

9-36Vdc to 12Vdc, 18W, Isolated Power Converter

P/N: AX082300

Features

- 12 or 24 Vdc to 12 Vdc, 18 W converter
- Isolated
- Operates from 9 Vdc to 36 Vdc
- Typical efficiency of 87% @ 12 Vdc input or 88% @ 24 Vdc input
- Thermal protection for over temperature
- Reverse battery, over and under-voltage protection
- Short circuit and overcurrent protection
- Protected against 205 Vdc load dump
- -40 to 70°C (-40 to 158°F) operating temperature
- Compact, IP67-rated laser welded enclosure
- Integrated TE Deutsch equivalent 4-pin connector
- EMI/EMC compliant

Applications

- Suitable for application in vehicles
- Off-highway Equipment
- Fire trucks and municipal vehicles



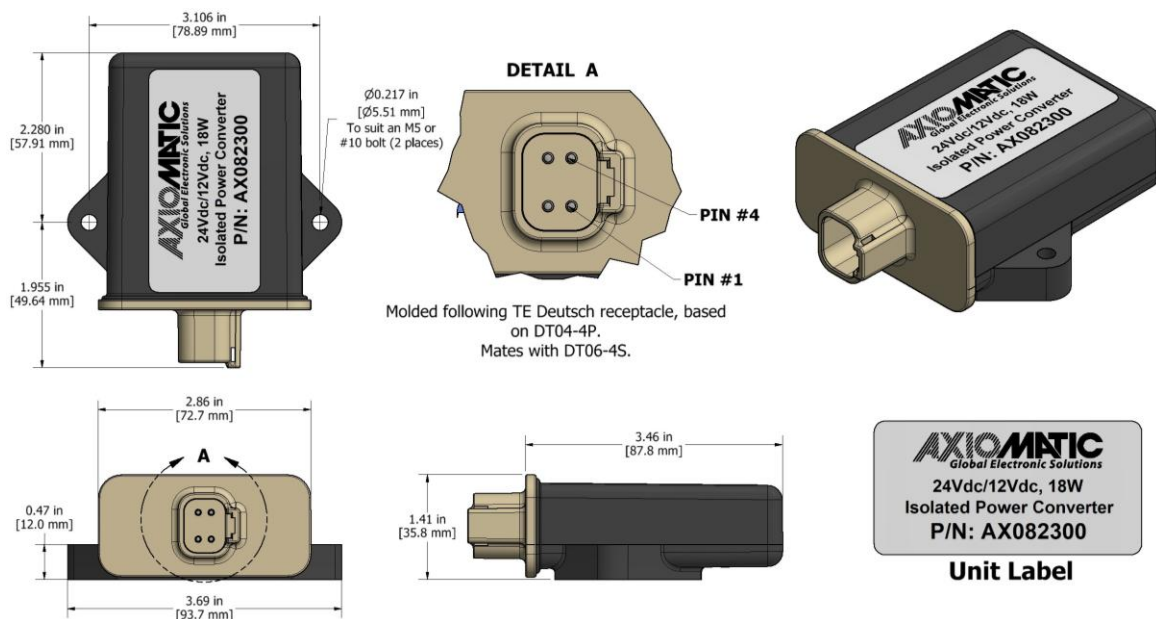
Ordering Part Number

9-36Vdc/12Vdc, 18W, Isolated Power Converter - P/N: **AX082300**

Accessories:

Mating Plug Kit: **AX070106**

Dimensional Drawing



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 Limitations & Return Materials Process as described on <https://www.axiomatic.com/service/>.

Typical at nominal input voltage and 25 °C unless otherwise specified.

Input Specifications

Power Source	12 or 24 Vdc nominal
Operating Voltage Range	9 to 36 Vdc provides output (Minimum 12 V required for start-up)
Maximum Input Current	1.8 Adc @ 12 Vdc
Engine Load Dump	Up to 205 Vdc
Reverse Voltage Protection	Provided
Under-Voltage Shutdown	7 Vdc typical
Over-Voltage Shutdown	40 Vdc typical

Output Specifications

Nameplate Rating (Output Power)	18 W nominal
Output Voltage	12 Vdc \pm 0.24 Vdc
Output Ripple Voltage	$V_{O(RIPPLE)} \leq 80$ mVpp
Output Current	1.5 Adc continuous
Turn-On Time (at Full Load)	100 ms typical
Stability	Stable at all loads (no minimum load requirement)
Transient Response	700 mV/ms (25% to 75% load)
Output Short Circuit Protection	Provided 1.8 A current limit Self-recovery

General Specifications

Efficiency	87% @ 12 Vdc input (typical); 88% @ 24 Vdc input (typical)										
Operating Conditions	-40 to 70 °C (-40 to 158 °F)										
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Compliance	RoHS										
Protection Rating	IP67										
Enclosure	Molded enclosure, integral connector Nylon 6/6, 30% glass Laser welded 4.24 in x 3.69 in x 1.41 in (107.6 mm x 93.7 mm x 35.8 mm) L x W x H including integral connector Refer to the dimensional drawing.										
Weight	0.28 lb. (0.125kg)										
Electrical Connections	Integral 4-pin receptacle (equivalent to TE Deutsch P/N: DT04-04P) 18 AWG wire is recommended for use with contacts 0462-201-16141. <table><tr><th>Pin</th><th>Description</th></tr><tr><td>1</td><td>Output +</td></tr><tr><td>2</td><td>Input +</td></tr><tr><td>3</td><td>Input -</td></tr><tr><td>4</td><td>Output -</td></tr></table>	Pin	Description	1	Output +	2	Input +	3	Input -	4	Output -
Pin	Description										
1	Output +										
2	Input +										
3	Input -										
4	Output -										
Mating Plug Kit	Axiomatic P/N: AX070106 (includes 1x Plug DT06-4S, 1x Wedgelock W4S, 4x Contacts 0462-201-16141)										
Mounting	Mounting holes are sized for #10 or M5 bolts. The bolt length will be determined by the end-user's mounting plate thickness. The mounting flange of the controller is 0.47 in (12 mm) thick. It should be mounted with connectors facing left or right to reduce likelihood of moisture entry. All field wiring should be suitable for the operating temperature range. Install the unit with appropriate space available for servicing and for adequate wire harness access (6 in or 15 cm) and strain relief (12 in or 30 cm).										

Form: TDAX082300-02/03/2025