IIoT I/O & RS485 CONCENTRATOR

16 channel isolated digital I/O concentrator for industrial automation, smart metering and building automation

Our data concentrator and digital I/O module is the ideal product for IoT system integrators. The product is used to read data from multiple front-end I/O field devices over one communication link and make the data available real-time to a back-end management system through another. This way conventional devices can be attached to a modern control system and through standard Modbus protocol easily communicate with most SCADA/ HMI systems and PLCs.

The device provides the ability to save Data Logger information to an internal non-volatile memory, allowing real-time data reception of the 16 input channels to be recorded.

The input data (counter registers) can be sent by a connected modem or router through the RS485 output transparently (RTU over IP) or with RTU↔TCP conversion, and the data can be read out by the data center.

Thanks to the Modbus RTU and RS485 data connection up to 254 devices can be connected to the same network, which is makes it possible to query a maximum of 4064 endpoints. Thanks to the Modbus protocol, it can be easily integrated into a Scada environment or for local data collection into a PC- or a PLC environment to display on an HMI.

Our data concentrator comes in a IP31 protected, flame-proof plastic housing. It has protected and isolated digital inputs and a surge protected output. In combination with a cellular modem or router, it is suitable for reliable, real-time input monitoring, making the device one of the most cost-effective products in industrial IoT.

MAIN FEATURES

- Continuous counting of input signals from metering devices (such as water, gas, electricity, etc.)
- Readout of the status of connected inputs
- 16 channel isolated digital inputs
- Input modes: wet contact / dry contact / open-collector
- Accept reed and hall sensor output from meters
- Input channels also can work as 32-bit counter input (counters stored into Flash when power off)
- Frequency: 0-200Hz / 16 channels, 1000Hz / 1 channel
- Standard ModBus protocol allows for up to 254 connected devices
- RS485 output with surge protection
- Static electricity and lightning protection for each input
- 24V AC/DC power input
- Configuration software

APPLICATION

- REMOTE DATA ACQUISITION
- PROCESS MONITORING
- INDUSTRIAL PROCESS CONTROL
- ENERGY MANAGEMENT
- SUPERVISORY CONTROL
- BUILDING AUTOMATION

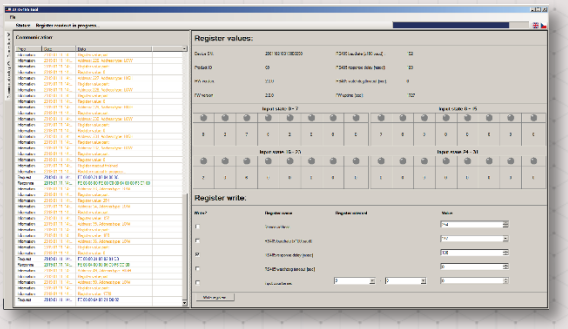
IIoT I/O & RS485 CONCENTRATOR 16DI

DESIGN AND OUTFIT

- IP31-protected, flame proof plastic enclosure
- 16 isolated digital inputs (terminal blocks for wiring)
- RS485 isolated output (surge protection - terminal block)
- I/O protection: against lightning, static electricity
- Watchdog to monitoring operation
- LEDs for indicating the operation

COMPATIBILITY

- Industrial RS485 Modem®
- M2M Industrial Router®
- M2M Industrial Router Mbus®
- M2M Industrial Router wMbus®
- M2M PRO4 DCU®
- M2M PRO4 DCU Mbus®
- M2M PRO4 Modem®
- M2M Router PRO4®
- M2M Modbus RS485 IO Gateway®
- Modbus compatible PLC systems, Scada and metering applications



IIoT I/O & RS485 CONCENTRATOR 16 DI ®		
Power	Voltage	· 24V AC/DC power supply
	Current	· Max. 0.6W
Interfaces	Inputs	· Input channels: 16 pcs isolated digital inputs (terminal blocks) · Input range: between +4V and +36V · Input signal: wet contact, dry contact, TTL, open-collector · Input channel number is configurable, can be set up from 1 channel through 16 channels to improve frequency for small count input · Counter frequency: 0 - 200Hz / for 16 channels, 1000Hz / for 1 channel · Counter resolution: 0.1Hz · Counter length: 32-bit, 4 bytes · Each of input can be enabled or disabled
	Output	· Output: RS485 port - isolated by high speed opto-couplers (terminal block) · Standard Modbus protocol communication (allows for up to 254 unique devices on one RS485 network) · Surge-protected RS485 port, which ensure reliability
Indication	LED indication	· Operation indication by LED signals
Device operation	Main features	· Continuous counting of input signals of meter devices (water, gas, electricity, etc.) · Accept reed and hall sensor output from meters · Readout the status of connected inputs · Counter values are stored in flash memory · Watchdog to monitor operation
Protection	Protection	· Input protection: against lightning, static electricity · Output protection: against lightning, static electricity · Isolation voltage: 3000V
Construction	Temperature range	· Operating: from -20'C to +85'C at 10-90% rel. humidity · Storage: from -40'C to +100'C at 10-90% rel. humidity
	Enclosure	· IP31 protected, flame proof plastic enclosure · Surface mount
	Dimensions/Weight	· 100 x 69 x 25 mm · 100gr

CE

WM Systems LLC 8 Villa str., Budapest, H-1222 HUNGARY Phone: +36 (1) 310 7075 Support: +36 (20) 333 1111
Our website: **www.wmsystems.hu** Sales inquiry: **intersales@wmsystems.hu** Support: **support@wmsystems.hu**