



**CENTRALBIDDING**  
FROM CENTRAL AUCTION HOUSE

**5000118698 POWER SUPPLIES NEEDED FOR THE JEFFERSON PARISH  
SCADA DEPARTMENT**  
Jefferson Parish Government

Project documents obtained from [www.CentralBidding.com](http://www.CentralBidding.com)  
18-Jan-2017 07:33:59 AM

DATE: 1/13/2017

INVITATION TO BID  
THIS IS NOT AN ORDER

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BID NO.: 50-00118698

**JEFFERSON PARISH**  
PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETNA, LA. 70054-0009  
504-364-2678

VENDOR: \_\_\_\_\_

BUYER: SFOLSE

Bids will be received until 11:00 AM, 1/20/2017 via fax: 504-364-2693 or via online at [www.jeffparish.net](http://www.jeffparish.net)

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law, as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647. A copy of these resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at [purchasing.jeffparish.net](http://purchasing.jeffparish.net) and clicking on On-line forms.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Delivered, anywhere within the Parish as designated by the Purchasing Department. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications. JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail.

JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in the quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum.

All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected; JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A1 17.1-1961).

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

**IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS**

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at [www.jeffparishbids.net](http://www.jeffparishbids.net) to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

**ADDITIONAL REQUIREMENTS FOR THIS BID**

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

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1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(l), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

## INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. PUBLIC WORKS BIDS: All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. Unless otherwise stated in the bid specifications, the successful bidder will be required to procure standard insurance policies evidencing Parish-mandated insurance requirements as indicated on the attached "insurance requirements" sheet. All bidders must comply with the instructions in this sheet. Failure to comply will cause bid to be rejected.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies). If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

DATE: 1/13/2017

INVITATION TO BID  
THIS IS NOT AN ORDER

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BID NO.: 50-00118698

**JEFFERSON PARISH**

PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETNA, LA. 70054-0009  
504-364-2678

VENDOR: \_\_\_\_\_

BUYER: SFOLSE

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

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JEFFERSON PARISH is expecting all products to be new and all work is to be done in a workman-like manner, according to standard practices. Any deviations or alterations from the specifications must be indicated and backup documentation supplied with your quotation.

<b>DELIVERY: FOB JEFFERSON PARISH</b>	
INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES	_____
INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK	_____
INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK	_____

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_  
 NUMBER: \_\_\_\_\_

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) \_\_\_\_\_

<b>*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***</b>	
FIRM NAME: <i>The Reynolds Co</i>	
SIGNATURE: (Must be signed here) <i>D Landreneau</i>	TITLE: <i>Sales</i>
PRINT OR TYPE NAME: <i>D LANDRENEAU</i>	
ADDRESS: <i>700 Elmwood Park Blvd Ste A</i>	
CITY, STATE: <i>Harahan La</i>	ZIP: <i>70123</i>
TELEPHONE: <i>(504) 734-6228</i>	FAX: <i>(504) 734 6212</i>
EMAIL ADDRESS: <i>DPLANDRENEAU@Reynco.com</i>	

TOTAL PRICE OF ALL BID ITEMS: \$ 2,672<sup>00</sup>

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00118698

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	8.00	EA	<p>POWER SUPPLIES NEEDED FOR THE JEFFERSON PARISH SCADA DEPARTMENT</p> <p>0010 EATON POWER SUPPLIES SINGLE PHASE 240 VAC POWER SUPPLY #PSG240E</p> <p>TO BE DELIEVRED TO: SCADA DRAINAGE DEPARTMENT 4901 JEFFERSON HWY., SUITE D JEFFERSON, LA 70121</p> <p><i>Allen BRADLEY equal # 1606 XLE240E</i></p>	334 <sup>10</sup>	2,672 <sup>80</sup>

## 1606-XLE240E 24V, 10A; Single Phase Input

# 1606-XLE240E

## 24V, 10A Single Phase Input

### POWER SUPPLY

- Ultra-small size
- Extra-low inrush current
- Superior efficiency and temperature rating
- DC-OK and overload LED



## 1. GENERAL DESCRIPTION

The 1606-XLE power supplies are cost optimized power supplies without compromising quality, reliability and performance. The 1606-XLE240E is part of the XLE power supply family, existing alongside the high featured XLS family

The 1606-XLE includes all the essential basic functions and the devices have a power reserve of 20%. This extra current may even be used continuously at temperatures up to +45°C. The most important features are the small size, the high efficiency and the wide temperature range.

The Auto-select input makes worldwide installation and usage very simple. Defects or system failures caused by wrongly set switches can not occur.

## 2. SPECIFICATION QUICK REFERENCE

Output voltage	DC 24V	
Adjustment range	24 - 28V	
Output current	10 – 8.6A	ambient <60°C
	12 – 10.3A	ambient <45°C
Output power	240W	ambient <60°C
	288W	ambient <45°C
Output ripple	< 50mVpp	20Hz to 20MHz
Input voltage	AC 100-120 / 200-240V	Auto-select Input
Line frequency	50-60Hz	±6%
AC Input current	typ. 3.73 / 2.23A	at 120 / 230Vac
Power factor	typ. 0.59 / 0.51	at 120 / 230Vac
AC Inrush current	typ. 3A peak	
DC Input	not allowed	
Efficiency	typ. 91.0 / 91.6%	at 120 / 230Vac
Losses	typ. 23.7 / 22.0W	at 120 / 230Vac
Temperature range	-25°C to +70°C operational	
Derating	6W/°C	+60 to +70°C
Hold-up time	typ. 46 / 47ms	at 120 / 230Vac
Dimensions	60x124x117mm	WxHxD

## 3. AGENCY APPROVALS

 US LISTED IND. CONT. EQ. UL 508	 UL 60950-1
 EMC, LVD	

## 4. RELATED PRODUCTS

1606-XLB	Wall mount bracket
1606-XLSRED	Redundancy Module
1606-XLBUFFER	Buffer unit

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 12. PRODUCT FACE LABEL

Fig. 12-1 Front side

**Output Terminals**

Screw terminals

- + Positive output
- Negative (return) output
- Dual pins per pole

**Output voltage potentiometer**

Open the flap to tune the output voltage.  
Factory set: 24.1V

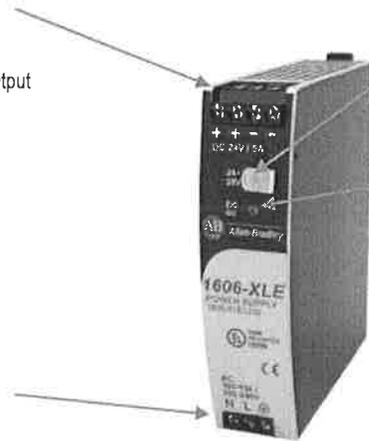
**DC-on lamp (green)**

On when the voltage on the output terminals is > 21 V

**Input Terminals**

Screw terminals

- N ... Neutral input
- L ... Line (hot) input
- ⊕ ... PE (Protective Earth) input



### 13. TERMINALS AND WIRING

Type	Screw terminals
Solid wire	0.5-6mm <sup>2</sup>
Stranded wire	0.5-4mm <sup>2</sup>
American wire gauge	20-10 AWG
Ferrules	allowed, but not required
Wire stripping length	7mm / 0.275inch
Screwdriver	3.5mm slotted or Pozidrive No 2
Recommended tightening torque	0.8Nm, 7lb.in

**Instructions:**

- a) Use appropriate copper cables that are designed for an operating temperature of:  
60°C for ambient up to 45°C and  
75°C for ambient up to 60°C minimum.
- b) Follow national installation codes and installation regulations!
- c) Ensure that all strands of a stranded wire enter the terminal connection!
- d) Up to two stranded wires with the same cross section are permitted in one connection point (except PE wire).
- e) Do not use the unit without PE connection.

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 14. EMC

The CE mark is in conformance with EMC guideline 89/336/EEC and 93/68/EEC and the low-voltage directive (LVD) 73/23/EWG.

EMC Immunity	EN 61000-6-2, EN 61000-6-1		Generic standards	
Electrostatic discharge	EN 61000-4-2	Contact discharge	8kV	Criterion A
		Air discharge	15kV	Criterion A
Electromagnetic RF field	EN 61000-4-3	80MHz-1GHz	10V/m	Criterion A
Fast transients (Burst)	EN 61000-4-4	Input lines	4kV	Criterion A
		Output lines	2kV	Criterion A
Surge voltage on input	EN 61000-4-5	L → N	2kV	Criterion A
		N / L → PE	4kV	Criterion A
Surge voltage on output	EN 61000-4-5	+ → -	500V	Criterion A
		+ / - → PE	500V	Criterion A
Conducted disturbance	EN 61000-4-6	0,15-80MHz	10V	Criterion A
Line voltage dips	EN 61000-4-11	0% of 100Vac	0Vac, 20ms	Criterion A
		40% of 100Vac	40Vac, 200ms	Criterion C
		70% of 100Vac	70Vac, 500ms	Criterion C
		0% of 200Vac	0Vac, 20ms	Criterion A
		40% of 200Vac	80Vac, 200ms	Criterion C
		70% of 200Vac	140Vac, 500ms	Criterion C
Voltage interruptions	EN 61000-4-11		0Vac, 5000ms	Criterion C
Input voltage swells	RA internal standard		300Vac, 500ms	Criterion A
Powerful transients	VDE 0160	over entire load range	750V, 1.3ms	Criterion A

#### Criteria:

A: Power supply shows normal operation behavior within the defined limits.

C: Temporary loss of function is possible. Power supply might shut-down and restarts by itself. No damages or hazards for the power supply occur.

Switching frequency	85kHz to 110kHz	input voltage dependent
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# Rockwell Automation

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## 1606-XLE240E 24V, 10A; Single Phase Input

EMC Emission	EN 61000-6-4	Generic standards
Conducted emission	EN 55011, EN 55022, FCC Part 15, CISPR 11, CISPR 22	Class B, input lines
	EN 55022	Class A, output lines
Radiated emission	EN 55011, EN 55022	Class B
Harmonic input current	EN 61000-3-2	not fulfilled
Voltage fluctuations, flicker	EN 61000-3-3	fulfilled

This device complies with FCC Part 15 rules.

Operation is subjected to following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The power supply does not fulfill the harmonic current standard EN61000-3-2.

Please note:

**A power supply has to comply with EN 61000-3-2 (Standard for harmonic input current) when:**

- 1) the end-device is used within the European Union and
- 2) the end-device is connected to a public mains supply with a nominal voltage  $\geq 220V_{ac}$  and
- 3) the power supply is:
  - fitted in an end-device with an average input power in excess of 75W or
  - fitted in an end-device with a continuous input power in excess of 75W or
  - part of a lighting system.

**Exceptions:**

End-devices for professional applications with an input power > 1000W do not need to fulfill EN 61000-3-2.

**Comments:**

- The average input power must be determined in accordance with EN 61000-3-2.
- Industrial Line supplies with their own transformer are considered to be "non-public".
- Where individual self-contained items of equipment are installed in a rack or case (e.g. devices connected in parallel), they are regarded as being individually connected to the Line side of supply. The rack or case need not be tested as a whole. Alternatively it is also permitted to assess the whole rack or case. This is recommended for devices used in professional applications with an input power greater than 1000W.

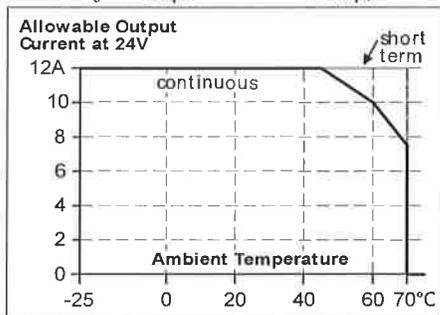
# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 15. ENVIRONMENT

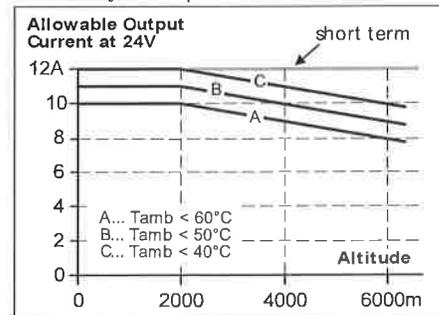
Operational temperature	-25°C to +70°C (-13°F to 158°F)	reduce output power according Fig. 15-1
Output de-rating	3.2W/°C 6W/°C	45-60°C (113°F to 140°F) 60-70°C (140°F to 158°F)
Storage temperature	-40 to +85°C (-40°F to 185°F)	storage and transportation
Humidity	5 to 95% r.H.	IEC 60068-2-30 Do not energize while condensation is present
Vibration sinusoidal	2-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2 hours / axis	IEC 60068-2-6
Shock	30g 6ms, 20g 11ms 3 bumps / direction, 18 bumps in total	IEC 60068-2-27
Altitude	0 to 6000m (0 to 20 000ft)	Reduce output power or ambient temperature above 2000m sea level.
Output de-rating (for altitude)	15W/1000m or 5°C/1000m	above 2000m (6500ft), see Fig. 15-2
Over-voltage category	III II	EN 50178, altitudes up to 2000m Altitudes from 2000m to 6000m
Degree of pollution	2	EN 50178, not conductive

Fig. 15-1 Output current vs. ambient temp.,



The ambient temperature is defined 2cm below the unit.

Fig. 15-2 Output current vs. altitude, 24V



### 16. PROTECTION FEATURES

Output protection	Electronically protected against overload, no-load and short-circuits
Output over-voltage protection	typ. 35Vdc max. 39Vdc In case of an internal power supply defect, a redundant circuitry limits the maximum output voltage. The output shuts down and automatically attempts to restart.
Output over-current protection	electronically limited see Fig. 8-1
Degree of protection	IP 20 EN/IEC 60529
Penetration protection	> 3.5mm e.g. screws, small parts
Over-temperature protection	yes output shut-down with automatic restart
Input transient protection	MOV Metal Oxide Varistor
Internal input fuse	T6.3A H.B.C. not user replaceable

Note: In case of a protection event, audible noise may occur.

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 17. SAFETY

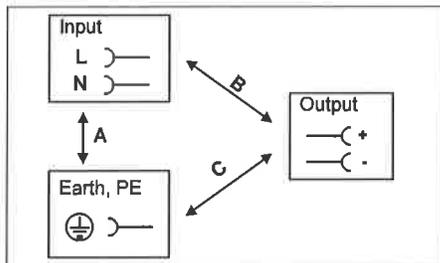
Input / output separation	SELV	IEC/EN 60950-1
	PELV	EN 60204-1, EN 50178, IEC 60364-4-41
	double or reinforced insulation	
Class of protection	I	PE (Protective Earth) connection required
Isolation resistance	> 5MΩ	input to output, 500Vdc
PE resistance	< 0.10Ω	between housing and PE terminal
Touch current (leakage current)	typ. 0.36mA	100Vac, 50Hz
	typ. 0.50mA	120Vac, 60Hz
	typ. 0.64mA	230Vac, 50Hz
	< 0.45mA	110Vac, 50Hz
	< 0.62mA	132Vac, 60Hz
	< 0.85mA	264Vac, 50Hz

### 18. DIELECTRIC STRENGTH

#### **⚠ WARNING**

To fulfill the PELV requirements according to EN60204-1 § 6.4.1, we recommend that either the + pole, the – pole or any other part of the output circuit shall be connected to the protective earth system. This helps to avoid situations in which a load starts unexpectedly or can not be switched off any more when unnoticed earth faults occur.

Fig. 18-1 Dielectric strength



		A	B	C
Type test	60s	2500Vac	3000Vac	500Vac
Factory test	5s	2500Vac	2500Vac	500Vac
Field test	5s	2000Vac	2000Vac	500Vac

#### Type tests and factory tests:

Conducted by the manufacturer. Do not repeat test in field!

#### Rules for field test:

Use appropriate test equipment which applies the voltage with a slow ramp!  
Connect L and N together as well as all output poles.

The output voltage is floating and has no ohmic connection to ground.

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 19. APPROVALS

IEC 60950-1



CB Scheme,  
Information Technology Equipment

UL 508



LISTED as Industrial Control Equipment  
E198865

UL 60950-1



RECOGNIZED E137006 recognized for the use in U.S.A. (UL 60950-1) and Canada  
(C22.2 No. 60950)  
Information Technology Equipment, Level 5

### 20. FULFILLED STANDARDS

EN 61558-2-17	Safety of Power Transformers
EN/IEC 60204-1	Safety of Electrical Equipment of Machines
EN/IEC 61131-2	Programmable Controllers
EN 50178	Electronic Equipment in Power Installations

### 21. USED SUBSTANCES

The unit does not release any silicone and is suitable for the use in paint shops.

Electrolytic capacitors included in this unit do not use electrolytes such as Quaternary Ammonium Salt Systems.

Plastic housings and other molded plastic materials are free of halogens, wires and cables are not PVC insulated.

The production material within our production does not include following toxic chemicals:

Polychlorized Biphenyl (PCB), Polychlorized Terphenyl (PCB), Pentachlorophenol (PCP), Polychlorinated naphthalene (PCN), Polybrom Biphenyl (PBB), Polybrom Bipheny-oxyd (PBO), Polybrominated Diphenylether (PBDE), Polychlorinated Diphenylether (PCDE), Polydibromphenyl Oxyd (PBDO), Cadmium, Asbest, Mercury, Silicia

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### 22. PHYSICAL DIMENSIONS AND WEIGHT

Weight	700g / 1.54lb
DIN-Rail	Use 35mm DIN-rails according to EN 60715 or EN 50022 with a height of 7.5 or 15mm. The DIN-rail height must be added to the depth (117mm) to calculate the total required installation depth.

Fig. 22-1 Front view

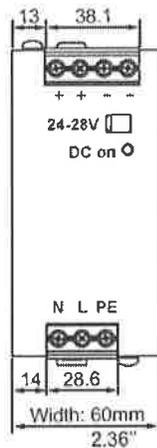
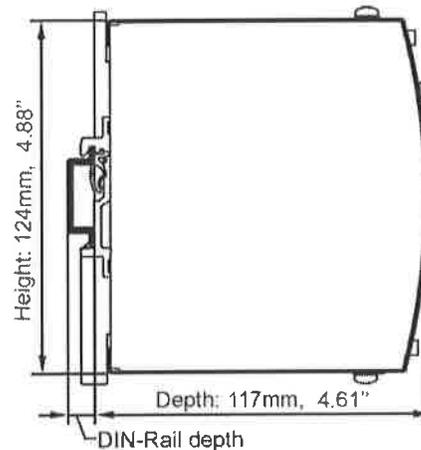


Fig. 22-2 Side view



### 23. INSTALLATION AND OPERATION INSTRUCTIONS

#### **⚠ WARNING**

Hazardous voltage inside device. Risk of electric shock, severe burns, or death.

- Do not use the unit without proper earth connection (Protective Earth). Use the pin on the terminal block for earth connection and not one of the screws on the housing.
- Turn power off before working on the power supply. Protect against inadvertent re-powering.
- Make sure the wiring is correct by following all local and national codes.
- Do not open, modify or repair the unit.
- Use caution to prevent any foreign objects from entering into the housing.
- Do not use in wet locations or in areas where moisture or condensation can be expected.

#### **Mounting Orientation:**

Output terminal must be located on top and input terminal on the bottom. For other orientations see section 25.12.

#### **Cooling:**

Convection cooled, no forced cooling required. Do not cover ventilation grid (e.g. cable conduits) by more than 30%!

#### **Installation clearances:**

40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.

#### **Service parts:**

The unit does not contain any serviceable parts. The tripping of an internal fuse is caused by an internal defect.

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 25.9. EXTERNAL INPUT PROTECTION

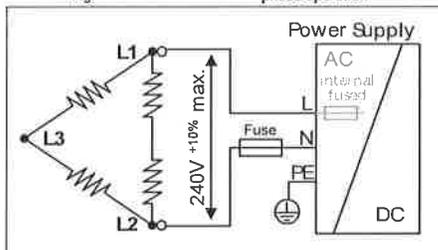
The unit is tested and approved for branch circuits up to 20A. External protection is only required if the supplying branch has an ampacity greater than this. In some countries local regulations might apply. Check also local codes and local requirements.

If an external fuse is necessary or utilized, a minimum value is required to avoid undesired tripping of the fuse.

		B-Characteristic	C-Characteristic
Ampacity	max.	20A	20A
	min.	10A	6A

### 25.10. OPERATION ON TWO PHASES

Fig. 25-6 Schematic for two phase operation



#### Instructions for two phase operation:

- A phase to phase connection is allowed as long as the supplying voltage is below  $240V^{+10\%}$ .
- Use a fuse or a circuit breaker to protect the N input. The N input is internally not protected and is in this case connected to a hot wire.

Appropriate fuses or circuit breakers are specified in section 25.9 "External Input Protection".

### 25.11. USE IN A TIGHTLY SEALED ENCLOSURE

When the power supply is installed in a tightly sealed enclosure, the temperature inside the enclosure will be higher than outside. The inside temperature defines the ambient temperature for the power supply.

Results from such an installation:

Power supply is placed in the middle of the box, no other heat producer inside the box

Enclosure: Type IP66 Box PK 9519 100, plastic, 180x180x165mm

Load: 24V, 8A; (=80%) load is placed outside the box

Input: 230Vac

Temperature inside the box: 48.9°C (in the middle of the right side of the power supply with a distance of 2cm)

Temperature outside the box: 23.3°C

Temperature rise: 25.6K

# Rockwell Automation

## 1606-XLE240E 24V, 10A; Single Phase Input

### 25.12. MOUNTING ORIENTATIONS

Mounting orientations other than input terminals on the bottom and output on the top require a reduction in continuous output power or a limitation in the max. allowed ambient temperature. The amount of reduction influences the lifetime expectancy of the power supply. Therefore, two different derating curves for continuous operation can be found below:

**Curve A1** Recommended output current.

**Curve A2** Max allowed output current (results approx. in half the lifetime expectancy of A1).

Fig. 25-7 Mounting Orientation A (Standard Orientation)

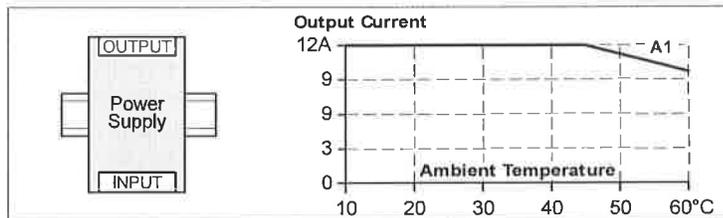


Fig. 25-8 Mounting Orientation B (Upside down)

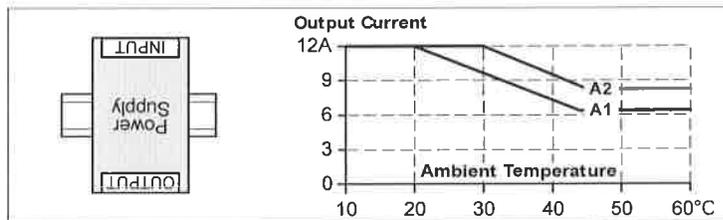


Fig. 25-9 Mounting Orientation C (Table-top mounting)

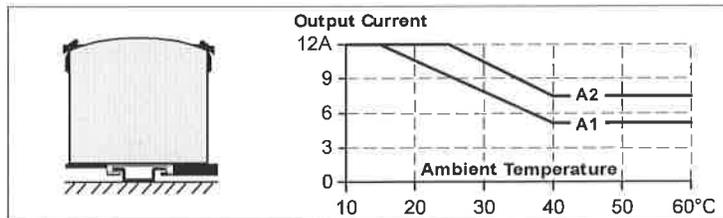


Fig. 25-10 Mounting Orientation D (Horizontal cw)

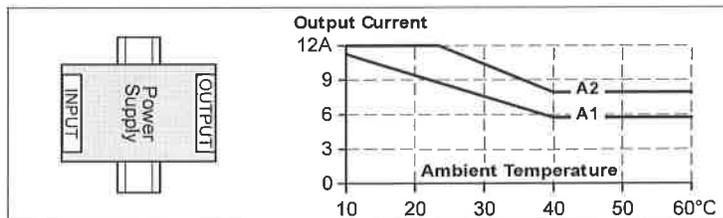


Fig. 25-11 Mounting Orientation E (Horizontal ccw)

