WISE-5800

User-defined I/O & Data Logger Module

I/O Expansion & Data Logger Module

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, Schedule, Email, Recipe operations
- Data logger and data files send back function supported
- Modbus TCP/RTU Protocol for SCADA Software Seamless Integration
- Support XW-Board
- Support I-7000 Remote I/O Modules(Up to 16)
- Support Modbus RTU Slave Devices(Up to 4)
- SNTP Time Synchronization Supported

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-5800 supports an I/O expansion bus to implement various I/O functions such as D/I, D/O, A/D and D/A according to the XW-Board. In addition, it also support ICP DAS I-7000 remote I/O modules and Modbus RTU slave devices. Based on the variety I/O module of I-7000 and the connection ability with Modbus RTU slave devices, WISE-5800 can provide user more flexibility in application field. WISE-5800 supports Modbus TCP/RTU protocol to make seamless integration with SCADA software available. It include all advantages which WISE series controllers can provide. In addition, WISE-5800 provide data logger function with microSD card, it can record I/O channel value by event trigger or regular time period. The data files can be sent back by Email or FTP. All setting can be completed through browser.

Applications

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

Specifications

Models	WISE-5800
CPU Module	
CPU	16-bit CPU
SRAM	768 KB
Flash	512 KB
EEPROM	16 KB
NVRAM	31 Bytes
microSD Expansion	Yes, can support 1 or 2 GB microSD
RTC (Real Time Clock)	RTC Provide seconds, minutes, hours, date of week/month; month and year
Watchdog Timers	Yes (0.8 second)
Communication Ports	
Ethernet	RJ-45 x 1, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)
COM 1	RS-232 (TxD, RxD, RTS, CTS, GND), non-isolated, Speed: 115200 bps max.
COM 2	RS-485 (D2+, D2-), self-tuner ASIC inside, non-isolated, Speed : 115200 bps max.
LED Indicator	
System LED	Yes (Red)
Ethernet Link LED	Yes (Green : Ethernet link detected, Flashing Green : Ethernet packet received)
LED Display	-
Hardware Expansion	
I/O Expansion Bus	Yes
Mechanical	
Dimensions (W x H x D)	91 mm x 123 mm x 52 mm
Installation	DIN-Rail
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +80 °C
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)
Power	
Protection	Power reverse polarity protection
Frame Ground	Yes (for ESD Protection)
Input Range	+12 ~ +48 V_{DC}
Redundant Power Input	Yes
Power Consumption	2.0 W

Software Specifications

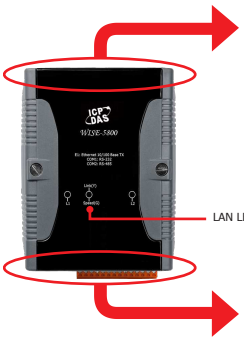
Functions	
Rule Configuration Website	Access Web server on WISE controllers to edit and upload logic rules through web browser.
36 IF-THEN-ELSE Logic Rules	3 IF conditions with AND or OR operators 3 THEN actions and 3 ELSE actions
48 Internal Registers	Hold temporary variables and read/write data via Modbus TCP address.
12 Timers	Delay / Timing functions.
12 Schedules	Setup prescheduled routine tasks.
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.
Data Logger	Set up the Data Logger configuration, include the data record format, and data file sending operation.
Modbus TCP/RTU 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 Internal Register	=、>、<、>=、<=(value)
DI Counter	=、>、<、>=、<=(value)、Change
Timer	Timeout、Not Timeout
Schedule	In Range、Out of Range
Rule Status	Enable、Disable

WISE
IF-THEN-ELSE
Rule Engine

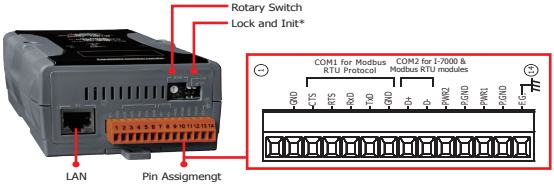
THEN / ELSE Actions	
DO Channel	ON、OFF、Pulse Output (Just for XW-Board)
AO Channel Internal Register	Change the value
DI Counter	Reset
Timer	Start、Reset
Schedule	Enable、Disable
Email CGI Commands	Send
Recipe	Execute
Data Logger	Start、Stop、One-Time Log
Rule Status	Enable、Disable

Appearance

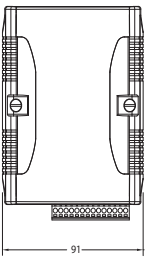


microSD Socket

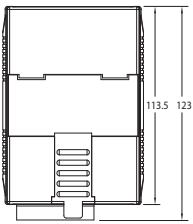
Connector for Optional XW-board



Dimension(Units: mm)

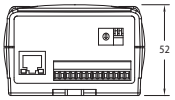


Front View

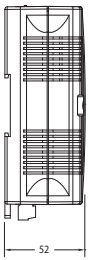


Rear View

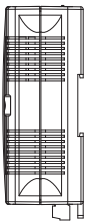
Top View



Bottom View



Left Side View


Right Side View

Ordering Information

WISE-5800	User-defined I/O & Data Logger Module

Accessories

NS-205 CR	Unmanaged 5-Port Industrial Ethernet Switch (RoHS)
MDR-20-24 CR	24V/1A, 24 W Power Supply with DIN-Rail Mounting (RoHS)
DIN-KA52F CR	24V/1.04A, 25 W Power Supply with DIN-Rail Mounting (RoHS)
3LMSD-2000 CR	2 GB microSD card (RoHS)