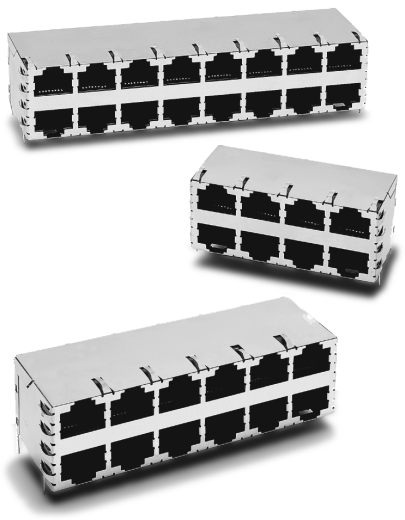
PULSEJACK™
2XN RJ45 Connector

Pulse
A TECHNITROL COMPANY

www.pulseeng.com

Description:

10/100 Base-TX RJ45 2XN Tab-UP with or without LEDs (J2 series) integrated magnetics connector (ICM), designed to support applications, such as Hub and Switches and Power over Ethernet enabled switch/hub systems.



Features and Benefits:

- RoHS peak wave solder temperature rating 260°C
- 2XN RJ45 with internal magnetics
- Available with or without LEDs
- **Power over Ethernet (PoE) Enabled. Compatible to IEEE 802.3af standard**
- Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- Internal magnetics are 100% electrically tested for HI-POT and functionality

Electrical Performance Summary:

- Internal magnetics options available
- **Meets or exceeds IEEE 802.3i/u/af standard**
- 350µH minimum OCL with 8mA bias current
- High performance for maximum EMI suppression
- **Minimum 1500 Vrms isolation per IEEE 802.3i/u/af requirement**

Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

RoHS Compliant	No. of Ports	Turns [2] Ratios		LEDs [3]	PoE [4] Enabled	Insertion Loss (dB TYP)	Return Loss (dB TYP) 100Ω ±15Ω				Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)	
Part No.		TX	RX	L/R		1-65 MHz	1-10 MHz	10-30 MHz	30-60 MHz	60-80 MHz	1-30 MHz	30-60 MHz	60-100 MHz	1-50 MHz	50-150 MHz
J2039H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J2042H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J2045H3 (A,B,C)NL	8,12,16	1CT:1CT	1CT:1CT	None	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0013NL	4	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0014NL	8	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0015NL	12	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0016NL	16	1CT:1CT	1CT:1CT	G/Y, G/Y	No	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0017NL	8	1CT:1CT	1CT:1CT	None	Yes	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20
J20-0019NL	12	1CT:1CT	1CT:1CT	None	Yes	-1	-20	-16	-12	-12	-40	-35	-30	-30	-20

Notes:
1. Part numbers code (A,B,C, D): A = 2x4, B = 2x6, C = 2x8, D = 2x2
2. Both transmit and receive channels meet IEEE 802.3 specifications.
3. Bi-color LEDs: G = green; Y = yellow for each port
4. PoE = Power over Ethernet Compatible product, compliant to IEEE 802.3af standard, providing minimum 1.5Kv isolation
5. Contact Pulse for PoE enabled product with LEDs.

RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J2 Series	5lbs./2.268kgs.	5lbs./2.268kgs.	750 Insertions	20lbs./9.072kgs.

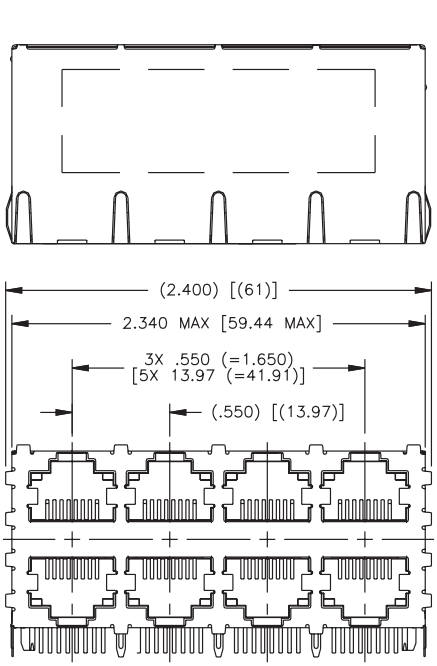
RJ45 Material Specification

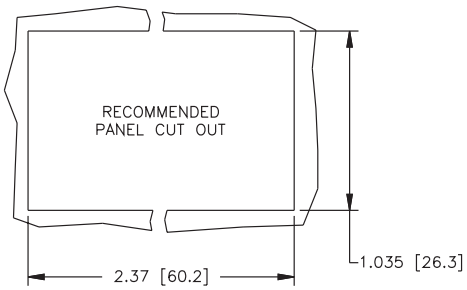
Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
J2 Series	Brass	10-20m inches Nickel over 10-20m inches Brass	Phosphor Bronze	Nickel underplating and selective gold plating 30µ inches	Tin matte finish	Thermoplastic	UL 94 V-0

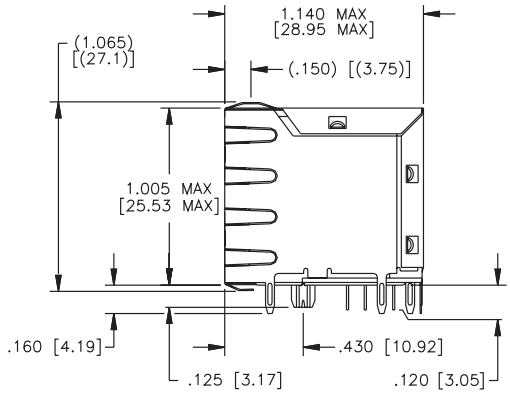
Notes: 1. All connector part numbers starting with the series prefix J2 comply to the above limits. 2. Connector dimensions comply with FCC dimension requirements.

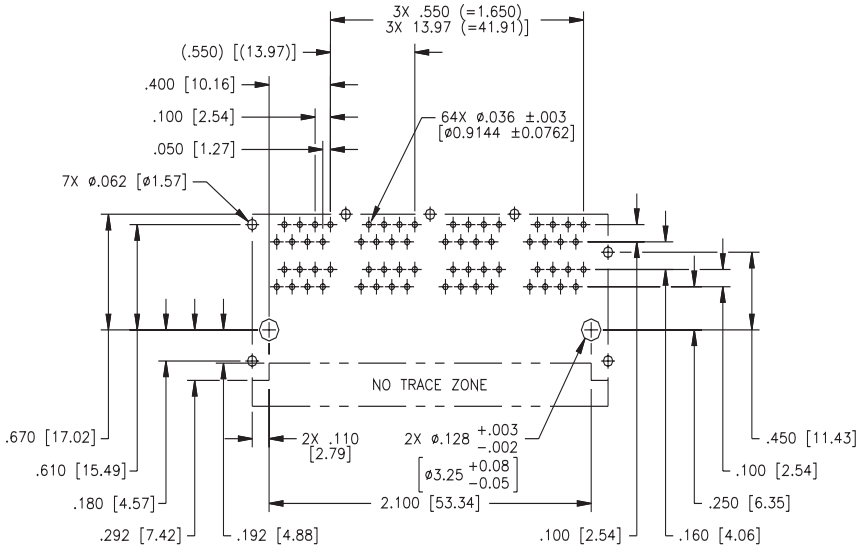
J2 Series (No LEDs) Mechanicals (available PoE Enabled)

2 X 4



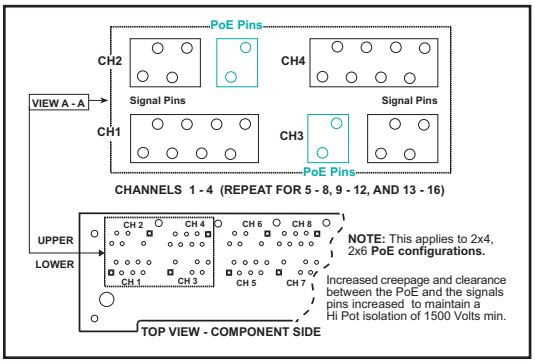






SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ±.002

PoE Enabled Connector Pin Out Assignment

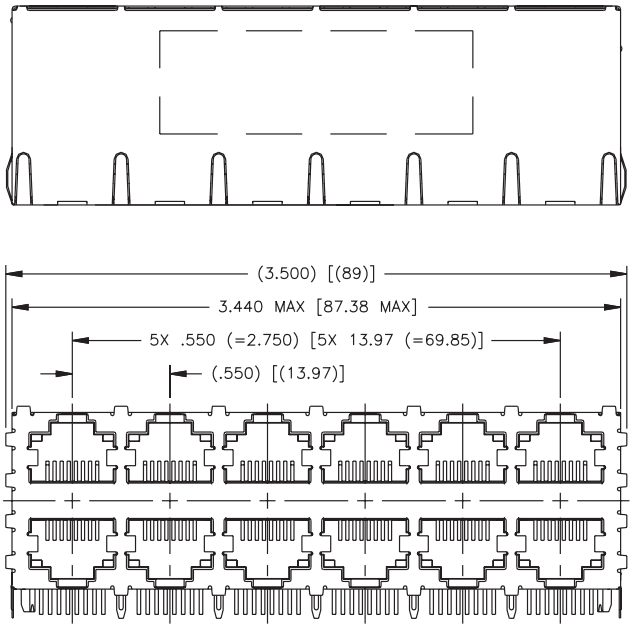


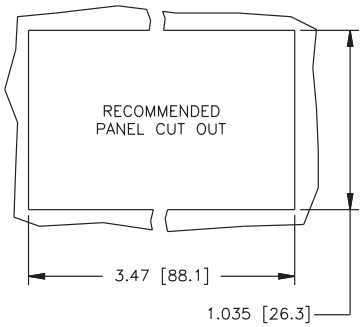
Dimensions: Inches / mm

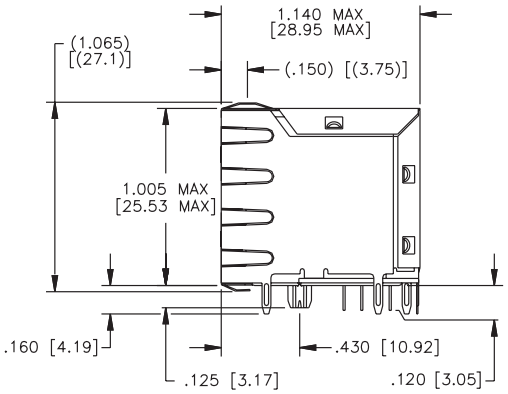
Unless otherwise specified, all tolerances are ± .010 / 0,25

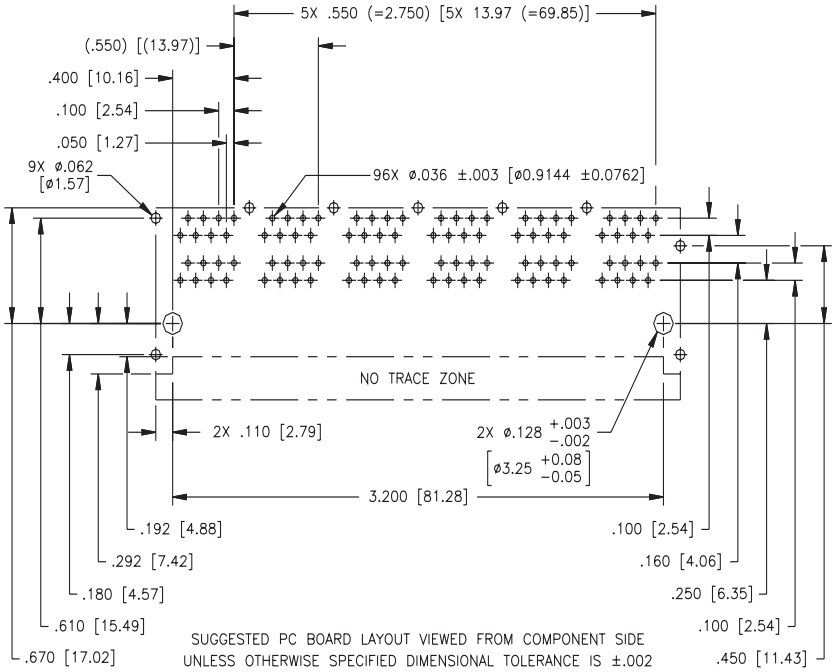
J2 Series (No LEDs) Mechanicals (available PoE Enabled)

2 X 6

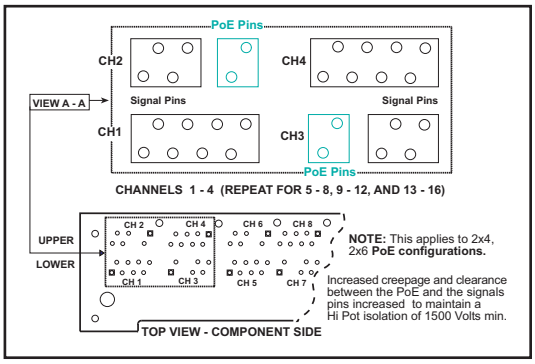








PoE Enabled Connector Pin Out Assignment

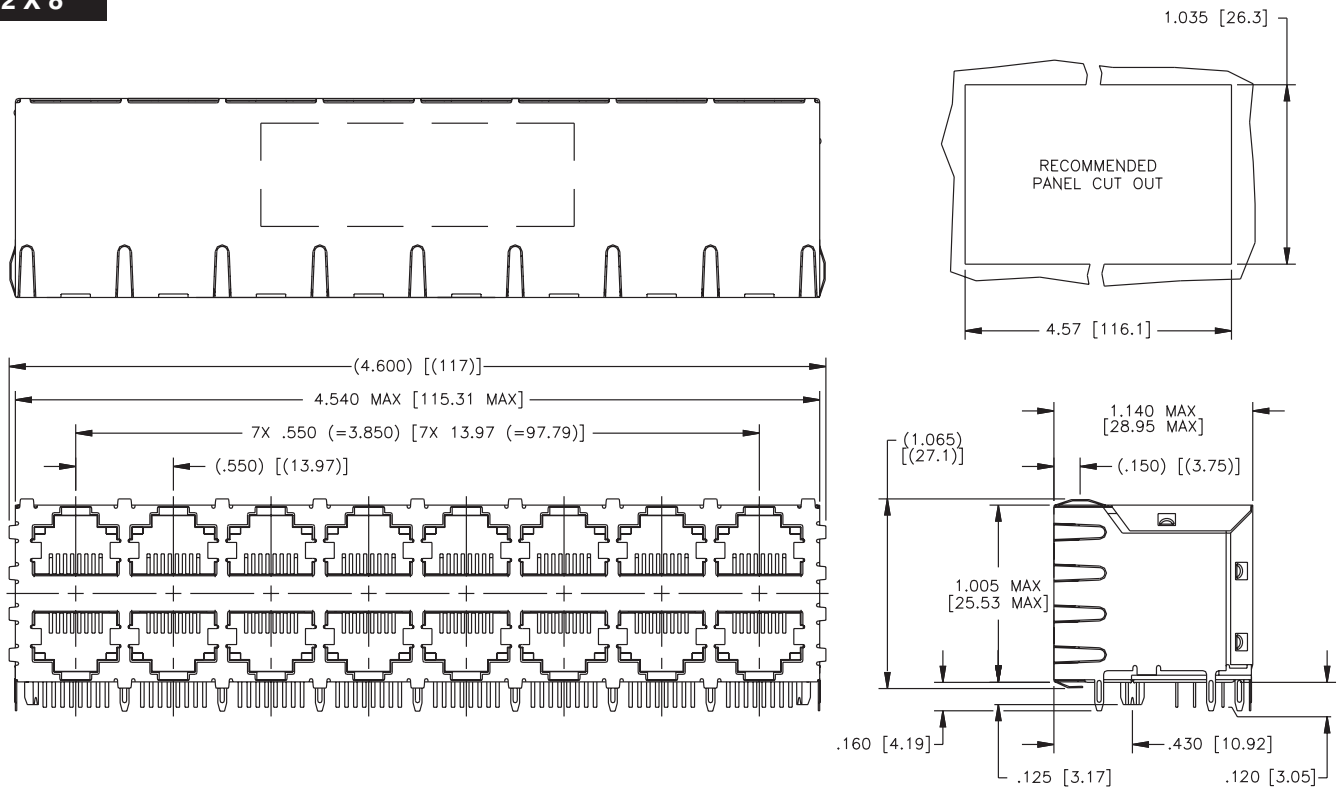


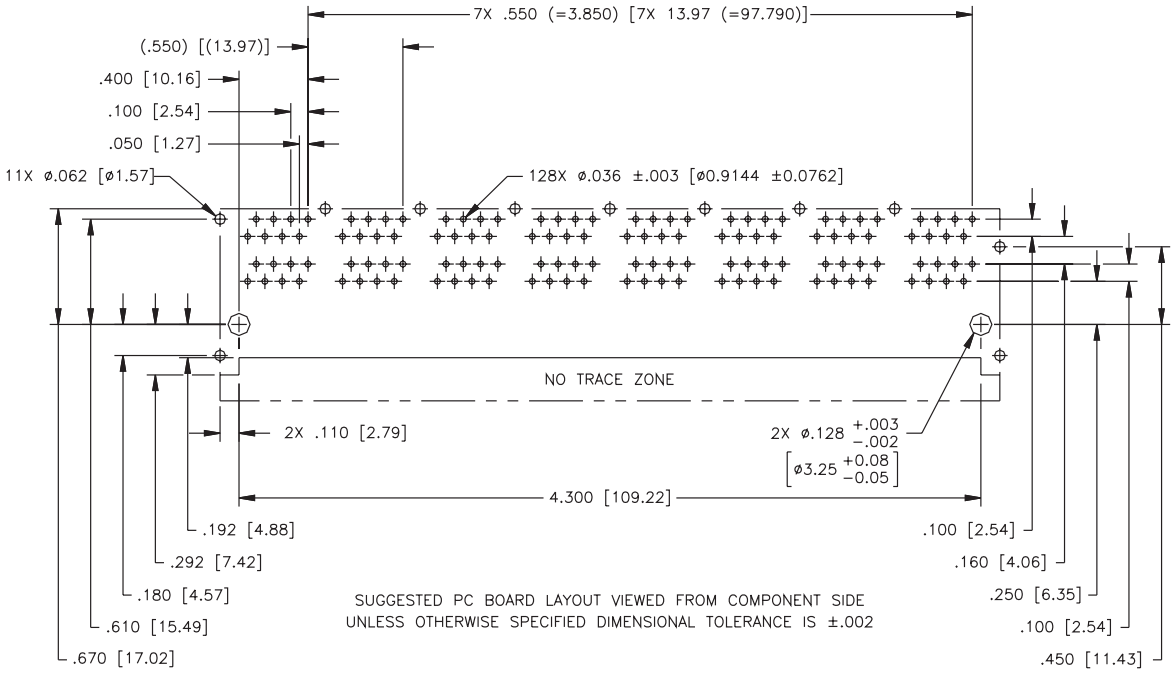
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

J2 Series (No LEDs) Mechanicals (not PoE Enabled)

2 X 8



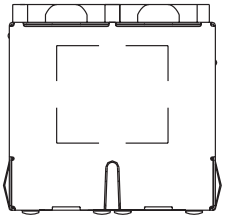


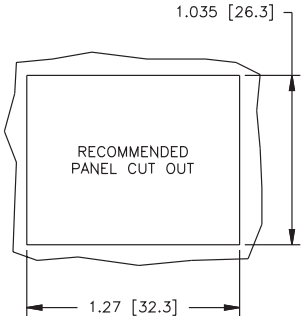
Dimensions: Inches / mm

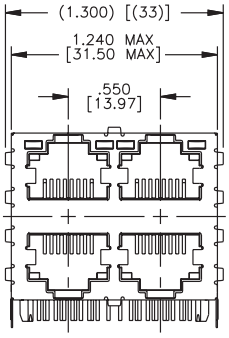
Unless otherwise specified, all tolerances are ± .010 / 0,25

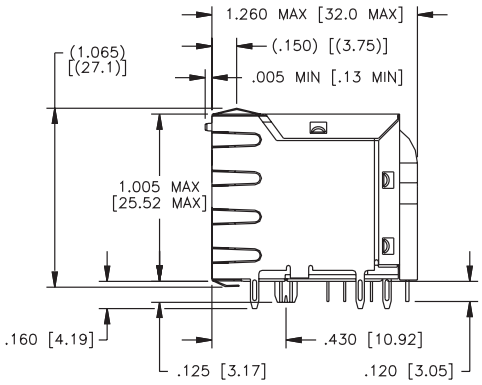
J2 Series (With LEDs) Mechanicals (not PoE Enabled)

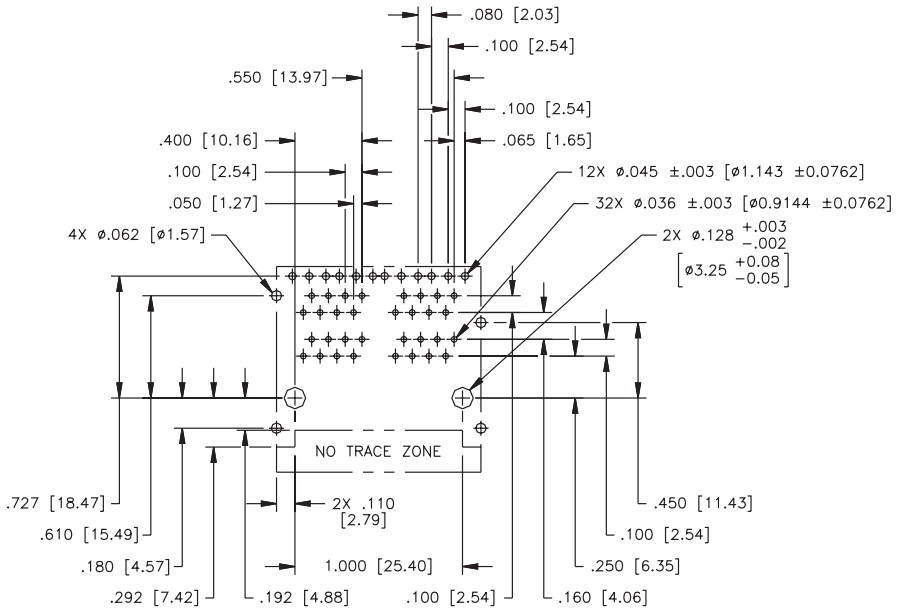
2 X 2











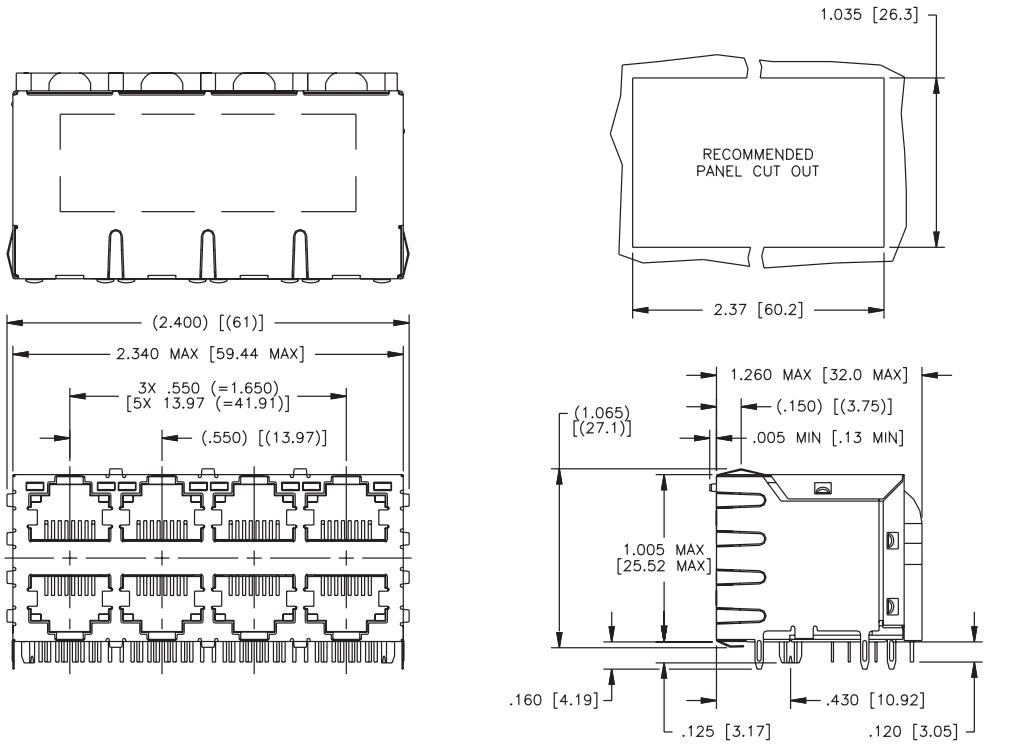
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ±.002

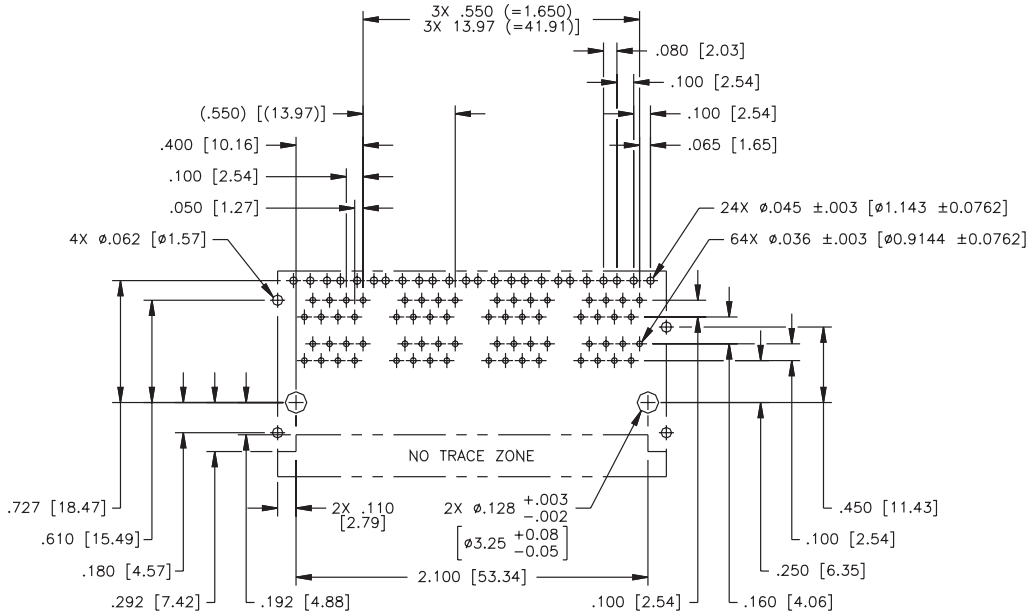
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

J2 Series (With LEDs) Mechanicals (not PoE Enabled)

2 X 4





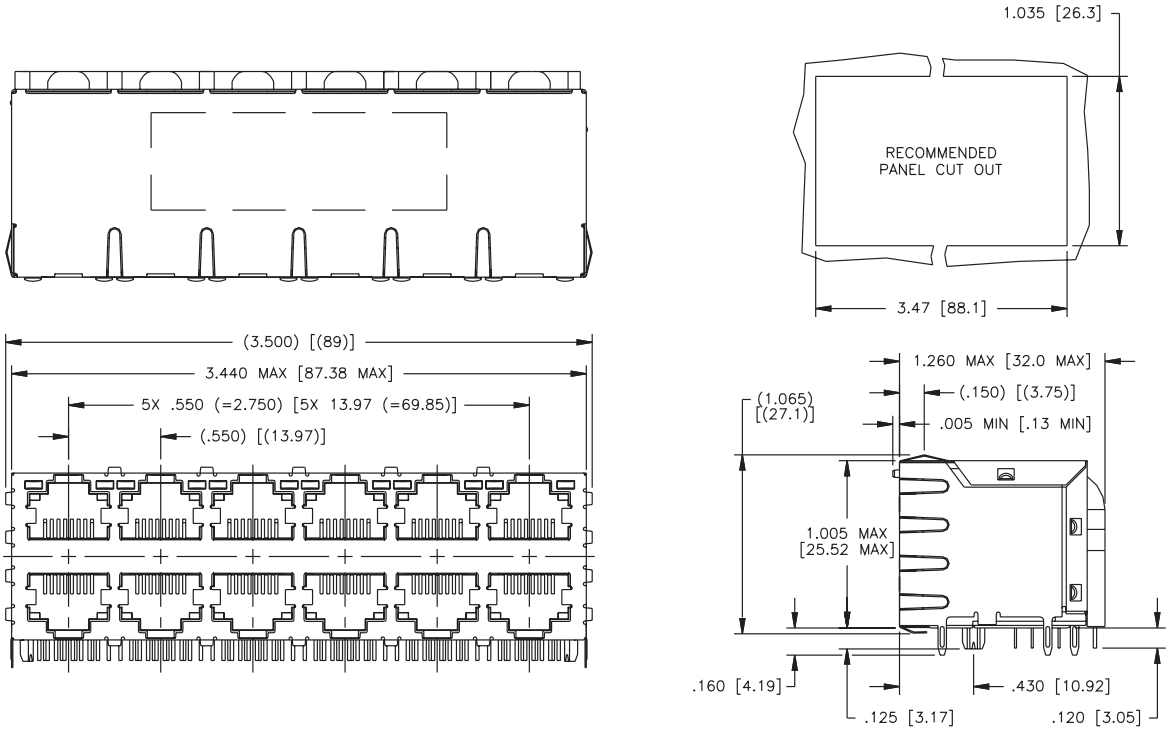
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ±.002

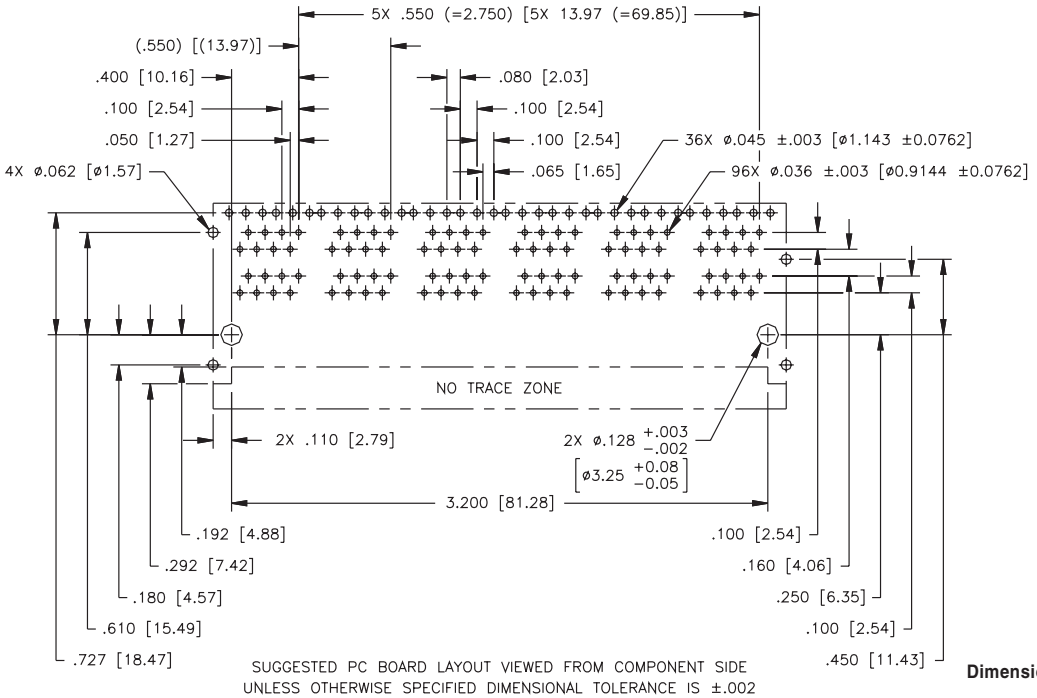
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

J2 Series (With LEDs) Mechanicals (not PoE Enabled)

2 X 6





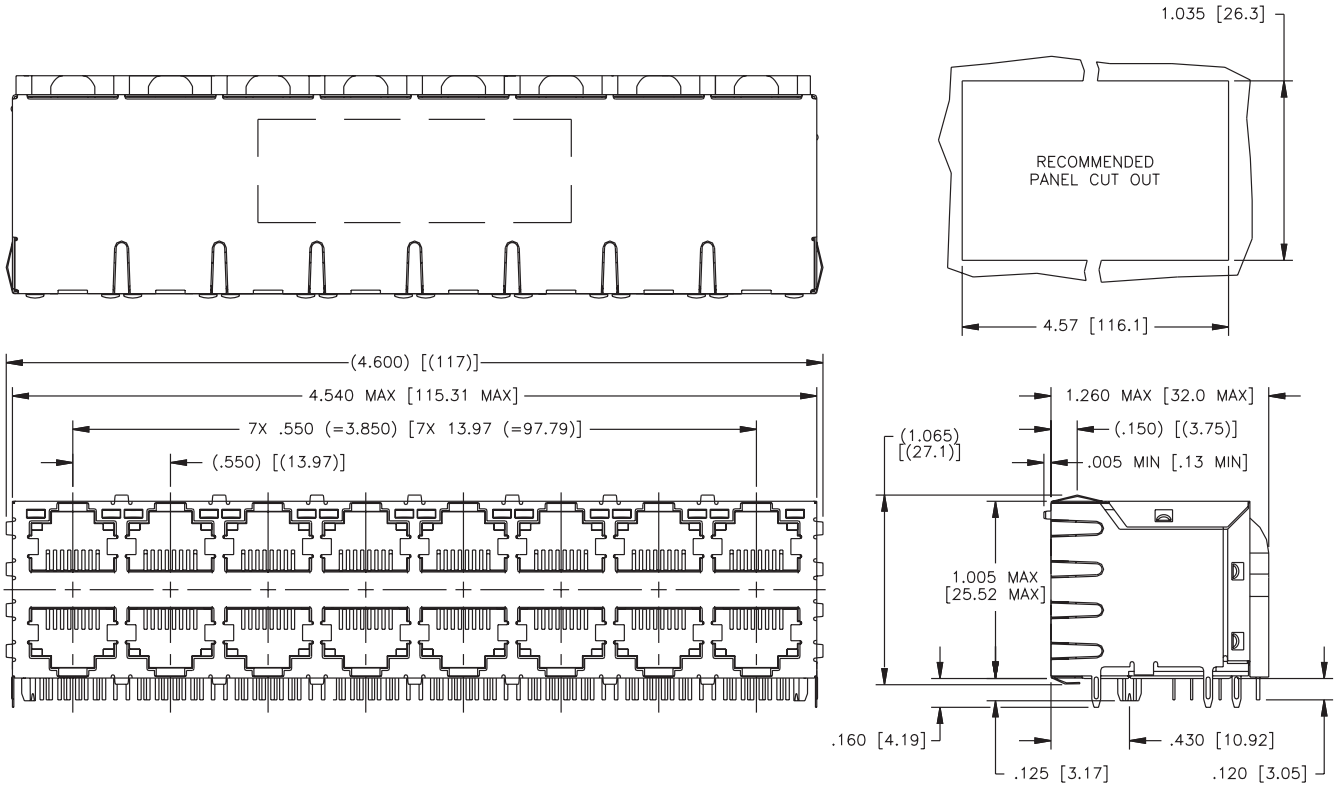
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ±.002

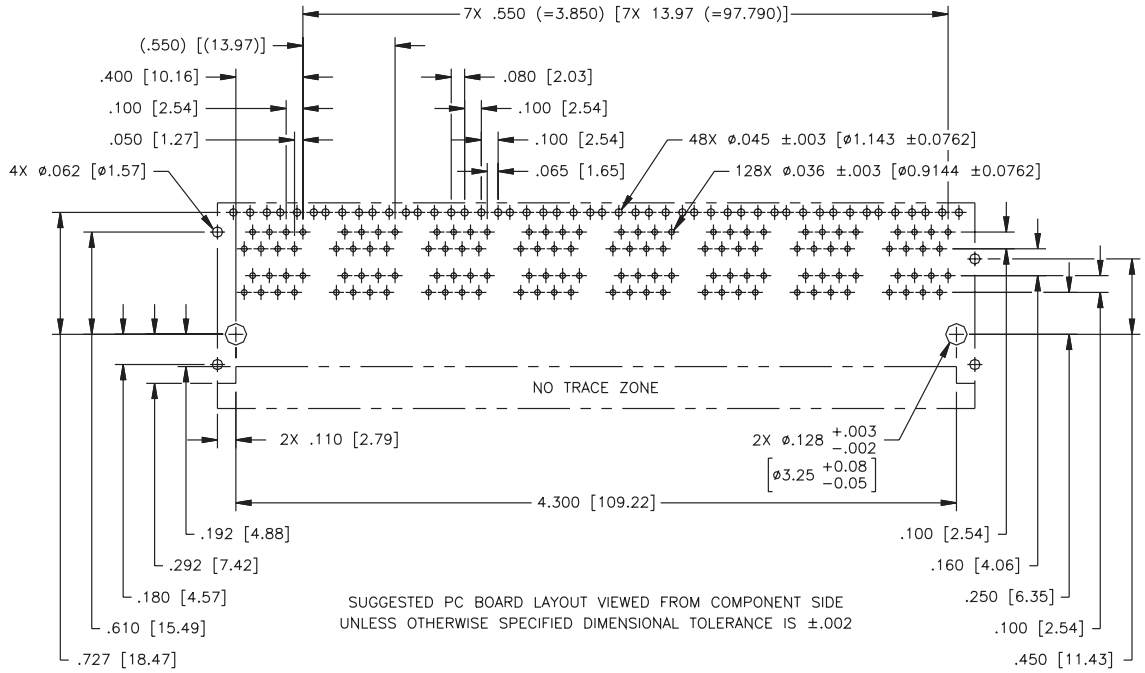
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

J2 Series (With LEDs) Mechanicals (not PoE Enabled)

2 X 8





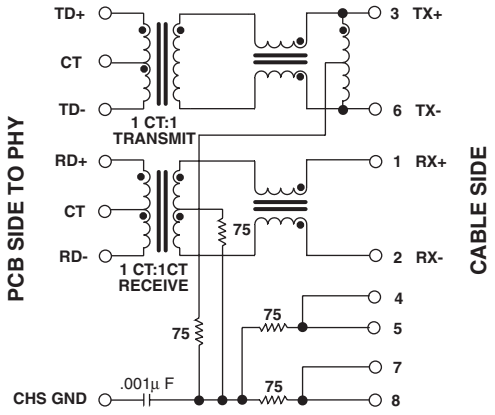
SUGGESTED PC BOARD LAYOUT VIEWED FROM COMPONENT SIDE
UNLESS OTHERWISE SPECIFIED DIMENSIONAL TOLERANCE IS ±.002

Dimensions: Inches / mm

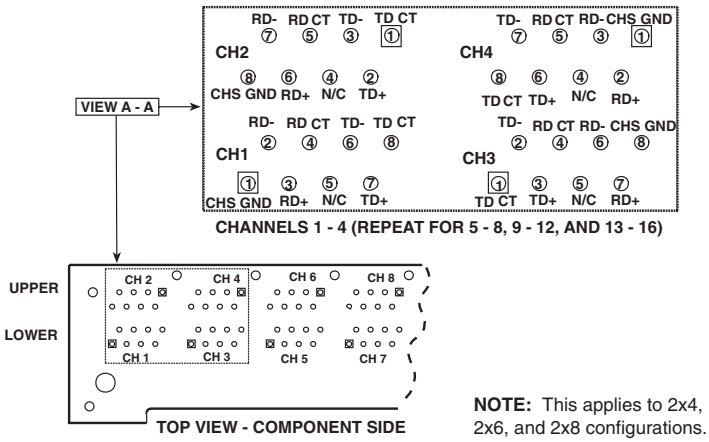
Unless otherwise specified, all tolerances are ± .010 / 0,25

J2 Series (No LEDs) Schematics (not PoE Enabled)

J2039



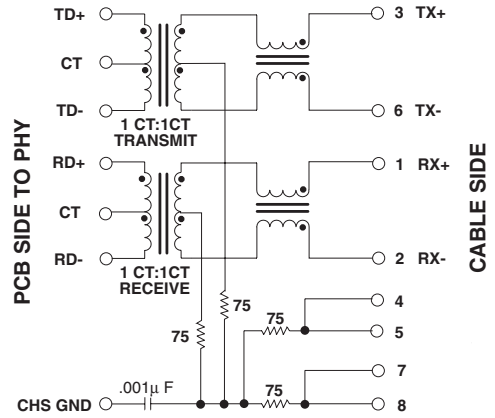
NOTE: Connect CHS GND to PCB ground.



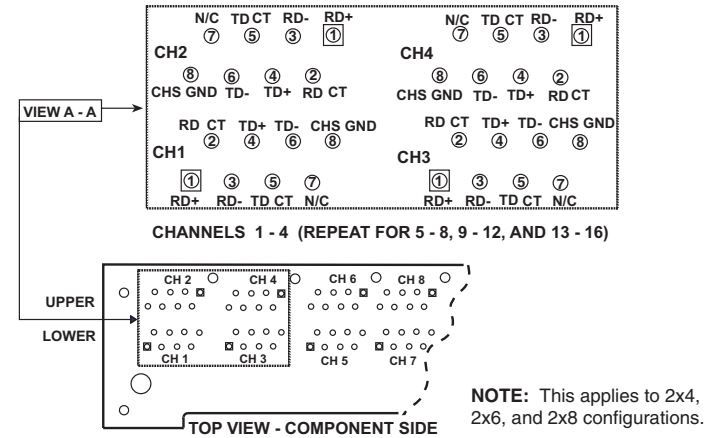
CHANNELS 1 - 4 (REPEAT FOR 5 - 8, 9 - 12, AND 13 - 16)

NOTE: This applies to 2x4, 2x6, and 2x8 configurations.

J2042



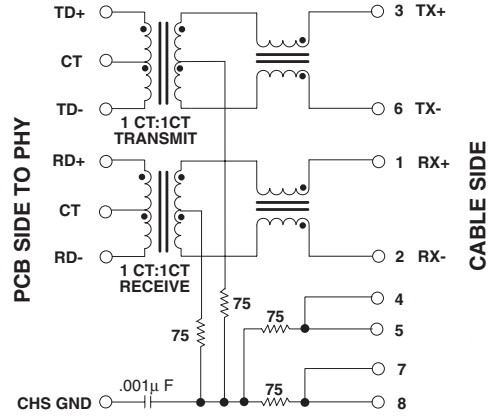
NOTE: Connect CHS GND to PCB ground.



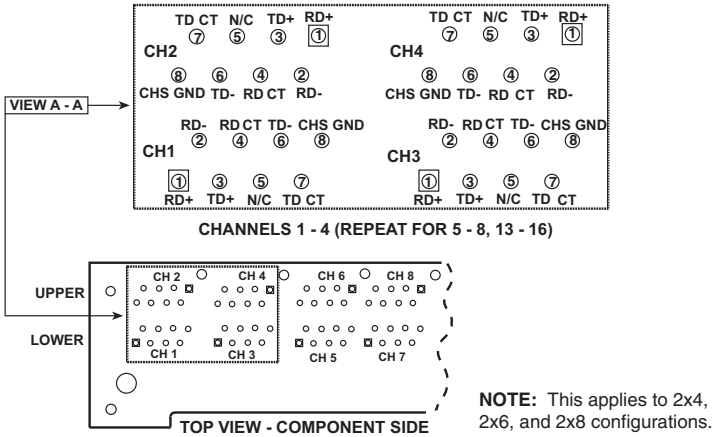
CHANNELS 1 - 4 (REPEAT FOR 5 - 8, 9 - 12, AND 13 - 16)

NOTE: This applies to 2x4, 2x6, and 2x8 configurations.

J2045



NOTE: Connect CHS GND to PCB ground.

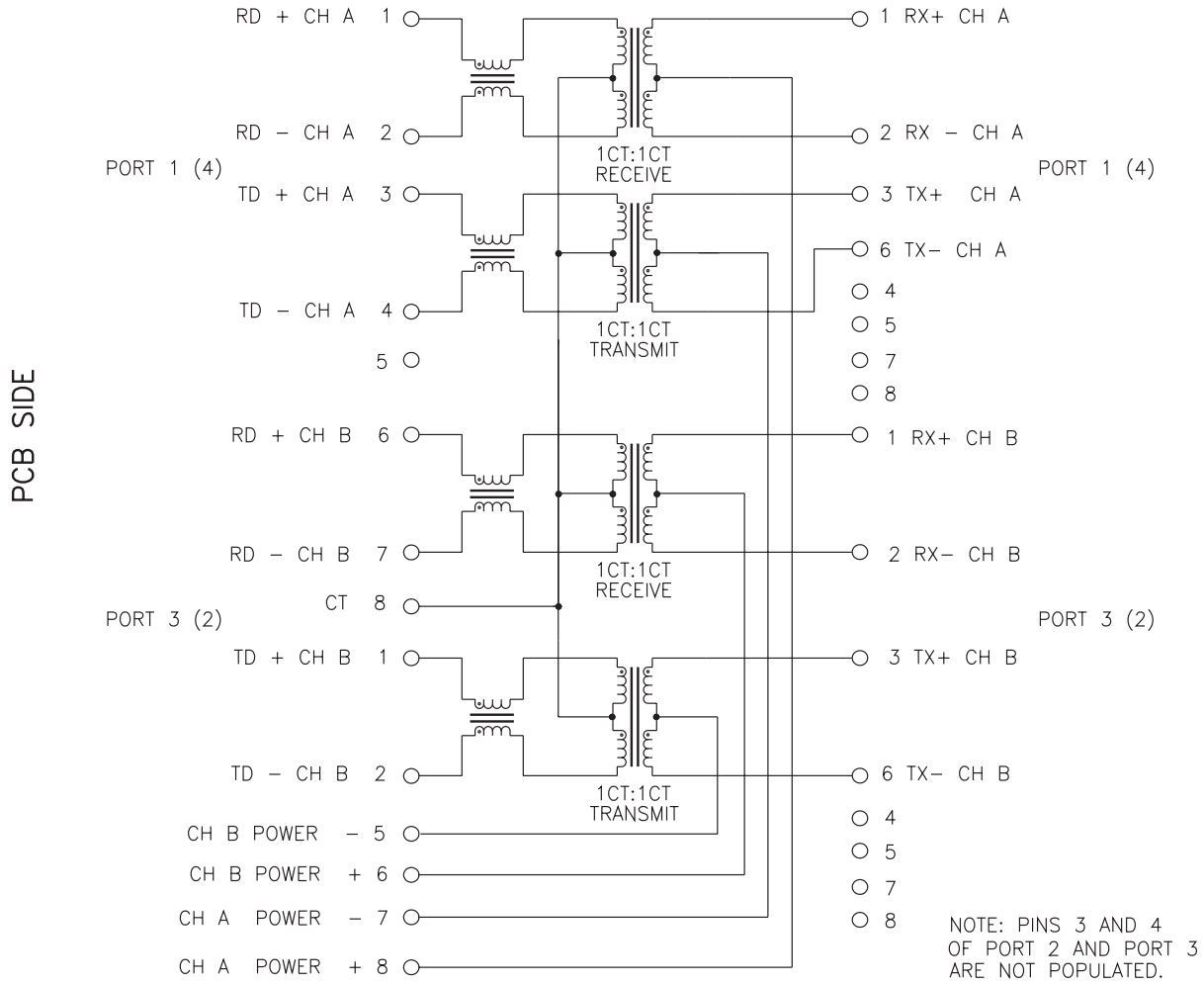


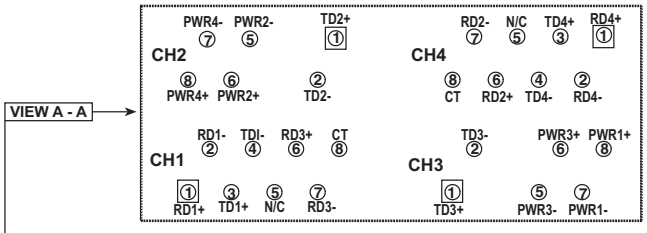
CHANNELS 1 - 4 (REPEAT FOR 5 - 8, 13 - 16)

NOTE: This applies to 2x4, 2x6, and 2x8 configurations.

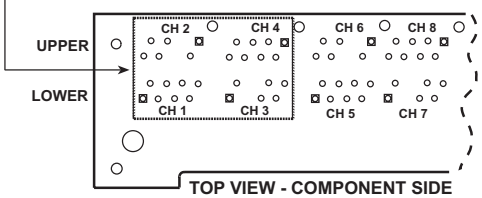
J2 Series (No LEDs/PoE Enabled) Schematics

J20-0017/19NL





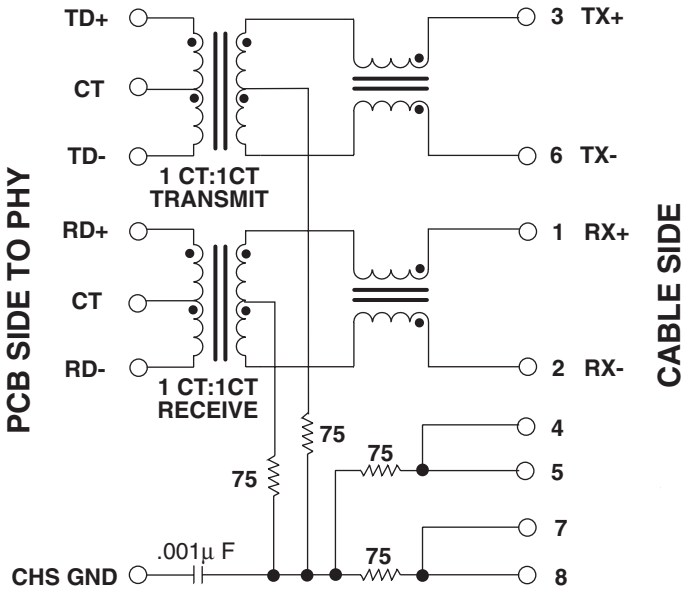
CHANNELS 1 - 4 (REPEAT FOR 5 - 8, 13 - 16)



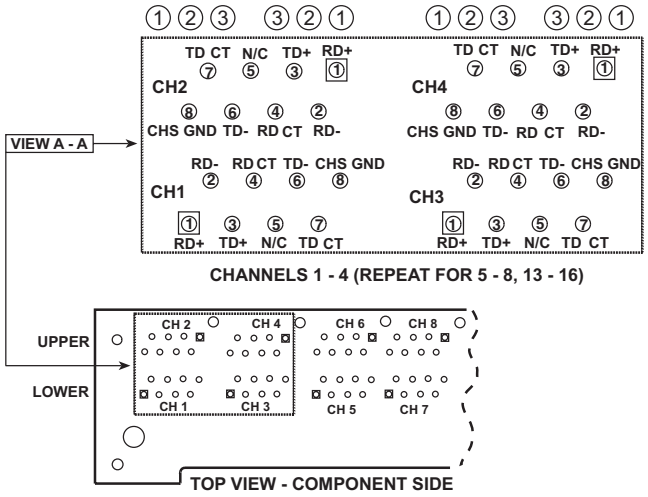
NOTE: This applies to 2xN PoE enabled configurations.

J2 Series (With LEDs) Schematics (not PoE Enabled)

J20-0013/14/15/16NL

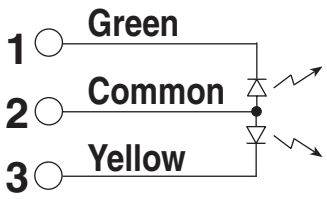


NOTE: Connect CHS GND to PCB ground.



NOTE: This applies to LED 2xN configurations.

LED Configuration



Standard LED Color	LED Wavelength [1]	Forward [2] (V MAX)	Typical (V TYP)
Green	560 - 570 nm	2.5	2.1 - 2.2
Yellow	588 - 610 nm	2.5	2.1 - 2.2

1. LED intensity/wavelength measured with Photo Research PR-650 Colormeter
2. With a forward current of 20 mA

For More Information:

Pulse Worldwide Headquarters
12220 World Trade Dr.
San Diego, CA 92128
U.S.A.

www.pulseeng.com
Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe
Einsteinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 7806 0
Fax: 49 7032 7806 135

Pulse China Headquarters
B402, Shenzhen Academy of Aerospace Technology Bldg.
10th Kejinan Rd.
High-Tech Zone
Nanshan District
Shenzen, PR China 518057
TEL: 86 755 33966678
FAX: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance Ctr.
2067 Yan An Rd. West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
135 Joo Seng Rd.
#03-02
PM Industrial Bldg.
Singapore 368363

TEL: 65 6287 8998
FAX: 65 6280 0080

Pulse North Asia
No. 26, Kao Ching Rd.
Yang Mei Chen
Taoyuan Hsien
Taiwan
R. O. C.

Tel: 886 3 4643715
Fax: 886 3 4641911

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners.
© Copyright, 2009. Pulse Engineering, Inc. All rights reserved.

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9