



Features

- Built-in Web Server for IF-THEN-ELSE rule setting
- Built-in IF-THEN-ELSE rule enigne 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
- 6-channel Digital Outputs
- 2-way Isolation/ESD Protection











■ 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-7118Z 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-7118Z will still be able to receive power from auxiliary power sources like AC adapters or battery, etc.

This multi-function module WISE-7118Z supports Modbus/TCP protocol to make seamless integration with SCADA software available. It features 16-bit, 10-channel differential analog inputs and 6-channel digital ouputs. Each analog channel 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, Testing Equipment, etc.

I/O Specifications _____

Analog Input		
Input Channels	10 (Differential)	
Input Type	+/-15 mV, +/-50 mV, +/-100 mV, +/-500 mV, +/-1 V, +/-2.5 V	
	+/-20 mA, 0 \sim 20 mA, 4 \sim 20 mA (Requires Optional External 125 Ω Resistor)	
	Thermocouple (J, K, T, E, R, S, B, N, C, L, M,LDIN43710)	
Resolution	16-bit	
Sampling Rate	10 Sample/Sec. (Total)	
Accuracy	+/-0.1% or better	
Zero Drift	+/-0.5 uV/°C	
Span Drift	+/-25 ppm/°C	
Overvoltage Protection	240 Vrms	
Input Impedance	>300 kΩ	
Common Mode Rejection	150 dB Min.	
Normal Mode Rejection	100 dB	
Individual Channel Configuration	Yes	
Temperature Outputs Consistency	Yes	
Stable temperature output in the field	Yes	
Open Wire Detection	Yes	
Digital Output		
Output Channels	6	
Output Type	Isolated Open Collector (Sink)	
Max. Load Current	700 mA/Channel	
Load Voltage	+5 V _{DC} ~ +50 V _{DC}	
Overvoltage Protection	60 Vpc	
Overload Protection	1.4 A	
Short-circuit Protection	Yes	

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 Vpc	
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		
AI Channel		
Internal	=, >, <, >=, <= (value)	
Register		
DO Counter	=, >, <, >=, <= (value), Change	
Timer	Timeout, Not Timeout	
P2P	DI, AI, DI counter, DO counter, IR	
Rule Status	Enable, Disable	

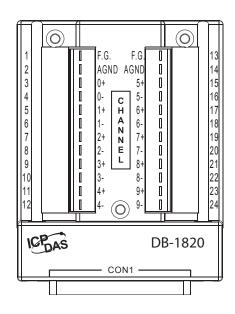


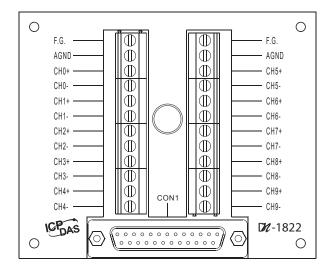
THEN / ELSE Actions		
DO Channel	ON, OFF, Pulse Output	
Internal Register	Change the value	
DO Counter	Reset	
Timer	Start, Reset	
Email	Send	
CGI Commands		
Recipe	Execute	
P2P	DO(On/Off), AO, IR	
Rule Status	Enable, Disable	

■ Pin Assignments -

Terminal No.	Pin Assignment
E1	RJ-45
01	DO0
02	DO1
03	DO2
04	DO3
05	DO4
06	DO5
07	ISO.GND
08	(R)+Vs
09	(B)GND

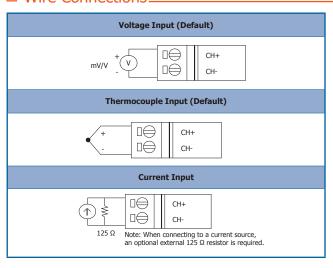


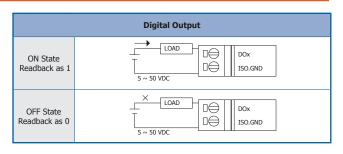


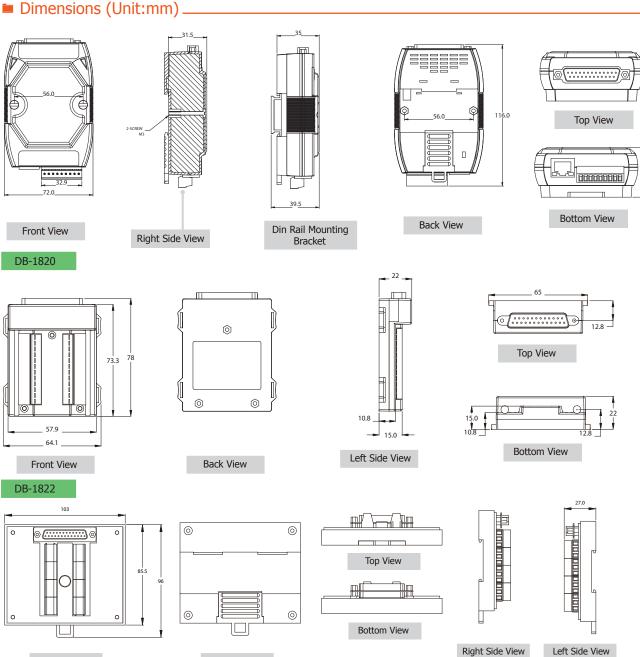




Wire Connections.







Front View

Back View

Ordering Information_

WISE-7118Z/S WISE-7118Z/S2

8Z/S 10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Output PoE Module(RoHS) and DB-1820 daughter board.

10-channel Thermocouple Input with High Voltage Protection and 6-channel Isolated Output PoE Module(RoHS) and DN-1822 daughter board and 1.8m cable.



Accessories

