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作者	Amber	版本	1.0.0	日期	2012/07/12	頁數	1/10

WISE module solution.

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2-11	1.17	/ \	

平台	作業系統版本
PC	Windows 98/NT/2000/XP/Vista

The Wise-71xx module is an Intelligent AIO & DIO controller. You can choose from the controllers to meet your demands for use in various industrial applications. The Wise-71xx modules support the Modbus TCP protocol and can be used with the EZ Data Logger to easily plan HMI and offer a variety of functions that meet different requirements of the projects, such as remote message notification function(SMS, Email), data logger(local database, SQL Server),etc.

The following example is greenhouse automation solution and use ICP DAS WISE-7118Z. WISE-7118Z is equipped with 10 thermocouple inputs that allow real-time monitoring of the temperature humidity in the greenhouse; 6DO outputs of the controller can be connected to various greenhouse facilities. It will real-time detect the greenhouse status and in response to sensors connected; the control system will automatically adjust vent position, fans, heating, fogging, shading, lighting, irrigation frequency, irrigation nutrient levels and CO2 levels, etc. WISE-7188Z will tirelessly monitor the key environmental factors that affect crop quality and will make constant changes that a grower could not possibly achieve the same consistency level. In addition, WISE controller also support Modbus TCP interface so that you can use EZ Data Logger in the control center to instantly receive the information, make real time monitoring of the overall status for each greenhouse more efficiently, log data to database, and load to trend or report.

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Step1: Before you start to plan for EZ Data Logger, please configure the wiring and software of WISE-7118Z well.

Step2 : Open EZ Data Logger \rightarrow From the menu in the main form click Project \rightarrow New

Project \rightarrow Type the new project name **Greenhouse** \rightarrow Click **Save** and then EZ Data Logger will restart automatically.



Step3 : From the button list click the Group Setup button.



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Step4 : Click the **Install** button under "Driver List" to open the "Driver" setting form \rightarrow Select **Modbus TCP** driver and set its **Host** and **Port** \rightarrow Click the **Install** button to add the driver \rightarrow Click the **+Device** button to open the "Device" setting form.

🦉 Workgroup Setting		
nriver List		-Work Group
MailNatifian		Workgroup1 Workgroup2
VirtualChannel	VirtuaiChannei	Workgroup3
Inst	all Modify Delete Add Modify Delete	1
Channel List Al List	Driver	
Counter List	Driver Mode Modbus TCP	
Contact List	Time Out (ms) 1500	
Nickname Tag	Host can be IP or hostname:ie	
	Host [192.168.0.10]	
	Port 502	
	Modify Install Search +Device Close	e Help

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Step5: Select Driver and Module < set properties and then click the **Add** button.

	MTCP 192.168	3.0.10.P502	2 🔽	Nickname	Greenhouse	_1
Module	WISE-7118Z		-	Description	Monitor Greenho	ouse_1
Slave ID	1		×			
Address F	≀ange Definition– s (DO)	₽ 20) To	25		
0xxxx Coil	s (DO)	☑ 20		25		
1xxxx Disc	rete Input (DI)		To [
Ocean Income	t Registers (Al)	20) To	39 Float	•	
3xxxxx inpu						

Step6: Set the alarm notifies of AI channels.

6.1. Double-click on an AI channel to open its setting form.

Channel List								
Al List	AO Lis	st		DI List)O List	
Counter List	Freq Li	st	Virtu	Jal Chai	nnel	Cor	trol Logic	
Contact List	Web Car	nera						
Nickname	Tag	Loc	ation	Gain	Offset	Hight Alarm	Low Alarm	D
WISE-7118Z_AI_0	WISE7118Z_AI_0	WISE-71	18Z Ch0	1	0	100	-10	10*A
WISE-7118Z_AI_1	WISE7118Z_AI_1	WISE-71	18Z Ch1	1	0	100	-10	10*AI
WISE-7118Z_AI_2	WISE7118Z_AI_2	WISE-71	18Z Ch2	1	0	100	-10	10*AI
WISE-7118Z_AI_3	WISE7118Z_AI_3	WISE-71	18Z Ch3	1	0	100	-10	10*AI
WISE-7118Z_AI_4	WISE7118Z_AI_4	WISE-71	18Z Ch4	1	0	100	-10	10*AI
WISE-7118Z_AI_5	WISE7118Z_AI_5	WISE-71	18Z Ch5	1	0	100	-10	10*AI
WISE-7118Z_AI_6	WISE7118Z_AI_6	WISE-71	18Z Ch6	1	0	100	-10	10*AI
MISE 71197 AL 7	WISE71187 AL 7	WISE-71	187 Ch7	1	Ο	100	-10	10*AI

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6.2. Set the High/Low Alarm values and properties, and then click the Modify button to

6 修改通道		
Nickname Tag	Temperature_A Temperature_A	Scaling Al Value Display Value Gain 0.001525902 Point1 0 0 Calculate Offset 50.00076295 Point2 32767 10 10
Description	Temperature_A	Alarm High Alarm 30 Contact to None
		Low Alarm 18 Contact to None
Component Style Linear Gauge Linear_Bar_Gre Linear_Bar_Yell Linear_Pointer_ Linear_Pointer_ Linear_Pointer_ Linear_Pointer_	e.ini een.ini low.ini Basic.ini Blue.ini Green.ini Orange.ini Scroll.ini	Name 100 90 80 70 60 50 40 30 20 10 96.320 kg Editor

Step7: Set the AI channels to measure temperature relative humidity and CO2 levels, etc.

Al List	AO List		DI Lis	t		DO List	
Counter List	Freq List		Virtual Ch	annel		Control Logi	ic
Contact List	Web Camera						
Nickname	Tag		Location	Gain		Offset	Hight Al:
	<u> </u>						
Temperature_A	Temperature_A	W	ISE-7118Z ChO	0.0015259	102	50.00076295	30
Temperature_A Temprature_B	Temperature_A Temprature_B	W	ISE-7118Z Ch0 ISE-7118Z Ch1	0.0015259 1	102	50.00076295 0	30 33
Temperature_A Temprature_B CO2	Temperature_A Temprature_B CO2	W W	ISE-7118Z Ch0 ISE-7118Z Ch1 ISE-7118Z Ch2	0.0015259 1 0.0003051	102 85	50.00076295 0 0.	30 33 1000
Temperature_A Temprature_B CO2 Humidity	Temperature_A Temprature_B CO2 Humidity	W W W	ISE-7118Z Ch0 ISE-7118Z Ch1 ISE-7118Z Ch2 ISE-7118Z Ch3	0.0015259 1 0.0003051 0.1	102 85	50.00076295 0 0. 0.	30 33 1000 50

The configuration is as the below picture $\mathop{\downarrow}$

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Step8: Set the DO channels to control heating machine < fans and water sprinklers, etc. These machines not only can be automatically started or stopped by the "Logic control" function in WISE-7118Z, but also can be manually controlled by EZ Data Logger in the control center. Please refer to the pre-steps to set DO channels. The configuration is as the below picture ↓

-Channel List									
Al List	AO L	AO List		DI List	DO List				
Counter List	Freq	Freq List		Virtual Channel	Control Logic				
Contact List	Web Ca	Web Camera							
Nickname	Tag	Location		Description					
Heating	Heating	WISE-7118Z	Ch0	Heating					
Fans	Fans	WISE-7118Z	Chl		Fans				
Fogging	Fogging	WISE-7118Z	Ch2		Fogging				
Irrigation	Irrigation	WISE-7118Z	Ch3		Irrigation				
Fertilization	Fertilization	WISE-7118Z	Ch4		Fertilization				
Light	Light	WISE-7118Z	ChJ		Light				

Step9: In the "Workgroup Setting" form, select the AI and DO channels that have been set→ Click the **Add**>> button to add them into **Greenhouse1** and then click the **Home** button.

orkgroup Setting		
Driver List MTCP 192.168.0.10.P502 MailNotifier VirtualChannel	Device List VirtualChannel WISE-7118Z	Work Group Greenhouse1 Add Workgroup2 Workgroup3 Delete Property
Channel List Install Modify C Al List AO List Counter List Freq List Contact List Web Camer	Delete Add Modify Del DI List DO List Virtual Channel Control Logic a	ete AI Channels Temperature_A Temporature_B CO2 Humidity PH AO Channels
Nickname Tag Location Heating Heating WISE-71182 Ch0 Fans Fans WISE-71182 Ch1 Fogging Fogging WISE-71182 Ch2 Imagation Inrigation WISE-71182 Ch3 Fertilization Fertilization WISE-71182 Ch4 Light Light WISE-71182 Ch4	Description Heating Fans Fogging Imigation Fertilization Light	Di Channels DO Channels Counter Channels Freq Channels Virtual Channels Webcam Browsers
	Modif. Add>	y Home
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Ste	ep10:Fro	m the button	list click t	he System	Config bu	itton.		
	🙀 EZ Data L	ogger Basic Edi	tion ¥4.5.2	2012/03/30	2 hours trial	C:\ICPDAS\EZ_	Data_Logge	r\Project\G1
	Project Execu	te User Setup	Help	_ (
-	Start	Simulation	► Pause	Record	System Config	Group Setup Ope:	n Database	Exit
Ste	ep11 : Set	Save Interva	al and Re	cord Time	, and enab	le Log Local	Databas	$e \rightarrow Save \rightarrow$
Exit.		* # 450						
		mg ver 4.5.2 graph Confi	a					
	000011105	Display M	a Iode o M	lumeric	⊙ Da	ate/Time	6	
	Sam	plina Time(sec) 1					
	Cron		ute) [1				-	Save
	Grap		nute) ·	200				⊉
	Dis	play Buffer	Size 200	500				Exit
		Data Foi	rmat 12:	3.456	<u> </u>		1	
		Alarm Au	udio ⊽⊡	licpdas/ez_	vnen exec Data_Logger	uting \alarm.wav		
	Data Lo	g Config						
	Sa	ve Interval(sec) 1			1		
	Rec	ord Time(H	lour) 1					
	Dat	abase File I	Path C:\I	PDAS\EZ_Da	ta_Logger\lo	g\		
						🗵 Log Loc	al Datab	ase
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Step13 : From the button list click the Start button to execute your project.





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Step15: You can open the local database of Greenhouse1 to display trend, and you can see

the screen as shown below \downarrow



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