

# Sentry Series RTUs Features & Benefits

## Smart & Economical

### Connectivity

Easily connect to nearly any SCADA device, PLC or process control instrument.

Built-in Ethernet provides a high-speed means of configuration and back-up, and the ability to transfer information as registers and files. Configurable user screens provide a low-cost simple HMI which also allows for viewing trend graphs and downloading spreadsheet files. Serial communications includes hardwired and wireless technologies for register exchanges. Cellular wireless provides both register exchange capabilities, alarming and HMI access by text messaging.

#### Ethernet Networking

MODBUS TCP/IP/UDP

SDX

HTTP

TFTP

#### Serial Communications

MODBUS RTU

SDX

DF1

SMS

### Security

Latest security technologies to protect your systems and data exchanges.

SECURE EMBEDDED OS

COMMUNICATIONS ENCRYPTION

SECURE USER ACCESS MANAGER

### Data Storage

Replace expensive PC software or make sure that critical data is never lost when a communications link is down.

Data is logged to an internal flash disk, then displayed as tables and graphs in auto-generated web pages. Logged data can be downloaded into Excel or to your local PC.

#### Historical Trending & Data Logging

HISTORICAL TRENDING DOWN TO 1 SEC

TREND UP TO 16 VARIABLES

LOG 4 TOTALS EVERY MINUTE FOR THE LAST HOUR

LOG 4 HOURLY TOTALS FOR OVER 5 YEARS

REALTIME TODAY, YESTERDAY AND PEAK MINUTE, HOUR, DAY TOTALS

AUTO GENERATED WEB TREND AND LOG DISPLAYS

PLOT, PAN, ZOOM TRENDS AND TOTALS IN LOCAL GRAPHS

DOWNLOAD TREND AND TOTALS TO CSV

### Alarm Notification

Versatile, 3-state alarm management included—replace alarm dialers & expensive PC software.

TEXT MESSAGE ALARMS AND ACKNOWLEDGMENT

UP TO 30 CONFIGURABLE ALARMS

8 CONFIGURABLE ALARM DESTINATIONS

TIME OF DAY AND DAY OF WEEK SCHEDULING

REALTIME ALARM STATUS DISPLAY ON WEB AND VIEWPOINT II HMIs

### Applications:

MIRRORED I/O TO ELIMINATE CONDUIT AND COPPER WIRING

ETHERNET AND WIRELESS DISTRIBUTED I/O EXPANSION

DATA RECORDING FOR PRODUCTION TRACKING AND COMPLIANCE MONITORING

CELLULAR ALARMING FOR LIFT STATIONS AND PROCESS CONTROLS

WIRELESS PUMP CONTROL WITHOUT COSTLY PLCs AND PROGRAMMING

ENERGY MONITORING AND LOAD SHEDDING



Solaras II and Spectra RTUs have built-in solar controllers/UPSs. Save \$\$\$ by simply adding a solar panel or power supply, and a battery.

### HMIs

Replace or supplement expensive PC HMI software. HMIs are built in and easier to use, with no recurring license fees, user limits, tag limits or maintenance fees.

CONFIGURABLE USER WEB PAGES

TEXT MESSAGE HMI INTERFACE OVER CELLULAR

BUILT-IN SUPPORT FOR VIEWPOINT HMI PANELS

### Control

Powerful pre-built control functions—simply fill in the blanks for configuration.

FULL DUPLEX PUMP CONTROLLER

DUAL LOOP PID CONTROLLER (SPRITE II)

8 SETPOINT CONTROL BLOCKS

ENERGY CALCULATION BLOCKS



For Additional  
Product Information  
Visit [www.iclinks.com](http://www.iclinks.com)

 **Industrial Control Links, Inc.**

12840 Earhart Avenue  
Auburn, CA 95602 USA

Phone: 530.888.1800  
Fax: 530.888.7017  
E-mail: [info@iclinks.com](mailto:info@iclinks.com)

[www.iclinks.com](http://www.iclinks.com)

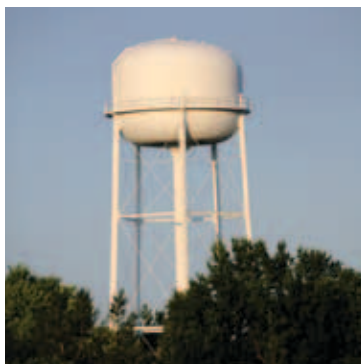


Industrial Control Links, Inc.

# Sentry Series Remote Telemetry Units



- Ethernet I/O
- Wireless I/O
- Cellular I/O
- Serial I/O
- Data Logging
- Alarming

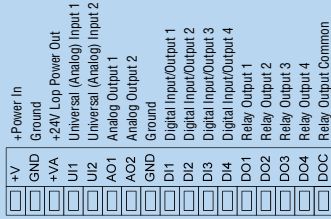


# Sentry Series Selection Guide

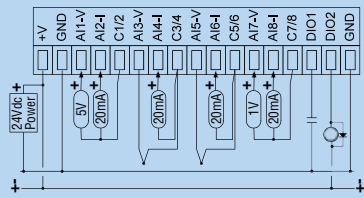
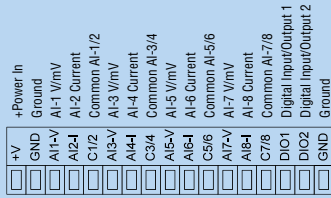
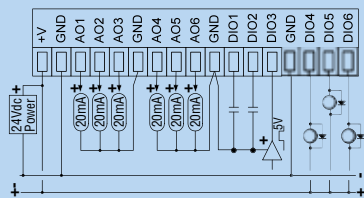
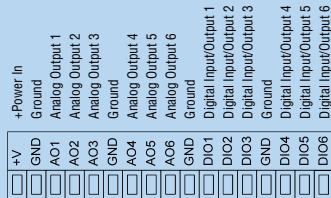
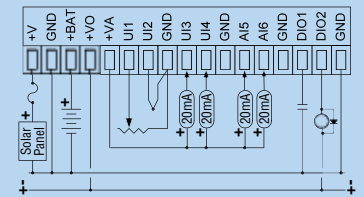
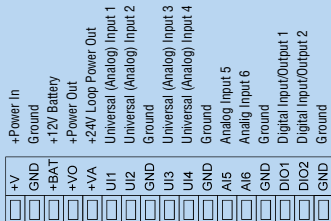
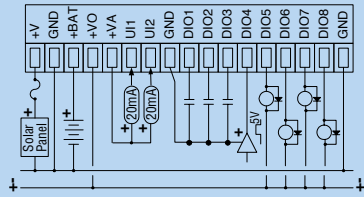
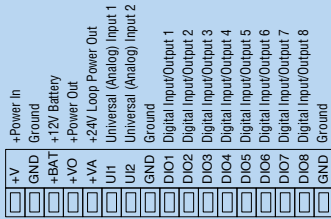
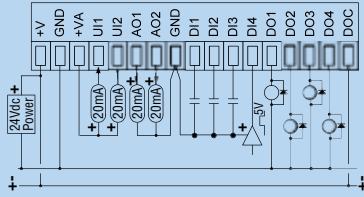
Description	Ethernet	UPS/Solar Controller	I/O						Internal Options*					External Options		
			Universal Inputs	Analog Inputs	Analog Outputs	Digital Inputs	Digital Outputs	Digital I/O	RS-232/RS-485 Serial Port	Microhard Radio	Freewave Radio	Digi/Maxstream Radio	Cellular Modem	Leased Line Modem	Ethernet Radios	VHF/UHF Radio
<b>Sprite II</b>  <p>Sprite II is a general purpose I/O module with a symmetrical I/O mix: 2 universal analog inputs and 2 analog outputs, 4 digital inputs and 4 relay outputs. Sprite II is ideal for “mirrored” I/O, pump control, and lift stations. Includes closed-loop PID Control.</p>	1		2	2	4	4		•	•	•	•	•	•	•	•	
<b>Solaras II</b>  <p>Solaras II is designed from the ground up as a solar-powered or battery backed RTU. Just add a battery and a solar panel or DC power source; no external solar controller or UPS required! Solaras II is the ideal solution for tank, stream and reservoir monitoring and alarming.</p>	1		2				8	•	•	•	•	•	•	•	•	
<b>Spectra</b>  <p>Spectra is also designed from the ground up as a solar-powered or battery backed RTU. Just add a battery and a solar panel or DC power source; no external solar controller or UPS required! Spectra has the most analog inputs especially for energy usage, as well as compliance and regulatory monitoring.</p>	1		4	2**			2	•	•	•	•	•	•	•	•	
<b>Stratus</b>  <p>Stratus has many analog outputs and digital I/O, making it ideal as one end of a “mirrored” I/O system. Take readings from the field and re-drive loop displays, chart recorders or PLCs with secure communications.</p>	1			6			6	•	•	•	•	•	•	•	•	
<b>Spirit</b>  <p>Spirit has isolated high performance analog inputs where non ground referenced signals must be measured. Besides reading voltage, mV, thermocouples and current loops, Spirit can read ripple voltage and mV; ideal for monitoring cathodic protection systems.</p>	1			8***			2	•	•	•	•	•	•	•	•	

\* Can have 1 serial port option plus 1 internal radio option. \*\* 20mA \*\*\* 4 pairs of analog inputs, one V, mV, and TC input, and one current input, per pair.

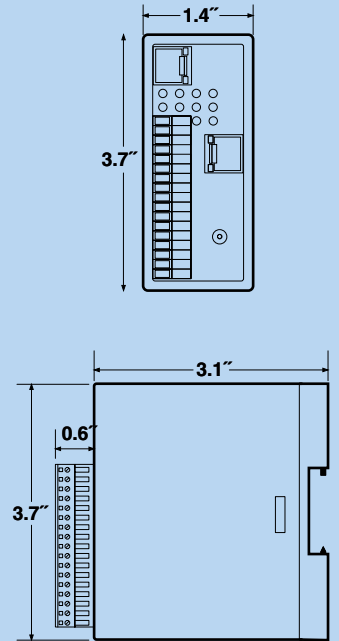
### Terminal Diagrams



### Wiring Diagram Examples



### Dimensions



## Sentry Series—Common Features

<b>Storage</b>	32MB Internal Flash Disk (64MB and Larger Optional)
<b>Universal Inputs</b>	16-bit Analog Inputs with Sensor Conditioning and Configurable Filtering, Up to 800 Samples/Second 20mA, 0 to 2V, 0 to 5V, 100 mV, 250 mV, +/-250 mV, 30K and 300K Ohms, Thermocouple (Type J, K, T, E, R, S, B, N), Thermistor (10K, Type II & Type III), RTD 2 and 3-wire (10,100, 1K ohm) note: 3-wire RTDs Require 2 Inputs Each
<b>Analog Inputs</b>	0/4 to 20mA, 1mA OR 0 to 5V, 100 mV, 250 mV, +/-250 mV, Thermocouple (Type J, K, T, E, R, S, B, N) Depending on Model
<b>Analog Outputs</b>	16-Bit, 0/4 to 20mA
<b>Digital Inputs</b>	Contact Closure, or 0 to 30Vdc Inputs, Configurable Filtering, Counting to 10kHz
<b>Digital I/O</b>	Contact Closure, or 0 to 30Vdc Inputs, 0 to 30Vdc 1A Protected FET Outputs, Configurable Filtering, Counting to 10kHz
<b>Digital Outputs (Sprite)</b>	Relay Contacts Up to 120V, up to 3A
<b>Solar Controller/UPS</b>	(Solaras and Spectra only) Up to 3A Battery Backed Power to External Equipment in Addition to Controller. Requires External 12V Lead-acid Gel-Cel Battery, 3 to 18 AH, 0.8A Charge Current Max.
<b>Warranty</b>	3 Years, Factory Parts and Labor
<b>Operating Range</b>	-40°F (-40°C) to 158°F (70°C), 5%RH to 95%RH, Non-Condensing
<b>Safety</b>	Certified for Use in Hazardous Locations—Class 1, Div 2, Groups A, B, C, D (UL/CSA)
<b>Power</b>	10 to 28Vdc Power Draw Depends on I/O & Option Configuration—Contact Factory
<b>Mounting</b>	35mm DIN Rail
<b>Internal Options</b>	
<b>Serial Port</b>	RS-232 and RS-485, Baud Rate adjustable from 1200 to 115200
<b>Wireless Options</b>	902MHz to 928MHz Spread Spectrum, Frequency Hopping, 1Watt, 115K Baud
Digi/Maxstream	Sensitivity: -110dBm @9600 Baud, -100dBm @115K Baud, Point to Multipoint & Peer to Peer, DigiMesh
Microhard	Sensitivity: -108dBm (BER 10-6), 32-bit CRC, Point to Multipoint, Network Diagnostics
Freewave	Sensitivity: -108dBm (BER 10-6), 32-bit CRC, Point to Multipoint, Network Diagnostics, FGR-115 Compatible
<b>Cellular</b>	GSM/GPRS/HSPA (AT&T, T-Mobile, Rogers, Telus), Quad Band 850/900/1800/1900 MHz CDMA/EV-DO (Verizon, Sprint), Dual Band 800/190 MHz
<b>External Options (Requires Serial Port Option—Except for Ethernet Radios)</b>	
<b>Leased Line</b>	Input: -40dB to +6dB, Automatic Gain Adjust Output: 600 ohms, -40dB to +6dB, User Settable
<b>VHF/MURS Radio</b>	150MHz to 174MHz, 5W (VHF), 2W (MURS), Sensitivity: -118dBm@1200bps, -114dBm @ 4800bps, -108 dBm @ 9600bps
<b>UHF Radio</b>	450MHz to 480MHz, 5W (UHF), Sensitivity: -116 dBm@4800bps, -108dBm @ 9600bps
<b>Ethernet Radios</b>	900MHz, up to 1.2 Mbps, 1W, up to -108dBm Sensitivity 2.4GHz, 5.8 GHz, up to 54 Mbps, 1W, up to -97dBm Sensitivity