

PoE Module

DC 3.3, 5V, 7.5, 9, 12V

Power 12W

Power over Ethernet Module

Features

- IEEE 802.3af compliant Power Device
- Small SIP package size - 53mm (L) x 14mm (H)
- Low ripple and Low noise output
- Low ESR decoupling capacitor
- Input voltage range 36V to 57V
- Output overload, short-circuit, and over-temperature protection
- Support IEEE 802.3af Under voltage Lockout (UVLO)
- Adjustable Output Voltage: 3.3V, 5V, 9V, or 12V
- High efficiency DC/DC conversion
- Maximum Output Power 12 Watt for Class 0
- Pb Free & RoHS Compliant

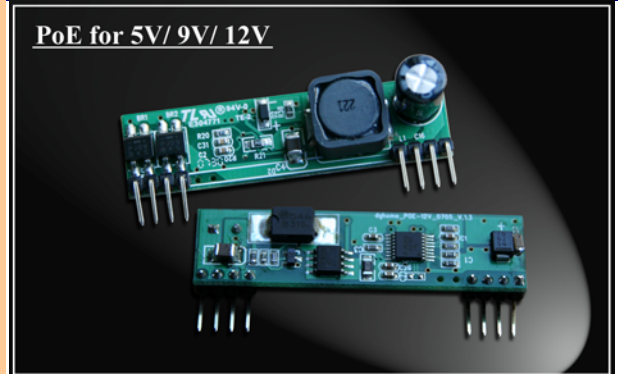
Descriptions

The PM100 modules are designed to extract power over Ethernet (PoE) from a Power Sourcing Equipment (PSE) through a Category 5 Ethernet cable, to provide Power Device (PD) a stable DC voltage in compliant with the IEEE 802.3af PoE standard.

The PM100 series have two pairs of power inputs pins: VA1&2 and VB1&2, to accommodate IEEE 802.3af allowing for two power options with Category 5 cables as the following figure. The PM100 modules provides the PoE compatibility detection and power classification required by the Power Sourcing Equipment and up to 12.95W power to the Powered Device (PD).

With non-isolated regulation, PM100 provides low ripple and low noise output.

In addition, PM100 implements protections for output overload, output short-circuit, and thermal shut-down. The modules also provide two pins; CR1&2 for external resistors connection to select for PoE Class 0 to Class 3 equipments. The high efficiency DC/DC converter operates over a wide input voltage range from 36V to 60V.



RELATED PRODUCT

PSE808 8-Port PoE Switch

PSE844 8-Port 4/PoE Switch

PSE802G 1-Port Gigabit PoE Injector

PSE801 1-Port 10/100m *Non-standard PoE*

Specification

Data Rate : 10/100 Mbps

Input Power Requirement: 1/2(+), 3/6 (-) or 4/5(+), 7/8(-)

Input Power Voltage: \pm 48Vdc/350mA,

Output Power: 5V(2A), 9V(1.1A), 12V(1A)

Physical Dimension:

Height x Width x Depth:

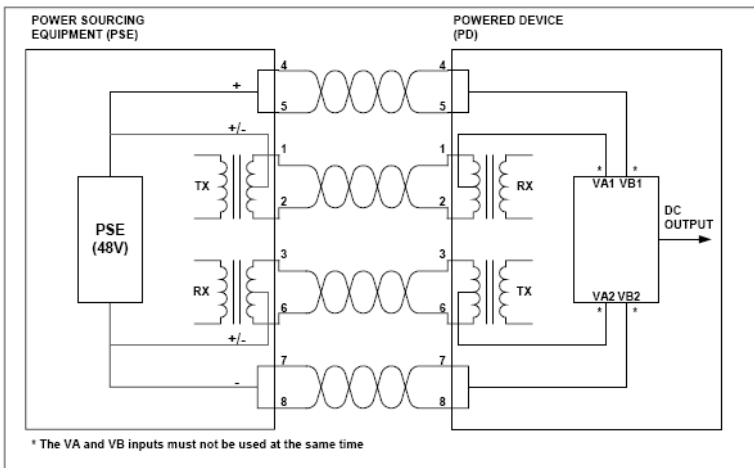
14mm x 53mm x 15mm (with 90 degree Pin Header)

14mm x 53mm x 12mm (with 180 degree Pin Header)

Operating Environment:

_ Ambient Temperature: 0 ~ 80 °C

Compliance RoHS



Input Pin	Name	Description
1	VA1	RX Input (1). This input pin is used in conjunction with VA2 and connects to the centre tap of the transformer connected to pins 1 & 2 of the RJ45 connector (RX) - it is not polarity sensitive.
2	VA2	TX Input (2). This input pin is used in conjunction with VA1 and connects to the centre tap of the transformer connected to pins 3 & 6 of the RJ45 connector (TX) - it is not polarity sensitive.
3	VB1	Direct Input (1). This input pin is used in conjunction with VB2 and connects to pin 4 & 5 of the RJ45 connector.
4	VB2	Direct Input (2). This input pin is used in conjunction with VB1 and connects to pin 7 & 8 of the RJ45 connector.

Input Pin	Name	Description
1	-VDC	Negative DC Output. This pin provides the regulated output from the DC/DC converter.
2	+VDC	Positive DC Output. This pin provides the regulated output from the DC/DC converter.
3,4	NC	No connection and can be use freely.

Note: 1. Grounding

If the input of PM100 is from a grounded source (e.g. a standard multi-channel PSE), it is important that the -VDC output NOT be connected to the same ground. Connecting -VDC to this ground might short circuit the input diode bridge, and cause improper operation of the PM100.



4. Technical Specifications

Maximum Output Power:

Ordering Info	Nominal Output Voltage	Maximum Output Power	Marking
PM100-12	12.0V	12 Watts	12
PM100-9	9.0V	12 Watts	9
PM100-5	5.0V	10 Watts	5
PM100-3	3.3V	6.5 Watts	3

Class Resistance:

PoE Class	Minimum Power	Maximum Power
0	0.44 Watts	12.95 Watts
1	0.44 Watts	3.84 Watts
2	3.84 Watts	6.49 Watts
3	6.49 Watts	12.95 Watts

Transient Surge Protection:

System-Level ESD immunity: Max 16KV for IEEE 802.3af

Conduction Surge: Max 1KV with 0.3μseconds rise time and 50μseconds fall time for IEEE 802.3af