

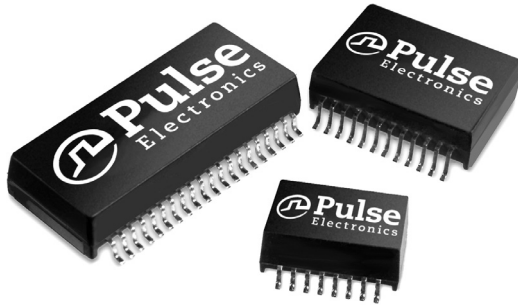


**THE DATASHEET OF  
HX2305NLT**



# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios

\*Power over Ethernet



- RoHS peak reflow temperature rating 245°C
- Meets IEEE 802.3 specification
- Compact footprint

Electrical Specifications @ 25°C - Operating Temperature 0°C to 70°C

Part Number	PoE	Number of Ports	Insertion Loss (dB MAX)			Return Loss (Z out = 100 Ω ± 15%)			Crosstalk (adjacent channels dB MIN)			Hipot (Vrms MIN)
			0.1 MHz	1 MHz	100 MHz	30 MHz	60 MHz	80 MHz	30 MHz	60 MHz	100 MHz	
H0055NL <sup>1, 6a, 7</sup>	No	1	-2.5	—	-1.0	-16	-10	-10	-45	-40	-33	1500
H0056NL <sup>2, 6a, 7</sup>	No	1	—	-0.8	-0.9	-16	-10	-10	-45	-40	-33	1500
H1259NL <sup>6a, 7</sup>	No	4	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX1259NL <sup>3, 6a, 7</sup>	No	4	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
H1260NL <sup>6a, 7</sup>	No	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
HX1260NL <sup>3, 6a, 7</sup>	No	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
H1278NL <sup>6a, 7</sup>	No	1	-1.1	—	-1.0	-16	-10	-10	-45	-40	-33	1500
H1305NL <sup>6a, 7</sup>	No	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX1305NL <sup>3, 6a, 7</sup>	No	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
H2260NL <sup>6a, 7</sup>	Yes <sup>d</sup>	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
HX2260NL <sup>3, 6a, 7</sup>	Yes <sup>d</sup>	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
H2305NL <sup>6a, 7</sup>	Yes <sup>d</sup>	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX2305NL <sup>3, 6a, 7</sup>	Yes <sup>d</sup>	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500

**Notes:**

1. H0055NL is designed to meet 200 μH nom.
2. H0056NL is designed to meet 300 μH nom.
3. Parts offer extended operating temperature of -40 to +85°C
4. These parts are compliant to IEEE802.3af, Power over Ethernet (PoE) standard.
5. When ordering Tape & Reel packaging, add a "T" suffix to the end of the part number, e.g. H0056NLT
6. MSL = Moisture Sensivity Level: a=1, b=2, c=3, d=4, e=5
7. Not for sale in U.S.

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios

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## Mechanicals

### H0055NL

**SUGGESTED LAND PATTERN**

**Weight** .....0.35 grams  
**Tape & Reel** .....1000/reel  
**Tube** .....40/tube

### H0056NL

**SUGGESTED LAND PATTERN**

**Weight** .....0.30 grams  
**Tape & Reel** .....2000/reel  
**Tube** .....40/tube

Unless otherwise specified, all tolerances are ±  $\frac{.010}{0,25}$  inches/mm

### H1259NL, HX1259NL

**SUGGESTED PAD LAYOUT**

**Weight** .....3.4 grams  
**Tape & Reel** .....250/reel  
**Tube** .....15/tube

### H1260NL, HX1260NL, H2260NL, HX2260NL

**SUGGESTED PAD LAYOUT**

**Weight** .....0.9 grams  
**Tape & Reel** .....600/reel  
**Tube** .....40/tube

Unless otherwise specified, all tolerances are ±  $\frac{.010}{0,25}$  inches/mm

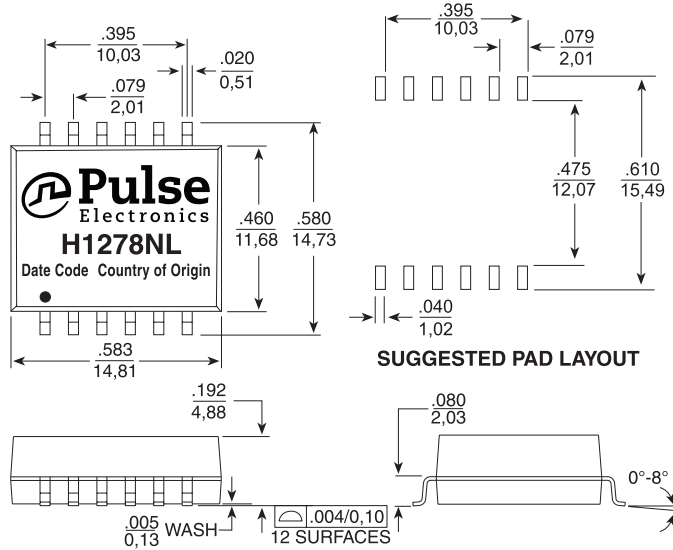
# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios

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## Mechanicals (continued)

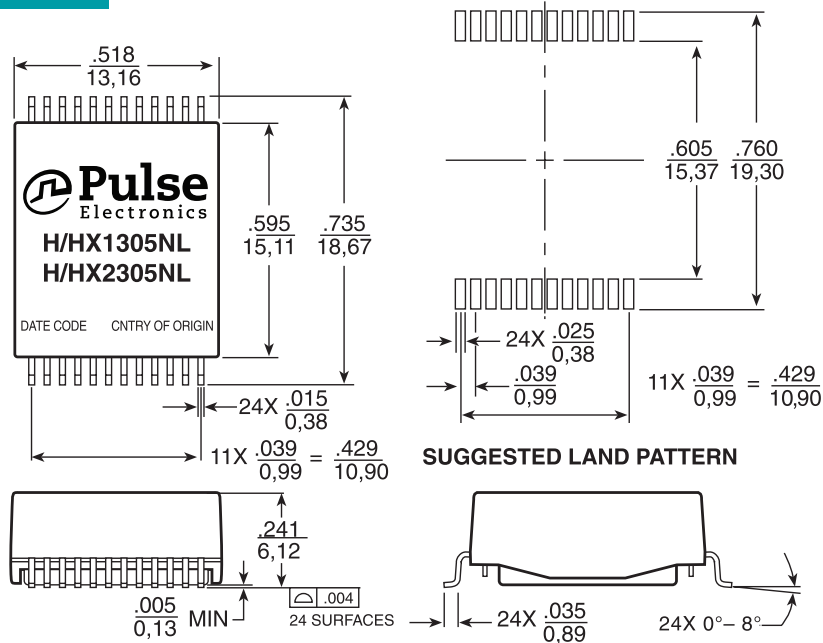
### H1278NL



Weight .....0.9 grams  
Tape & Reel .....350/reel  
Tube .....35/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

### H1305NL, HX1305NL, H2305NL, HX2305NL



Weight .....2.7 grams  
Tape & Reel .....350/reel  
Tube .....35/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

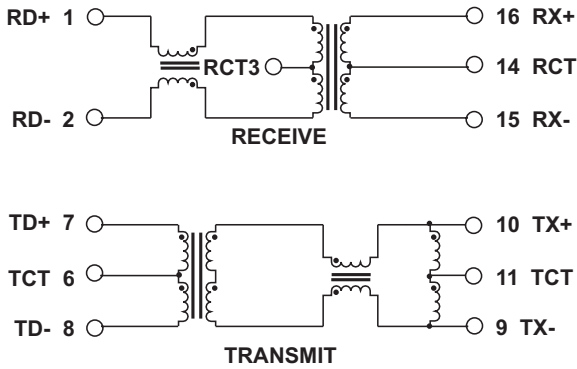
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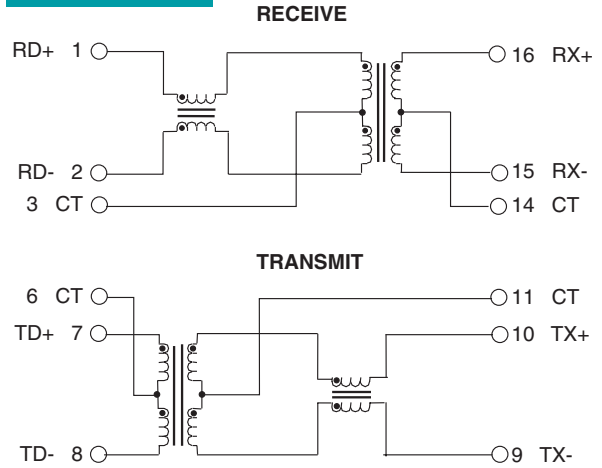


## Schematics

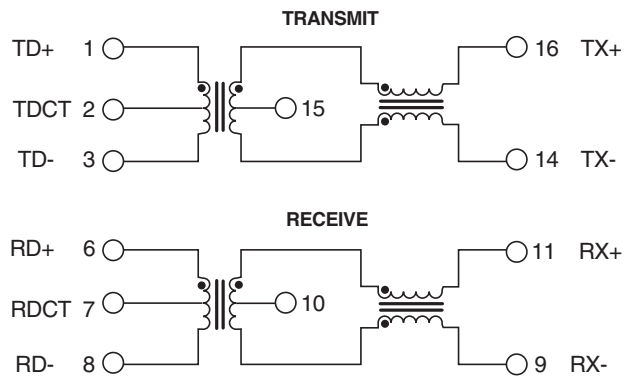
### H0055NL



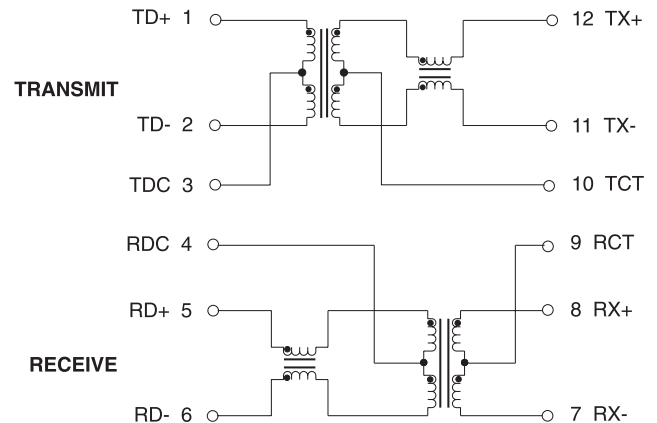
### H0056NL



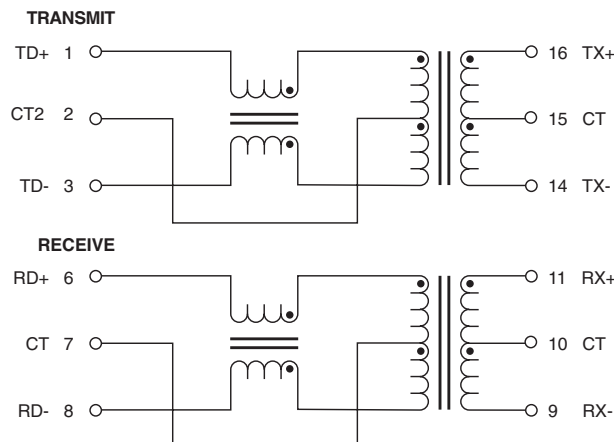
### H1260NL, HX1260NL



### H1278NL



### H2260NL, HX2260NL



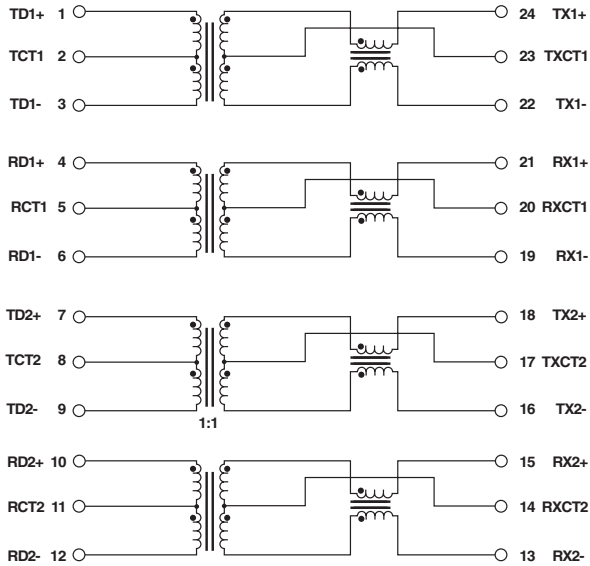
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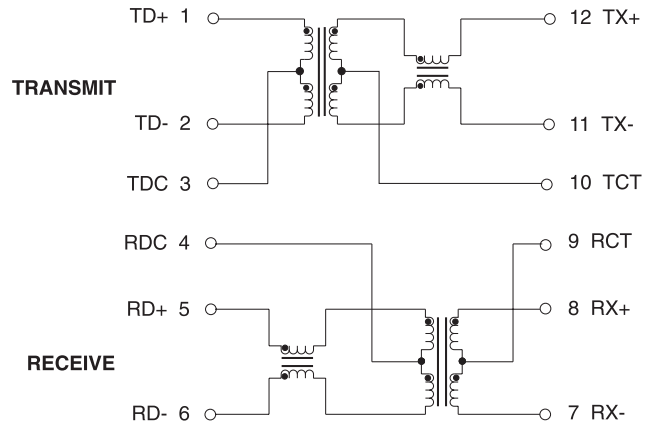


## Schematics (continued)

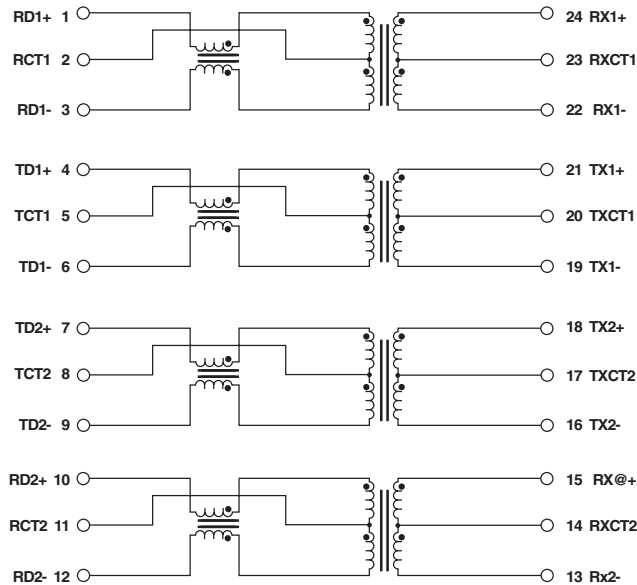
### H1305NL, HX1305NL



### H1278NL



### H2305NL, HX2305NL

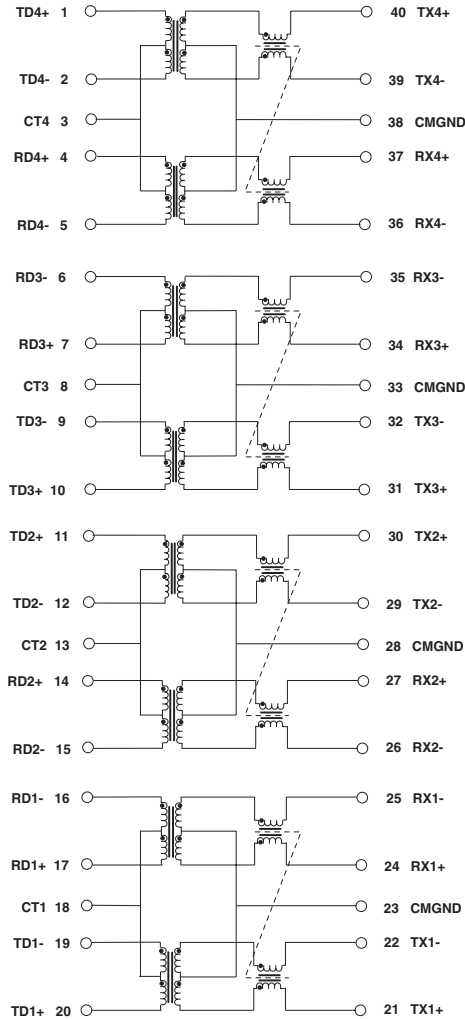


# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios

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## Schematics (continued)

H1259NL, HX1259NL



## For More Information

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