



# ANALOG INPUT TO MODBUS RTU CONVERTER

## 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

## TECHNICAL SPECIFICATIONS

### HARDWARE

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

### ANALOG INPUT

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Resolution</b>      | 16 bits                              |
| <b>Input number</b>    | 4                                    |
| <b>Current</b>         | 4 to 20 mA                           |
| <b>Voltage</b>         | 0 to 10 V                            |
| <b>Input Impedance</b> | Voltage: 1.33M Ohm, Current: 120 Ohm |
| <b>Accuracy</b>        | mA +-0.5%, V +- 1%.                  |

### SERIAL INTERFACE

|                          |                                                           |
|--------------------------|-----------------------------------------------------------|
| <b>Port number</b>       | 1                                                         |
| <b>Port Type</b>         | RS-485 * 1 Port                                           |
| <b>Connector</b>         | 2-pin Terminal Block                                      |
| <b>Speed</b>             | 300 bps to 115.2 Kbps                                     |
| <b>Parity</b>            | None, Odd, Even, Mark, Space                              |
| <b>Data Bit</b>          | 5, 6, 7, 8                                                |
| <b>Stop Bit</b>          | 1, 2                                                      |
| <b>RS-485</b>            | Data+, Data-                                              |
| <b>Terminal Resistor</b> | Built-in RS-485 pull high / low                           |
| <b>Protection</b>        | 485 Surge & Over Current and built in 15KV ESD protection |

## POWER

### Dual Inputs Redundant

|         |                                             |
|---------|---------------------------------------------|
| Input 1 | DC 9 to 24V, 500mA@ 12VDC, External Adapter |
| Input 2 | 48V DC. Wide Terminal Block                 |
| LED     | PWR, Pair, Rx, Tx                           |

## SOFTWARE FEATURES

|               |                                                                    |
|---------------|--------------------------------------------------------------------|
| Modbus        | Convert Analog signal to Modbus protocol, Support Modbus RTU Slave |
| OS Supported  | Win 2000/2003/XP/Vista/Win 7/Win 8                                 |
| Configuration | Window Utility, Web Browser                                        |

## ENVIRONMENTAL

|                       |                           |
|-----------------------|---------------------------|
| Operating Temperature | -10°C to 65°C.            |
| Storage Temperature   | -20°C to 70°C             |
| Operating Humidity    | 10% to 95% non-condensing |
| Storage Temperature   | 5% to 95% non-condensing  |

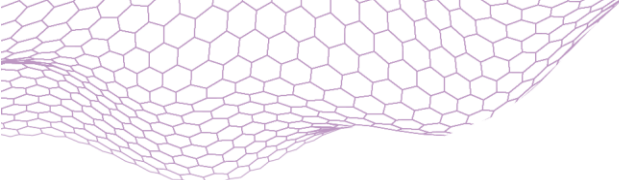
## MECHANICAL

|           |                                        |
|-----------|----------------------------------------|
| Dimension | 90 * 60 * 20 mm (W * D * H)            |
| Weight    | 140 gms                                |
| Mounting  | Panel, Optionally with DIN accessories |

## ORDERING CODE

DDRIO 4000 XX K

|       |                                                                                                 |
|-------|-------------------------------------------------------------------------------------------------|
| DDRIO | Analogue input to Modbus RTU Converter                                                          |
| 4000  | Supports 4 Analogue input                                                                       |
| XX    | A : 4 * 4 to 20mA Inputs<br>V : 4 * 0 to 10V Inputs<br>AV : 2 * 4 to 20mA + 2 * 0 to 10V Inputs |
| K     | Fixed                                                                                           |



## SAMPLE MODEL CODE

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|                        |                                                                               |
|------------------------|-------------------------------------------------------------------------------|
| <b>DDRIO 4000 A K</b>  | Analog input to Modbus RTU Converter with 4 * 4 to 20mA Inputs                |
| <b>DDRIO 4000 V K</b>  | Analog input to Modbus RTU Converter with 4 * 0 to 10V Inputs                 |
| <b>DDRIO 4000 AV K</b> | Analog input to Modbus RTU Converter with 2 * 4 to 20mA + 2 * 0 to 10V Inputs |

