

**Spara**Konnekt®

## Continuous monitoring and load control without wires or conduit



**Spara Konnekt® Wireless I/O** is a cost-effective solution for interfacing reliably with field devices and equipment. In places where conduit is impractical or impossible, Konnekt's wireless I/O capabilities and the option of either line or battery power provide maximum flexibility and easy installation. Whether the application is energy management, building management, or process control, your infrastructure investment can now easily adapt to the changing needs of your organization. Konnekt Wireless I/O allows you to capture and transmit both digital and analog data in a wireless sensor network. It accepts all digital inputs in addition to analog process values such as temperature, energy, level, pressure, flow and distance. RTD, thermocouple, and counter nodes are also available.

### **Bi-directional communications**

Full receive and transmit RX/TX communications between Konnekt Gateway and Remote Nodes allow radio link validation and error checking, with both sensing and actuation on the same network.

### **Powerful, rugged and reliable**

System operates on a proven, Frequency-Hopping, Spread-Spectrum wireless protocol with radio output up to 150mW, while high-gain antennas can boost power up to 1W. Gateways and Nodes are available with internal, external or remote antennas. Enclosures are rated NEMA #6P, IP67 for challenging environments and outdoor applications.

### **Load connection-ready**

Optional relay and power panels provide the necessary system power and field-interfaces needed for field implementation. Panels are designed and built to UL508 and include the necessary circuit protection, surge suppression, field-voltage relays and terminal blocks. All panels include detailed drawings and are clearly labeled for easy installation and support.

### **Konnekt Wireless I/O Features**

- Accepts all sensor & field inputs, digital and analog
- Quick install where conduit is not practical
- Radio operates on reliable 902 to 928 MHz (FHSS) platform
- Full RX/TX communications between gateway and remote nodes
- Seamless integration with Spara EMS®
- Rugged radio and field interface enclosures
- Plug and play quick disconnect options for easy system setup
- Optional 2-year or 5-year battery power



## System features 1 Gateway + up to 55 Nodes

### General Specifications:

Power	+10-30VDC or +3.6VDC Low Power Option
Power Consumption	<1.4 W@24VDC
Mounting	#10 / M5 - horizontal or vertical mounting (M5 hardware included)
M5 Fasteners - Max. Tightening Torque	0.56 N.m (5 in.lbf)
Case Material	ABS, polycarbonate
Weight	0.26 kg (0.57 lb.)
Indicators	(2) LED, bi-color
Switches	(2) Push Buttons
Display	6-character LCD

### Radio Specifications:

Range	Up to 4.8 kilometers (3 miles with standard antennas, up to 10 miles with high gain antennas)
Frequency	902 - 928 MHz ISM band
Transmit Power	21 dBm
Spread Spectrum Technology	FHSS (Frequency Hopping Spread Spectrum)
Antenna Connector	Ext, Reverse Polarity SMA SO n
Antenna - Max Tightening Torque	0.45 N.m (4in.lbf)

### Environmental Condition:

Environmental Rating	NEMA 6P / IEC IP67
Operating Temperature, Electronics	-40 to +85°C
Operating Temperature, LCD	-20 to +80°C
Operating Humidity	95% max. relative (non-condensing)
Shock & Vibration	IEC 68-2-6 & -7, Shock: 30g, 11 ms half sine wave, 18 shocks, Vibration: 0.5 mm p-p, 10-60 Hz

### I/O Specifications:

Signal Type	Analog / Digital, Thermocouple, RTD, Counter
Inputs/Outputs	Up to (12) Configurable Input/Outputs
Digital Inputs	Sourcing type, 3 mA max current @ 30VDC
Digital Input Sample/Report Rates	62 ms (report = change of state)
Digital Outputs	Sourcing type, 100 mA max current @ 30VDC
Analog Inputs	0-20 mA
Analog Outputs	0-20 mA
End-to-end Latency	200 ms
End-to-end Latency Repeater	250 ms
Link Timeout	8 seconds (Configurable)
Output State Following Timeout	De-energized (OFF) (Configurable)