IO 模組

應用領域

此類模組可通過Modbus RTU協定，用於HMI（人機介面）、

PLC或SCADA。IO Studio是執行通信設定所用的電腦軟體。

Data Acquisition Studio是針對資料收集用途的電腦軟體。

我們可提供高性能、高品質的資料收集模組，分散式IO模組、

資料收集模組、資料記錄、IO模組、IO卡、延伸IO、遙控IO、

擴充IO、模組式IO、網路IO、Modbus Io、資料蒐集系統。

特點

■ 使用Modbus通訊，輕鬆整合人機或圖控

■ 使用Modbus 通訊；組態設定容易

■ 在同一RS485網路，最多可接128個

■ 有隔離功能的模組，用於特殊環境需求

■ 低價優勢，可作為PLC的擴充IO

■ 專用的組態設定及維護軟體

■ 可配合資料收集軟體，達到記錄器功能

■ 有LED顯示IO，通訊，電源狀態

■ 多樣式輸入訊號可供選擇，熱電偶 ，PT100，線性電壓或電流

■ 使用熱電偶，PT100時可以直接讀到溫度，不需比例轉換

IO Modules

Model Number	Description
DCS-016DI	16 DIGITAL INPUT MODULE INCLUDING COUNTERS
DCS-016DO	16 DIGITAL OUTPUT MODULE
DCS-04RO	4 RELAY OUTPUT MODULE
DCS-08DIO	8 DIGITAL INPUT / 8 DIGITAL OUTPUT MODULE
DCS-08TC	8 THERMOCOUPLE INPUT MODULE INCL. 0 - 50mV & ±100mV I/P
DCS-08TCS	8 TC INPUT MODULE INCL. 0 - 50mV & ±100mV I/P FULLY ISOLATED
DCS-06RTD	6 RTD INPUT MODULE - PT100, Ni120, PT1000, Ni1000, Ni1000LG & Ohms
DCS-08AII	8 ANALOG INPUT 0 - 20mA / 4 - 20mA
DCS-08AIV	8 ANALOG INPUT 0 - 5V / 1 - 5V / 0 - 10V / 2 - 10V
DCS-08AIIS	8 ANALOG INPUT 0 - 20mA / 4 - 20mA / ±20mA FULLY ISOLATED
DCS-08AIVS	8 ANALOG INPUT 0 - 1V / 0 - 10V / ±1V / ±10V FULLY ISOLATED
DCS-08AOI	8 ANALOG OUTPUT MODULE 0(4) - 20mA
DCS-08AOV	8 ANALOG OUTPUT MODULE 0(2) - 10V
DCS-DAIO	2 RTD I/P, 2 ANALOG INPUT 0(4) - 20mA / 0(2) - 10V, 1 ANALOG OUTPUT 0(4) - 20mA / 0(2) - 10V, 4 DIGITAL INPUTS, 2 DIGITAL OUTPUTS

Environmental & Physical

Operating temperature	-10°C to +50°C
Storage temperature	-40°C to +85°C
Dimension (WxHxD)	23 x 109 x 98mm
Weight	105 grams
Mounting	DIN Rail

Communication

Interface	2 wire, RS485
Modbus address setting	By Dip switch
Modbus Max.address	127 only
Baud rate	2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	None, Even, Odd
Stop bits	1, 2
Data Bits	8

Approval Standards

Safety	IEC 950
EMC	IEC 61000-4-2-A1 Level 2
	IEC 61000-4-3-A1 Level 2
	IEC 61000-4-4 Level 3
	CISPR 11:1997-A1 / EN 55011:1998
	Group 1 Class A

IO Studio

It is standard PC software used to configure the communication settings for IO modules on the Modbus network. Once a module is detected, it is possible to view real-time data of the module directly on PC and it can be used for diagnostic purpose as well. All IO modules support RS485 communication. A RS232 to RS485 converter should be used between module and PC for configuration purpose. The address of each module is set up by using dip switches available on the module itself.

Data Acquisition Studio

It is optional PC software used to connect with IO Modules via RS485/RS232 converter for data acquisition purpose. Maximum 1024 tags are supported. All the data from the IO Modules can be collected and stored in PC as pre-configured sample rates. Real-Time Viewer is available to display real-time data in digital values, bar graphs, trends etc. Historical Viewer is available too. DDE feature can make real-time data used for the third party applications like Excel. Alarm management is allowed the user can configure it in maximum four different events from six possible types as high, low, high high, low low, rate of increase, rate of decrease. Alarming email can be received via Internet. 200 pages of displays are available, and each page displays maximum 6 tags.

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Analog Moduls
RTD and Thermocoulle Inputs

DCS-06RTD   DCS-08TC   DCS-08TCS

Specifications

Input	6, RTD Inputs	8, Thermocouple Inputs	8, Isolated Thermocouple Inputs
Type	PT100, Ni 120, PT1000, Ni1000 -DIN, NI1000 Landys & Gyr 10-400 Ohs, 100-4000 Ohms	J,K,E,T,N,B,S,R,mV,C,D and G	J,K,E,T,N,B,S,R,mV,C,D andG
Connection	2/3 wire	2 wire	2 wire
Resolution	0.1 Deg.C	0.1 Deg.C	0.1 Deg.C
Sample rate	0.52 samples/sec	0.71 samples/sec	0.63 samples/sec
Drift	100 PPM/Deg.C	100 PPM/Deg.C	100 PPM/Deg.C
Isolation (Field&Logic)	1500 V RMS	1500 V RMS	1500 V RMS / 350 V (P-P) between channels
Power supply	12 V to 24 V DC	12 V to 24 V DC	12 V to 24 V DC

Current&Voltage Inputs

DCS-08AII   DCS-08AIV   DCS-08AIIS   DCS-08AIVS

Specifications

Analog Inputs	8	8	8	8
Type	Single-Ended	Single-Ended	Differential	Differential
Voltage	N.A	0 - 10 V DC/ 0 - 5V DC	N.A	0(2) - 10 V / 0(1) - 5V DC
Current	0-20 mA	N.A	0-20 mA	N.A
Offset by switch	4 mA	2 V DC (0-10)/ 1 V DC(0-5)	4 mA	2 V DC (0-10)/ 1 V DC(0-5)
Resolution	12 bit (0-4095)	12 bit (0-4095)	12 bit (0-4095)	12 bit (0-4095)
Sample rate	12.5 samples/sec	12.5 samples/sec	12.5 samples/sec	12.5 samples/sec
I/P Impedance	250 Ohms	20 K Ohms	250 Ohms	110 Kohms
Isolation(Ch-Ch)	N.A	N.A	350 V (P-P)	350 V (P-P)
Drift	50 ppm/deg.C	50 ppm/deg.C	100 ppm/deg.C	100 ppm/deg.C
Accuracy	0.2 % of span	0.2 % of span	0.2 % of span	0.2 % of span
Isolation (Field&Logic)	1500 V RMS	1500 V RMS	1000 V RMS	1500 V RMS
Power supply	12 V to 24 V DC	12 V to 24 V DC	12 V to 24 V DC	12 V to 24 V DC

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Digital Modules

	DCS-016DI	DCS-016DO	DCS-04RO	DCS-08DIO

Specifications

	DCS-016DI	DCS-016DO	DCS-04RO	DCS-08DIO
Digital Inputs	16	N.A	N.A	8
No.of Counters	16	N.A	N.A	8
Isolation (Field&Logic)	1500 V RMS	N.A	N.A	1500 V RMS
Status Indication	LED for each channel	N.A	N.A	LED for each channel

Common specifications

Counter Resolution	32 Bit
Counter frequency	1 KHz
Pulse width	Min 500 Micro sec
Counter Mode	UP/Down
Digital input 0 level	0-6.5 V DC
Digital input 1 level	12 to 24 V DC
Input Impedance	2200 ohms
Input filter	Max 6553 msec.
Power supply	12 V to 24 V DC

	DCS-016DI	DCS-016DO	DCS-04RO	DCS-08DIO
Digital Outputs	0	16	4	8
Type of Digital output	N.A	Open collector	Relay, Form C	Open collector
Maximum load current	N.A	100 mA/channel	0.5A / 1 A each ch.	100 mA/channel
Maximum load Voltage	N.A	36 V DC	220 V AC/ 28 V DC	36 V DC
Isolation (Field&Logic)	N.A	1500 V RMS	1000 V RMS	1500 V RMS
Status Indication	N.A	LED for each channel	LED for each channel	LED for each channel

Common specifications

Watch dog timer	Available
Watch dog time	1-255 sec, adjustable
Power supply	12 V to 24 V DC

Ordering Code

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DCS-DAIO	2 RTD I/P, 2 ANALOG INPUT 0(4) - 20mA / 0(2) - 10V, 1 ANALOG OUTPUT 0(4) - 20mA / 0(2) - 10V, 4 DIGITAL INPUTS, 2 DIGITAL OUTPUTS

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