



### 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 effort and cost spent on system development.

WISE-7119 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-7119 will still be able to receive power from auxiliary power sources like AC adapters or battery, etc.

This multi-function module WISE-7119 supports Modbus/TCP protocol to make seamless integration with SCADA software available. It features 16-bit, 8-channel differential analog inputs and 4-channel digital outputs. Each analog input is allowed to configure an individual range and has 240 Vrms high over voltage protection.

### Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote diagnosis and Testing Equipment, etc.

### I/O Specifications

Analog Input	
Input Channels	8 (Differential)
Input Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-50 mV, +/-500 mV, +/-1 V, +/-5 V, +/-10 V Thermocouple (J, K, T, E, R, S, B, N, C, L, M, LDIN43710) +/-20mA, 0~20mA, 4~20mA (jumper selectable)
Resolution	16-bit
Sampling Rate	10 samples/Sec. total
Accuracy	+/-0.1 % or better
Bandwidth	15.7 Hz
Zero Drift	+/-10 uV/°C
Span Drift	+/-25 ppm/°C
Input Impedance	>1 MΩ
Current	125 Ω
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Overvoltage Protection	240 V <sub>rms</sub>
ESD Protection	+/-4 kV (Contact for each channel) +/-8 kV air for random point
EFT Protection	+/-4 kV for Power
Digital Output	
Output Channels	4 (Sink)
Output Type	Isolated Open Collector
Max. Load Current	700 mA/Channel
Load Voltage	5 V <sub>oc</sub> ~ 50 V <sub>oc</sub>

### Analog Input & Digital Output

#### 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
- Support Current Input, Voltage Input and Thermocouple Input
- Over Voltage Protection is up to 240 Vrms
- 4-channel Digital Outputs
- 2-way Isolation/ESD Protection



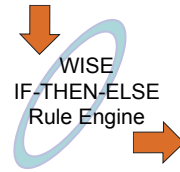
### System Specifications

System	
CPU	80186 CPU (80 MHz)
SRAM	512 KB
Flash Memory	512 KB
EEPROM	16 KB
Dual Watchdog	Yes
Communication	
PoE Ethernet Port	10/100 Base-TX (With Link, Activity LED Indicator) and automatic MDI/MDI-X
2-Way Isolation	
Ethernet	1500 V <sub>oc</sub>
AI and DO	2500 V <sub>rms</sub>
LED Indicators	
PoE	PoE On
L1	Run
L2	Link/Act
L3	10/100M
Power Requirements	
IEEE 802.3af	Class 1
Required Supply Voltage	Powered by Power over Ethernet (PoE) or auxiliary power +12 V <sub>oc</sub> ~ +48 V <sub>oc</sub> (non-regulated)
LED Indicator	Yes
Power Consumption	0.12 A @ 24 V <sub>oc</sub> Max.
Mechanical	
Dimensions(W x L x H)	123 mm x 72 mm x 35 mm
Installation	DIN-Rail or Wall mounting
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +80 °C
Humidity	5 ~ 90% RH, non-condensing

## Software Specifications


Functions	
36 IF-THEN-ELSE Logic Rules	3 IF conditions with AND or OR operators 3 THEN actions 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.
Rule Configuration Website	Access Web server on WISE controllers to edit and upload logic rules through web browser.
Modbus/TCP Protocol	Real time control and monitoring I/O channels and system status of controllers via SCADA software.

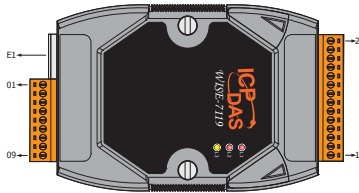
IF Conditions	
AI Channel	= > < >= <= (value)
Internal Register	
DO Counter	= > < >= <= (value) · Change
Timer	Timeout · Not Timeout



THEN / ELSE Actions	
DO Channel	ON · OFF · Pulse Output
Internal Register	Change the value
DO Counter	Reset
Timer	Start · Stop
Email	Send

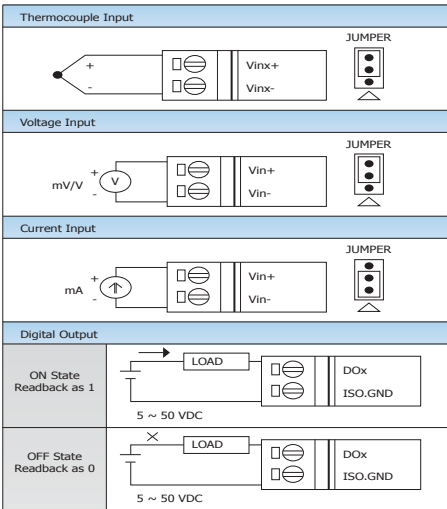
## Pin Assignment

Terminal No.	Pin Assignment
E1 	
01	Vin7+
02	Vin7-
03	DO0
04	DO1
05	DO2
06	DO3
07	ISO.GND
08	(R)+Vs
09	(B)GND

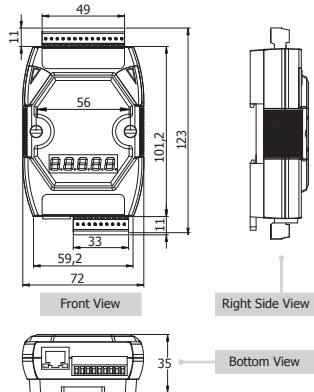


Terminal No.	Pin Assignment
23	Vin6-
22	Vin6+
21	Vin5-
20	Vin5+
19	Vin4-
18	Vin4+
17	Vin3-
16	Vin3+
15	Vin2-
14	Vin2+
13	Vin1-
12	Vin1+
11	Vin0-
10	Vin0+

## Wire Connection



## Dimensions (Unit: mm)



## Ordering Information

WISE-7119	8-channel Universal Input with High Voltage Protection and 4-channel Isolated Output PoE Module (RoHS)
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## 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)