

# TP-DCDC - HP

## DATA SHEET

### High Power DC to DC Converter

#### Features

- Input Voltage 12VDC, 24VDC or 48VDC
- Passive POE Output voltage 24VDC or 56VDC
- IEEE802.3at Model Available
- High Power up to 35W
- Integrated POE Inserter
- Low self consumption power
- Short Circuit, Over Current and Reverse/Over Voltage Protection
- High Temperature Operation



#### Applications

- 12V, 24V and 48V Battery Systems
- Wireless Access Points and Client Devices
- IP Phone and Security Camera Systems

#### Description

The TP-DCDC-HP Series of DC to DC converters offered by Tycon Power Systems are a low cost and high reliability solution for those requiring 24VDC or 56VDC Power Over Ethernet voltage from a 12V, 24V or 48V battery system. They have an integrated POE injector. Passive POE and 802.3at models are available. They have two inputs for connecting 2 power sources, like a primary and backup power source.

They accept data-in to a shielded RJ45 Jack and provide data-out and POE power on the shielded RJ45 output jack. They work by supplying power on the unused Ethernet pins 4,5(V+) and 7,8(V-). They have various protections for surge, short circuit and overload. The units have a power output of up to 35W. The input and output are isolated so the units can accept minus voltage on input and can be wired for positive voltage on the output for those systems which are negative voltage based.

If the remote device does not support power over Ethernet, splitters (POE-SPLT-S) are available to split the data and DC voltage at the remote device. If the remote device requires reverse voltage the POE-XOVER-S cable can be used.

#### Device Pinouts

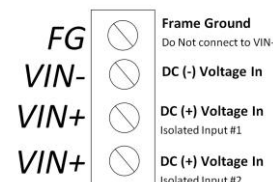
RJ-45 Input (Data Only)			RJ-45 Output (Data & Power)	
Pin	Symbol	Description	Symbol	Description
1	RX+	Data Receive(+)	RX+	Data Receive(+)
2	RX-	Data Receive(-)	RX-	Data Receive(-)
3	TX+	Data Transmit(+)	TX+	Data Transmit(+)
4	NC	No Connection	+Vdc	DC power(+)
5	NC	No Connection	+Vdc	DC power(+)
6	TX-	Data Transmit(-)	TX-	Data Transmit(-)
7	NC	No Connection	-Vdc	DC power(-)
8	NC	No Connection	-Vdc	DC power(-)

## Specifications

	TP-DCDC-1224-HP	TP-DCDC-2448-HP	TP-DCDC-4824-HP	TP-DCDC-4848-HP	TP-DCDC-4848D-HP
<b>Input Voltage</b>	+/- 10VDC to 15VDC	+/- 18VDC to 36VDC	+/- 36VDC to 72VDC	+/- 36VDC to 72VDC	+/- 36VDC to 72VDC
<b>DC Input Connector</b>	Removeable Screw Type Compression Wire Terminal (12 AWG Max)				
<b>POE Specification</b>	Passive				IEEE 802.3at
<b>Output Voltage (+/-2.5%)</b>	24VDC	56VDC	24VDC	56VDC	56VDC
<b>Data in &amp; Data/POE Output Connector</b>	RJ45 (Shielded)				
<b>Output Current (max)</b>	1.46A	0.5A	1.25A	0.5A	0.625A
<b>Output Power (max)</b>	35W	30W			35W
<b>Self Consumption Power</b>	2W				
<b>Efficiency (min)</b>	75%				
<b>Line Regulation</b>	1%				
<b>Load Regulation</b>	5%				
<b>Ripple</b>	1%				
<b>Noise</b>	1%				
<b>EMC Standards</b>	FCC Class B NE55022 Class B				
<b>Safety Standards</b>	UL1950, CSA 22.2 &TUV EN60950				
<b>Operating Temperature</b>	-30 to +60°C (-22 to +140°F)				
<b>Operating Humidity (RH)</b>	5% - 90%				
<b>Storage Temperature</b>	-40 to +80°C (-40 to +176°F)				
<b>Dimensions (LxWxH)</b>	125 x 75 x 38mm (4.9 x 3 x 1.5")				
<b>Weight</b>	300g (10.6oz)				

**Notes:**

- All shipments F.O.B. Bluffdale, UT 84065
- Tycon Power Systems Power Sources carry a 1 year warranty

**DC Input Connector**

## System Ordering:

**TP-DCDC-1224-HP** +/- 10-15VDC IN 24VDC OUT, 35W DC to DC Converter with POE Inserter

**TP-DCDC-2448-HP** +/- 18-36VDC IN 56VDC OUT, 30W DC to DC Converter with POE Inserter

**TP-DCDC-4824-HP** +/- 36-72VDC IN 24VDC OUT, 30W DC to DC Converter with POE Inserter

**TP-DCDC-4848-HP** +/- 36-72VDC IN 56VDC OUT, 30W DC to DC Converter with POE Inserter

**TP-DCDC-4848D-HP** +/- 36-72VDC IN 56VDC OUT, 35W DC to DC Converter with 802.3at POE Inserter