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[Pulse Electronics Corporation](#)

[JG0-0032](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

PULSEJACK™

PowerJack G-UP10



www.pulseeng.com

Description:

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	LEDs ³ L/R	Insertion Loss TX/RX (dB TYP)	Return Loss (dB TYP) 100 Ω (±15 Ω)				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	1500 Vrms
JG0-0031	1x2	Y-G/G	-0.15	-20	-16	-12	-40	-35	-30	-20	-20		
JG0-0032	1x4												

NOTES:

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

Contact Pulse Applications Engineering.

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.

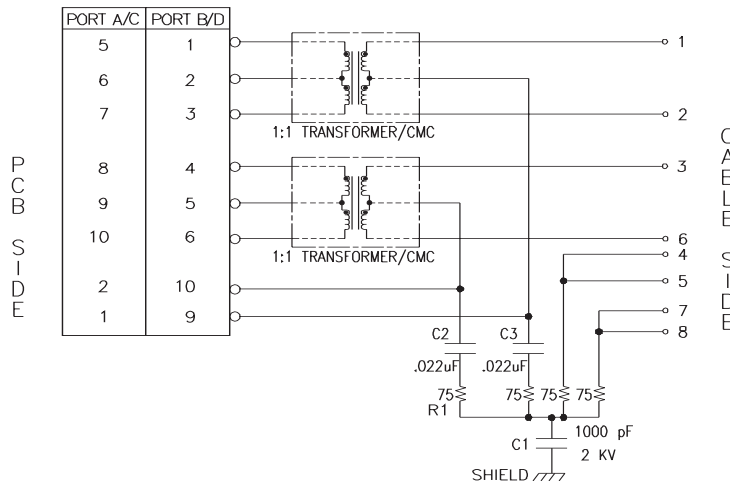
RJ45 Material Specification

Part Number	Shield		Contact			Housing	
	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

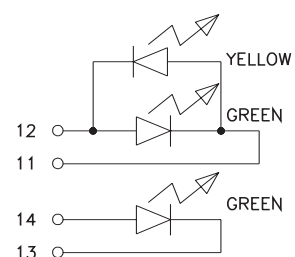
Notes:

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



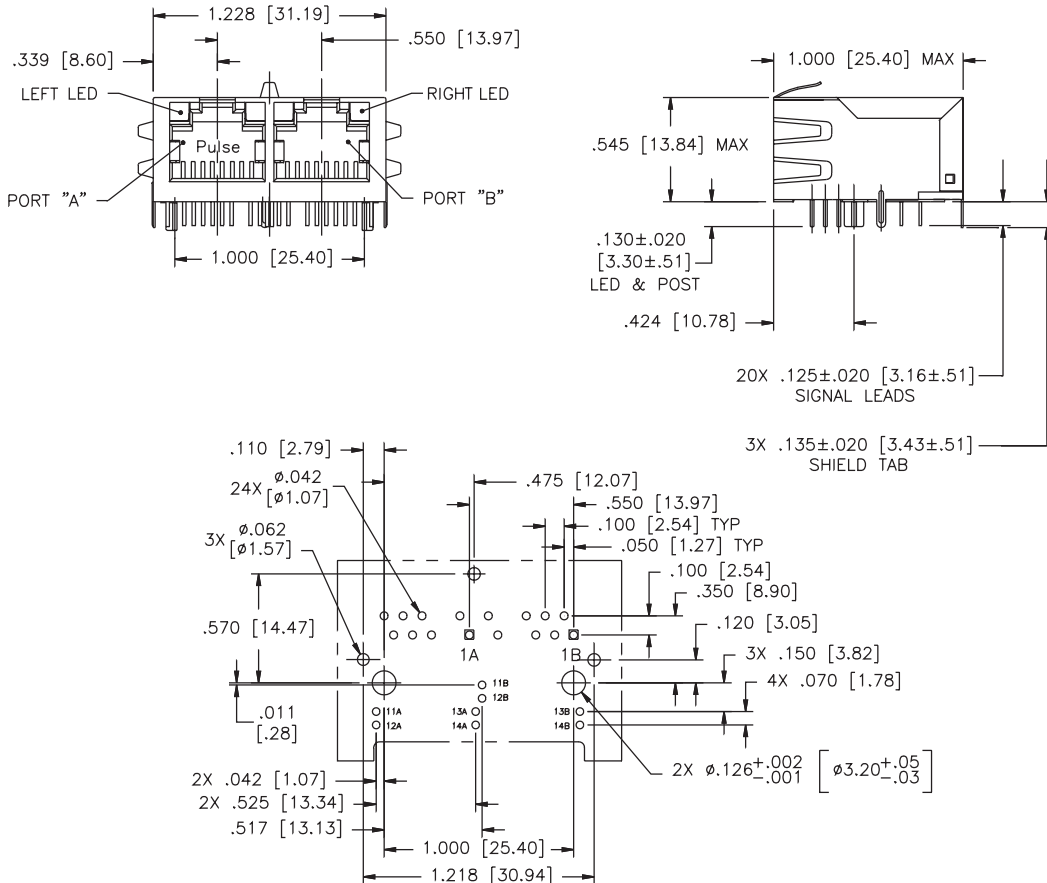
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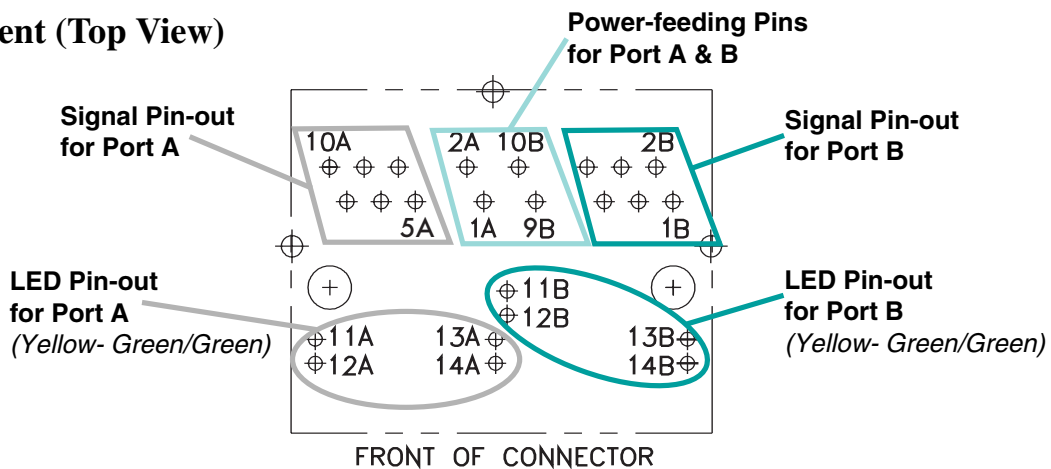
Mechanicals

JG0-0031 Dual Port PoE Solution



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

Pin Assignment (Top View)



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

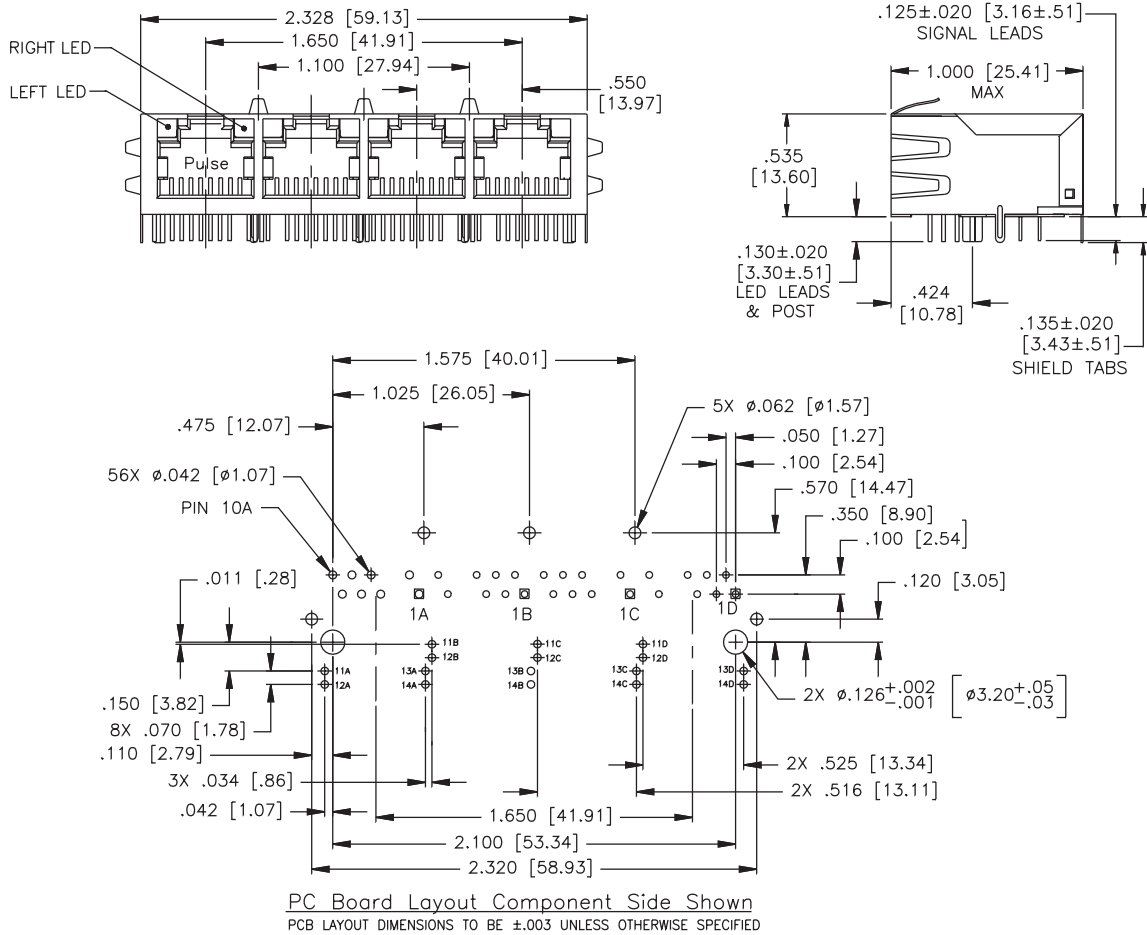
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PowerJack G-UP10

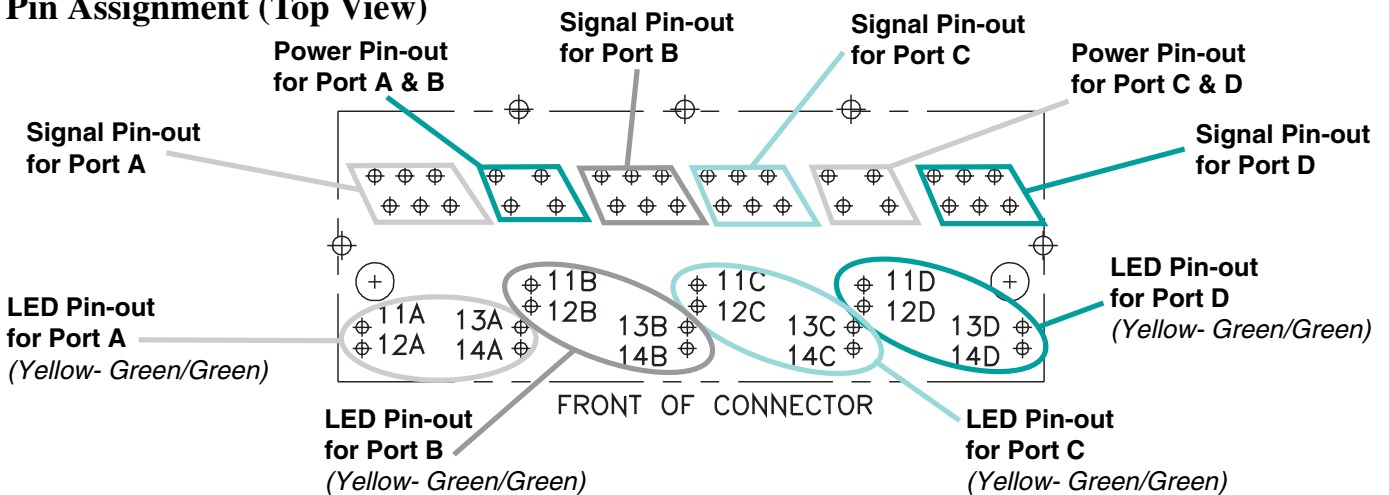


Mechanicals

JG0-0032 Quad Port PoE Solution



Pin Assignment (Top View)



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.