



RJ45 ICM 1G Base-T 2x4 Ports PoE Ultra

Part No:

TMJG471213-9A51NL6

Description:

RJ45 connector with integrated magnetics 1G Base-T

2x4 Port with THT mount and LEDs

Features:

2x4 Configuration

Long Body

3 Wire + Transformer + 5th Channel-PSF

Current drive

Shielded EMI Finger

PoE Ultra (1000mA)

Industrial grade

RoHS Compliant



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1. Introduction



Featuring a popular footprint and compatible package to industry RJ45 Integrated Connectors standards, the Taoglas TMJG471213-9A51NL6 is an RJ45 Integrated Connector 1G Base-T Single 2x4 Ports with shielded EMI finger body and designed for Industrial grade environments and PoE++ capabilities.

Typical Applications Include:

- Industrial Automation
- Hubs
- Routers
- Switches
- Wireless Access Points

Taoglas Magnetics offer an extensive product line of RJ45 Integrated Connectors designed for commercial and industrial grade applications, supporting 10/100 Base-T (Atmos100 Series) and 1G Base-T (Atmos1000 series). These surface mount or through-hole components provide reliable performance and maintain signal integrity that meets IEEE 802.3 standards, and they are UL certified. The Power over Ethernet options are also available including PoE, PoE+ and PoE++.

The majority of Taoglas RJ45 ICMs are manufactured with fully automated winding, assembly & testing to ensure consistent performance, quality and reliability while ensuring cost competitiveness for its customers. These products are fully compliant with the REACH and RoHS directive, and compatible with all major PHY vendors.

For customized products or support with integration, contact your regional Taoglas customer support team for further information.



2. Specifications

Electrical Performance @25°C			
Inductance	350uH MIN @100KHz, 0.1V, 8mA DC Bias		
	120uH MIN @100KHz, 0.1V, 18mA DC Bias		
Turns Ratio (±2%)	1CT: 1CT		
Insertion Loss	1-100MHz: -1.0dB Max		
	100-125MHz: -1.2dB Max		
Return Loss (dB Min)	1-40MHz: -16		
	40-60MHz: -12		
	60-80MHz: -10		
	80-100MHz: -8		
Crosstalk (dB MIN)	1-100MHz: -30		
Common to Mode Rejection (dB MIN)	1-100MHz: -30		
Hipot	2250 VDC		
DC Current/Voltage rating-PSE Pins	1000mA @ 57V (CONTINUOUS)		

Environmental Specifications			
Operating Temperature	-40°C TO +85°C		

Material Specifications			
Housing	PA66 Black UL94 V-0		
Insert	PA66 Black UL94 V-0		
Shield	Brass		
Shield plating	Nickel		
Contact	Phosphor Bronze		
Contact Plating	Selective Gold, 6 micro-inches Min in contact area Pin not electrically connected maybe omitted see electrical drawing for omitted pins		
Peak Soldering Temperature	45° C Max, 5 secs Max		

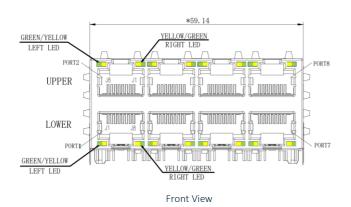
Compliance		
UL recognized - FILE NO. E528697		
IEEE 802.3		
RoHS Compliant		

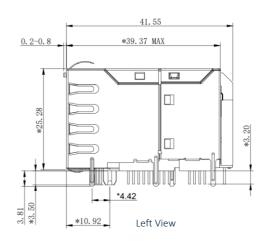
Storage requirements			
Humidity	MSL - 1		
Storage Temperature	-40°C TO +85°C		

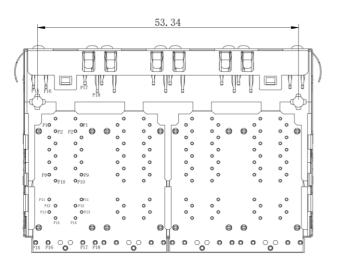


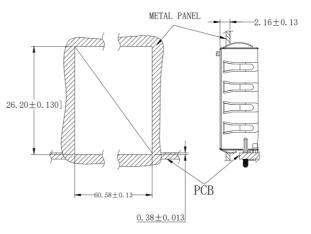
3. Mechanical

3.1 Mechanical Drawings









Bottom View

Suggested Panel Opening

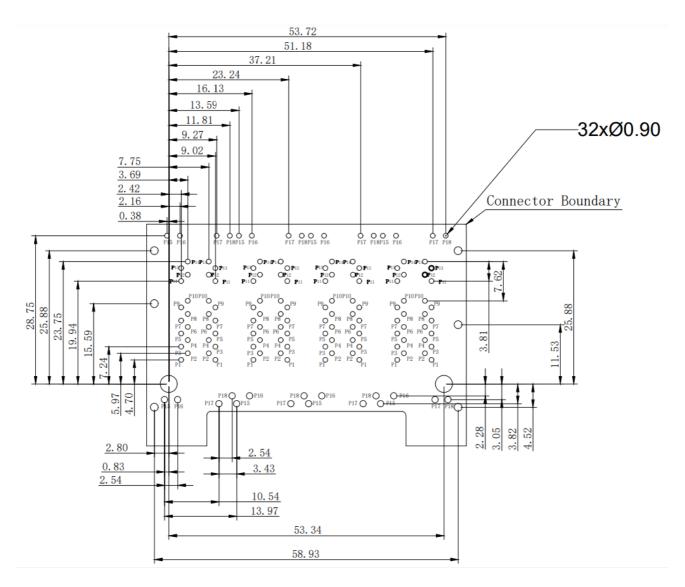
Mechanical Specifications			
Height	25.28 mm		
Width	59.14 mm		
Depth	41.55 mm		
Weight	61.5g		
Mounting Style	Through Hole (THT)		
Mounting Angle	Right Angle		

Dimensions are in millimeters with the following tolerances: $X.XX = \pm 0.25$



3. Mechanical

3.2 PCB Layout

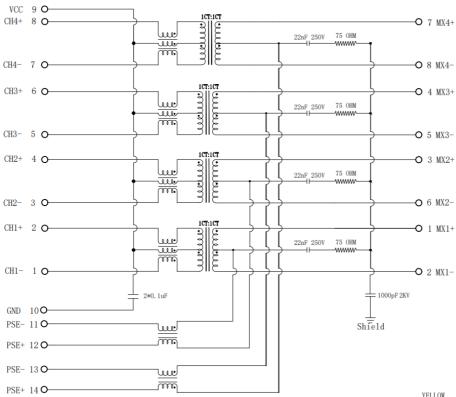


Suggested PCB Layout (Top View)
Dimensions are in millimeters



Electrical

Electrical Drawings



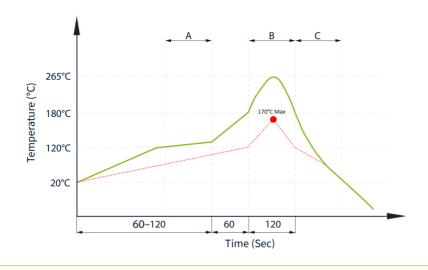
LED Electrical Specification				
Standard LED	Wavelength (nm)	V _F (max)	I _R	
Green	565	1.8-2.6v	10 μA Max	
Yellow	585	1.8-2.6v	10 μA Max	





Pin	Green	Yellow		Yellow	Green
P15	+	_	P17	+	_
P16	-	+	P18	_	+

Profile of Wave Solder



Pin Temperature Component Temperature

- A. Preheating B. Soldering C. Gradual Cooling

Suggested Wave Solder Curve

- 1. Tip temperature time: 3±1sec
- 2. Tip temperature time: 3±1sec

The melting point of Sn99.3/Cu0.7

www.taoglas.com SPE-23-8-133-A

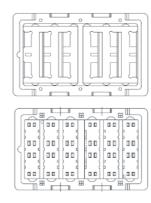


5. Packaging

5.1 SPQ

12 pcs/tray

Tray Weight: 1075g



1 Carton = 4 trays = 48 pcs

Carton dimensions: 340*220*200mm

Carton Weight: 4.3kg



5.2 Label

Taoglas Limited

P/N NO: XXXXXXXX

QYT: XXX PCS DC: XXXX

DATE: XXXX-XX-XX

SPQ Label (8x4cm)

Taoglas Limited

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P/N NO: XXXXXXXX

PO: XXXXXXXX B/N: XXXXXXXX

QYT: XXX PCS DC: XXXX

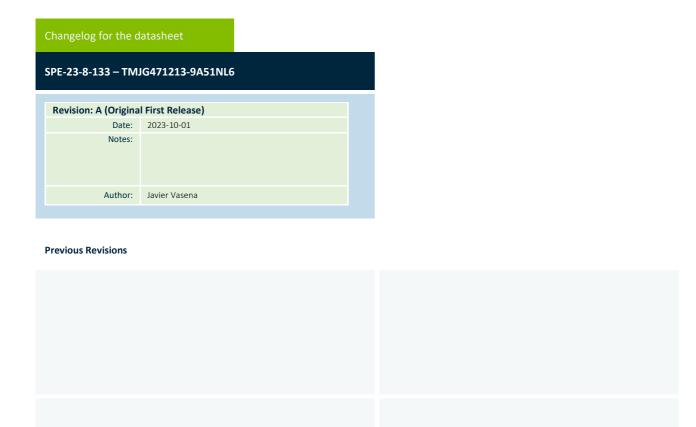
DATE: XXXX-XX-XX

Carton Label (8x4cm)

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Changelog







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