

Ethernet I/O Modules



#### 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-7153 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-7153 will still be able to receive power from auxiliary power sources like AC adapters or battery, etc.

This module WISE-7153 supports Modbus/TCP protocol to make seamless integration with SCADA software available. It features 16-channel dry contact digital inputs. Each digital input channel supports counter input.

## Applications -

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

## I/O Specifications \_\_\_\_\_

Digital In	put	
Input Char	nnels	16
Input Type		Dry Contact (Source)
On Voltage Level		Close to GND
Off Voltage	e Level	Open
	Max. Count	65535 (16 bits)
Counters	Max. Input Frequency	50 Hz
	Min. Pulse Width	10 ms

## System Specifications \_\_\_\_\_

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 VDC
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 <sub>DC</sub>
Powered from PoE	Yes, IEEE 802.3af, Class1
Consumption	3.0 W
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
Internal Register	=, >, <, >=, <= (value)
DI Counter	=, >, <, >=, <= (value), Change
Timer	Timeout, Not Timeout
P2P	DI, AI, DI counter, DO counter, IR
Rule Status	Enable, Disable
	Th



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

# Pin Assignments\_

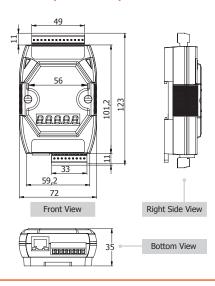
Terminal No.	Pin Assignment
E1	RJ-45
01	IN13
02	IN14
03	IN15
04	IN.GND2
05	N/A
06	N/A
07	N/A
08	(R)+Vs
09	(B)GND



Terminal No.	Pin Assignment
23	IN12
22	IN11
21	IN10
20	IN9
19	IN8
18	IN7
17	IN6
16	IN5
15	IN4
14	IN3
13	IN2
12	IN1
11	INO
10	IN.GND1

Digital Input/Counter	Readback as 1	Readback as 0
	ON State	OFF State
Dry Contact	Relay Close	× Relay Open

# ■ Wire Connections\_\_\_\_\_ ■ Dimensions (Unit:mm)\_



## Ordering Information\_

WISE-7153

16-channel Dry Contact Digital Input 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)	