ICP DAS

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)

tET-AD2   tPET-AD2

Tiny Ethernet Module with Isolated 2-ch AI

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
Software			
Built-in Web Server		Yes	
CPU Module			
CPU		32-bit MCU	
Watchdog Timer		Module, Communication (Programmable)	
Isolation			
2-way Isolation	Ethernet	1500 VDC	-
	I/O	3000 VDC	
EMS Protection			
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	
LED Indicators			
Status		Run, Ethernet	Run, Ethernet, PoE
Ethernet			
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	
Power			
Reverse Polarity Protection		Yes	
Consumption		1.0 W	1.2 W
Powered from PoE		-	IEEE 802.3af, Class 1
Powered from Terminal Block		+12 to +48 VDC	

I/O Specifications

Model		tET-AD2	tPET-AD2
Analog Input			
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 to 20 mA only	

Mechanical	
Dimensions (mm)	52 x 96 x 27 (W x L x H)
Installation	DIN-Rail mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Humidity	10 ~ 90% RH, Non-condensing

Pin Assignments

tPET-AD2: PoE

Bottom view labels:
- PoE
- E1 Link/Act
- (R)+Vs
- (B)GND
- Run ← ▌ → Init

Top view labels:
- N/A
- AGND
- Iin1
- Vin1
- AGND
- Iin0
- Vin0

Bottom	Top

Wire Connections

Voltage Input (Single-ended Mode)

mV/V + V - → Vin+ / AGND

Current Input (Single-ended Mode)

mA + ↑ - → Vinx / Iinx / AGND
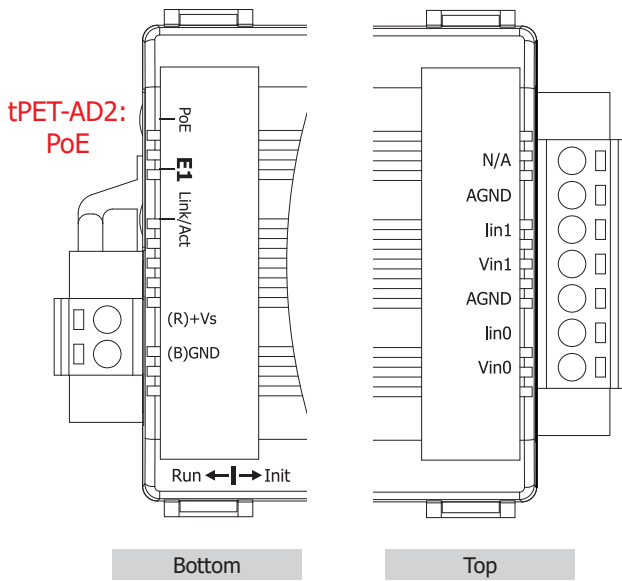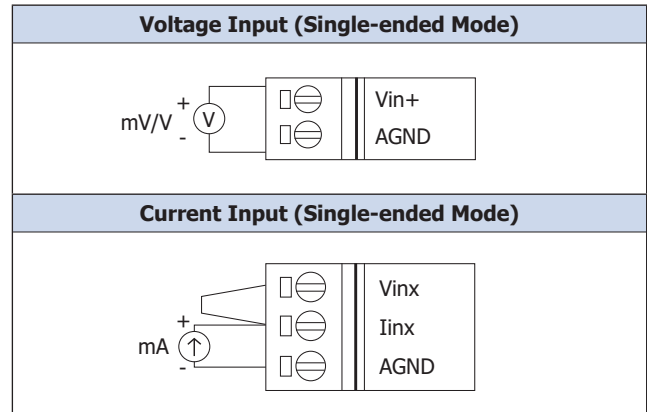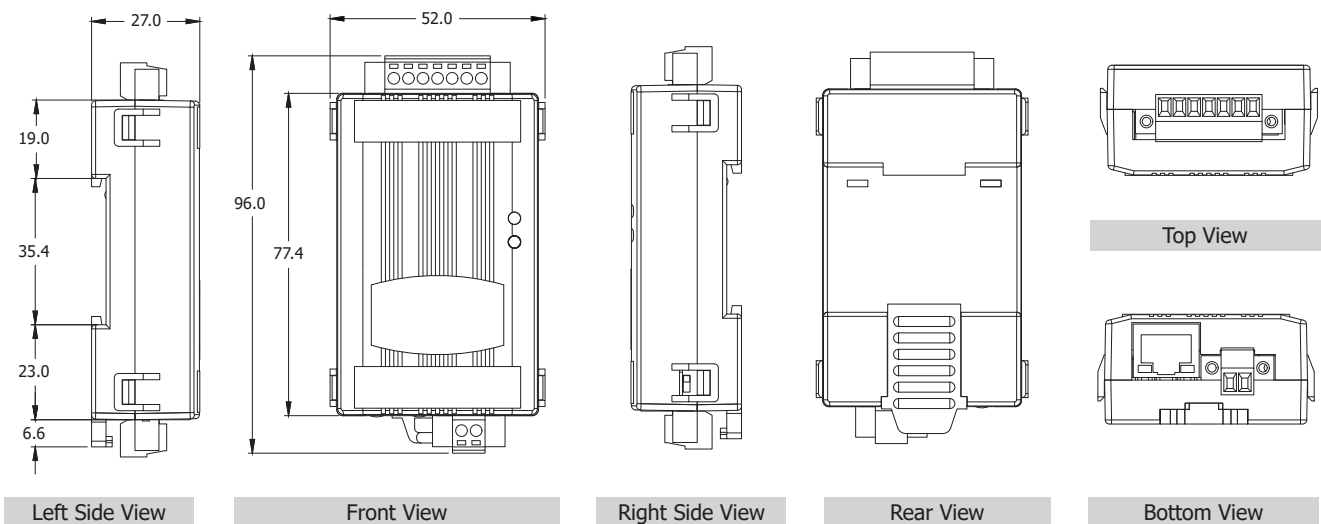
Applications

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

Dimensions (Units: mm)

Left Side View: 27.0, 19.0, 35.4, 23.0, 6.6

Front View: 52.0, 96.0, 77.4

Left Side View	Front View	Right Side View	Rear View	Bottom View

Top View

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)