

# MIT-924G-56PNN

## Multiport Passive PoE Injector

# USER'S MANUAL



MSTRONIC CO., LTD.

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# 1. Introduction

The MIT-924G-56PNN is a 24 ports passive PoE injector, 1U rack mount upgradeable from 24 ports, in a 10/100/1000BaseTx Ethernet network, over TIA/EIA-568 Category 5/5e/6 cabling. It is power on all 4 pairs of the cabling.

## Features

- 24 port Passive PoE Injector (No detection) or 802.3bt 90Wmax
- Support 24 ports full load, max. 2160W
- AC input (100-240 VAC, 50/60 Hz)
- Independent overload and short-circuit protection per module
- Individual power status indicator
- Supports IEEE 802.3af/at/bt non-standard device
- Standard 19" or 23" rack mountable
- DIY upgrade from 24 port available

# 2. Hardware Description

## Front Panel

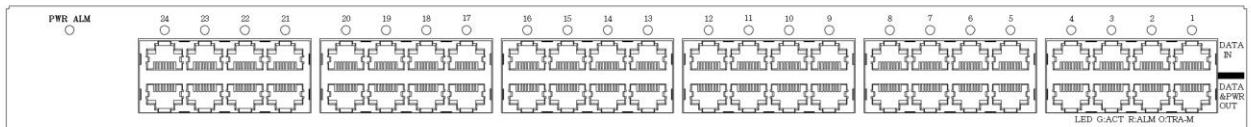


Figure 2-1. The Front panel of MSE MIT-924G

The Front Panel of the MSE MIT-924G-56XXX consists of 24 x RJ-45 Ethernet ports (data), 24 x RJ-45 PoE ports (data + power), 24 x LED port indicators, each LED indicates the individual port power status.



## LED Indicators

**ALARM LED Indicators status:**

**RED:** Any fan stops or any power stops outputting (3 power modules inside).

**The RJ45 LED Indicators status:**

Status	Description
GREEN	POE outputting
GREEN flashing	Over load
NO light	POWER FAIL

## Rear Panel



The HD-302-5PHC inlet, and 4 Ventilation fans are located at the rear panel of MIT-924G. The device will work with AC in the range 100-240V AC  $\pm 10\%$ , 50-60Hz.

## Power On

Connect the power Line to the power inlet, (HD-302-5PHC) on the rear panel of the unit. The other side of power cord connects to the power

Must use 12AGW at 100Vac  $\pm 10\%$  INPUT , 15AGW at 240Vac  $\pm 10\%$  INPUT.

The internal power supply of the PSE works with voltage range of AC in the 100-240VAC, frequency 50~60Hz. Check the indicators on the front panel to see if power is properly supplied.



### 3. Technical Specification

PARAMETER	MIT-924G-56PNN
Data Ports	24
PoE Ports	24
Data Rates	10/100/1000 Mbps
Output power	90Watt (Passive): Per port @DC55V
Power consumption (maximum)	2160W
PoE pin assignment	All 4 pairs (1&2,V-, 3&6,V+, 4&5,V+, 7&8,V-)
AC Input	100~240VAC $\pm$ 10%,50/60Hz
AC Input Current require	13A@230VAC, 25A@100VAC
AC Inrush Current:	240VAC / 60Hz @ Full load (Cold start)=140Amax
PoE protection	Over-current $\approx$ 1.7A
Indicator	Per port: Green: PoE outputting Off: no power
Environment	Operating Temperature: -35°C~50°C Storage Temperature: -40°C~85°C Humidity: 10%~95%RH (non condense)
Dimensions	430mm(L) x 403mm(W) x 44mm(H), 19" Rack-Mount / 1U
Weight	6.5kg

# Product Specifications

**Model : CSB800-056-000**

## Description

This specification is defined for Class I (3 prong) open frame power supply , Single phase, 800 watts with 56V DC single output.

Characteristics	Parameter Description	Condition	CSB800-056-000	Units	
Output	Output Voltage Regulation:	Main power	56	V	
	Output Current Regulation:	With 10.1 CFM fan	14.29	A	
	Peak Load:	None		A	
		None		A	
	Output Ripple Voltage: <sup>*1</sup>	The bandwidth is 20MHz	560	mV p-p	
	Voltage Regulation	Main power	54.88 ~ 57.12	V	
	Adjust Voltage Range	None		%	
	Initial Set Accuracy	None		%	
	Standby Output	None			
	Fan Supply	None			
	Output Watt :	With 10.1 CFM fan	800	W	
	Line Regulation		±1.0	%	
	Load Regulation		±2.0	%	
	Over-Shoot & Under-Shoot:		5	%	
	Dynamic Load Requirements:	Output regulation		53.2 ~ 58.8	% Max. Power
		Dynamic loading - 50%~100%		±5%	
Dynamic loading - 10%~50%			±5%		
Dynamic loading - 100%~120%			None		
Slew rate			0.1	A/uS	
Duration 1			10	mS	
Period 1			20		
Duration 2			100	mS	
Period 2			200		
Applicable voltages			115 ~ 230	V <sub>AC</sub>	
Capacitive load	Start-up test		uF		
Input	Operating Voltage:		100 ~ 240	V <sub>AC</sub>	
	Operating Frequency:		50 ~ 60	Hz	
	Input Voltage Limited:		90 ~ 264	V <sub>AC</sub>	
	Input Frequency Limited:		47 ~ 63	Hz	
	Input Current:	110VAC / 60Hz @ Full load		8.5 Max.	A(rms)
		230VAC / 60Hz @ Full load		4.0 Max.	A(rms)
	Inrush Current:	120VAC / 60Hz @ Full load (Cold start)		70 Max.	A
		240VAC / 60Hz @ Full load (Cold start)		140 Max.	A
	Power Factor:	115VAC / 60Hz @ Full load		0.98 Min.	
		230VAC / 50Hz @ Full load		0.95 Min.	
	No Load Power Consumption	115VAC & 230VAC		0.5 Max.	W
Efficiency:	115VAC / 60Hz @ Full load		92 Min.	%	
	230VAC / 50Hz @ Full load		94 Min.		

**Notes:**

\*1 The output ripple voltage test conditions are matched to the connector, where each output is decoupled from a high frequency 0.1µF cap and a 10µF cap.

# Product Specifications

Model : CSB800-056-000

Characteristics	Parameter Description	Condition	Min	Typ	Max	Units	
<b>Timing Diagram</b>	Timings:						
		Timing name	Timing description	Acceptable range			
		Start-up Time	AC power on to 90% output	T1 ≤1Sec			
		Rise Time	10% output to 90% output	T2 ≤100mS			
		Hold-up Time	AC power off to 95% output	T3 ≥12mS			
		PS on/off	none				
		PG on/off	none				
		Start-up Time:	Loading conditions @ 800W	1			S
			Applicable voltages	115 / 230			VAC
		Hold-up Time:	Loading conditions @ 800W	12 min.			mS
	Applicable voltages	115 / 230			VAC		
Rise Time:	Loading conditions @ 800W	100 max.			mS		
	Applicable voltages	115 / 230			VAC		

Characteristics	Parameter Description	Temp. vs Load	Vin vs Load
<b>Derating</b>	Thermal Derating Curves:		

Characteristics	Agency	Standard	Notes & Conditions	
<b>Safety</b>	CB Report	IEC 62368-1		
	UL	UL 62368-1		
	TUV	EN 62368-1		
	CE	LVD & RoHS		
	<b>Parameter</b>	<b>Condition</b>	<b>Specification</b>	
	Isolation Resistance:	Primary to Secondary	2xMOPP	
		Primary to Earth	1xMOPP	
		Secondary to Earth	1xMOPP	
	HI - POT:	Primary to Secondary	3000VAC or 4242VDC	
		Primary to Ground	1500VAC or 2121VDC	
Secondary to Ground		500VDC		
Leakage Current:	264VAC	≤0.75mA(rms)		

Notes:

## Product Specifications

Model : CSB800-056-000

Characteristics	Parameter Description	Condition	Recovery	Latch	Range	Units
<b>Protection</b>	Over Voltage Protection: *3 O.V.P.			■		V
	Over Load Protection: O.C.P.		■			A
	Short Circuit Protection: S.C.P.		■			
	Over Temperature Protection: O.T.P.			■		

Characteristics	Parameter Description	Condition	Min	Typ	Max	Units	
<b>Environmental</b>	Surface Temperature:	ΔT			50	°C	
	Temperature Operating Range: *1		-40 *4		+70	°C	
	Temperature Storage Range:	Non-condensing	-40		+85	°C	
	Humidity Operating Range:		10%		90%	RH	
	Humidity Storage Range:	Non-condensing	5%		95%	RH	
	Cooling:	10.1CFM fan			800		W
		Natural air cooling					W
	Temperature Coefficient	0 ~ 50°C			±0.03		%/°C
	Operating Altitude					5000	meters
	Shock	Conforms to EN60068-2-27					
Vibration	Conforms to EN60068-2-6						

Phenomenon	Phenomenon	Standard	Test Level	Criteria	Note
<b>EMC : Emission</b>	Conduction	EN55032	Class B		
	Radiation *2	EN55032	Class B		
	Harmonic current	EN61000-3-2	Class A		
	Voltage Fluctuation and Flicker	EN61000-3-3			
<b>EMC : Immunity</b>	Electrostatic Discharge (ESD)	IEC 61000-4-2		A	
	RF Immunity	IEC 61000-4-3		A	
	EFT	IEC 61000-4-4		A	
	Surge Immunity Test	IEC 61000-4-5		A	
	Conducted (CS)	IEC 61000-4-6		A	
	Power frequency	IEC 61000-4-8		A	
	Voltage Dips	IEC 61000-4-11		B	

Characteristics	Parameter Description	Condition	Specification			Units
<b>Reliability</b>	MTBF: Base on Telcordia SR-332 issue 3	25°C Full load	1000 Min.			khrs
	Power Line Transients:	230V <sub>AC</sub> at rated load for 25°C	Coupling mode	Test level	Phase	Remark
			Common	± 2KV	0°C / 90°C	L-G / N-G
			Differential	± 1KV	180°C / 270°C	L-N
	Electrostatic Discharge (ESD):	110V <sub>AC</sub> & 220V <sub>AC</sub> at rated load for 25°C	Coupling mode		Test level	Remark
			Contact discharge		± 8KV	
Air discharge			± 15KV			

**Notes:**

\*1: Refer to P4. Temp. vs Load curve.

\*2: Add a toroid core \_\_\_\_\_ on the inlet and with system case.

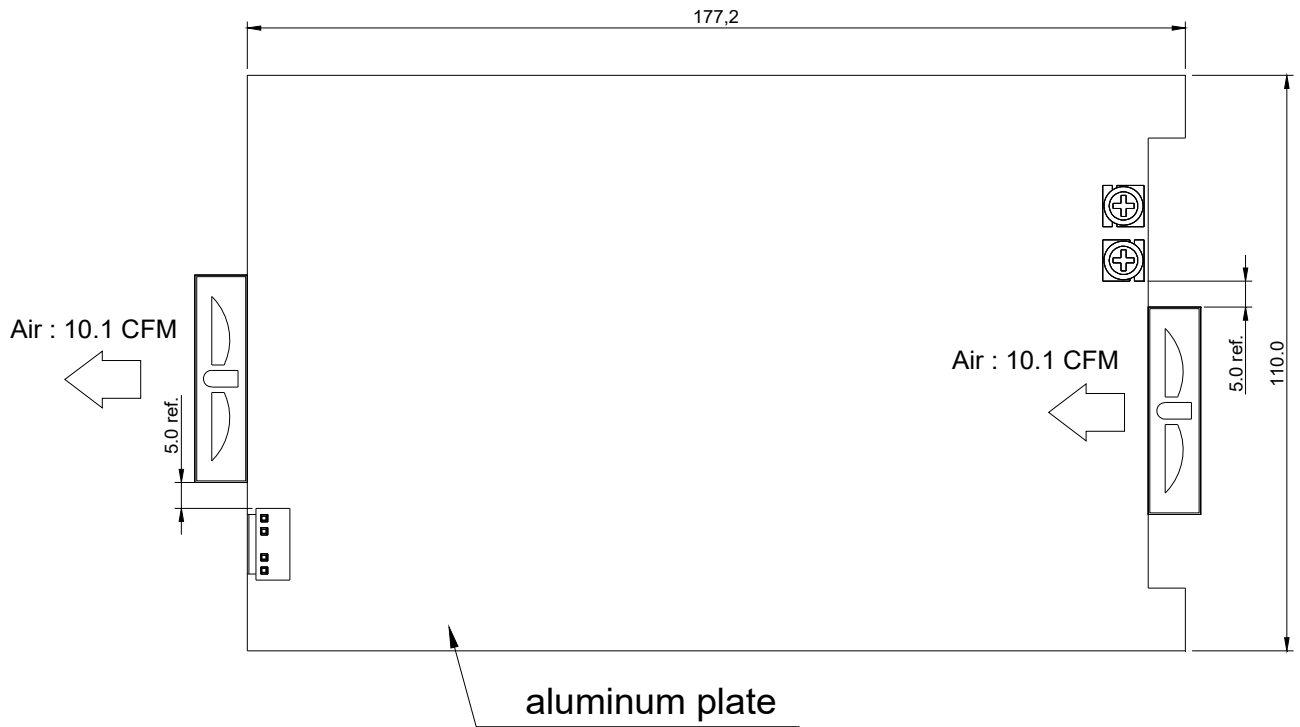
\*3: 客戶接受超出電容耐壓63V保護,但必須是LATCH保護機制

\*4: Start up in -40°C@730W within 30 sec

# Product Specifications

Model : CSB800-056-000

**Mechanical** Unit :mm



Connector	PIN Number	Assignment	Terminal	Mating
P1 (AC Input)	L	Line		
	N	Neutral		
V+ (DC Output)		V+		
V- (DC Output)		V-		

Packing	Parameter Description	Condition	Min	Typ	Max	Units
	Weight			TBD		g
	Packing Quantity			TBD		pcs / Box
	Packing Materials					

**Remark (or design note):**