



**tET-AD2**

**tPET-AD2**

Tiny Ethernet Module with Isolated 2-ch AI

### Features

- Web Server for Configuration
- Support Modbus TCP/UDP, MQTT, and SNMP V2c Protocols
- I/O Pair Connection (Push and Pull)
- Supports Dual-watchdog
- Supports Firmware Update via Ethernet
- Built-in I/O
  - 2-channel Single-ended Inputs
  - Voltage Inputs and Current Inputs
- Adjustable Sampling Rate (Fast/Normal Mode)



### Introduction

The tET-AD2 / tPET-AD2 is an analog input module that includes 2 single-ended analog input channels and provides a programmable input range on all analog inputs (0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 5 V, 0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA). It provides high overvoltage protection of 120 VDC. The sampling rate of the tET-AD2 / tPET-AD2 is adjustable and is available in either fast or normal mode. It also provides 4 kV ESD protection as well as 3000 VDC intra-module isolation.

### System Specifications

Model	tET-AD2	tPET-AD2
<b>Software</b>		
Built-in Web Server	Yes	
<b>CPU Module</b>		
CPU	32-bit MCU	
Watchdog Timer	Module, Communication (Programmable)	
<b>Isolation</b>		
2-way Isolation	Ethernet:1500 VDC I/O: 3000 VDC	I/O: 3000 VDC
<b>EMS Protection</b>		
EFT (IEC 61000-4-4)	±4 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal, ±8 kV Air for Random Point	
<b>LED Indicators</b>		
Status	Run, Ethernet	Run, Ethernet, PoE
<b>Ethernet</b>		
Ports	1 x RJ-45, 10/100 Base-TX	
PoE	-	Yes
Access Control	Password and IP Filter	
Protocol	Modbus TCP, Modbus UDP, MQTT, SNMP V2c	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Consumption	1.0 W	1.2 W
Powered from PoE	-	IEEE 802.3af, Class 1
Powered from Terminal Block	+12 ~ +48 VDC	
<b>Mechanical</b>		
Dimensions (mm)	52 x 95 x 27 (W x L x H)	
Installation	DIN-Rail Mounting	
<b>Environment</b>		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-30 ~ +80 °C	
Humidity	10 ~ 90% RH, Non-condensing	

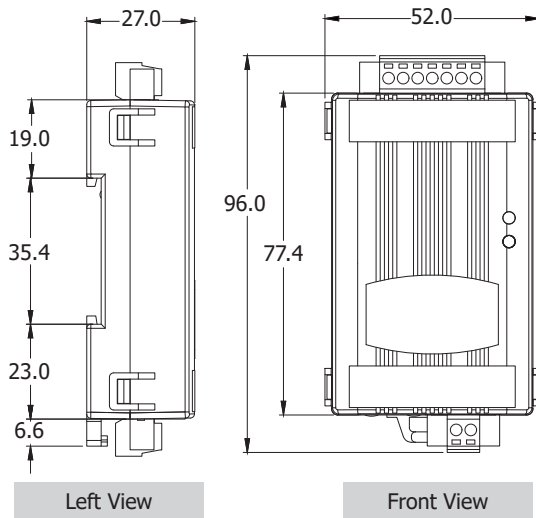
## I/O Specifications

Model	tET-AD2		tPET-AD2	
<b>Analog Input</b>				
Channels	2 Single-ended			
Range	Voltage	0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 5 V, 0 ~ 10 V		
	Current	0 ~ 20 mA, 4 ~ 20 mA		
Resolution	16-bit			
Accuracy	Normal Mode	±0.1% of FSR		
	Fast Mode	±0.5% of FSR		
Sampling Rate	Normal Mode	10 Hz (total channels)		
	Fast Mode	200 Hz (total channels)		
Input Impedance	Voltage	6 MΩ		
	Current	124 Ω		
Overvoltage Protection	120 VDC			
Overcurrent Protection	50 mA at 110 VDC			
Individual Channel Configuration	Yes			
Open Wire Detection	For 4 ~ 20 mA only			

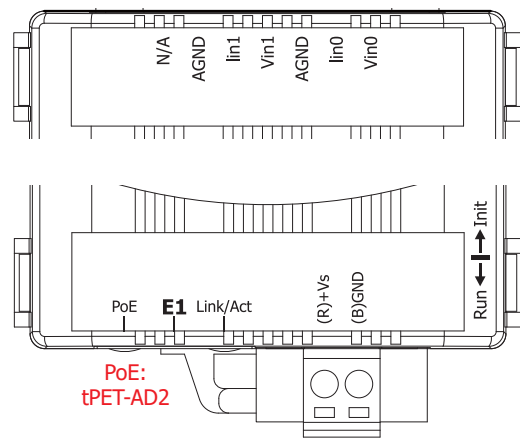
## Applications

- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor fabrication
- Control Systems

## Dimensions (Units: mm)



## Pin Assignments



## Wire Connections

Voltage Input (Single-ended Mode)	Current Input (Single-ended Mode)
<p>A circuit diagram showing a voltage source labeled "mV/V" with a positive terminal (+) and a negative terminal (-). The positive terminal is connected to the "Vin+" terminal of the module, and the negative terminal is connected to the "AGND" terminal.</p>	<p>A circuit diagram showing a current source labeled "mA" with a positive terminal (+) and a negative terminal (-). The positive terminal is connected to the "Vinx" terminal of the module, and the negative terminal is connected to the "AGND" terminal. The "Inx" terminal is also shown but not connected in this diagram.</p>

## Ordering Information

tET-AD2 CR	Tiny Ethernet Module with Isolated 2-ch AI (RoHS)
tPET-AD2 CR	Tiny PoE Ethernet Module with Isolated 2-ch AI (RoHS)