

**FEATURES**

- Magnetic designs to support every PHY
- Meet or exceed IEEE 802.3 and ANSI X3.263 standards
- including 350uH min OCL with 8mA bias
- Minimum 1500Vrms isolation per IEEE 802.3 requirement
- Designed for 100 base transmission over UTP-5 cable
- Size same as RJ-45 modular jack to save PCB board Space



| ELECTRICAL SPECIFICATIONS @25°C-Operating temperature 0°C TO 70°C |                 |            |             |           |                         |                             |        |        |           |                    |        |         |                                |        |         |                              |
|-------------------------------------------------------------------|-----------------|------------|-------------|-----------|-------------------------|-----------------------------|--------|--------|-----------|--------------------|--------|---------|--------------------------------|--------|---------|------------------------------|
| Part Number                                                       | Turns Ratio ±5% |            | EMI Fingers | LED (L/R) | Insertion Loss (dB max) | Return Loss (dB min @100 Ω) |        |        |           | Crosstalk (dB min) |        |         | Common Mode Rejection (dB min) |        |         | Hipot (V <sub>rms</sub> min) |
|                                                                   | TX              | RX         |             |           | 0.3-100 MHz             | 1- 30 MHz                   | 40 MHz | 50 MHz | 60-80 MHz | 30 MHz             | 60 MHz | 100 MHz | 30 MHz                         | 60 MHz | 100 MHz |                              |
| 13F-60X                                                           | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500                         |
| 13F-61X                                                           | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500                         |
| 13F-62X                                                           | 1CT:1           | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -14    | -12       | -45                | -40    | -35     | -35                            | -30    | -25     | 1500                         |
| 13F-69GYDNW2                                                      | 1CT:1           | 1CT:1      | NO          | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-69ND2                                                         | 1CT:1           | 1CT:1      | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-69GYD2                                                        | 1CT:1           | 1CT:1      | YES         | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64NW2                                                         | 1CT:1CT         | 1CT:1CT    | NO          | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64GYDNW2                                                      | 1CT:1CT         | 1CT:1CT    | NO          | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64ND2                                                         | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64GYD2                                                        | 1CT:1CT         | 1CT:1CT    | YES         | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64GGD2                                                        | 1CT:1CT         | 1CT:1CT    | YES         | G/G       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-61ND2                                                         | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64AND2                                                        | 1CT:1.414CT     | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-64AGGD2                                                       | 1CT:1.414CT     | 1CT:1CT    | YES         | G/G       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62ANW2                                                        | 1CT:1           | 1CT:1CT    | NO          | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62AGYDNW2                                                     | 1CT:1           | 1CT:1CT    | NO          | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62AGGDNW2                                                     | 1CT:1           | 1CT:1CT    | NO          | G/G       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62AND2                                                        | 1CT:1           | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62AGYD2                                                       | 1CT:1           | 1CT:1CT    | YES         | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62AGGD2                                                       | 1CT:1           | 1CT:1CT    | YES         | G/G       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62ADGD2                                                       | 1CT:1           | 1CT:1CT    | YES         | Y/G/G     | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-62CGYD2                                                       | 1CT:1           | 1CT:1CT    | YES         | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-60CND2                                                        | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-60END2                                                        | 1CT:1.41CT      | 1CT:1.41CT | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-60VGYD2                                                       | 1CT:1CT         | 1CT:1CT    | YES         | G/Y       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-61FND2                                                        | 1CT:1CT         | 1CT:1CT    | YES         | N/A       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |
| 13F-66YGNW2                                                       | 1CT:1CT         | 1CT:1CT    | YES         | Y/G       | -1                      | -18                         | -16    | -12    | -10       | -40                | -35    | -30     | -30                            | -20    | -20     | 1500                         |

13F-6X GYD NW 2 NL A:Series

A B C D E F B:SCHEMATICS

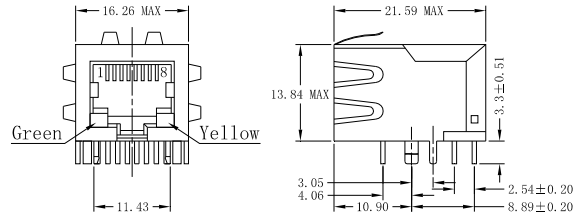
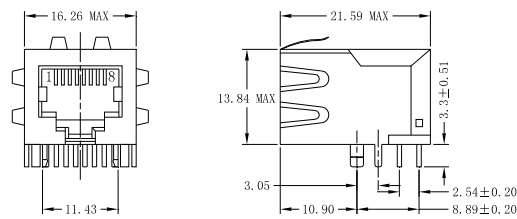
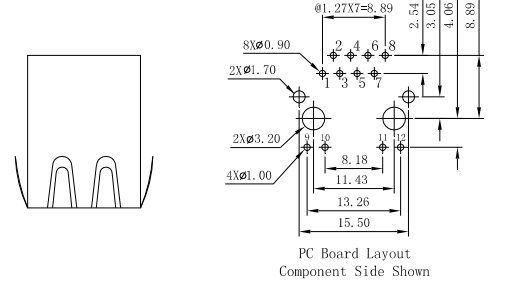
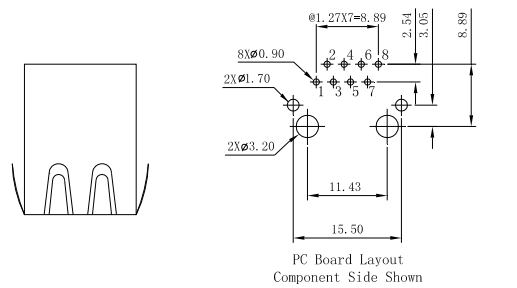
C:Led

D:Mechanical

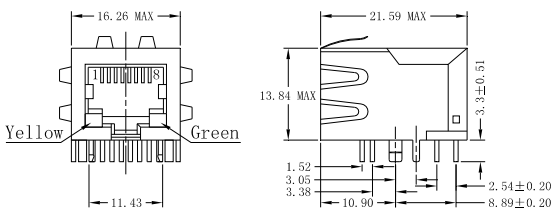
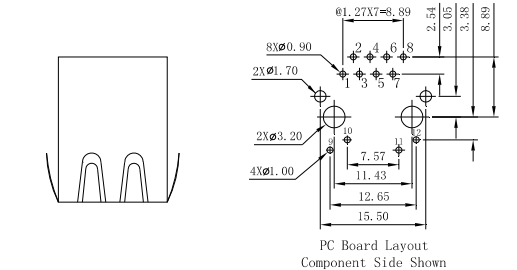
E:Gold Plating:1=3u", 2=6u", 3=15u", 4=30u", 5=50u"

F:RoHS version

## Mechanicals and Dimensions



※ led pin are parallel



※ led pin are oblique

Dimensions: mm all tolerances are ± 0.25

## MATERIALS

### 1.Housing Material:

MATERIAL:NYLON +25% GF (Fr50) UL94V-0  
STANDARD COLOR:BLACK

### 2.Insert Material:

MATERIAL:Phos-Bronze C5210 EH---0.35mm Thickness

Insert -PBT+30% GF UL94V-0

1.PLATING(1) NICKEL

2.PLATING(2) 100%Sn

3.PLATING(3) GOLD FLASH (3u " ~50u " )

### 3.Plate Material:PBT-4830 +30% GF UL 94V-0

### 4.Contact pin Material:

MATERIAL: Phos-Bronze C5210 EH---0.35mm Thickness

1.PLATING(1) NICKEL

2.PLATING(2) 100%Sn

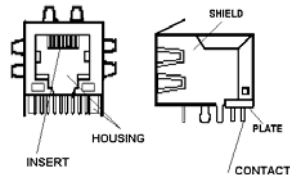
### 5.Shielding Material:

BRASS C2680 H---0.25mm THICKNESS

PLATING NICKEL

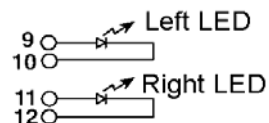
### 6.Operation Life : 750 Cycles Min.

### 7. MATES WITH MODULAR PLUG CONFORMING TO FCC PART 68,SUBPART F.

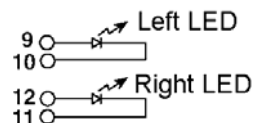


## LED Configuration

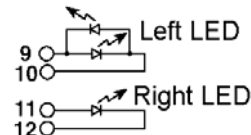
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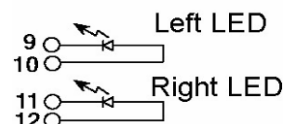
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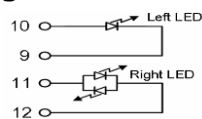
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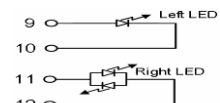
4



5



6



Vin=2.1Vdc TYP. 2.5Vdc MAX.

**SCHEMATICS**

