



DIGITAL INPUT TO MODBUS RTU CONVERTER

DDRIO SERIES



DATA BRIDGE
D Y N A M I C

SYNOPSIS

- A DIGITAL INPUT TO MODBUS RTU CONVERTER IS AN INTERFACE DEVICE THAT COLLECTS THE STATUS OF DISCRETE DIGITAL SIGNALS (ON/OFF, HIGH/LOW, OPEN/CLOSE) AND CONVERTS THEM INTO STANDARD MODBUS RTU PROTOCOL FOR TRANSMISSION OVER RS-485 NETWORKS.
- IT ENABLES LEGACY SENSORS, SWITCHES, CONTACT CLOSURES, AND OTHER DIGITAL DEVICES TO BE MONITORED AND CONTROLLED BY PLCs, SCADA SYSTEMS, HMIS, OR ANY MODBUS-COMPATIBLE MASTER DEVICE. THE CONVERTER TYPICALLY PROVIDES MULTIPLE ISOLATED DIGITAL INPUT CHANNELS, DEBOUNCING FEATURES, AND STATUS INDICATION THROUGH LEDs.
- THE MODBUS RTU COMMUNICATION ENSURES RELIABLE DATA TRANSFER WITH STANDARD SETTINGS (BAUD RATE, PARITY, STOP BITS) AND SUPPORTS UNIQUE SLAVE ADDRESSING FOR MULTI-DROP NETWORKING.
- THIS DEVICE IS WIDELY USED IN INDUSTRIAL AUTOMATION, BUILDING MANAGEMENT, ENERGY MONITORING, AND REMOTE TELEMETRY, WHERE DIGITAL SIGNALS FROM FIELD EQUIPMENT NEED TO BE CENTRALIZED AND INTEGRATED INTO SUPERVISORY SYSTEMS.

FEATURES

- 12 Channel Digital Input
- Parameter Range, High and Low set points for each channel
- Acknowledge Input
- Modbus RTU, RS485 Output
- Compact Din Mount
- Multi-Function Display
- Provision to set
- Plug and play Device
- Industry Compliant
- Modular Architecture
- Rugged Durability

APPLICATIONS

- Process Automation
- Retrofit old machines with new devices
- Sub-station Automation
- Input to Output Expansion / Integration
- Building Automation
- Automotive Industry
- Process Optimization

PIN SETTINGS

- | | |
|---------------------|----------------------|
| 1. Digital Input 01 | 9. Digital Input 09 |
| 2. Digital Input 02 | 10. Digital Input 10 |
| 3. Digital Input 03 | 11. Digital Input 11 |
| 4. Digital Input 04 | 12. Digital Input 12 |
| 5. Digital Input 05 | 13. DC24V + |
| 6. Digital Input 06 | 14. DC24V - |
| 7. Digital Input 07 | 15. RS485 A |
| 8. Digital Input 08 | 16. RS485 B |

TECHNICAL SPECIFICATIONS

HARDWARE

CPU	8 bits CPU
RAM	64KB Internal SRAM
ROM	256K bytes Flash ROM
Watchdog	Built in H/W Watchdog timer
Modbus RTU Slave	

DIGITAL INPUT

Inputs	12 Channel Digital Input 24 VDC
Isolation Type	Opto-coupler
Protections	Up to 1500 Vrms for 1 Minute

SERIAL INTERFACE

Port number	1
Port Type	RS-485 * 1 Port
Connector	Terminal Block
Speed	9600 bps to 115.2 Kbps
Parity	None, Odd, Even
Data Bit	7, 8
Stop Bit	1
RS-485	Data+, Data-
Protection	485 Surge & Over Current and built in 15KV ESD protection

POWER

Operating Voltage	24 VDC
Power Consumption	Maximum 5 Watt
LED	PWR, Rx, Tx

DISPLAY FEATURES

Display	2 Digits Multi-Function Display
Modbus	MODBUS Setting (ID, Baud rate & Parity Setting)
Configuration	Push Buttons

ENVIRONMENTAL

Operating Temperature	0°C to + 70°C
Storage Temperature	-40°C to + 85°C
Operating Humidity	10% to 95% non-condensing
Storage Temperature	5% to 95% non-condensing

MECHANICAL

Dimension	23 * 100 * 150 mm (L * W * H)
Weight	150 gms
Mounting	Polyamide (PA66)

ORDERING CODE

DDRIO 12DI M

DDRIO	Databridge Dynamic Compact Remote IO's
12DI	12 *Digital Inputs
M	Modbus RTU