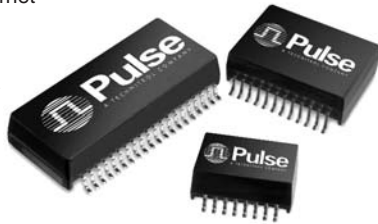






Star Magnetics™ 10/100BASE-T Transformer Modules with PoE* Option and 1:1 Turns Ratios

*Power over Ethernet



-  RoHS-5 peak reflow temperature rating 235°C
-  RoHS-6 peak reflow temperature rating 245°C
-  Meets IEEE 802.3 specification
-  Compact footprint

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

RoHS-5 ⁶ Compliant Part Number	RoHS-6 ⁷ Compliant Part Number	PoE	Number of Ports	Insertion Loss (dB MAX)			Return Loss (Z out = 100 Ω ±15%)			Crosstalk (adjacent channels, dB MIN)			Hipot (VRMSMIN)
				0.1 MHz	1 MHz	100 MHz	30 MHz	60 MHz	80 MHz	30 MHz	60 MHz	100 MHz	
H0055 ¹	H0055NL ^{1,8a}	No	1	-2.5	—	-1.0	-16	-10	-10	-45	-40	-33	1500
—	H0056NL ^{2,8a}	No	1	—	-0.8	-0.9	-16	-10	-10	-45	-40	-33	1500
H1259	H1259NL ^{8a}	No	4	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX1259 ³	HX1259NL ^{8a}	No	4	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
H1260	H1260NL ^{8a}	No	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
HX1260 ³	HX1260NL ^{8a}	No	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
H1265	H1265NL ^{7,8a}	No	1	-1.3	—	-1.0	-16	-10	-10	-40	-38	-33	1500
H1266	H1266NL ^{7,8a}	No	4	-1.2	—	-1.0	-16	-10	-10	-45	-40	-30	1500
H1278	H1278NL ^{7,8a}	No	1	-1.1	—	-1.0	-16	-10	-10	-45	-40	-33	1500
H1305	H1305NL ^{8a}	No	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX1305 ³	HX1305NL ^{8a}	No	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
H2260	H2260NL ^{8a}	Yes ⁴	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
HX2260 ³	HX2260NL ^{7,8a}	Yes ⁴	1	-1.1	—	-1.1	-16	-10	-10	-35	-30	-30	1500
H2305	H2305NL ^{8a}	Yes ⁴	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500
HX2305 ³	HX2305NL ^{8a}	Yes ⁴	2	-1.2	—	-1.4	-16	-10	-10	-45	-40	-33	1500

- H0055 is designed to meet 200 μH nom.
- H0056NL is designed to meet 300 μH nom.
- Parts offer extended temperature of operation -40 to +85°C
- These parts are compliant to IEEE802.3af Power over Ethernet (PoE) standard.
- For **Tape & Reel packaging** add a "T" suffix to the end of the part number when ordering, e.g. H0056NLT
- RoHS-5:** Product does not contain 5 out of the 6 banned substances specified in the RoHS directive (product contains lead in applications considered solder).
- RoHS-6:** Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Some internal connections may contain lead in high-temperature solder (solder alloys containing more than 85% lead).
- MSL=Moisture Sensitivity Level:** a=1, b=2, c=3, d=4, e=5

Mechanicals

H0055/NL

SUGGESTED LAND PATTERN

H0056NL

SUGGESTED LAND PATTERN

Weight355 grams
Tape & Reel . . .1000/reel
Tube40/tube

Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

Weight3 grams
Tape & Reel . . .2000/reel
Tube40/tube

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Mechanicals (continued)

H1259/NL, HX1259/NL, H1266/NL

Weight 4.8 grams
Tape & Reel 250/reel
Tube 15/tube

H1260//NL, HX1260//NL, H2260/NL, HX2260/NL

Weight 2.8 grams
Tube45/tube
Tape & Reel 600/reel

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

H1265/NL

Weight 3.0 grams
Tube 20/tube
Tape & Reel 300/reel

H1278/NL

Weight 1.7 grams
Tape & Reel 350/reel
Tube 30/tube

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

H1305/NL, HX1305/NL, H2305/NL, HX2305/NL

Weight 2.7 grams
Tape & Reel 300/reel
Tube 25/tube

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

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Star Magnetics™

10/100BASE-T Transformer Modules

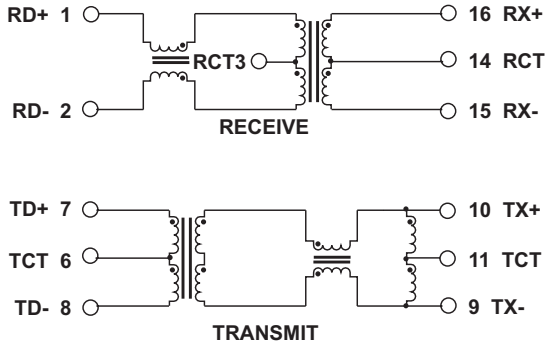
with PoE* Option and 1:1 Turns Ratios

*Power over Ethernet

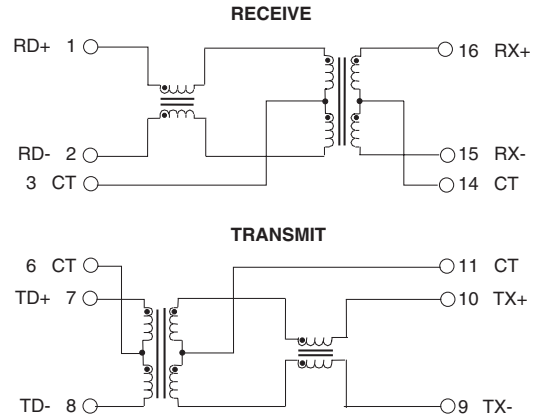


Schematics

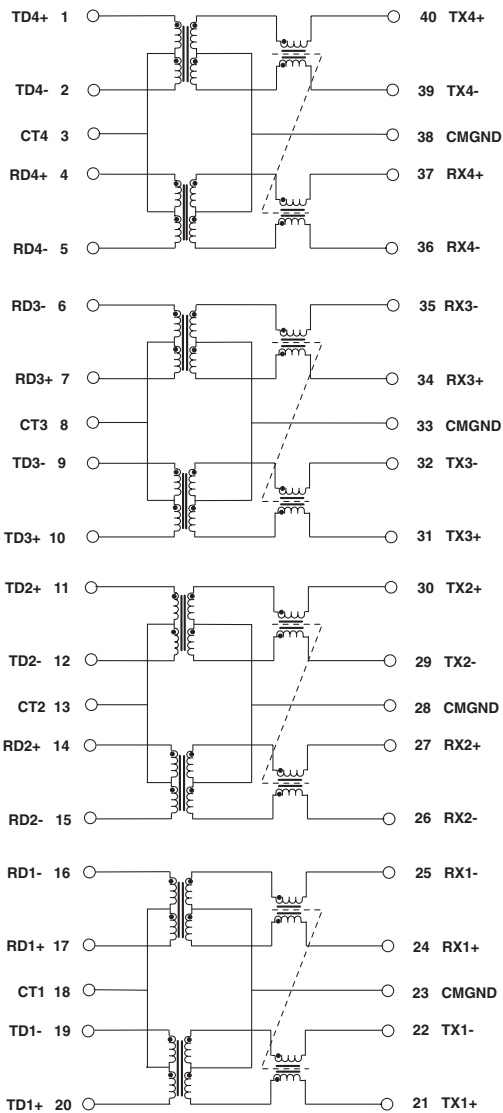
H0055/NL



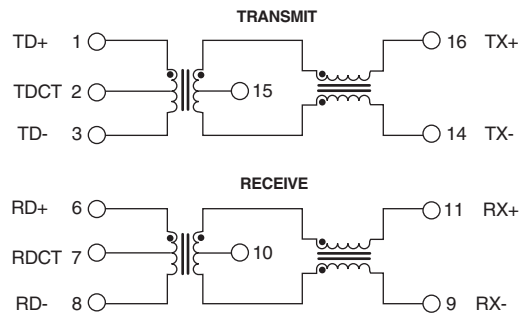
H0056NL



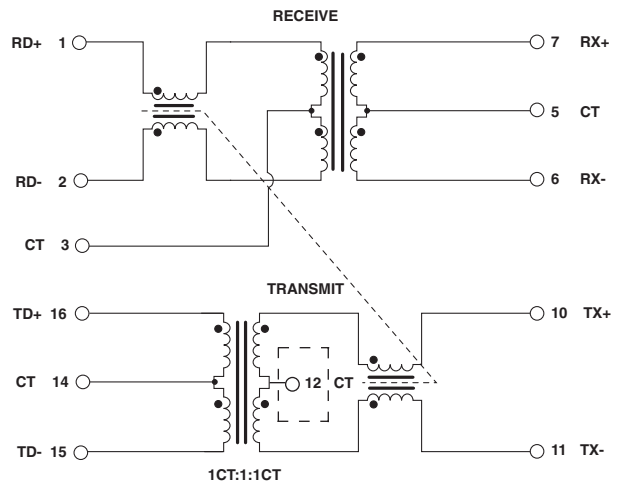
H1259/NL, HX1259/NL



H1260/NL, HX1260/NL



H1265/NL



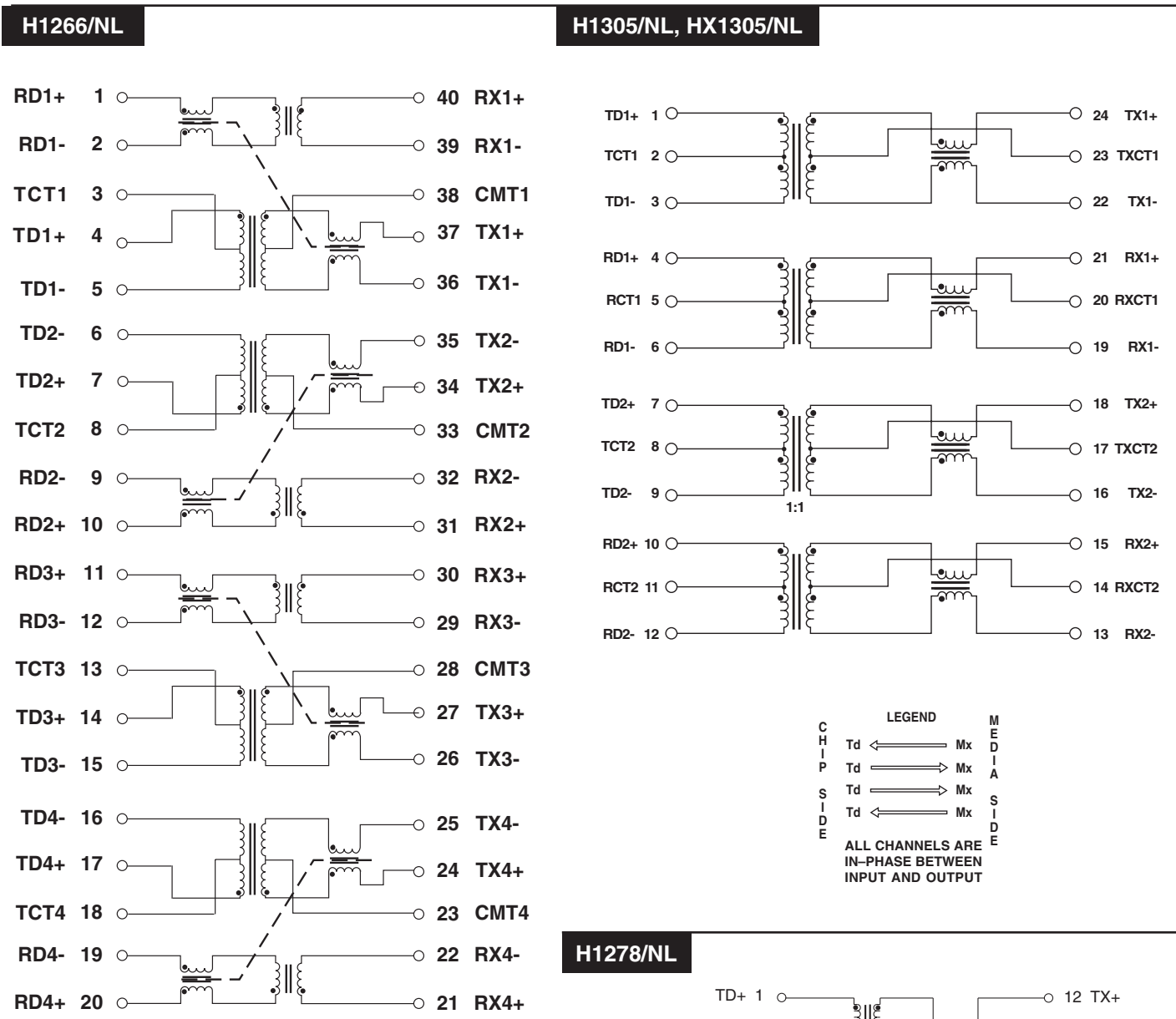
H1265: 3-core design (T3 same toroid core)

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

*Power over Ethernet



Schematics (continued)



LEGEND

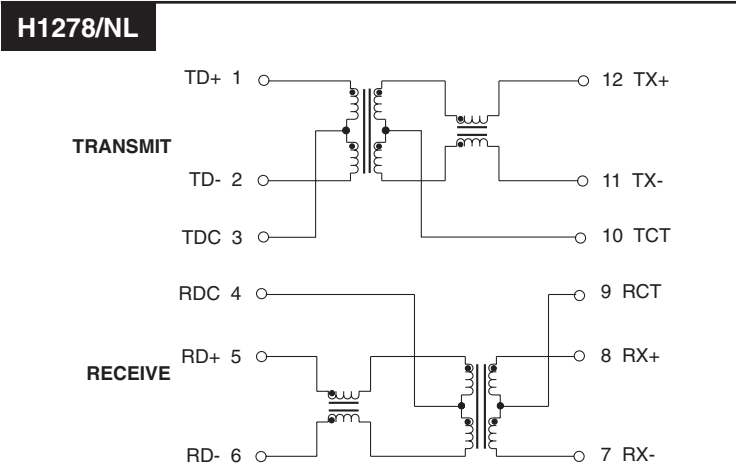
C H I P S I D E	Td ← Mx Td → Mx Td → Mx Td ← Mx	M E D I A S I D E
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ALL CHANNELS ARE IN-PHASE BETWEEN INPUT AND OUTPUT

LEGEND

C H I P S I D E	Rd ← Rx Td → Tx Td → Tx Rd ← Rx Rd ← Rx Td → Tx Td → Tx Rd ← Rx	M E D I A S I D E
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ALL CHANNELS ARE IN-PHASE BETWEEN INPUT AND OUTPUT



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Star Magnetics™

10/100BASE-T Transformer Modules

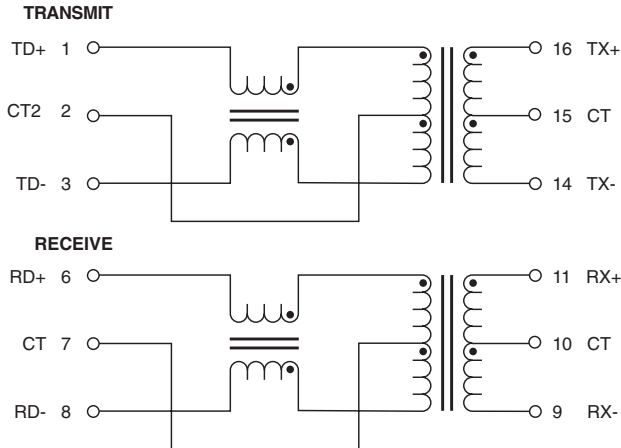
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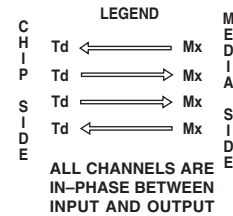
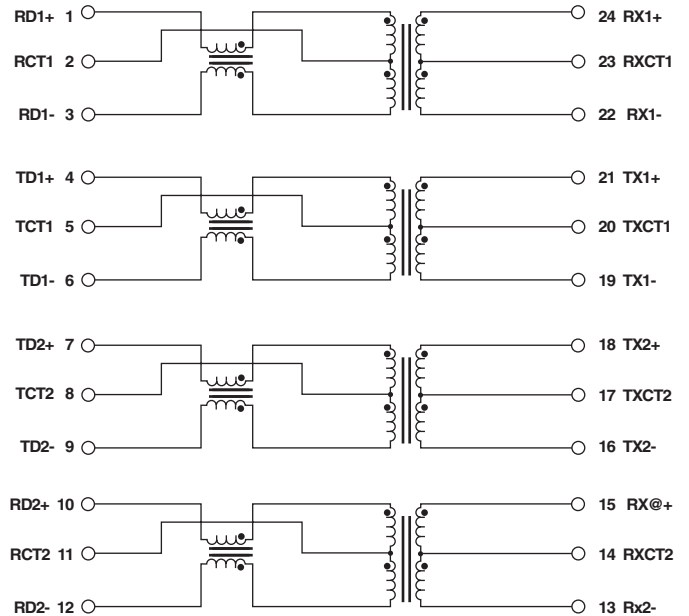


Schematics (continued)

H2260/NL, HX2260/NL



H2305/NL, HX2305/NL



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