ICP DAS

IoTstar Supported

WISE-7526M

WISE I/O Module with 6-channels AI, 2-channels AO, 2-channels DI, 2-channels DO and 2-port Ethernet Switch

Features

- No more programming, Web pages provided for system and logic rule setting.
- IF-THEN-ELSE logic rules execution ability.
- Built-in I/O
  AI: 6 Channels; AO: 2 Channels; DI: 2 Channels; DO: 2 Channels
- Support I/O Monitoring/Control, Counter, Schedule, Timer, Email sending and CGI Command sending operations.
- Modbus TCP Protocol for SCADA System Integration.
- IEEE 802.3af-compliant Power over Ethernet (PoE).
- 2-port Ethernet Switch for Daisy-Chain Topology.
- MQTT Protocol for IT & IoT (Internet of Things) System Integration.
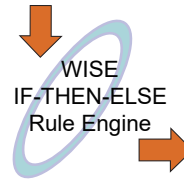- Support connection with IoTstar Cloud Management Software

CE UKCA FC RoHS PoE

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. By integrating with IF-THEN-ELSE rule engine, WISE-7526M provides more powerful functions such as I/O Monitoring/Control, Counter, Timer, Schedule, E-mail sending, CGI Command sending and Modbus TCP and MQTT protocol, and allows users to implement control logic on controllers just a few clicks away; no programming is required. WISE-7526M also can connect with ICP DAS IoTstar cloud management software for the services such as Remote Access and Sensor Data Collection.

WISE-7526M is a module with 6-channel analog inputs, 2-channel analog outputs, 2-channel digital inputs, and 2-channel digital outputs. It follows IEEE 802.3af-compliant Power over Ethernet (PoE) specification, and has a built-in two-port Ethernet switch to implement daisy-chain topology.

I/O Specifications

Analog Input	
Channels	6 (Differential)
Input Type	+/-500 mV, +/-1 V, +/-5 V, +/-10 V, +/-20 mA, 0 to 20 mA, 4 to 20 mA (jumper selectable)
Resolution	16-bit
Sampling Rate	10 Sample/Sec. (Total)
Accuracy	+/-0.1%
Overvoltage Protection	240 Vrms
Input Impedance — Voltage	2 MΩ
Input Impedance — Current	125 Ω
Individual Channel Configuration	Yes

Analog Output	
Channels	2
Output Type	0 to 5 VDC, +/- 5 VDC, 0 to 10 VDC, +/- 10 VDC, 0 to 20 mA, 4 to 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 to 20mA only

Digital Input		
Channels		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	+ 1VDC Max.
	Off Voltage Level	+ 3.5 VDC to + 30 VDC
Counters	Channels	2
	Max. Counts	16-bit (65535)
	Max. Input Frequency	50 Hz
	Min. Pulse Width	10 ms
Open Wire Detection		30 VDC

Digital Output	
Channels	2
Output Type	Isolated Open Collector (Sink)
Max. Load Current	700 mA/Channel
Load Voltage	+5 VDC to +50 VDC
Overvoltage Protection	60 VDC
Overload Protection	1.4 A
Short-circuit Protection	Yes

System Specifications

Communication	
Ethernet Port	2 x RJ-45, 10/100 Base-TX, Swtich Ports
PoE	Yes
Protocol	Modbus TCP, MQTT

LED Indicators	
for System Running	Yes
for Ethernet Link/Act	Yes
for I/O Channel Status	Yes
for PoE Power	Yes

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)	±2 kV for Power Line
Surge (IEC 61000-4-5)	±2 kV for Power Line

Power	
Reverse Polarity Protection	Yes
Powered from Terminal Block	12 to 48 VDC
Powered from PoE	Yes, IEEE 802.3af, Class1
Consumption	4.4 W (Max.)

Mechanical	
Dimensions (L x W x H)	120mm x 97mm x 42mm
Installation	Wall mounting

Environment	
Operating Temperature	-25 °C to +75 °C
Storage Temperature	-30 °C to +80 °C
Humidity	10 to 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.
72 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
24 Timers	Delay / Timing functions.
24 Schedules	Setup prescheduled routine tasks.
24 Emails	Send Email messages to pre-set Email receivers.
24 CGI Commands	Send pre-set CGI commands.
24 Recipes	Set up THEN/ELSE action groups.
8 P2P remote modules	Set up the connection information for the remote WISE modules.
Integration with SCADA/IT/IoT Systems	Support Modbus TCP and MQTT protocols for the integration with SCADA/IT/IoT systems. Support connection with ICP DAS IoTstar Cloud Management Software.

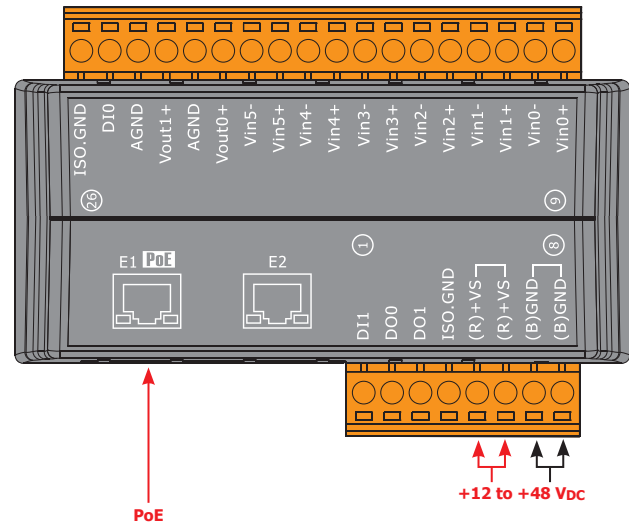| IF Conditions	
DI Channel	ON, OFF, ON to OFF, OFF to ON, Change
AI Channel	=, >, <, >=, <= (value)
Internal Register	
DI Counter	=, >, <, >=, <= (value), Change
DO Counter	
Timer	Timeout, Not Timeout
Schedule	In Range, Out of Range
P2P	DI, AI, DI counter, DO counter, IR
Rule Status	Enable, Disable

WISE IF-THEN-ELSE Rule Engine

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

▣ Wire Connections

Voltage Input (Default) — mV/V, Vinx+, Vinx-, JUMPER

Current Input — mA, Vinx+, Vinx-, JUMPER

Voltage Output (Default) — Load, Voutx+, AGND, JUMPER

Current Output — Load, Voutx+, AGND, JUMPER

Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Dry Contact	DIx, ISO.GND	DIx, ISO.GND

Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)	LOAD, DOx, ISO.GND, 5 ~ 50 V_{DC}	LOAD, DOx, ISO.GND, 5 ~ 50 V_{DC}

▣ Pin Assignments

ISO.GND, D10, AGND, Vout1+, AGND, Vout0+, Vin5-, Vin5+, Vin4+, Vin4+, Vin3-, Vin3+, Vin2-, Vin2+, Vin1-, Vin1+, Vin0-, Vin0+

E1 PoE, E2

DI1, DO0, DO1, ISO.GND, (R)+VS, (R)+VS, (B)GND, (B)GND

+12 to +48 V_{DC}

PoE

▣ Ordering Information

WISE-7526M CR	WISE I/O Module with 6-channels AI, 2-channels AO, 2-channels DI, 2-channels DO and 2-port Ethernet Switch (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)