ICP DAS

Features

- Built-in Web Server
- Support Modbus TCP/UDP, MQTT, and SNMP V2c Protocols
- 2-port Ethernet Switch (LAN Bypass) for Daisy-Chain Wiring
- Dual Watchdog
- I/O Pair Connection (Push and Pull)
- Built-in I/O
  - ☐ 8-channel Wet or Dry contact DI
  - ☐ 8-channel DO selectable as either sink- or source-type via wire connection
- LED Display to Indicate the I/O Status

ET-2255U

Ethernet I/O Module with 8-ch DI, 8-ch Sink-/Source-type DO

Introduction

The ET-2255U provides 8 wet/dry contact Digital Input channels and 8 sink- or source-type Digital Output channels by wire connection. With 2 Ethernet ports, The ET-2255U allows daisy chain connection which permits the flexibility in locating devices, eases installation and lowers infrastructure costs. It features optical isolation for 3000 Vrms of transient overvoltage protection but doesn't provide channel-to-channel isolation. Each input channel can be used as a 32-bit counter and each output channel can drive 500 mA load. The power-on value and safe value of digital output channel are programmable. It can safely be used in applications where hazardous voltages are present. It features 8 kV ESD protection, 4 kV EFT protection, 3 kV surge and 3000 VDC I/O isolation to enrich the noise protection ability for industrial environment.
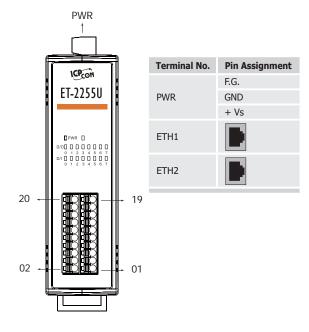
System Specifications

Software	
Built-in Web Server	Yes
CPU Module	
CPU	32-bit ARM
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)	±8 kV Contact for Each Terminal ±16 kV Air for Random Point
Surge (IEC 61000-4-5)	±2 kV for Power Line
LED Indicators	
Status	Run, Ethernet, I/O
Ethernet	
Ports	2 x RJ-45, 10/100 Base-Tx, Switch Ports
LAN bypass	Yes
Security	Password and IP Filter
Protocol	Modbus TCP, Modbus UDP, MQTT, and SNMP V2c
Power	
Reverse Polarity Protection	Yes
Consumption	2.7 W (max.)
Powered from Terminal Block	+10 to +48 VDC
Mechanical	
Casing	Plastic
Dimensions (mm)	33 x 126 x 108 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +80°C
Humidity	10 to 90% RH, Non-condensing

■ I/O Specifications

Digital Input/Counter	
Channels	8
Type	Dry Contact Wet Contact
Sink/Source (NPN/PNP)	Dry: Source Wet: Sink/Source
ON Voltage Level	Dry: Close to GND Wet: +5 to +50 VDC
OFF Voltage Level	Dry: Open Wet: +1 VDC (max.)
Max. Counts	4,294,967,295 (32-bit)
Frequency	3 kHz
Input Impedance	7.5 kΩ
Overvoltage Protection	+70 VDC
Low Pass Filter	1 to 6500 ms (0.08 Hz to 500 Hz)
Digital Output	
Channels	8
Type	Push-Pull
Sink/Source (NPN/PNP)	Sink/Source
Load Voltage	+3.5 to +80 V
Load Current	500 mA/channel
Overvoltage Protection	-
Overload Protection	-
Power-on Value	Programmable
Safe Value	Programmable

■ Wire Connections

Digital Input/ Counter	Readback as 1	Readback as 0
	Close to GND	Open
Dry Contact		
	+5 to +50 VDC	OPEN or <1 VDC
Wet Contact (Sink)		
	+5 to +50 VDC	OPEN or <1 VDC
Wet Contact (Source)		

■ Pin Assignments

PWR

Terminal No.	Pin Assignment
PWR	F.G.
	GND
	+ Vs
ETH1	
ETH2	

Pin Assignment	Terminal No.		Pin Assignment
N/A	20	19	DI.GND
DO0	18	17	DI0
DO1	16	15	DI1
DO2	14	13	DI2
DO3	12	11	DI3
DO4	10	09	DI4
DO5	08	07	DI5
DO6	06	05	DI6
DO7	04	03	DI7
DO.COM	02	01	DI.COM
	20-pin Connector		

Output Type	ON State Readback as 1	OFF State Readback as 0
Sink		
Source		

■ Ordering Information

ET-2255U CR	Ethernet I/O Module with 2-port Ethernet Switch, 8-ch DI and 8-ch Sink/Source-type DO (RoHS)