

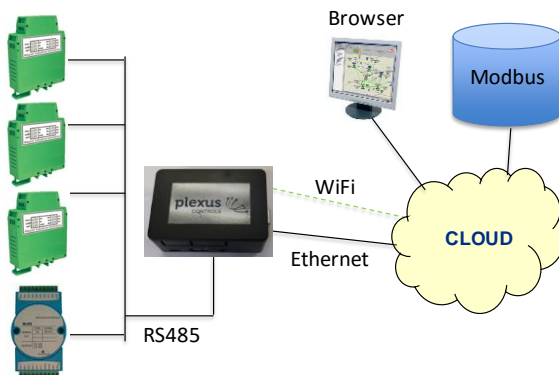


**IOT-420-1 / IOT-420-2**

## IOT Series Industrial 4-20mA, 0-5V/0-10V and Digital Input Monitoring System

### Features and Benefits

- Low cost standards based interfaces
- Single and Dual 4-20mA modules
- Single and Dual 0-5V/0-10V modules
- 8 Digital Input modules
- All module inputs fully isolated
- DIN Rail mounted modules
- 8-24V Power Requirements
- Full monitoring and webserver support from gateway including email/sms alarms
- Full back office database support (optional)
- MODBUS TCP supported at gateway



## SYSTEM DESCRIPTION

The Intelligent Wireless System (IWS) nodes comprise of a range of distributed wireless products from Plexus Controls providing advanced supervisory, control and data acquisition (SCADA) functionality for commercial and industrial applications.

With 'out the box' auto mesh wireless functionality, IWS nodes can be easily installed at a remote location and connected to standard sensors, supporting 4-20mA, 0-5V, 0-10V, HART, temperature, pressure and many other interfaces. Either through a direct wireless connection or automatically hopping through a series of repeater IWS nodes, the sensor data is relayed back to the IWS Hub for termination over Ethernet to the IWS Management Server application for display, logging and alarm management.

The Remote Termination Unit R-300PWR is a fully integrated self-contained radio and multi-function power meter with local LCD display and full remote monitoring capabilities. The system comes complete with electrical enclosure, integrated radio with external antenna and wiring kit. Just add the Current Transformers to suit your installation.

The frequency of readings and read type can be programmed at installation. All values are cached inside the Plexus gateway system that provides a local stand-alone interface with web server access or interface to cloud web services for detailed analysis.

The R-300PWR taps power from the voltage input lines to power the meter and radio components

## PRODUCT DESCRIPTION

### IOT series Analog Signal Interface

#### Features:

1. Analog signal acquisition, isolated RS-485/232 output
2. 12-bit AD converter, accuracy>0.1%
3. Calibrate modules accuracy via RS-485/232 interface
4. Signal input/output: 3000VDC Isolation
5. Wide power supply: 8~32VDC
6. 0-5V / 0-10V voltage signal or 4-20mA current signal input

#### General parameters:

(typical @ +25 °C, Vs to 24VDC)

Input type: Input current / voltage input

Accuracy: 0.1%

Temperature drift:  $\pm 30$  ppm / °C ( $\pm 50$  ppm / °C, maximum)

Input Resistance: 50 $\Omega$  (4-20mA/0-20mA/0-  $\pm 20$ mA current input)

Power Supply: +8 ~ 32VDC wide range power supply, internal anti-reverse and over-voltage protection circuit

Power Loss: less than 1W

Operating Temperature: - 45 ~ +80 °C

Humidity: 10 ~ 90% (no condensation)

Storage Temperature: - 45 ~ +80 °C

Storage Humidity: 10 ~ 95% (no condensation)

Isolation Voltage: input / output: 3KVDC, 1 minute, leakage current:1mA

Which output signal and power supply are common ground.

Shock Voltage: 3KVAC, 1.2/50us (peak)

Dimensions: 106.7 mm x 79 mm x 25mm

### IOT series Digital Signal Interface

#### Features:

1. Eight channels switch signal acquisition,isolated RS-485/232 output
2. Each input channel adopts optical isolation
3. Can read level status of each channel via the RS-485/232 interface
4. Input/output: 3000VDC isolation
5. Wide power supply range: 8 ~ 32VDC
6. High reliability, easy programming, easy application

#### General parameters:

(typical @ +25 °C, Vs is 24VDC)

Input type: switching input

Low level: input <1V

High level: input 4-30V

Input Resistance:3K $\Omega$



# Industrial Monitoring System

Power Supply: +8 ~ 32VDC wide range power supply, internal anti-reverse and over-voltage protection circuit

Power Loss: less than 0.5W

Operating Temperature: - 45 ~ +85 °C

Humidity: 10 ~ 90% (no condensation)

Storage Temperature: - 45 ~ +85 °C

Storage Humidity: 10 ~ 95% (no condensation)

Isolation Voltage: input / output: 3KVDC, 1 minute, leak current: 1mA

Which output signal and power supply are common ground.

Shock Voltage: 3KVAC, 1.2/50us (peak)

Dimensions: 120 mm x 70 mm x 43mm

## IOT series Gateways System

### Features:

1. RS485 Termination for all remote IOT modules
2. Ethernet /WiFi WAN Connectivity
3. Internal real time clock
4. Internal NV storage (with date & time stamp)
5. MODBUS TCP
6. Real time and/or scheduled data transfer
7. Local web browser configuration
8. Full webserver with GUI map and graphing display
9. Red and amber alarm management with email/sms notification
10. Indoor enclosure

### General parameters:

Power Supply: +8 ~ 32VDC wide range power supply

Power: 1.2A

Operating Temperature: -10 ~ +60 °C

Humidity: 10 ~ 90% (no condensation)

Dimensions: 100 mm x 60 mm x 45mm

### Warranty

Two years limited (hardware), 90 days limited (software)

## ORDERING INFORMATION

<b>Part Number</b>	<b>Description</b>	<b>Mounting</b>
IOT-420-1	4-20mA single interface module, 12-24V DC powered	DIN 15/35
IOT-420-2	4-20mA dual interface module, 12-24V DC powered	DIN 15/35
IOT-05-1	0-5V single interface module, 12-24V DC powered	DIN 15/35
IOT-05-2	0-5V dual interface module, 12-24V DC powered	DIN 15/35
IOT-010-1	0-10V single interface module, 12-24V DC powered	DIN 15/35
IOT-010-2	0-10V dual interface module, 12-24V DC powered	DIN 15/35
IOT-D8	8 input digital input module. 12-24V DC powered	DIN 15/35
IOT-GW	IOT Gateway System RS485 to Ethernet (MODBUS TCP)	DIN 15/35
IOT-PSU	85-265V AC to 24V 5W DC Power Supply	DIN 15/35

Plexus Controls can also provide ready build enclosures with interfaces pre-assembled onto DIN rails and prewired.