (40 mm)	4.88 in (124 mm)	4.61 in (117 mm)	
1606-XLSDNET4				
1606-XLS240E	2.36 in (60 mm)	4.88 in (124 mm)	4.61 in (117 mm)	**Input/Output❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XLS480E-3	2.56 in (65 mm)	4.88 in (124 mm)	5.00 in (127 mm)	
1606-XLSDNET8	2.36 in (60 mm)	4.88 in (124 mm)	4.61 in (117 mm)	
1606-XLSRED	1.26 in (32 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XLP25A	1.77 in (45 mm)	2.95 in (75 mm)	3.58 in (91 mm)	**Input/Output❄** Stranded 28...12 AWG (0.3...2.5 mm²) Solid 28...12 AWG (0.3...4 mm²)
1606-XLP30B				
1606-XLP30E				
1606-XLP36C				
1606-XLP50B				
1606-XLP50E				
1606-XLP50EZ				
1606-XLP50F				
1606-XLP72E				
1606-XLPRED				
1606-XLP95E	2.87 in (73 mm)	2.95 in (75 mm)	4.06 in (103 mm)	
1606-XLP100E				
1606-XLP100F				
1606-XLP90B				
1606-XL60D	1.93 in (49 mm)	4.88 in (124 mm)	4.02 in (102 mm)	**Input/Output❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XL120D	2.56 in (64 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL180B	4.72 in (120 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL240E				
1606-XL240EP				
1606-XL240FP				
1606-XL480E	8.6 in (220 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL480EP				
1606-XL480EPT				
1606-XL480GP				
1606-XL480F				
1606-XL120E-3	2.87 in (73 mm)	4.88 in (124 mm)	4.61 in (117 mm)	**Input/Output❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XL240E-3	3.50 in (89 mm)	4.88 in (124 mm)	4.61 in (117 mm)	
1606-XL480E-3	8.66 in (220 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL480E-3W	5.91 in (150 mm)	4.88 in (124 mm)	4.76 in (121 mm)	
1606-XL480F-3H	8.66 in (220 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL720E-3	9.45 in (240 mm)	4.88 in (124 mm)	4.41 in (112 mm)	
1606-XL960E-3	10.83 in (275 mm)	4.88 in (124 mm)	4.61 in (117 mm)	**Input❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XL960E-3S				**Output❄** Stranded 22...8 AWG (0.5...10 mm²) Solid 22...8 AWG (0.5...16 mm²)
1606-XLBUFFER	2.56 in (65 mm)	4.88 in (124 mm)	4.02 in (102 mm)	**Input/Output❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XLDC40A	1.93 in (49 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XLDNET4	2.56 in (65 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XLDNET8	4.72 in (120 mm)	4.88 in (124 mm)	4.02 in (102 mm)	**Input/Output❄** Stranded 22...10 AWG (0.2...2.5 mm²) Solid 22...10 AWG (0.2...2.5 mm²)
1606-XLP50EZ	1.77 in (45 mm)	2.95 in (75 mm)	3.58 in (91 mm)	**Input/Output❄** Stranded 22...12 AWG (0.2...2.5 mm²) Solid 22...12 AWG (0.2...2.5 mm²)
1606-XL60DR	1.93 in (49 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL120DR	2.56 in (64 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XL240DR	4.72 in (120 mm)	4.88 in (124 mm)	4.02 in (102 mm)	
1606-XLRED20-30	1.89 in (48 mm)	4.88 in (124 mm)	4.02 in (102 mm)	**Input/Output❄** Stranded 20...10 AWG (0.5...4 mm²) Solid 20...10 AWG (0.5...6 mm²)
1606-XLRED40	1.89 in (48 mm)	4.88 in (124 mm)	4.61 in (117 mm)	

* Depth measurement does not include DIN rail.

❄ The wire sizes indicated refer only to the connection capability of the terminal. For proper operation, the correct wire size must be used (based on accurate determination of the electrical characteristics and loading of the system).