

Isolated, 480Vac, 3 Phase to 24Vdc Power Supply

480Vac, 3 Phase Input
24Vdc, 1440W Output

CAN Port

P/N: AX083600

Rugged, Isolated AC/DC Power Supply

Features:

- 480Vac, 3 Phase to 24Vdc, 1440 Watts
- Isolated
- Operates from 430-530Vac
- CAN port (SAE J1939 or CANopen)
- Typical efficiency of 90%
- Input inrush current limit
- Thermal protection for over temperature
- Reverse battery, over and under-voltage protection
- Short circuit and overcurrent protection
- -40 to 70°C (-40 to 158°F) operating temperature
- IP67
- 1 TE Deutsch DT13-12P output connector, 1 Molex MOL 19435-0611 input connector
- EMI/EMC compliant
- CE mark pending
- Redundancy for parallel application

Applications: The DC/DC converter is suitable for application on charging/cranking battery based systems.

- ❖ Railway Equipment
- ❖ Electric Vehicles
- ❖ Mining Equipment

Ordering Part Numbers:

480Vac, 3 ϕ /24Vdc, 1440W, Isolated AC/DC Power Supply P/N: **AX083600**

Accessories:

Input Mating Wire Harness, 2 m: **AX070143**

Output Mating Wire Harness, 2 m: **AX070144**

A mating wire harness for the CAN connection is not supplied.

To purchase the power supply and two mating wire harnesses as a KIT (AX083600 power supply, input and output wire harnesses), the ordering P/N is **AX083600K**.

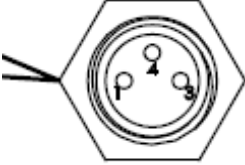
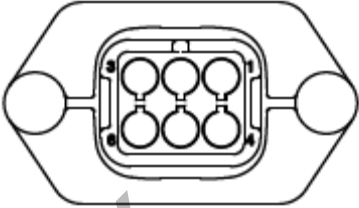
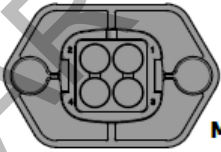
Technical Specifications:

All specifications are typical at nominal input voltage and 25 degrees C unless otherwise specified.

Input Specifications		Output Specifications	
Power Source	480Vac nominal	Nameplate Rating (Output Power)	1440 VA nominal
Operating Voltage Range	430 – 530 Vac, 3 Phase	Output Current (DC)	60 A continuous
Maximum Input Current	5Aac @ 430 Vac	Output Voltage	24 Vdc \pm 3%
Under-voltage Shutdown	350Vac typical	Output Voltage Ripple	$V_{O(RIPPLE)} \leq 100$ mVpp
		Turn-on time (at full load)	500 ms typical
		Stability	Stable at all loads (no minimum load requirement)
		Transient Response	700 mV/1 ms (25%-75% Load)
		Short Circuit Current	Protection provided Self-recovery 70A current limit

General Specifications

CAN	CAN port SAE J1939 CANopen is available on request.
Approvals	Pending
EMI and Environmental Compliance	Designed to meet the requirements of SAE J1455 and SAE J1113 CE mark for the EMC Directive
Efficiency	90%
Isolation	3750Vdc minimum input to output 500Vdc output to chassis
Enclosure	Cast Aluminum housing, integral gasket and connector 13.45 x 10.35 x 3.97 inches (341.52 x 262.95 x 100.75 mm) L x W x H including integral connector Refer to the dimensional drawing, Figure 1.0.
Protection	IP67
Vibration	Pending MIL-STD-202G, Test 204D and 214A (Sine and Random) 10 g peak (Sine); 7.86 Grms peak (Random)
Shock	Pending MIL-STD-202G, Test 213B; 50 g
Weight	Contact Axiomatic
Temperature Rating	Operating: -40 to 70°C (-40 to 158°F) Storage: -50 to 90°C (-58 to 194°F)

Electrical Pinout	<p>CAN Connector: Bradley Harrison 45360-001</p> <table border="1" data-bbox="589 258 907 369"> <thead> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN Hi</td> </tr> <tr> <td>2</td> <td>CAN Lo</td> </tr> <tr> <td>3</td> <td>CAN Shield</td> </tr> </tbody> </table> <p>Input Connector: 1 Molex 19435-0611</p> <table border="1" data-bbox="589 516 907 705"> <thead> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Chassis GND</td> </tr> <tr> <td>2</td> <td>Not Used</td> </tr> <tr> <td>3</td> <td>Input 1</td> </tr> <tr> <td>4</td> <td>Not Used</td> </tr> <tr> <td>5</td> <td>Input 2</td> </tr> <tr> <td>6</td> <td>Input 3</td> </tr> </tbody> </table> <p>Output Connector: 1 Molex 19436-0411</p> <table border="1" data-bbox="589 779 907 924"> <thead> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Output +</td> </tr> <tr> <td>2</td> <td>Output +</td> </tr> <tr> <td>3</td> <td>Output -</td> </tr> <tr> <td>4</td> <td>Output -</td> </tr> </tbody> </table>	Pin #	Description	1	CAN Hi	2	CAN Lo	3	CAN Shield	Pin #	Description	1	Chassis GND	2	Not Used	3	Input 1	4	Not Used	5	Input 2	6	Input 3	Pin #	Description	1	Output +	2	Output +	3	Output -	4	Output -	 <p>CAN Connector back view</p>  <p>back of connector pin numbering</p>  <p>MOL 19436-0411 back view</p>
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3	Output -																																	
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Mating Wire Harnesses	<p>A mating wire harness assembly, P/N: AX070143, for the input connector is available. It has the following wire colours and pin out. TBA – wire colours and AWG</p> <p>A mating wire harness assembly, P/N: AX070144, for the output connector is available. It has the following wire colours and pin out. RED: Output + connections BLACK: Output – connections TBA – wire AWG</p> <p>A mating wire harness is not available for the CAN connector.</p>																																	
Installation	<p>Set up</p> <ol style="list-style-type: none"> 1. The AC/DC Power Supply should be installed by qualified electrical personnel. 2. A maximum 5A per phase is recommended for the 480Vac, 3 Phase input. 3. Use four 5/16 inch or M8 bolts screws to mount the converter. 4. Ground the unit to chassis ground by attaching a ground strap to Pin 1 on the Molex Connector. 5. Snap the mating plug connectors into the mating receptacles mounted on the converter. 6. Connect the wiring to power and output terminal blocks (as provided by customer). 7. Once the load is ready to receive power, turn on the power source to the converter. 																																	

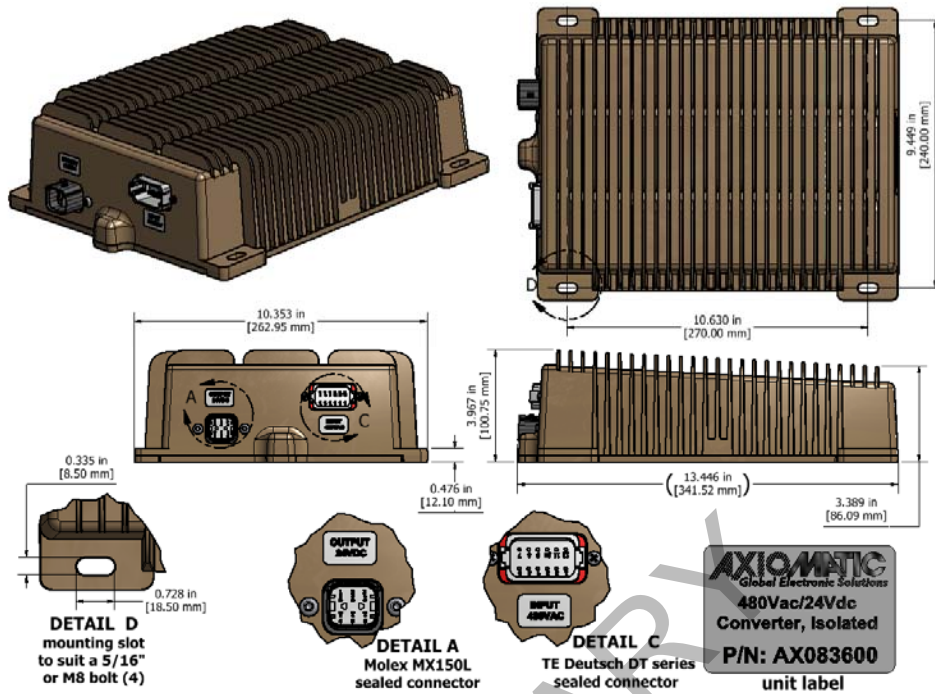


Figure 1. 0. – Dimensional Drawing

Specifications are indicative and subject to change. Actual performance will vary depending on the application and operating conditions. Users should satisfy themselves that the product is suitable for use in the intended application. All our products carry a limited warranty against defects in material and workmanship. Please refer to our Warranty, Application Approvals/Limitations and Return Materials Process as described on www.axiomatic.com/service.html.

Form: TDAX083600-08/29/19