



REMOTE I/O WITH MODBUS TCP SUPPORT

DDRIO SERIES



SYNOPSIS

- SENSORS ARE USED TO CONTINUOUSLY MONITOR AND CONTROL VARIOUS PROCESS PARAMETERS.
- THESE MEASUREMENTS HELP IMPROVING PROCESSES FOR ADHERING TO PRODUCT SPECIFICATIONS & IMPROVE PRODUCT QUALITY.
- MONITORING AND CONTROLLING TEMPERATURE, PRESSURE, LEVEL, FLOW ETC ARE COMMON OCCURRENCES FOR ANY PROCESS.
- IO CONVERTERS CONVERT THE ANALOG & DIGITAL DATA FROM SENSORS TO MODBUS TO BE TAKEN TO SCADA FOR FURTHER PROCESSING
- DDRIO MTCP E IS USED TO MONITOR FIELD INPUTS AND CONTROL OUTPUTS THROUGH MODBUS TCP.
- IT ACTS AS A MODBUS TCP SLAVE AND UPDATES STATUS OF ANALOG AND DIGITAL INPUTS IN PREDEFINED MODBUS REGISTERS.
- DIGITAL OUTPUTS CAN BE CONTROLLED THROUGH MODBUS REGISTERS.
- IT IS DESIGNED TO BE USED IN INDUSTRIAL PANELS AND OPERATES ON 24V DC POWER SUPPLY.
- 230V AC OPTION IS ALSO AVAILABLE

FEATURES & BENEFITS

- SUPPORTS 1 OF IO CARD EITHER DI/DI/AI/AO/RTD
- DI BOARD WITH 12 INPUTS, DO BOARD WITH 12 OUTPUTS, AI BOARD WITH 8 INPUTS, AO BOARD WITH 8 OUTPUTS & RTD BOARD WITH 4 INPUTS
- PWM INPUTS ALSO AVAILABLE ON REQUEST
- MODBUS TCP SLAVE INTERFACE FOR SCADA
- CONFIGURABLE MODBUS INTERFACE SETTINGS VIA WEB PAGE
- ROBUST DESIGN WITH RACK TYPE MOUNTING
- INDUSTRIAL SCREW TYPE POWER TERMINAL BLOCKS
- FILE STORAGE SD CARD UP TO 4GB
USB FOR DEVICE DATA TRANSFER

TECHNICAL SPECIFICATION

SOFTWARE MODULE SUPPORT

Protocols support on Ethernet	HTTP, Telnet, UDP, MQTT, MODBUS
Protocols support on 485	Modbus Slave (Optional)
Protocols support on GSM	FTP, SMS, MQTT, HTTP

HARDWARE SPECIFICATIONS

CPU MODULE

High-performance Arm® Cortex®-M4 32-bit RISC core operating at 168 MHz.
10/100 Ethernet
RAM: 200 KB
4GB SD Card
USB
Power 5 Watt @ 3.3V

ANALOG INPUT MODULE

Number of Channels : 8
4-20mA / 0 to 10V Input
Card Level Isolation: 1.5KV
Maximum sampling rate: 50ksps/channel
16 Bit ADC
Status LED for Card to CPU communication
Field signal indication for Current Inputs
Single Ended Analog Input Channel
Input Impedance: 120Ω (Current)
Accuracy: 0.25%
Sampling Rate: 10 sample/ Sec

ANALOG OUTPUT MODULE

Number of Channels : 8
4-20mA / 0 to 5V output
Card Level Isolation: 1.5KV
Maximum output rate: 1000samples/channel
16 Bit DAC
Status LED for Card to CPU communication
Field signal indication for Current Inputs

RTD MODULE

Number of Channels : 4
3 wire RTD
Accuracy: +/- 0.5°C
Range : -50°C to +300°C
2 Step Calibration
Card Level Isolation: 1.5KV
Card Status indication with CPU

DIGITAL INPUT MODULE

Number of Channels	: 12
High Switching/ Gnd Switching Inputs	
Card Level Isolation:	1.5KV
Inputs High:	5V
Maximum inputs level:	24V
Status LED for each input	
Card Status indication with CPU	

DIGITAL OUTPUT MODULE

Number of Channels	: 12
Sourcing/ Sinking Outputs	
Card Level Isolation:	1.5KV
Output High maximum	: 24V
Status LED for each Output	
Card Status indication with CPU	

485 COMMUNICATIONS (OPTIONAL)

Isolated 485 Interface	
Baud rates from 2.4kbps to 115.2kbps	

POWER

Input voltage	24V DC, Range 12 to 36V DC. 12-Watt full load 230V AC Option is also available on request
Reverse Polarity Protection	Yes

MECHANICAL

Metal	HS30 Aluminium
Dimensions	L (110) X W (105) X H (80)
Card guide for each slot upto 6 slots	

OPERATING CONDITION

Operating Temp	0-70°C
Storage Temperature	- 40 to 70°C
Humidity	95% relative humidity, non-condensing

ORDERING INFORMATION

DDRIO MTCP D/A

DDRIO MTCP E	BASE CODE FOR REMOTE IO RACK WITH MODBUS TCP SUPPORT
D/A	D: 24VDC INPUT A: 230 VAC INPUT

ORDERING CODE FOR MODULES

CODE : X. CHOOSE CODE FROM BELOW

I/O Module	Code	Qty	description
DI MODULES	DI	X	DIGITAL INPUTS PER BOARD IS 12
DO MODULES	DO	X	DIGITAL OUTPUTS PER BOARD IS 12
AI MODULES	AI	X	ANALOG INPUTS PER BOARD IS 8
AO MODULES	AO	X	ANALOG OUTPUTS PER BOARD IS 8
RTD MODULES	RTD	X	RTD MODULES PER BOARD IS 4

ACCESSORIES

DIN rail DIN RAIL (OPTIONAL)

NOTE

THE ORDERING CODE WILL HAVE 2- OR 3-LINE ITEMS DEPENDING ON ACCESSORY.