

## Gigabit DC to DC Converter

### Features

- Input Voltage 9-36VDC
- 24V Gigabit Passive 4 Pair PoE Output
- Dual Inputs for Connecting 2 Power Sources
- Integrated 10/100/1000MB PoE Inserter
- High Power up to 24W
- Short Circuit, Over Current and Reverse/Over Voltage Protect
- High Temperature Operation to 70C
- Built-in Low Battery Disconnect and Surge Protection



TP-DCDC-1224G-4P  
24W 4 Pair Gigabit PoE

### Applications

- 12V / 24V Battery Systems, Vehicle Applications
- UBNT Airfiber®-X
- Wireless Access Points and Client Devices

### Description

The TP-DCDC-1224G-4P Gigabit DC to DC converters offered by Tycon Power Systems are a low cost and high efficiency solution for those requiring 24VDC 4 pair Passive Power over Ethernet from a 12VDC or 24VDC voltage source like a battery system or vehicle. They have an integrated 4 pair PoE injector to apply the power and data output to the CAT5 Ethernet cable. All 8 wires carry both data and PoE power. The output voltage is regulated and protected. They have two isolated inputs for connecting 2 power sources, like a primary and backup power source. Input and outputs are isolated so + or – ground is OK.

They accept gigabit data-in to a shielded RJ45 Jack and provide gigabit data-out and 4 pair PoE power on the shielded RJ45 output jack. They work by supplying power on Ethernet pins 1,2,4,5(V+) and 3,6,7,8(V-). They have various protections for surge, short circuit and overload. The units have power outputs up to 24W.





### Device Pinouts

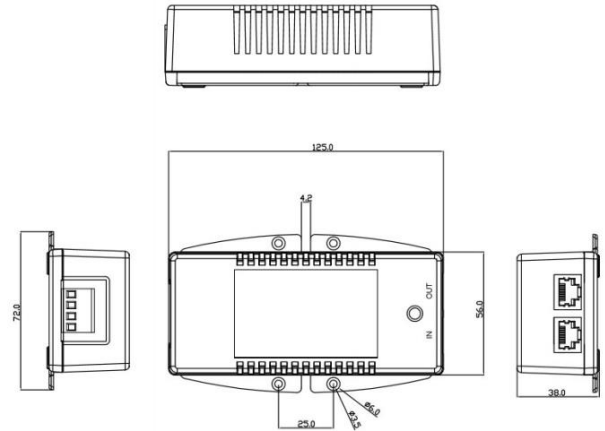
RJ-45 Input (Data Only)			RJ-45 Output (Data & Power)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+	Data Pair A+	+Vdc + BI_DA+	power(+) & Data Pair A+
2	BI_DA-	Data Pair A-	+Vdc + BI_DA-	power(+) & Data Pair A-
3	BI_DB+	Data Pair B+	-Vdc + BI_DB+	power(-) & Data Pair B+
4	BI_DC+	Data Pair C+	+Vdc + BI_DC+	power(+) & Data Pair C+
5	BI_DC-	Data Pair C-	+Vdc + BI_DC-	power(+) & Data Pair C-
6	BI_DB-	Data Pair B-	-Vdc + BI_DB-	power(-) & Data Pair B-
7	BI_DD+	Data Pair D+	-Vdc + BI_DD+	power(-) & Data Pair D+
8	BI_DD-	Data Pair D-	-Vdc + BI_DD-	power(-) & Data Pair D-

## Specifications

	TP-DCDC-1224G-4P
<b>DC Input Voltage</b>	9VDC – 36VDC, Input/Output is Isolated
<b>DC Input Connector</b>	Removeable Screw Type Compression Wire Terminal (12 AWG Max)
<b>DC Output Voltage</b>	24V (Passive) 4 pair power
<b>Data in &amp; Data/POE Output Connector</b>	RJ45 (Shielded)
<b>Output Current (max)</b>	1A
<b>Output Power (max)</b>	24W
<b>Low Voltage Disconnect / Reconnect</b>	Disconnect at 8.9V, Reconnect at 9.02V
<b>Efficiency (min)</b>	80%
<b>Line Regulation</b>	1%
<b>Load Regulation</b>	5%
<b>Ripple</b>	1%
<b>Noise</b>	1%
<b>LED Operation</b>	RED = Input Power On, GREEN = Output Connected
<b>Surge Protection (IEC 61000-4)</b>	15kV (Air), 8kV (Contact), 20A (8/20us) Lightning
<b>EMC Standards</b>	FCC Class B EN55022 Class B
<b>Safety Standards</b>	CSA 22.2 & TUV EN60950
<b>Operating Temp</b>	-40 to +70°C (-40 to +158°F)
<b>Operating Humidity</b>	5% - 90%
<b>Storage Temp</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)
<b>Warranty</b>	3 Years

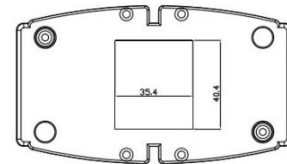
### DC Input Connector

FG		Frame Ground Connect to earth ground
VIN-		DC (-) Voltage In
VIN+		DC (+) Voltage In Isolated Input #1
VIN+		DC (+) Voltage In Isolated Input #2



### System Ordering:

**TP-DCDC-1224G-4P** 9-36VDC IN, 24VDC Gigabit 4 Pair  
Passive PoE OUT, 24W DCDC Converter



### For further information contact:

[Tyconsystems.com](http://Tyconsystems.com)



14641 S 800 W Ste A Bluffdale, UT 84065  
PH: 801-432-0003 FAX: 801-618-4220