

# Industrial Fast Ethernet 2xN PulseJack™

RJ45 Connectors



## Description:

100 Base-TX (Fast Ethernet) RJ45 2xN Integrated Connector Module (ICM) with or without LEDs - Designed to support Switch and Gateway applications.



- Ⓢ Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- Ⓢ Magnetics are 100% electrically tested for HI-POT and functionality
- Ⓢ IEEE802.3u compliant 350μH min OCL with 8mA bias current
- Ⓢ High performance for maximum EMI suppression
- Ⓢ RoHS peak wave solder temperature rating 260°C
- Ⓢ Other Internal magnetics options available

### Electrical Specifications @ 25°C - Operating Temperature -40°C to +85°C

Part Number	No. of Ports	LEDs <sup>1</sup> Top Row Only	Insertion Loss TX/RX (dB)		Return Loss (dB MIN) 100Ω (±15Ω)			Cross Talk <sup>3</sup> (dB TYP)			Common Mode Rejection (dB TYP)		Isolation Pri:Sec
		L/R	1-100 MHz	100-125 MHz	1-30 MHz	30-60 MHz	60-80 MHz	1 MHz	10-30 MHz	100 MHz	30-60 MHz	80-200 MHz	Vdc /60sec
JX20-0237NL	4	G/Y, G/Y	-1.5	-2.0	-16	-10	-10	-50	-45	-33	-30	-20	2250VDC
JX20-0252NL*	4	G/O, G/O	-1.5	-2.0	-16	-10	-10	-50	-45	-33	-30	-20	2250VDC
JX20-0114NL	8	G/Y, G/Y	-1.5	-2.0	-14	-10	-10	-45	-40	-30	-30	-16	2250VDC
J2X0-0206NL	8	N/A	-1.5	-2.0	-16	-10	-10	-50	-45	-33	-30	-20	2250VDC
JX20-0254NL*	8	G/O, G/O	-1.5	-2.0	-16	-10	-10	-50	-45	-33	-30	-20	2250VDC

**Notes:**

1. Bi-color LEDs: G = green; Y = yellow, O = orange for each port
2. \* denotes 50microns Gold plating on FCC contact leads, 30microns is standard

3. Calculation for Crosstalk = -55+22xLOG10(f/10)

### RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability
JX20-Series	5 lbs./2.268 kgs.	5 lbs./2.268 kgs.	750 Insertions

### RJ45 Material Specification

Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
JX20-Series	Copper Alloy	10-20μ inches Nickel over 10-20μ inches Copper Alloy	Phosphor Bronze	Nickel underplating, selective gold plating 30 or 50μ inches	Tin matte finish	Thermoplastic (Black)	UL 94 V-0

**Notes:**

1. All connector part numbers starting with the series prefix JX20 comply to the above limits.
2. Connector dimensions comply with FCC Part 68 dimension requirement.

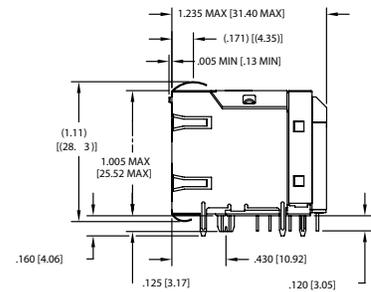
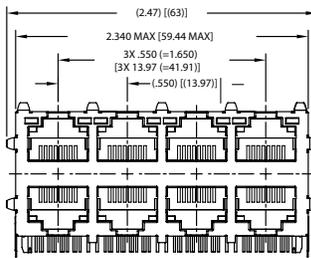
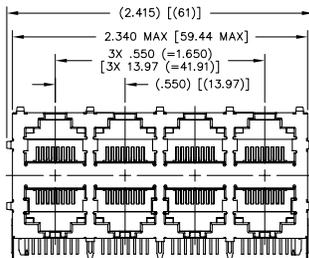
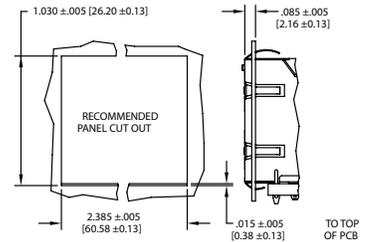
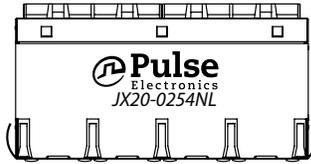
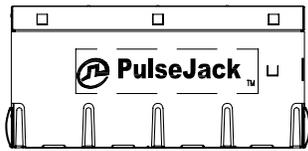
3. Storage Temperature : -50°C to +150°C

4. Compliance to J-STD:
  - a) J-STD-002: Solderability at 245°C DIP and LOOK Test
  - b) J-STD-020: Level 1 No Moisture Sensitive
  - c) J-STD-075: W2 270oC Max through WAVE solder

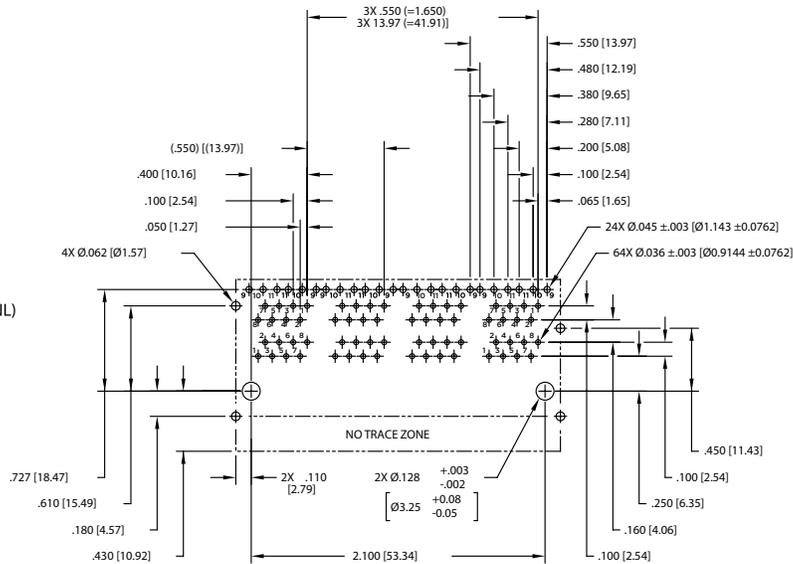


## 2X4 SERIES MECHANICALS

JX20-0114NL, JX20-0206NL, JX20-0254NL



LED PIN NUMBERING  
(NOT REQUIRED ON JX20-0206NL)  
GREEN = PIN 9  
COMMON = PIN 10  
YELLOW/ORANGE = PIN 11



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

### Dimensions:

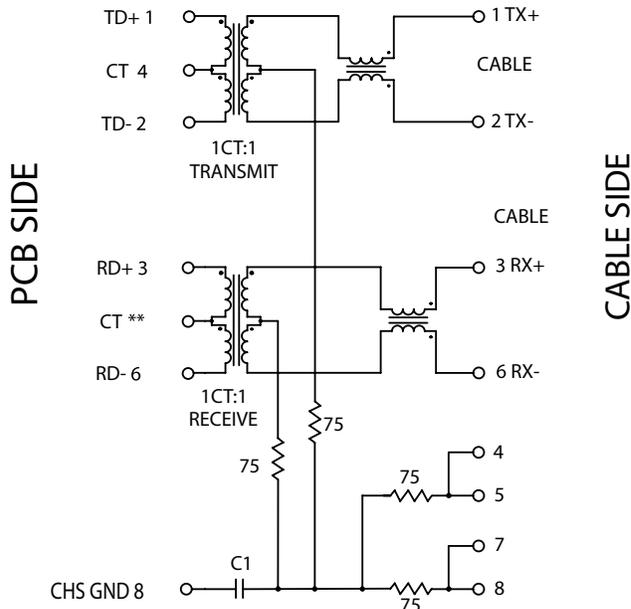
Unless otherwise specified,  
all tolerances are ± .010

# Industrial Fast Ethernet 2xN PulseJack™

RJ45 Connectors

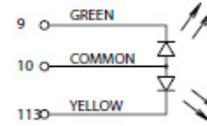
## JX2 SERIES ELECTRICAL SCHEMATICS

JX20-0114NL, JX20-0206NL, JX20-0237NL



\*\* NOTE: ON JX20-0114NL AND JX20-0237NL CT IS CONNECTED TO PIN#7 AND PIN #5 IS NOT POPULATED  
ON JX20-0206NL - CT IS CONNECTED TO PIN#5 AND PIN#7 IS NOT POPULATED

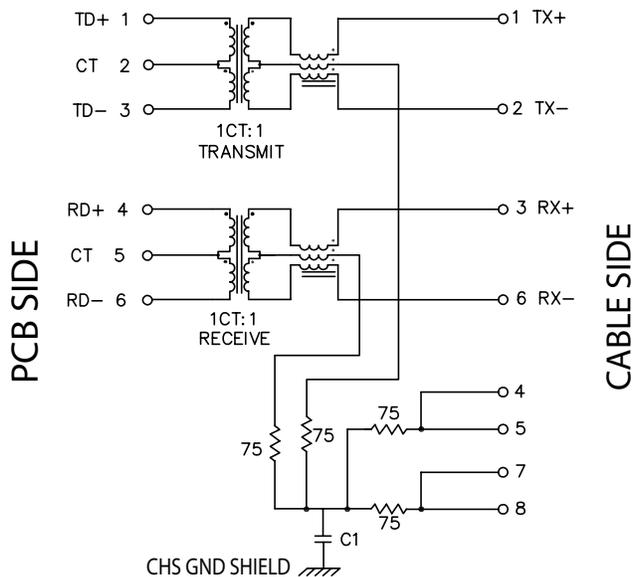
### LED Configuration JX20-0114NL and JX20-0237NL



EMMITTED COLOR	GREEN	YELLOW
WAVE LENGTH (If = 20 mA)	570 nm	590 nm
BRIGHTNESS - MIN TO MAX (mcd) If (mA) = 20	5 TO 12	3.5 TO 8.5
VIEWING ANGLE	120°	120°
POWER DISSIPATION (Pd)	85 mW MAXIMUM	85 mW MAXIMUM
FORWARD CURRENT (0.1 mS PULSE)	160 mA MAXIMUM	160 mA MAXIMUM
FORWARD VOLTAGE (Vf) (If = 20 mA)	2.8 V MAXIMUM	2.8 V MAXIMUM

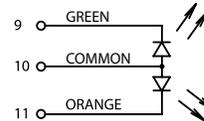
NOTE: PER VENDOR'S SPECIFICATION

JX20-0252NL, JX20-0254NL



NOTE: ON JX20-0252NL AND JX20-0254NL - PIN#7 AND PIN#8 ARE NOT POPULATED

### LED Configuration



EMMITTED COLOR	GREEN	ORANGE
WAVE LENGTH (If = 20 mA)	570 nm	605 nm
BRIGHTNESS - MIN TO MAX (mcd) If = 20mA	6 Typical	8 Typical
VIEWING ANGLE	100°	100°
POWER DISSIPATION (Pd)	70 mW MAXIMUM	60 mW MAXIMUM
FORWARD VOLTAGE (Vf) (If = 20 mA)	2.2V Typical	2.1V Typical
	2.8 V MAXIMUM	2.8 V MAXIMUM

NOTE: PER VENDOR'S SPECIFICATION

### For More Information:

Americas - [prodinfinetworkamericas@yageo.com](mailto:prodinfinetworkamericas@yageo.com) | Europe - [prodinfinetworkemea@yageo.com](mailto:prodinfinetworkemea@yageo.com) | Asia - [prodinfinetworkapac@yageo.com](mailto:prodinfinetworkapac@yageo.com)

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