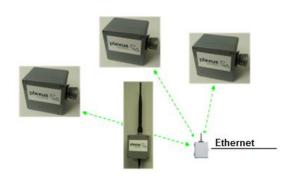# Intelligent Wireless SCADA Distributed Control System

plexus CONTROLS

R-025 Series
Ruggedized Industrial
0-2.5V Input
Remote Wireless System

Features and Benefits

IWS-R-025V3-M

IWS-R-025V3-L

Ethernet

- Next generation distributed, intelligent wireless SCADA system
- 0-2.5V input measurement
- Integrated or external long range antenna
- Battery powered (2 x C) no plant wiring or external power required
- Auto calibration and battery optimizer
- Reliable & scalable auto mesh wireless
- Full monitoring, control and back office support
- Attach to 0-2.5V output sensor
- Provides 3V power to the sensor
- MODBUS TCP supported at Hub

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-025V3 is a fully integrated self contained radio and interface package supporting a 0-5V input connection. The R-025V3 is powered using 2 x Alkaline dry batteries that can be easily changed by the user. The R-025V3 has been designed to mount onto a flat surface or may be supported through the ½" NPT pipe fitting. The frequency of readings can be user changed and values logged and plotted on Plexus controls Network Management System (NMS) software. Plexus also provided an SQL database package that allows more sophisticated packages to access the data for detailed analysis.

The R-025V3 is powered by internal 2 x C Alkaline batteries (not supplied). Battery life is expected to be 3-5 years depending on the frequency of the reading cycles (programmable through the hub web pages).

SPECIFICATIONS

Radio Specifications

Wireless Topology	Auto Mesh with dynamic configuration
Frequency	2.4 GHz ISM Band
Channels	16
Hops	30 max.
Power Output	+18dBm EIRP with internal antenna
RX Sens	-102 @ 10-6 BER
RF Data Rate	2Mb/s
Indoor Range	up to 200ft (-M version), up to 500ft (-L version)
Outdoor Range	up to 1000ft (-M version), up to 2 miles (-L version)

Power (with current loop power)

	IWS-R-025V5
Supply Voltage	3V DC (internal 2 x C primary batteries, alkaline recommended)
Max. Power (Transmit Active)	400mW
Max. Power (Idle/Receive)	70mW
Sleep Mode	10uA @ 3V DC

I/O

	IWS-R-025V5
	1 Input: 0-2.5V DC (Minimum sensor voltage available at terminals = 3V) (10 bit ADC Internal)

Security

Data Encryption	AES 128bit

Management

Stand alone local or remote graphic display with SMS & email alarms. Supported on Windows 7/8
Modbus TCP support through Ethernet Hub

Physical, Electrical & Environmental

Mounting Bracket	Unit mounts on ½" NPT fitting. Alternate mounting holes at the edges of the enclosure
Operating Temperature	-20C to +55C
Relative Humidity	0-100% (non condensing)
Wireless Certifications	802.15.4 (2.4GHz) FCC &, IC
Enclosure	Polycabonate (grey) 3-1/4" (w) x 3-1/4" (h) x 2" (d) (85mm x 85mm x 50mm) NEMA 4X (UV protected)
Weight	1.2lb (0.5kg) (approx) with batteries

ORDERING INFORMATION

Part Number	Description
IWS-R-025V3-M	Remote Terminal Unit, internal antenna, 0-2.5V Input (3V Powered)
IWS-R-025V3-L	Remote Terminal Unit, external antenna, 0-2.5V Input (3V Powered)

plexus CONTROLS

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