



Features

- Built-in Web Server for IF-THEN-ELSE rule setting
- Built-in IF-THEN-ELSE rule engine for logic operation
- No more programming. Just click and get done!
- Support IO, Counter, Timer, Email operations
- Modbus/TCP Protocol for SCADA Software Seamless Integration
- IEEE 802.3af-compliant Power over Ethernet (PoE)
- 10/100 Base-TX Ethernet
- AI: 6 (mV, V, mA)
- AO: 2 (V, mA)
- DO: 2 (Open Collector Output)
- DI: 2 (Dry+Wet)



Introduction

WISE (Web Inside, Smart Engine) is a product series developed by ICP DAS that functions as control units for use in remote logic control and monitoring in various industrial applications. WISE offers a user-friendly and intuitive web site interface that allows users to implement IF-THEN-ELSE control logic on controllers just a few clicks away; no programming is required. With its powerful and easy-to-use features, it will minimize the learning curve, shorten time to market and dramatically reduce the labor and cost spent on system development.

WISE-7126 follows IEEE 802.3af-compliant (classification, Class 1) Power over Ethernet (PoE) specification. It allows receiving power from PoE enabled network by Ethernet pairs (Category 5 Ethernet cable). This feature provides greater flexibility and higher efficiency therefore simplifying systems design, saving space, reducing cables and eliminating the requirement for dedicated electrical outlets. Meanwhile, in case under a non-PoE environment, WISE-7126 will still be able to receive power from auxiliary power sources like AC adapters or battery, etc.

This multi-function module WISE-7126 supports Modbus/TCP protocol to make seamless integration with SCADA software available. It features 6-channel analog inputs, 2-channel analog outputs, 2-channel digital inputs and 2-channel digital outputs. Each analog input channel provides 240 Vrms high over voltage protection.

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment, etc.

System Specifications

I/O Specifications

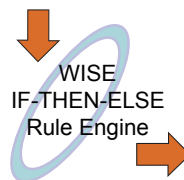
| Analog Input | | |
|----------------------------------|---|--|
| Input Channels | 6 (Differential) | |
| Input Type (jumper selectable) | +/-500 mV, +/-1 V, +/-5 V, +/-10 V +/-20 mA, 0 ~ 20 mA, 4 ~ 20 mA | |
| Resolution | 16-bit | |
| Sampling Rate | 10 Sample/Sec. (Total) | |
| Accuracy | +/-0.1% | |
| Zero Drift | +/-20 µV/°C | |
| Span Drift | +/-25 ppm/°C | |
| Overvoltage Protection | 240 Vrms | |
| Input Impedance | Voltage | 2 MΩ |
| | Current | 125 Ω |
| Common Mode Rejection | 86 dB Min. | |
| Normal Mode Rejection | 100 dB | |
| Individual Channel Configuration | Yes | |
| Analog Output | | |
| Output Channels | 2 | |
| Output Type | 0~5 V _{DC} , +/- 5 V _{DC} , 0~10 V _{DC} , +/- 10 V _{DC} , 0~20 mA, 4~20 mA (jumper selectable) | |
| Individual Channel Configuration | Yes | |
| Resolution | 12-bit | |
| Accuracy | +/- 0.1% of FSR | |
| Voltage Output Capability | 20 mA @ 10 V | |
| Current Load Resistance | 500 Ω | |
| Open Wire Detection | Yes, for 4 ~ 20mA only | |
| Digital Input | | |
| Input Type | 2 | |
| Dry Contact (Source) | On Voltage Level | Close to GND |
| | Off Voltage Level | Open |
| | Effective Distance for Dry Contact | 500M Max. |
| Wet Contact (Sink/Source) | On Voltage Level | + 1V _{DC} Max. |
| | Off Voltage Level | + 3.5 V _{DC} ~ + 30 V _{DC} |
| Counters | Channels | 2 |
| | Max. Counts | 16-bit (65535) |
| | Max. Input Frequency | 50 Hz |
| | Min. Pulse Width | 10 ms |
| Open Wire Detection | 30 V _{DC} | |
| Digital Output | | |
| Output Channels | 2 | |
| Output Type | Isolated Open Collector (Sink) | |
| Max. Load Current | 700 mA/Channel | |
| Load Voltage | +5 V _{DC} ~ +50 V _{DC} | |
| Overvoltage Protection | 60 V _{DC} | |
| Overload Protection | 1.4 A | |
| Short-circuit Protection | Yes | |

| System | |
|-----------------------------|--|
| CPU | 16-bit CPU |
| SRAM | 512KB |
| Flash Memory | 512KB |
| EEPROM | 16KB |
| Watchdog | Yes |
| Communication | |
| PoE Ethernet Port | 10/100 Base-TX and automatic MDI/MDI-X |
| 2-Way Isolation | |
| I/O | 2500 V _{DC} |
| EMS Protection | |
| ESD (IEC 61000-4-2) | 4 kV Contact for each terminal and 8 kV Air for random point |
| EFT (IEC 61000-4-4) | +/-4 kV for Power |
| LED Indicators | |
| PoE Power | PoE On |
| L1 | System Running |
| L2 | Ethernet Link/Act |
| L3 | Ethernet 10/100 M Speed |
| Power Requirements | |
| Reverse Polarity Protection | Yes |
| Powered from Terminal Block | Yes, 12 ~ 48 V _{DC} |
| Powered from PoE | Yes, IEEE 802.3af, Class1 |
| Consumption | 4.2W |
| Mechanical | |
| Dimensions (W x L x D) | 72 mm x 123 mm x 35 mm |
| Installation | DIN-Rail or Wall mounting |
| Environment | |
| Operating Temperature | -25 °C ~ +75 °C |
| Storage Temperature | -30 °C ~ +80 °C |
| Humidity | 10 ~ 90% RH, non-condensing |

Software Specifications

| Functions | |
|-----------------------------|--|
| Rule Configuration Website | Access Web server on WISE controllers to edit and upload logic rules through web browser. |
| 36 IF-THEN-ELSE Logic Rules | 3 IF conditions with AND or OR operators 3 THEN actions and 3 ELSE actions |
| 48 Internal Registers | Hold temporary variables and read/write data via Modbus/TCP address. |
| 12 Timers | Delay / Timing functions. |
| 12 Emails | Send Email messages to pre-set Email receivers. |
| 12 CGI Commands | Send pre-set CGI commands. |
| 12 Recipes | Set up THEN/ELSE action groups. |
| 8 P2P remote modules | Set up the connection information for the remote WISE modules. |
| Modbus/TCP Protocol | Real time control and monitoring I/O channels and system status of controllers via SCADA software. |

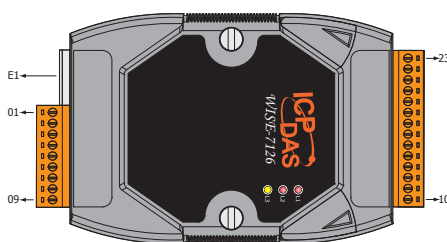
| IF Conditions | |
|-------------------|---------------------------------------|
| DI Channel | ON, OFF, ON to OFF, OFF to ON, Change |
| AI Channel | =, >, <, >=, <= (value) |
| Internal Register | |
| DI Counter | =, >, <, >=, <= (value), Change |
| DO Counter | |
| Timer | Timeout, Not Timeout |
| P2P | DI, AI, DI counter, DO counter, IR |
| Rule Status | Enable, Disable |



| THEN / ELSE Actions | |
|---------------------|-----------------------|
| DO Channel | ON, OFF, Pulse Output |
| AO Channel | Change the value |
| Internal Register | |
| DI Counter | Reset |
| DO Counter | Reset |
| Timer | Start, Reset |
| Email | Send |
| CGI Commands | |
| Recipe | Execute |
| P2P | DO(On/Off), AO, IR |
| Rule Status | Enable, Disable |

Pin Assignments

| Terminal No. | Pin Assignment |
|--------------|----------------|
| E1 | RJ-45 |
| 01 | Vout1+ |
| 02 | AGND |
| 03 | DI0 |
| 04 | DI1 |
| 05 | DO0 |
| 06 | DO1 |
| 07 | ISO.GND |
| 08 | +Vs |
| 09 | GND |

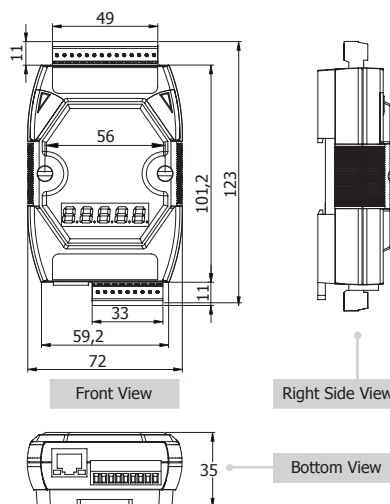


| Terminal No. | Pin Assignment |
|--------------|----------------|
| 23 | AGND |
| 22 | Vout0+ |
| 21 | Vin5- |
| 20 | Vin5+ |
| 19 | Vin4- |
| 18 | Vin4+ |
| 17 | Vin3- |
| 16 | Vin3+ |
| 15 | Vin2- |
| 14 | Vin2+ |
| 13 | Vin1- |
| 12 | Vin1+ |
| 11 | Vin0- |
| 10 | Vin0+ |

Wire Connections

| Voltage Input | | |
|-----------------------|--------------------------|---------------------------|
| mV/V | | JUMPER Default |
| Current Input | | |
| mA | | JUMPER |
| Voltage Output | | |
| Load | | Default |
| Current Output | | |
| Load | | |
| Digital Input | ON State / Readback as 1 | OFF State / Readback as 0 |
| Dry Contact | | |
| Digital Output | ON State / Readback as 1 | OFF State / Readback as 0 |
| Open Collector (Sink) | | |

Dimensions (Unit:mm)



Ordering Information

| | |
|------------------|---|
| WISE-7126 | 6-channel Analog Inputs, 2-channel Analog Outputs, 2-channel Digital Inputs And 2-channel Digital Outputs PoE Module (RoHS) |
|------------------|---|

Accessories

| | |
|---------------------|--|
| GPSU06U-6 | 24V/0.25A, 6 W Power Supply |
| MDR-20-24 | 24V/1A, 24 W Power Supply with DIN-Rail Mounting |
| NS-205 CR | Unmanaged 5-Port Industrial Ethernet Switch (RoHS) |
| NS-205PSE CR | Unmanaged 5-Port Industrial PoE Ethernet Switch (RoHS) |