

WiPS-102 and 103 I/O Interfaces Transmitter and Receiver Sets

Features

- 1-Watt transmit power
- Wireless conduit and wire replacement for one 4-20 mA and two digital signals
- Interference free – Frequency Hopping Spread Spectrum technology
- License-free 902-928 MHz industrial, scientific and medical (ISM) band
- Easy to use, wire in – wire out, no setup or programming
- Range: 600–1000 feet in-plant, no line of sight
- Class I, Division 2 approved for hazardous area installation (UL, CUL and CSA approved)
- NEMA 4X Transmitter enclosure with standard 1/4-wave whip antenna

Typical Applications

- SCADA systems
- Tank level
- PLC/RTU extensions
- Mills/quarries/factories
- Pump control
- Sensor monitoring
- Water/Wastewater
- Utilities
- Oil and gas
- Irrigation systems
- Petrochemical

Benefits

- Reduce cost of labor and installation
- Eliminate conduit and wiring
- Reliable and dependable operation



Frequency Hopping Spread Spectrum Technology

Each Siemens WiPS¹-100 Series receiver and transmitter includes an integrated radio and an I/O module designed to eliminate cable and conduit for one 4-20 mA current loop and two digital signals in harsh industrial environments.

This unique addition to the Siemens Process Instrumentation line uses 902-928 MHz ISM band spread spectrum frequency hopping technology to guarantee a license-free, interference-free link between remote devices and the control room.

Wireless I/O eliminates costly cable and conduit runs on new projects and when retrofitting existing systems. Wireless I/O is a maintenance-free, reliable and versatile solution for analog and digital data acquisition.

Technical Specifications, WiPS 100 Series

Transmitter

Power 1 Watt

Range 600-1000 feet (180-300m),
in-plant, no line of sight

4-5 miles (6-8km), line of sight,
flat terrain, raised antenna

20+ miles (32+km), line of
sight, flat terrain, professional
propagation study, installation
and directional antennas

Frequency..... 902-928 MHz

Power source WiPS-102 – 100-240 Vac,
50/60 Hz
WiPS-103 - 12-30 Vdc
regulated

Power usage WiPS-102 – 13 W
WiPS-103 - 8.4W peak, 1.8W
average

Inputs..... 1, 4-20 mA analog (250 Ohm
input impedance)

2, 5-30 Vac/Vdc digital (For
120 Vac digital inputs use
relays to convert to specified
voltage levels. Consult
factory for relay options.)

Receiver

Frequency..... 902-928 MHz

Power source 12-30 Vdc regulated

Power usage 3W (125 mA @ 24 Vdc)

Outputs 1, 4-20 mA analog (12-bit
resolution)

3, 120 Vac 0.5A digital (relay
contact)

Loop impedance..... 450 to 1350 Ohms for power
supply voltages of 12-30 Vdc

Repeatability..... 0.02%

Accuracy..... 0.2% of full scale

General Specifications

Temperature range..... -40° to 70°C (-40° to 158°F)

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Dimensions

Receiver..... 102 x 114 x 17.5 (mm)
4 x 4.5 x 0.7 (inch)

Transmitter 279 x 57 dia. (mm)
11 x 2.24 dia. (inch)

Approvals..... UL listed (Class 1, Division 2,
Groups A, B, C, D), CSA approved

Mounting..... Receiver - DIN rail
Transmitter – 1/2" Conduit Nipple

Ordering Information

Kit & Order No.	Description
WiPS-102 Kit Order P/N - TGX:16347-302	AC-powered, conduit mount transmitter and DIN-rail mount receiver, two 1/4-wave antennas with 6 foot cables, and I/O: Transmitter inputs - one 4-20 mA analog and two digital; Receiver outputs - one 4-20 mA and three digital
WiPS-103 Kit Order P/N - TGX:16347-303	DC-powered, conduit mount transmitter and DIN-rail mount receiver, two 1/4-wave antennas with 6 foot cables, and I/O: Transmitter inputs - one 4-20 mA analog and two digital; Receiver outputs - one 4-20 mA and three digital

Accessories

Siemens Logo Power Supply – Order Number
6EP1331-1SH02

Antennas - omnidirectional and Yagi directional

Antenna Cables - e.g. RG213, LMR400, LMR600

Connector Adapters - e.g. MCX, Type-N, SMA

Antenna Splitter - connect up to 21 receivers to a single antenna

Antenna Surge Protection - protect a receiver or transmitter against voltage surges (e.g. nearby lightning strikes)

Contact Information

Visit the Siemens Internet site www.usa.siemens.com/pi or telephone: 800-365-8766 for additional details.

Siemens sales representatives are available to provide sales and application support. For your Siemens office, visit www.usa.siemens.com/pisupport.