WISE-4000LAN Series

IoT Ethernet I/O Module

Main Features

- IEEE 802.3u 10/100Base-T(X)
- Industrial grade operating temperature -40~70°C
- Supported Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, HTTP, MQTT
- Supports RESTful web API in JSON format
- Supports local logging with RTC timestamp
- Supports mobile device web configuration in HTML5
- Supports 10~30V_{DC} power with reverse protection

Introduction

The WISE-4000LAN series is a newly designed IoT Ethernet I/O module which supports new RESTful web API for IoT applications. A HTML5 web configure interface enables users to configure WISE modules without the limitation of a platform or operation system. The built-in data logger function logs data with time information, then be retrieved in a bundle. Wide operating temperatures enable the WISE series to be implemented in more IoT data acquisition applications. As well as the new functions, the new mechanical design can let users install the module and doing diagnostics in an easier manner than before.

Specifications

Current Input

- **Channel** WISE-4010LAN: 4 (differential)
- **Resolution** 12-bit
- **Sampling Rate** 10/100 Hz/channel
- **Accuracy** ±0.2% of FSR @ 25°C
- **Input Range** 0~20 mA, 4~20 mA
- **Input Impedance** 120 Ω
- **Burn-out Detection** Yes (4~20 mA only)
- **Supports Data Scaling and Averaging**

Digital Input

- **Channels** WISE-4050LAN: 4
  WISE-4060LAN: 4
- **Logic level:** Dry Contact 0: Open
  1: Close to DI COM
  Wet Contact 0: 0 ~ 3 V_{DC}
  1: 10 ~ 30 V_{DC} (3 mA min.)
- **Isolation** 3,000 V_{rms}
- **Supports 32-bit Counter Input Function (Maximum frequency 3kHz)**
- **Keep/Discard Counter Value when Power-off**
- **Supports Frequency Input Function (Maximum frequency 3 kHz)**
- **Supports Inverted DI Status**

Digital Output

- **Channels** WISE-4010LAN: 4
  WISE-4050LAN: 4
  (Open collector to 30 V, 500 mA max. for resistance load)
- **Isolation** 3,000 V_{rms} (WISE-4050LAN only)
- **Supports 1 kHz Pulse Output**
- **Supports High-to-Low and Low-to-High Delay Output**

Relay Output

- **Channels** WISE-4060LAN: 4 (Form A)
- **Contact Rating** 250 V_{AC} @ 5 A
  (Resistive Load) 30 V_{DC} @ 3 A
- **Isolation** (b/t coil & contact) 3,000 V_{rms}
- **Relay On Time** 10 ms
- **Relay Off Time** 5 ms
- **Insulation Resistance** 1 GΩ min. @ 500 V_{DC}
- **Maximum Switching** 60 operations/minute
- **Supports Pulse Output**
- **Supports High-to-Low and Low-to-High Delay Output**

Environment

- **Operating Temperature** -40 ~ 70°C (-40~158°F)
- **Storage Temperature** -40 ~ 85°C (-40~185°F)
- **Operating Humidity** 20 ~ 95% RH (non-condensing)
- **Storage Humidity** 0 ~ 95% RH (non-condensing)

General

- **LAN** IEEE 802.3u 10/100Base-T(X)
- **Connectors** Plug-in screw terminal block (I/O and power)
- **Watchdog Timer** System (1.6 second) and Communication (programmable)
- **Certification** CE, FCC, RoHS
- **Dimensions (W x H x D)** 80 x 98 x 25 mm
- **Enclosure** PC
- **Mounting** DIN 35 rail, wall, and stack
- **Power Input** 10 ~ 30 V_{DC}
- **Power Consumption** WISE-4010LAN: 1.2 W @ 24 V_{DC}
  WISE-4050LAN: 2.2 W @ 24 V_{DC}
  WISE-4060LAN: 2.5 W @ 24 V_{DC}
- **Power Reversal Protection**
- **Supports Data Log Function** Up to 10000 samples with timestamp
- **Supports User Defined Modbus Address**
- **Supported Protocols: Modbus/TCP, TCP/IP, UDP, DHCP, HTTP, MQTT**
- **Supports RESTful Web API in JSON format**
- **Supports Web Server in HTML5 with JavaScript & CSS3**
- **Supports System Configuration Backup and User Access Control**

Ordering Information

- **WISE-4010LAN-B** 4-ch Current Input and 4-ch Digital Output IoT Ethernet I/O Module
- **WISE-4050LAN-B** 4-ch Digital Input and 4-ch Digital Output IoT Ethernet I/O Module
- **WISE-4060LAN-B** 4-ch Digital Input and 4-ch Relay Output IoT Ethernet I/O Module

Selection Table

Model Name	Current Input	Digital Input	Digital Output	Relay Output
WISE-4010LAN	4		4	
WISE-4050LAN		4	4	
WISE-4060LAN		4		4

Last updated: 14-Oct-2021