

**Features:**

- Wide ranging input from 95 to 260 VAC, 45/65 Hz
- 24V / 15A output or 12V / 30A output
- Isolation of 3.75kVAC
- Designed for mounting in a vehicle or in a stationary engine
- Managed heat dissipation so no fan cooling is required
- Wide ranging operation from 95 to 260 VAC, 45/65 Hz
- Highly efficiency design (90% for 24V model and 88% for 12V model)
- Inherent power factor correction
- Operational from -40 to 70°C (-40 to 158°F)
- Corrosion resistant packaging, IP67 rated for harsh environments, vibration compliant



**Applications:**

- Off-highway Vehicles, Lift Equipment, Electric Vehicles, Fleet and Utility Vehicles, Emergency Vehicles
- Mining Equipment

**Ordering Part Numbers:**

AC to 24VDC, 360W Power Supply P/N: **AX080710**  
AC to 24VDC, 360W Power Supply with Enable P/N: **AX080712**

AC to 12VDC, 360W Power Supply P/N: **AX080720**  
AC to 12VDC, 360W Power Supply with Enable P/N: **AX080722**

**Accessories:**

Mating Wire Harness, 2 m: **AX070165**

Mating Wire Harness with Enable, 2m: **AX070166** (only for AX080712 and AX080722 with the Enable)

To purchase the DC/DC Converter and mating wire harness as a KIT with the mating wire harnesses, please order the following part number.

KIT (AX080710 converter, AX070165 wire harness), the ordering P/N is **AX080710K**.

KIT (AX080712 converter, AX070166 wire harness), the ordering P/N is **AX080712K**.

KIT (AX080720 converter, AX070165 wire harness), the ordering P/N is **AX080720K**.

KIT (AX080722 converter, AX070166 wire harness), the ordering P/N is **AX080722K**.

## Technical Specifications:

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 <https://www.axiomatic.com/service/>.

### Input Specifications

Power Supply Input - Nominal	120 VAC, 208VAC or 240VAC nominal 95 to 260 VAC, 45/65 Hz power supply range (60 Hz units and 50/60 Hz units) Power factor correction >0.99 @ 120VAC; >0.98 @ 240VAC Two internal fuses L and N, 8A, 250VAC
Surge Protection	Provided
Under-voltage Protection	Provided
Over-voltage Protection	Provided

### Output Specifications

Output to Battery	Model AX080710: Maximum output is 360 Watts @ 24VDC, 15A Model AX080720: Maximum output is 360 Watts @ 14VDC, 30A
Output Current (DC)	Model AX080710: 15A continuous Model AX080720: 30A continuous
Output Voltage	Model AX080710: 24 VDC $\pm$ 3% Model AX080720: 12 VDC $\pm$ 3%)
Output Voltage Ripple	$V_{O(RIPPLE)} \leq 200$ mVpp
Transient Response	250 mV/1 mS (25%-75% Load)
Short Circuit Current	Protection provided, Self-recovery Model AX080710: 17A current limit (typical) Model AX080720: 28A current limit (typical)
Hold-up Time	15mS (typical)

### General Specifications

Isolation	3.75kVAC
Efficiency	90% @ max. load and 240VAC 88% @ max. load and 120VAC
Fusing	An external output fuse of 15 Amps is recommended.
Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature	-40 to 105°C (-40 to 221°F)
Protection Rating	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
Enclosure and Dimensions- Battery Charger	ACD12 Die Cast Aluminum Enclosure and Lid, Hard Anodized to MIL-A-8625 Type II Class I Clear Hard Anodize Molded EPDM Gasket 8.14 x 11.10 x 2.75 inches (206.00 x 282.00 x 70.00 mm) L x W x H including integral connectors Refer to the dimensional drawing, Figure 1.0.
Weight	8.31 lb. (3.77 kg)

Power Connection	<p><b>Input Power Cable:</b>  Heyco 3213 sealed cable gland  Integral 3 ft. (0.91 m) <b>unterminated power cable</b>.  The power plug is not supplied.  Black Wire: Live  White Wire: Neutral  Green Wire: Ground</p> <p><b>Output Connector:</b>  (equivalent TE Deutsch P/N: DT13-08P)</p> <table border="1"> <thead> <tr> <th>PIN#</th><th>Function</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>ENABLE+</td></tr> <tr><td>5</td><td>ENABLE-</td></tr> <tr><td>6</td><td>OUTPUT-</td></tr> <tr><td>7</td><td>OUTPUT-</td></tr> <tr><td>8</td><td>OUTPUT+</td></tr> </tbody> </table>	PIN#	Function	1	OUTPUT+	2	OUTPUT+	3	OUTPUT-	4	ENABLE+	5	ENABLE-	6	OUTPUT-	7	OUTPUT-	8	OUTPUT+
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Mating Wire Harness:	<p>Wire Harness 2m, P/N: AX070165 (equivalent to the TE Deutsch P/Ns: DT06-08SA, W8S, 6 0462-209-16141, 2 114017, 14 AWG wire unterminated)  Refer to Figure 2.0.</p> <p>Wire Harness with Enable, 2m P/N: AX070166 (equivalent to the TE Deutsch P/Ns: DT06-08SA, W8S, 8 0462-209-16141, 14 AWG wire unterminated)  Refer to Figure 3.0.</p>																		
Mounting Instructions:	<p>The power supplies can be parallel for more power and redundancy.  It has 2 internal fuses(L&amp;N) of 8A 250V rating.</p>																		

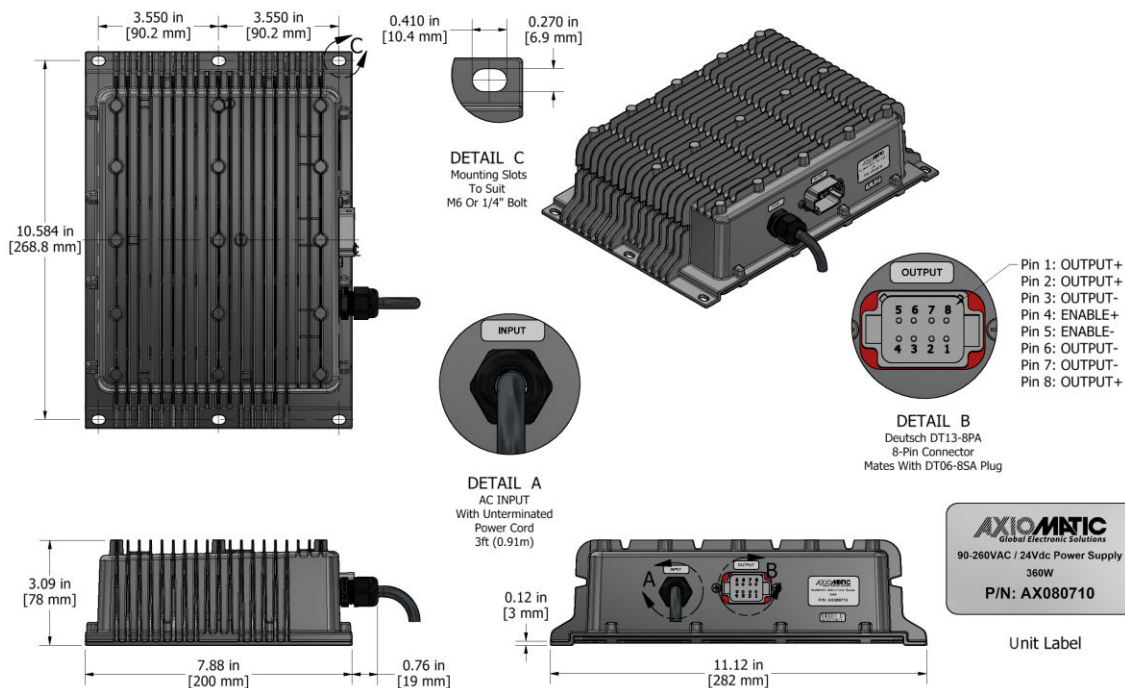
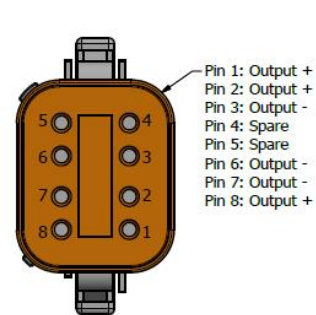


Figure 1.0 – Dimensional Drawing



**Detail A**  
Deutsch DT06-08SA  
8-Pin Plug  
Mates With DT13-08PA  
Connector

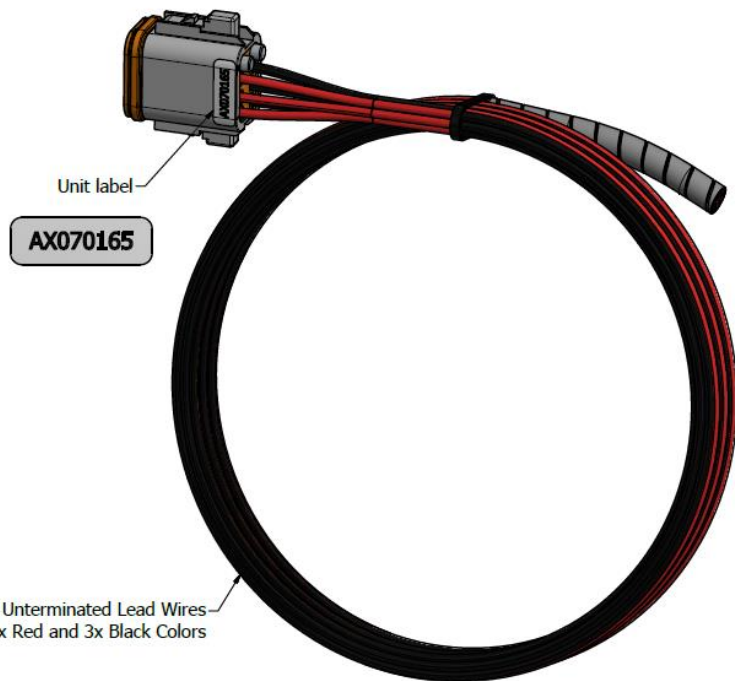
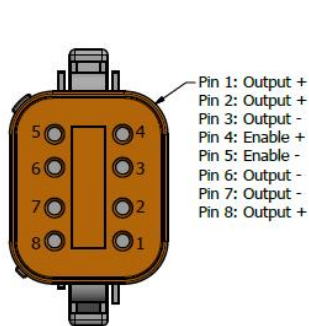


Figure 2.0 – Wire Harness AX070165



**Detail A**  
Deutsch DT06-8SA  
8-Pin Plug  
Mates With DT13-8PA  
Connector

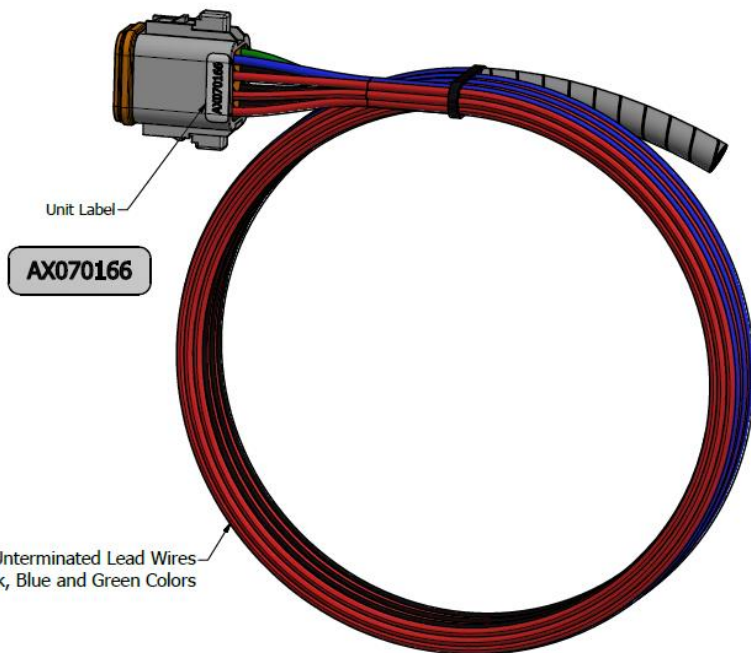


Figure 3.0 – Wire Harness AX070166

Form: TDAX080710-20-07/18/24