# PULSEJACK<sup>TM</sup> PowerJack G-UP10



## **Description:**

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10/100 Base-TX RJ45 Multi-port with LEDs and integrated magnetics — Designed for most leading PHY manufacturers with the addition of Power Feeding over the signal pairs according to IEEE 802.3.AF



### **Features and Benefits:**

- 1X2 and 1X4 Connector for PoE applications
- 1500 Vrms breakdown between Primary and Secondary windings
- Unique design ensures a separation of >2.0mm between Power, Signal and Ground pins.
- Compact design includes integrated magnetics, bi-color LEDs

Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C												
Part Number	Port Option	LEDs³ L/R	Insertion Loss TX/RX (dB TYP)	$\begin{array}{c} \textbf{Return Loss} \\ (\text{dB TYP}) \\ 100~\Omega~(\pm \text{15}~\Omega) \end{array}$			Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)		Hipot (MIN)
			1-100 MHz	1-10 MHz	30 MHz	60-80 MHz	1-10 MHz	30-60 MHz	60-100 MHz	1-50 MHz	50-130 MHz	@60 Hz 1 MIN
JG0-0031	1x2	Y-G/G	-0.15	-20	-16	-12	-40	-35	-30	-20	-20	1500 Vrms
JG0-0032	1x4											

### NOTES:

- 1. Both transmit and receive channels meet IEEE 802.3 specifications.
- 2. Different electrical and mechanical specifications can be accommodated.
- Contact Pulse Applications Engineering.
- 3. LEDs Left/Right: Y-G = Bi-color: yellow/green; G = green.

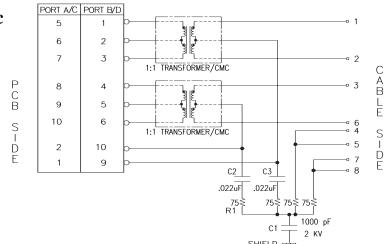
RJ45 Durability Testing Rating						
Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)		
JG0 Series	5 lbs./2.268 kgs.	5 lbs./2.268 kgs.	500 Insertions	20 lbs./9.072 kgs.		

RJ45 Material Specification								
Part		Shield		Contact		Housing		
Number	Material	Finish	Material	Plating Area	Solder Area	Material	Specification	
JG0 Series	Brass	10-20µ inches thick nickel over 10-20µ inches thick brass	Phosphor Bronze	30µ inches gold over 30-80µ inches nickel	75-300µ inches tin-lead over 75-300µ inches nickel	Thermoplastic	UL 94 V-0	

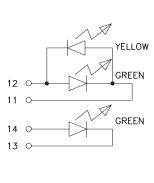
### Notes:

- 1. All part numbers starting with the series prefix JG0 comply to the above limits.
- 2. Connector dimensions comply with FCC dimension requirements.

### **Schematic**



### **LED Pins**

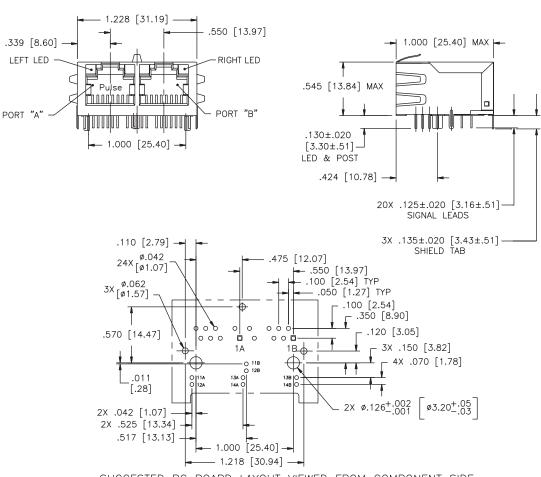


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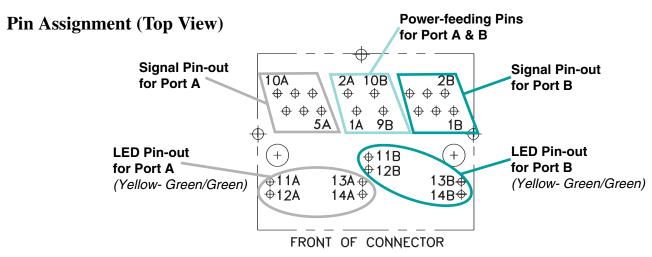


### **Mechanicals**

### JG0-0031 Dual Port PoE Solution



SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE PCB LAYOUT DIMENSIONS TO BE ±.003 UNLESS OTHERWISE SPECIFIED



**NOTE:** Pins 3A, 4A, 7B and 8B are removed from component to simplify PCB layout and separation of Power, Signal and Ground planes.

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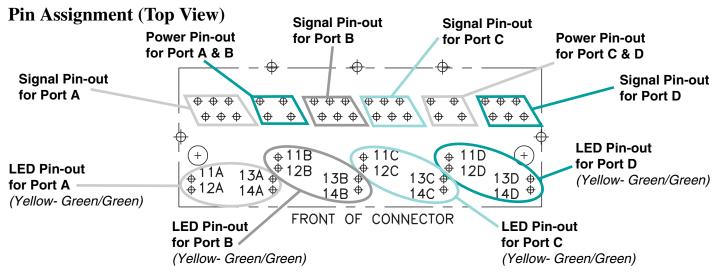


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### **Mechanicals**

#### JG0-0032 **Quad Port PoE Solution** .125±.020 [3.16±.51] 2.328 [59.13] SIGNAL LEADS 1.650 [41.91] RIGHT LED - 1.100 [27.94] 1.000 [25.41] -.550 LEFT LED [13.97] .535 [13.60] .130±.020 [3.30±.51] LED LEADS .424 & POST [10.78] .135±.020 [3.43±.51] 1.575 [40.01] SHIELD TABS 1.025 [26.05] -5X ø.062 [ø1.57] .475 [12.07] -- .050 [1.27] .100 [2.54] 56X Ø.042 [Ø1.07] .570 [14.47] PIN 10A .350 [8.90] - .100 [2.54 **b** 0 0 0 0 4 - .011 [.28] 0 0 0 0 0 0 0 0 0 .120 [3.05] 0 0 🖸 0 0 0 0 0 0 0 0 1A 1B 1C (+)13B O 14B O .150 [3.82] 8X .070 [1.78] .110 [2.79] -2X .525 [13.34] 3X .034 [.86] 2X .516 [13.11] .042 [1.07] 1.650 [41.91] 2.100 [53.34] 2.320 [58.93]

PC Board Layout Component Side Shown PCB LAYOUT DIMENSIONS TO BE ±.003 UNLESS OTHERWISE SPECIFIED



NOTE: Pins 3A, 4A, 7B, 8B, 3C, 4C, 7D and 8D are removed from component to simplify PCB layout and separation of Power, Signal and Ground planes.