

POE Power Sources

Features

- Remotely Power Equipment thru CAT5 Cable up to 100m
- Built in Ethernet and AC Surge Protection
- Autoranging Switching Power Supply
- Short Circuit, Over Current and Over Voltage Protection
- Medium Power and High Power Models Available
- 802.3af, 802.3at and Passive PoE Models Available
- 10/100Mb and 10/100/1000Mb Models Available
- High Temperature Industrial Operation
- Compact size – Floor / Desktop / Wall Mount



TP-POE Medium Power

Applications

- Wireless Access Points and Client Devices
- IP Phone and Security Camera Systems
- PoE Lighting Applications



TP-POE-HP High Power

Description

The TP-POE Power over Ethernet Power Sources offered by Tycon Power® are quality midspan power sources for years of reliable operation even in the toughest conditions. They accept data-in to a shielded RJ45 Jack and provide surge protected data-out and power on the shielded RJ45 output jack. They work by supplying power to the remote device on the unused Ethernet pins 4,5(V+) and 7,8(V-). For the “R” model the voltage is reversed. 4,5(V-) and 7,8(V+). The Ethernet spec supports distances up to 100m (328 feet).

There are models available that support 802.3af and 802.3at as well as models that support Gigabit Ethernet. The units are autoranging so that they accept AC inputs from 90VAC to 264VAC (50/60 Hz) and they supply regulated DC Voltage at the output. They have various protections for surge, short circuit, overload and overvoltage. The medium power models (TP-POE) have power output up to 24W and the high power models (TP-POE-HP) up to 50W. They are available in 18V, 24V and 48-56V DC Output with load regulation within 5%. The CI model has a special current sense LED which changes color when a PoE device is plugged onto the CAT5 cable.

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 cable can be used.

Device Pinouts

10/100 Pinout

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 (-V for R Model)	DC power(+) (- for R)
5	NC	No Connection	+Vdc (-V for R Model)	DC power(+) (- for R)
6	TX-	Data Transmit(-)	TX-	Data Transmit(-)
7	NC	No Connection	-Vdc (+V for R Model)	DC power(-) (+ for R)
8	NC	No Connection	-Vdc (+V for R Model)	DC power(-) (+ for R)

Gigabit Pinout

RJ-45 Input (Data Only)			RJ-45 Output (Data & Power)	
Pin	Symbol	Description	Symbol	Description
1	BI_DA+	Data RX+	BI_DA+	Data RX(+)
2	BI_DA-	Data RX-	BI_DA-	Data RX(-)
3	BI_DB+	Data TX+	BI_DB+	Data TX(+)
4	BI_DC+	Data RX+	BI_DC+, Vo+	Data RX(+), DC power(+)
5	BI_DC-	Data RX-	BI_DC-, Vo+	Data RX(-), DC power(+)
6	BI_DB-	Data TX-	BI_DB-	Data TX(-)
7	BI_DD+	Data RX+	BI_DD+, Vo-	Data RX(+), DC power(-)
8	BI_DD-	Data RX-	BI_DD-, Vo-	Data RX(-), DC power(-)

General Specifications

AC Input	90-264VAC 47-63Hz
Max Inrush Current (120VAC)	30A
Efficiency (min)	85%
Line / Load Regulation	1% / 5%
Ripple / Noise	1% / 2%
Protections	Over-Voltage, Short Circuit, Over-Current
Surge Protection (+/- 4KV) (IEC 61000-4-5)	Ethernet: 4 Pin (1/2,3/6) Common Mode Protection, 7.5V Clamping Voltage 5.4A (8/20µs) Peak Pulse Current, <2pF Shunt Capacitance AC Input: Operating voltage = 385VDC, Clamping voltage = 775VDC, Maximum discharge current is 1200A(8/20µs)
ESD Protection (IEC 61000-4-2)	Class B: Contact 8KV, Air 15KV
EMC Standards	FCC Class B EN55022 Class B
Safety Standards	UL1950, CSA 22.2 & TUV EN60950
Environmental Standards	RoHs
Operating Temperature	-30 to +60°C (-22 to +140°F)
Operating Humidity (RH)	5% - 90%
Storage Temperature	-40 to +80°C (-40 to +176°F)

Product Selector	PoE Output Voltage (+/- 2.5%)	Output Current	Output Power	PoE Type	Dimensions (LxWxH)	Weight	MTBF (Mean Time Between Failure)
TP-POE-18	18V	1.0A	18W	Passive	85 x 76 x 36mm (3.4 x 3 x 1.4")	150g (5.3oz)	88,352 Hours
TP-POE-24	24V	0.8A	19W	Passive			
TP-POE-24IR-CI	24V (Reversed)	0.8A	19W	Passive			
TP-POE-48	48V	0.5A	24W	Passive			
TP-POE-48D	48V	0.33A	16W	802.3af			
TP-POE-18G	18V	1.0A	18W	Passive			
TP-POE-24G	24V	1.0A	24W	Passive			
TP-POE-48G	48V	0.5A	24W	Passive			
TP-POE-48GD	48V	0.35A	16.8W	802.3af	125 x 75 x 38mm (4.9 x 3 x 1.5")	300g (10.6oz)	96,803 Hours
TP-POE-HP-18	18V	2.0A	36W	Passive			
TP-POE-HP-24	24V	2.0A	48W	Passive			
TP-POE-HP-48	56V	0.9A	50W	Passive			
TP-POE-HP-24G	24V	1.5A	36W	Passive			
TP-POE-HP-48G	56V	0.9A	50W	Passive			
TP-POE-HP-48GD	56V	0.625A	35W	802.3at / af			105,815 Hours

Notes:

- All shipments F.O.B. Bluffdale, UT 84065
- Tycon Power® Power Sources carry a 3 year warranty

System Ordering:

TP-POE-18	18V 18W Passive PoE Power Source with US Power Cord*
TP-POE-24	24V 19W Passive PoE Power Source with US Power Cord*
TP-POE-24IR-CI	24V 19W Passive PoE Reverse Voltage Power Source with current ind and US Power Cord*
TP-POE-48	48V 24W Passive PoE Power Source with US Power Cord*
TP-POE-48D	48V 16W 802.3af PoE Power Source with US Power Cord*
TP-POE-18G	18V 18W Gigabit Passive PoE Power Source with US Power Cord*
TP-POE-24G	24V 24W Gigabit Passive PoE Power Source with US Power Cord*
TP-POE-48G	48V 24W Gigabit Passive PoE Power Source with US Power Cord*
TP-POE-48GD	48V 16.8W 802.3af PoE Power Source with US Power Cord*
TP-POE-HP-18	18V 36W High Power Passive PoE Power Source with US Power Cord*
TP-POE-HP-24	24V 48W High Power Passive PoE Power Source with US Power Cord*
TP-POE-HP-48	56V 50W High Power Passive PoE Power Source with US Power Cord*
TP-POE-HP-24G	24V 36W High Power Passive Gigabit PoE Power Source with US Power Cord*
TP-POE-HP-48G	56V 50W High Power Passive Gigabit PoE Power Source with US Power Cord*
TP-POE-HP-48GD	56V 35W High Power 802.3at/af Gigabit PoE Power Source with US Power Cord*



*Add an "E" suffix for Euro power cord

POE-XOVER PoE Voltage Crossover Cable - converts standard PoE pin-out to reverse voltage pin-out

POE-SPLT-S Passive Splitter – 5.5/2.1mm DC Plug

POE-YSPLT-S Passive Y* Splitter – 5.5/2.1mm DC Plug
 (*Power is supplied on both RJ45 and DC Plug)

**For further information contact:**

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