

Ethernet modules for Medical Safety

HX1332NL, HX1332CNL, and HXU6200NL



- Ⓢ Designed to exceed IEEE standards for fast Ethernet and 1Gigabit over industrial temperature range -40 to +85°C
- Ⓢ Supports 30W PoE upto 100m 2/4pair connectivity
- Ⓢ Reinforced Medical Safety isolation - 1 MOPP/MOOP
- Ⓢ Designed to comply with UL60601-1 and IEC62368-1
- Ⓢ Compatible with all Major PHYs

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

Part Number	Data Rate	Inductance	Reinforced* Insulation Class	Working Voltage (Vrms)	Creepage and Clearance (min)	Isolation (Pri:Sec)	Power over Ethernet (PoE)	
							DC Current (@ 25°C)	Power Supported (2/4 pair UTP)
HX1332NL	100Base-Tx	200uH min	1MOOP/MOPP	400V	8.0 / 8.0mm	4000Vrms / 60sec	720mA	30W (PD/PSE)
HX1332CNL	100Base-Tx	350uH @ 8mA	1MOOP/MOPP	400V	8.0 / 8.0mm	4000Vrms / 60sec	350mA	15W (PD/PSE)
HXU6200NL	1000Base-T	350uH @ 8mA	2MOOP/MOPP	250V	4.6 / 4.6mm	3000Vrms / 60sec	720mA	35W (PD/PSE)

* Pollution Degree 2, Material Group IIIb

Part Number	Insertion Loss (MAX)			Return Loss (MAX)			DCMR (MIN)		
	0.1-30MHz	60-80MHz	100MHz	1-30MHz	40MHz	60 / 100MHz	1MHz	30-60MHz	100MHz
HX1332NL	-1.0dB	-4.0dB	-	-10dB	-8dB	-	-50dB	-36dB	-31.5dB
HX1332CNL	-1.0dB	-3.0dB	-4.0dB	-9dB	-7dB	-4.5 / -2dB	-50dB	-35dB	-30dB
HXU6200NL	-0.6dB	-1.6dB	-2.5dB	-11dB	-8dB	-7 / -3dB	-36dB	-32dB	-30dB

Notes:

1. Storage Temperature: -50°C to 125°C Compliance to J-STD:
 - A. J-STD-002: Solderability at 245°C Reflow Profile
 - B. J-STD-020: Moisture Sensitive Level 1
 - C. J-STD-075: R7, 245°C Maximum Through Reflow Solder
2. The NL suffix part is supplied in tubes. To order tape and reel packaging add a 'T' suffix to the part number (ie: HX1332NL becomes HX1332NT).
3. Header: DAP (Diallyl Phthalate) with flammability Rating UL 94V-0 or better
4. Lead Frame: Cooper Alloy
 - Under plated: Half Hard Ductile Nickel 50-100" (1.3-2.5um)
 - Over plated: 100% Tin electro-deposited per ASTM B545 300 - 50u"(8-13um)
5. Finish : Matte finish 100% Tin solder
6. HXU6200NL is Certified UL60601-1 File # E133523

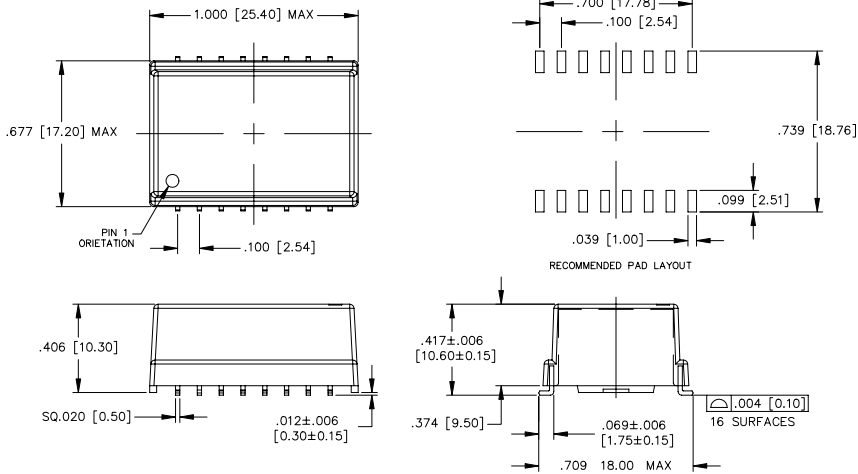
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Mechanical

HX1332NL, HX1332CNL

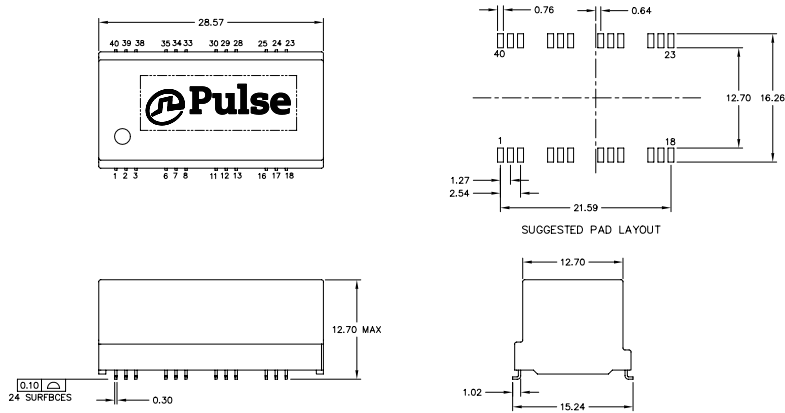


Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0,25}$

Mechanical

HXU6200NL

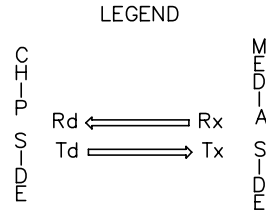
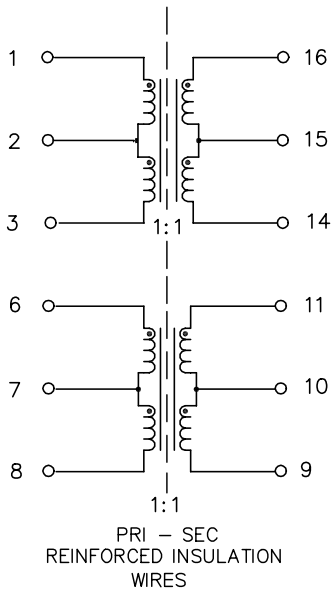


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Schematics

HX1332NL

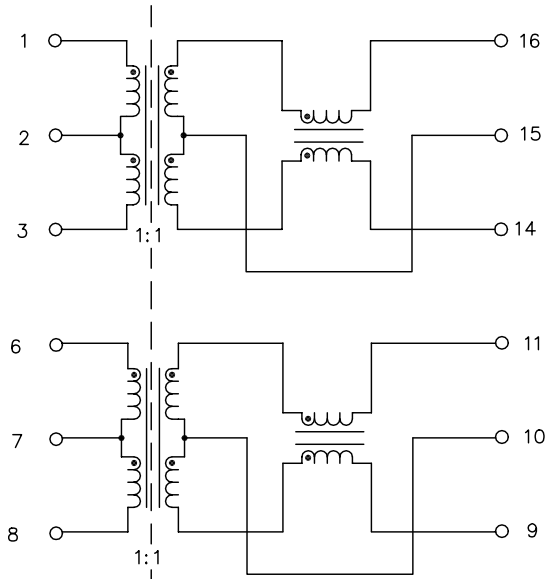


ALL CHANNELS ARE IN-PHASE BETWEEN INPUT AND OUTPUT

1:1
PRI - SEC
REINFORCED INSULATION
WIRES

WINDING WIRE APPROVED TO IEC63268-1, ANNEX U

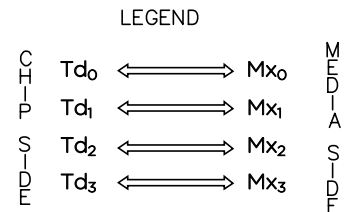
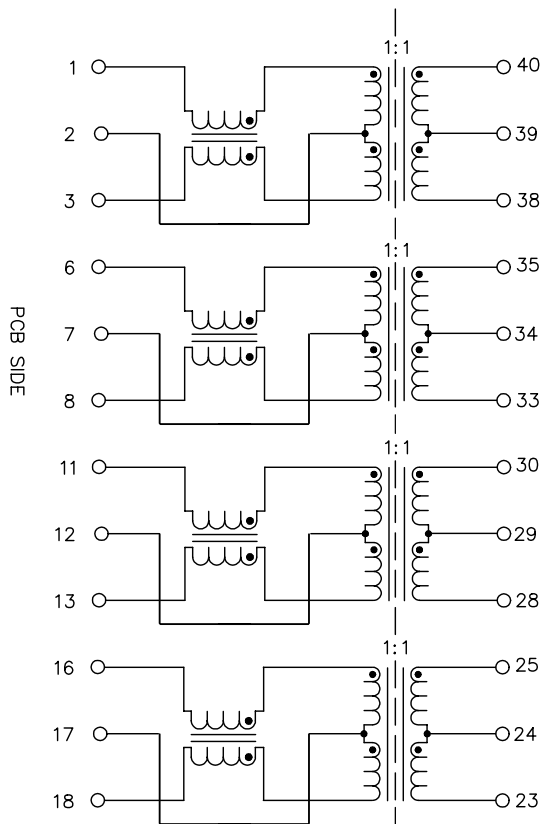
HX1332CNL



1:1
PRI-REINFORCED
INSULATION
WIRES

1:1
SEC-BASIC
INSULATION
WIRES

HXU6200NL



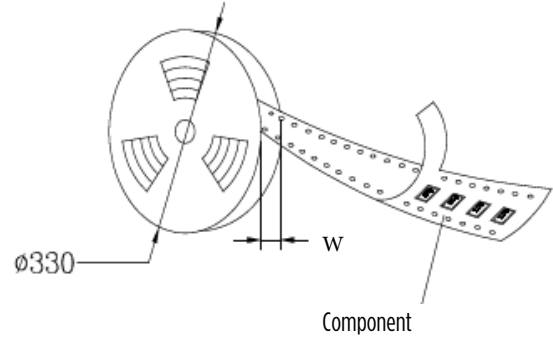
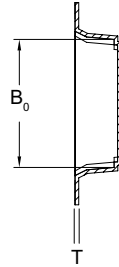
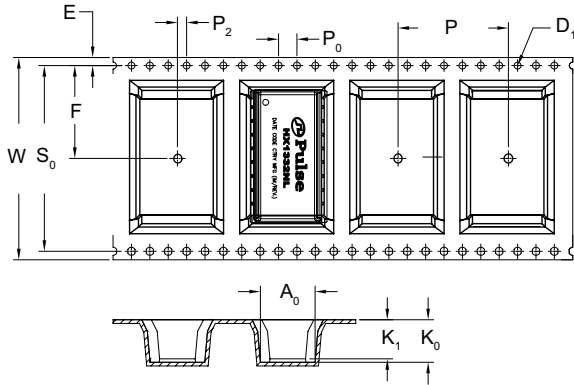
ALL CHANNELS ARE IN-PHASE BETWEEN INPUT AND OUTPUT

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Tape & Reel

HX1332NL, HX1332CNL



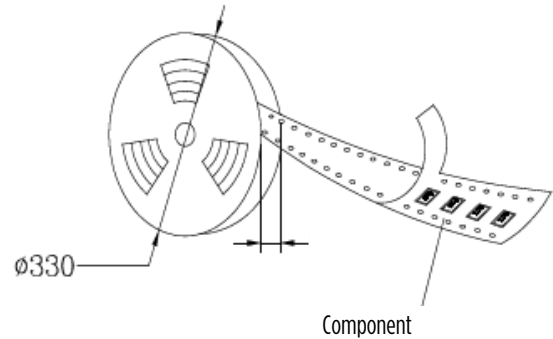
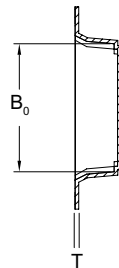
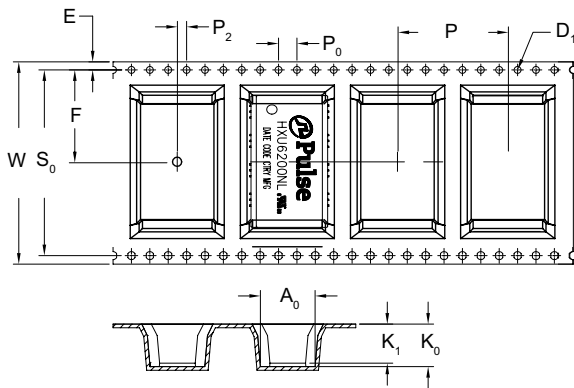
Component

W	44.00±0.30	P	24.00±0.10	A ₀	17.45±0.10	B ₀	24.8±0.10
S ₀	40.40±0.10	P ₀	4.00±0.10	A ₁	-----	B ₁	-----
E	1.75±0.10	P ₂	2.00±0.15	A ₂	-----	B ₂	-----
F	20.20±0.15	D ₀	-----	K ₀	11.55±0.10	K ₁	11.00±0.10
T	0.50±0.05	D ₁	1.50 ±0.10 -0.00				UNIT: mm

ALL Dimensions meet EIA-481-D requirements.

1. **Material:** Black Conductive Polystyrene
2. **Components per Reel:** 200 pcs
3. **Quantity per box:** 5x reels = 1000 pcs

HXU6200NL



Component

W	44.00±0.30	P	24.00±0.10	A ₀	15.13±0.10	B ₀	28.85±0.10
S ₀	40.40±0.10	P ₀	4.00±0.10	A ₁	-----	B ₁	-----
E	1.75±0.10	P ₂	2.00±0.15	A ₂	-----	B ₂	-----
F	20.20±0.15	D ₀	-----	K ₀	14.31±0.10	K ₁	13.310±0.10
T	0.50±0.05	D ₁	1.50 ±0.10 -0.00				UNIT: mm

ALL Dimensions meet EIA-481-D requirements.

1. **Material:** Black Conductive Polystyrene
2. **Components per Reel:** 150 pcs
3. **Quantity per box:** 5x reels = 750 pcs

For More Information:

Americas - prodinfornetworkamericas@yageo.com | Europe - prodinfornetworkemea@yageo.com | Asia - prodinfornetworkapac@yageo.com

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