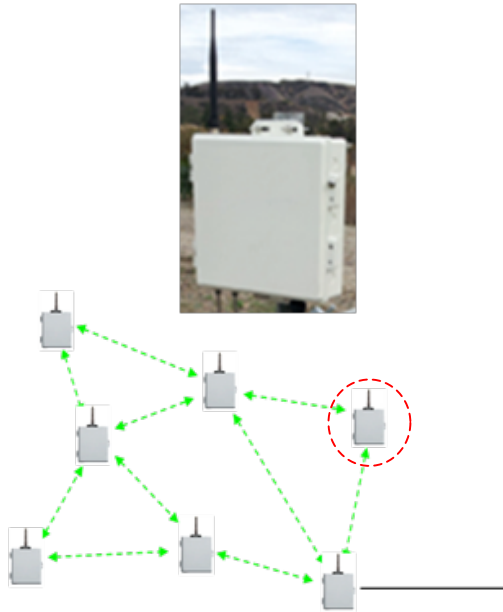




Intelligent Wireless SCADA Distributed Control Systems Oxygen/Pressure/Temperature



Features and Benefits

- Oxygen, Pressure and temperature content analysis for biogas monitoring
- Oxygen: Integrated digital fluorescence quenching technology with 1 year sensor calibration
- Gas Static Pressure (vacuum)
- Gas Temperature
- MODBUS TCP support (at gateway)
- Rugged cast aluminum enclosure for all weather operation

DESCRIPTION

Plexus Controls 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 and low power requirements, the IWS Methane and Oxygen Gas Analysis System (GAS) can be easily installed at a flare or well site and connected into the biogas pipe using 1/4" sampling and return tubes providing a flow through using a pitot tube or orifice plate. The IWS-R-O2PT takes a reading 24 times a day (programmable). Methane content (% volume), system static pressure and gas temperature is taken and reported via MODBUS TCP or Plexus database portal at the gateway. The system gateway provides functionality including alarm email/sms notification and GUI map display via a webpage. The gateway system stores all readings with date/time stamp. All data may be downloaded a regular basis (programmable) or continuously monitored in real time over a WAN connection such as a cell modem.

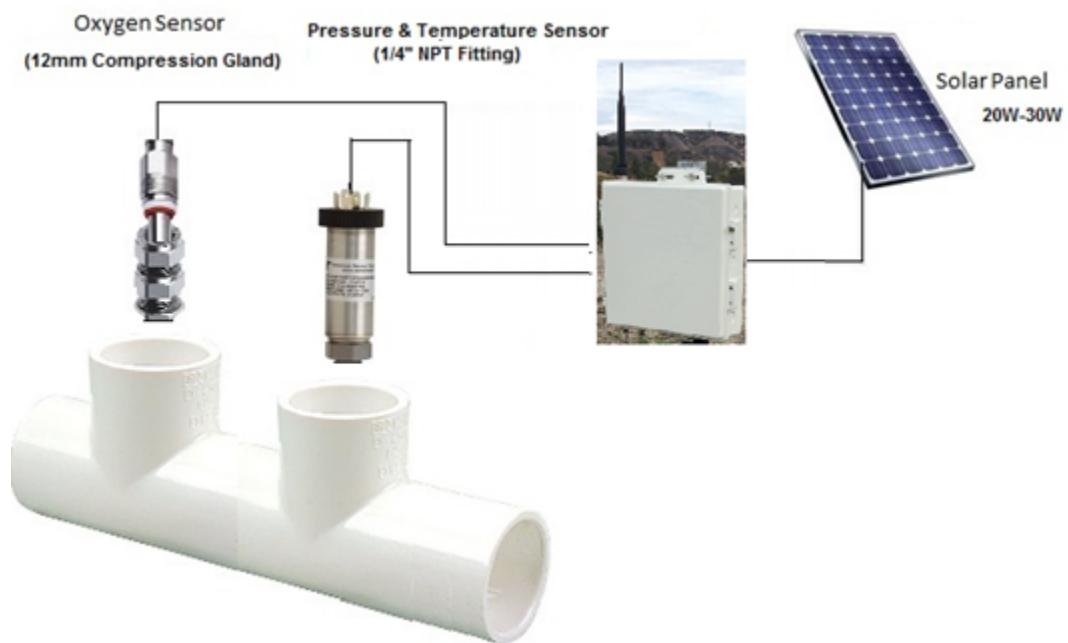
Plexus IWS GAS system uses the latest digital IR (methane sensor), and digital fluorescence quenching (oxygen sensor) technology with 1 year calibration validity. Either sensor can be swapped out in the field in a few minutes and recalibrated for another year.

IWS-R-O2PT systems are powered through an internal 24V DC power connection or 12V solar system (optional, must be specified at the time of ordering). A 24V 1.5A power adapter is provided with the system (non-solar version)



Intelligent Wireless SCADA Distributed Control Systems

TYPICAL APPLICATION GAS System





Intelligent Wireless SCADA Distributed Control Systems

SPECIFICATIONS

Radio Specifications

Wireless Topology	Auto Mesh with dynamic configuration
Frequency	2.4 GHz ISM Band
Channels	16
Hops	30 max.
Power Output	+18dBm (antenna port), +21dBm max. EIRP with external antenna (supplied)
RX Sens	-102 @ 10-6 BER
RF Data Rate	250 kbps
Indoor Range	up to 200m
Outdoor Range	1km+

Power (with current loop power)

IWS-R-O2PT

Supply Voltage	12-24V DC (power adapter with PoE combiner)
Max. Power (Read Active)	800mA @ 12V DC
Max. Power (Idle/Receive)	40mA @ 12V DC
	Solar Powered options – Solar Panel, Battery and mounting brackets

I/O

IWS-R-O2PT

Sensors	<p>Oxygen: 0-100% (Compatible to PSt3, 0-50% O2, resolution: 0.05%)</p> <p>Pressure: 0-25psi (±0.1% accuracy)</p> <p>Temperature: -67F-257F (±3% accuracy)</p>
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Security

Data Encryption: AES 128bit available (optional)

Management

Stand alone local or remote graphic display with SMS & email alarms.
Supported on Windows 7/10
And/or MODBUS TCP support

Physical, Electrical & Environmental

Mounting Bracket	Direct wall mount
Operating Temperature	-40C to +55C (system), 0C to +55C (sensor pod)
Relative Humidity	0-95% (system, non-condensing)
Wireless Certifications	802.15.4 (2.4GHz) FCC & IC
Enclosure	Weatherproof. 12" (w) x 10" (h) x 5" (d) (300mm x 250mm x 125mm)
Weight	8kg approx



Intelligent Wireless SCADA Distributed Control Systems

ORDERING

Type	Part Number	Description
RTU	IWS-R-O2PT	Wireless Sensor System (remote) 12-24V AC/DC. Interfaces: <ol style="list-style-type: none">1. Oxygen 0-100%2. Pressure 0-25psi (selectable range)3. Temperature -67F-257F Complete with external antenna, lightning surge suppressor and mounting brackets. Includes 24V 1.5A power adapter if solar upgrade not included

Type	Part Number	Description
Solar	SP-02	Solar Panel 30W with pole mounting bracket
Solar	SP-UPG	Upgrade kit for IWS-R (pre-installed): 3.8AH SLA Battery 10A Solar Controller