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Industrial 10/100Base-TX PulseJack™ Integrated RJ45 Connector

Rugged latch-Up Series designs for 30W PoE and Industrial use



Features and Benefits:

- *Side entry,small footprint to minimize board space*
- *Modular Construction, 6u" and 30u" Gold Contacts*
- *Meets IEEE 802.3 specification for 10/100Base-TX*
- *Industrial operating temperature -40 to +85oC*
- *Options to support Power over Ethernet*
- *High performance for EMI suppression*

Electrical Specifications @ 25°C - Operating Temperature -40°C to 85°C						
Part Number	**LED Configuration** (L/R)	**Supported PoE Current**	**Choke Fitted** (2Wire unless stated)	**EMI Fingers**	**Isolation** (Pri:Sec)	**Connector Orientation**
JD1-0003NL	None	No	Signal Line	None	2250VDC / 60sec	Latch-Up
JD1-0004NL	Green / Yellow	No	Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0005NL**	None	350mA - 4 Pair	Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0006NL**	None	350mA - 4 Pair	3W, Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0007NL**	Yellow / Green	350mA, 2Pair Rectified DC	3W, Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0008NL	Green / Yellow	No	Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0009NL**	Yellow / Green	350mA, 2Pair Rectified DC	3W, PHY Side	None	2250VDC / 60sec	Latch-Up
JXD1-0014NL	Yellow / Green	No	Signal Line	Top & Sides	2250VDC / 60sec	Latch-Up
JXD1-0018NL	Green / Yellow	No	Signal Line	None	2250VDC / 60sec	Latch-Up

** Isolation is across the Transformer only due to PoE feature

Electrical Specifications @ 25°C - Operating Temperature -40°C to 85°C									
Part Number	**Inductance (min)** Media Side	**Insertion Loss** (Max)	**Return Loss*** (dB MIN) 100Ω (±15Ω)			**Cross Talk** (dB TYP)		**Common Mode Rejection** (dB TYP)	
	100KHz, 0.1mA	**1-100 MHz**	**1- 30MHz**	**30-60MHz***	**60-80MHz***	**1- 30MHz**	**60-100MHz**	**1-30 MHz**	**30-200 MHz**
JD1-0003NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JD1-0004NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0005NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0006NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0007NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0008NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0009NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0014NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB
JXD1-0018NL	350mH	-1.20dB	-16dB	-12dB	-10dB	-35dB	-30dB	-35dB	-30dB

* Return Loss is calculated using -20 + [15 x LOG10 (f/40MHz)]

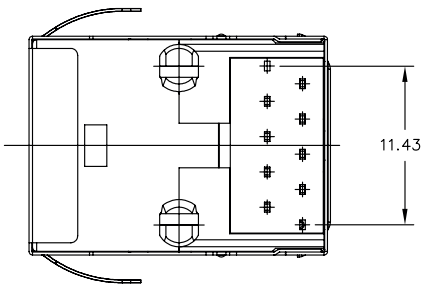
Notes:

1. ROHS Compliant:
2. Plastic housing: thermoplastic material with flammability rating UL 94V-0 or better
3. Contacts plating: 30 micro-inch gold plating -except JD1-0003/4NL at 6 mirco-inch
4. Contacts base material: Phosphor bronze
5. Under plating: 30 micro-inch min nickel
6. Solder Tail Plating: 100 micro-inch (min), inches 100% tin, matte finish
7. Metal shield nickel plating on Copper Alloy
8. Jack cavity conforms to FCC part 68 subpart
9. PCB plating: HASL
10. Storage temperature: -40°C to +85°C
11. Compliance to J-STD:
    A. J-STD-002: solderabilitiy at 245°C DIP and LOOK test
    B. J-STD-020: level 1, no moisture sensitive
    C. J-STD-075: R7, 260°C maximum through Wave Solder
12. Parts come in full Trays of 50pcs

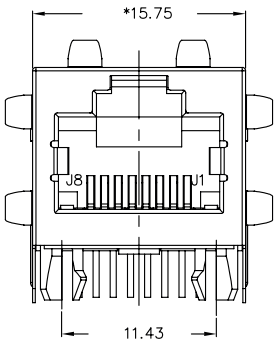
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Mechanicals

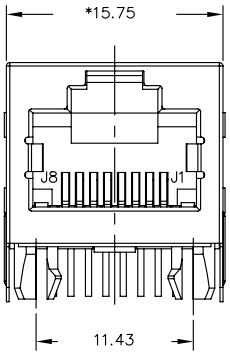
JD1/JXD1-00xxNL



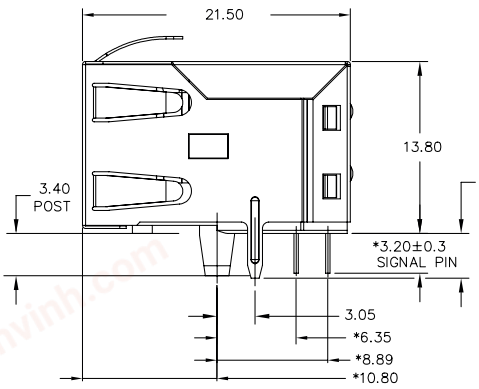
Design with EMI Fingers and LEDs

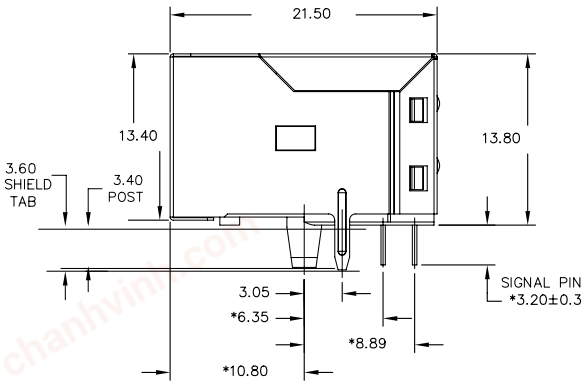


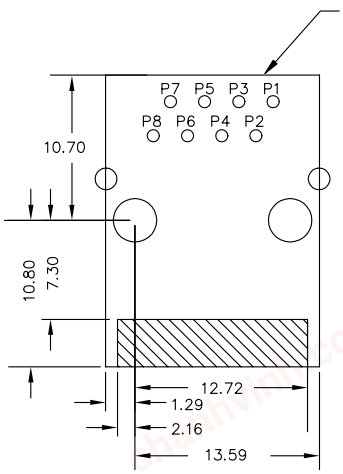
Design without EMI fingers and LEDs



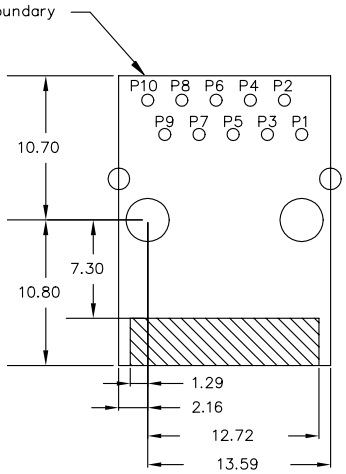
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES: X.XX= ±0.10



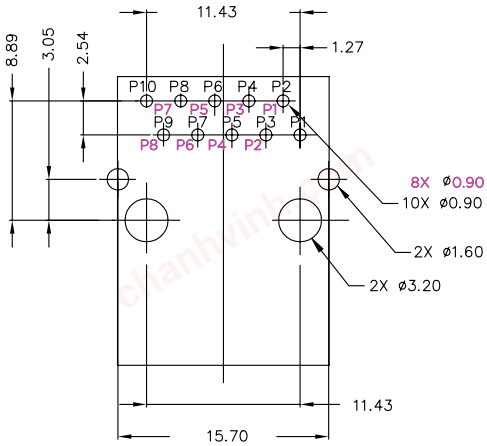




JD1-0003NL



JXD1-0005/6NL



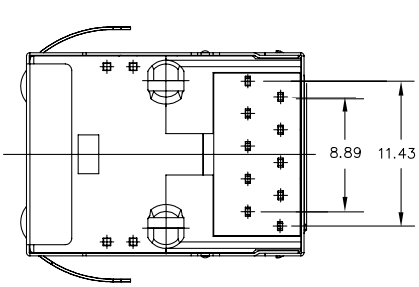
RECOMMENDED PWB LAYOUT
(COMPONENT SIDE SHOWN)

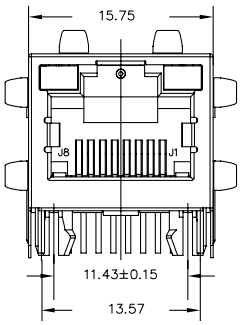
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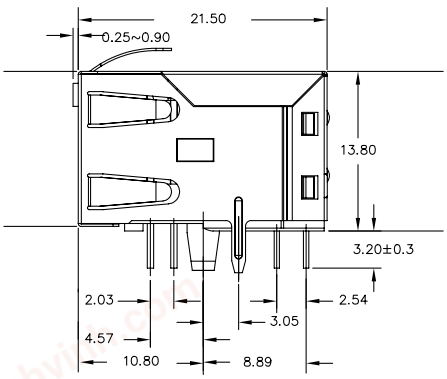
Mechanicals

JD1/JXD1-00xxNL

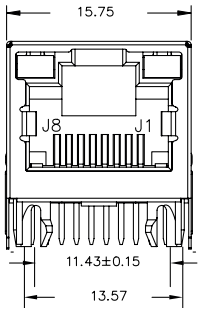
Design with EMI Fingers and no LEDs

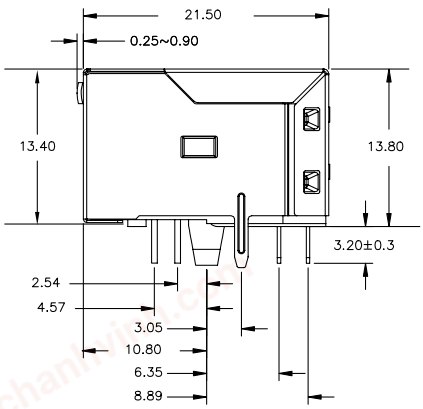




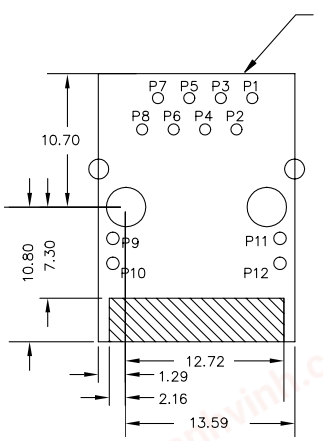


Design without EMI fingers and no LEDs

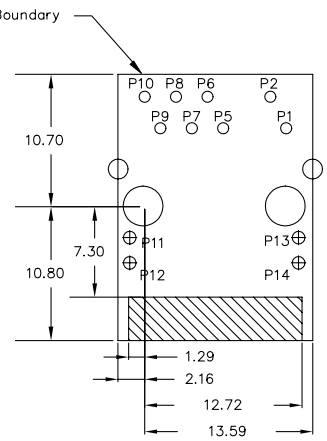




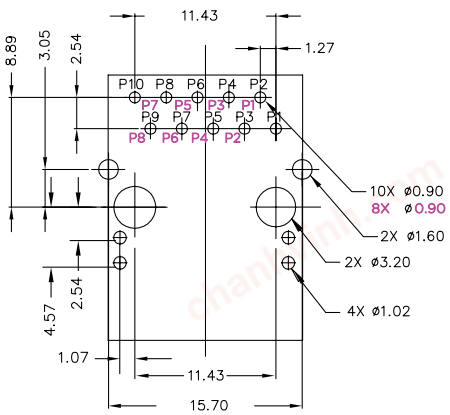
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES: X.XX= ±0.10



JD1-0004NL, JXD1-008/14NL



JXD1-0007/9NL

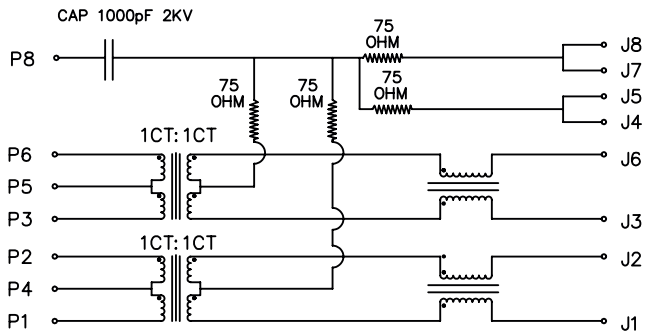


RECOMMENDED PWB LAYOUT
(COMPONENT SIDE SHOWN)

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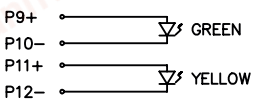
SCHEMATICS

JD1-0003NL*, JXD1-0008/14/18NL

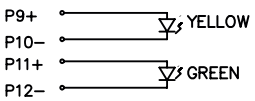


*NOTE: JD1-0003NL has no LEDs fitted

*LEDs for JXD1-0008NL, JXD1-0018NL



*LEDs for JXD1-0014NL

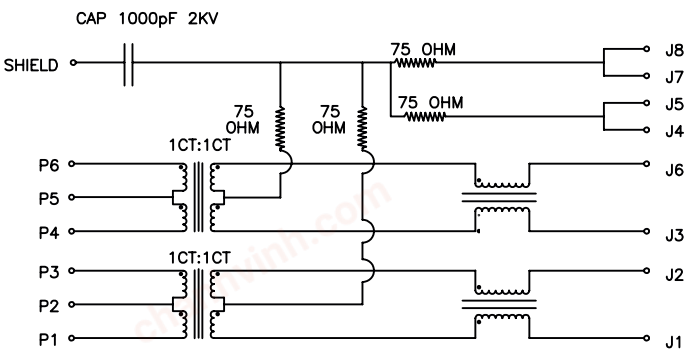


LED SPECIFICATION

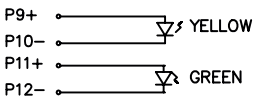
STANDARD LED	WAVELENGTH	FORWARD V(MAX)	TYP
GREEN	565nm	2.4V	2.2V
YELLOW	590nm	2.5V	2.1V

*WITH A FORWARD CURRENT OF 20mA

JD1-0004NL



*LEDs for JXD1-0004NL

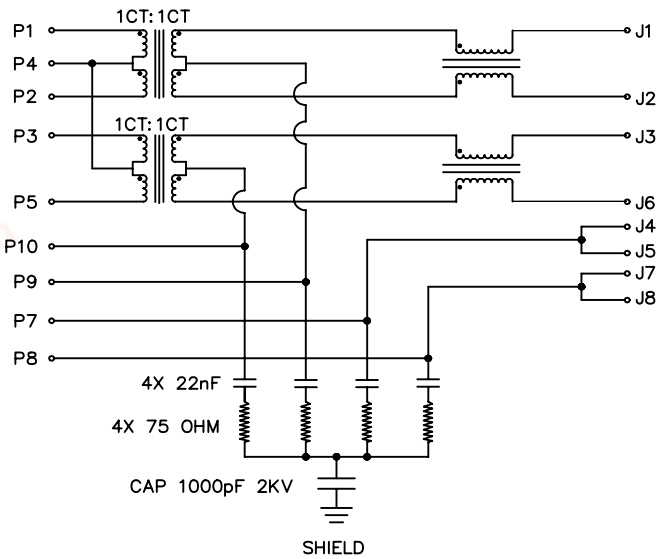


LED SPECIFICATION

STANDARD LED	WAVELENGTH	FORWARD V(MAX)	TYP
GREEN	565nm	2.4V	2.2V
YELLOW	590nm	2.5V	2.1V

*WITH A FORWARD CURRENT OF 20mA

JXD1-0005NL

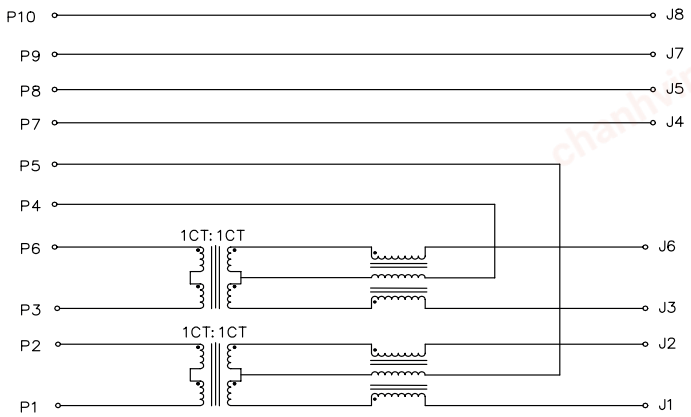


Industrial 10/100Base-TX PulseJack™ Integrated RJ45 Connector

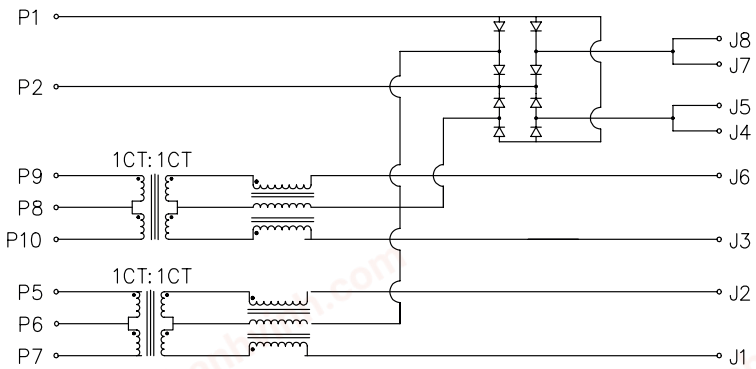
Rugged latch-Up Series designs for 30W PoE and Industrial use

SCHEMATICS

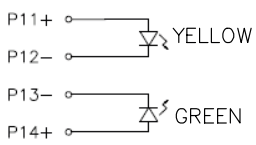
JXD1-0006NL



JXD1-0007NL



***LEDs for JXD1-0007NL**

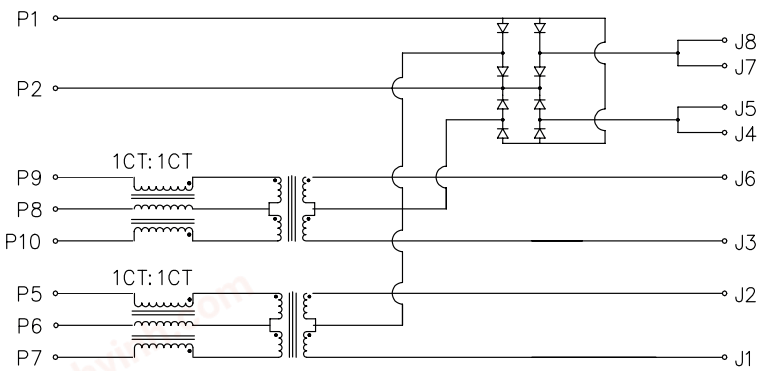


LED SPECIFICATION

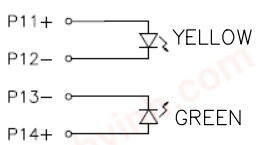
STANDARD LED	WAVELENGTH	FORWARD V(MAX)	TYP
GREEN	565nm	2.4V	2.2V
YELLOW	590nm	2.5V	2.1V

*WITH A FORWARD CURRENT OF 20mA

JXD1-0009NL



***LEDs for JXD1-0009NL**



LED SPECIFICATION

STANDARD LED	WAVELENGTH	FORWARD V(MAX)	TYP
GREEN	565nm	2.4V	2.2V
YELLOW	590nm	2.5V	2.1V

*WITH A FORWARD CURRENT OF 20mA

For More Information:

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