Sender Extends Wireless Sensor Operations Range

The Deeter Group, leaders in the design, development and manufacture of electronic sensors and control systems, announces a Wireless Sensor Sender for industrial measurement and control.

The new Wireless Sender is an extension to a Deeter Wireless Sensing System and communicates with a Deeter Base Station which acts as a coordinator for an IEEE 802.15.4 wireless network. The Deeter Sender has a number of sensing inputs and will transmit sensor data at regular intervals to the Base Station for conversion to process system outputs and alarms.

The Deeter Sender has the following sensor inputs; four discrete inputs from external switches, such as Deeter level sensors, float switches, or other voltage free contacts, one analogue resistive input, such as a Deeter Resistive LVCS (Liquid Vertical Continuous Sensor) or an industry standard 4 - 20mA current loop analogue input.

Wireless communication between the Deeter Sender and Base Station uses the internationally recognised IEEE 802.15.4 protocol in the 2.4GHz ISM radio band providing a range of up to 4km under ideal conditions.

The Sender is housed in an ABS enclosure with an external antenna and cable glands for power and signal inputs. An optional 3m extension lead and bracket are available for mounting the antenna in a position more favourable to wireless communication should the need arise. The unit can be powered by an internal 3.6V Lithium Thionyl Chloride battery or externally by a 5VDC mains powered wall adaptor. The internal battery acts as a no-break back-up should the external supply

be interrupted.

If a 4-20mA current loop sensor input is being monitored, a small amount of power is derived from this source to help extend battery life. Battery life for a battery only powered Deeter Sender is greater than one year (based on a transmission interval of 10 seconds) transmission rates of 1 - 60 seconds are user configurable.

Information from a Deeter Sender will be received and processed by the simple-to-use Base Station designed to receive data from remote wireless devices such as the Deeter Liquid Vertical Sensor (LVCS-RF). The base station converts remote sensor input signals into industry standard process outputs. It operates on one of 16 radio frequency channels available in the 2.4GHz ISM band. The internationally recognised IEEE 802.15.4 protocol allows several wireless sensor networks to share the same wireless spectrum without interference.

The Base Station provides four open-collector transistor outputs which may be used to drive external relays for pumps and alarms or Deeter's Dual Level Controller. Continuous analogue sensor data, such as liquid level, is output using a 4-to-20mA current-loop driver which enables interfacing with industrial process controllers or the Deeter Group's range of Current Loop Indicators. A serial communications channel provides full-duplex RS232 and half-duplex RS485 transceivers allowing software to be developed for linking to PCs, data-loggers, PLCs or other proprietary equipment.

Peter Whiteaker, Managing Director of Deeter Electronics, comments;"The introduction of our new Wireless Sender increases the flexibility of our wireless sensor system by allowing widely used conventional sensor inputs to be simply connected to our robust and easy to use wireless communication system. This not only allows existing sensors to communicate via a wireless network but also means our customers are not locked-in to using a single source for their measurement and control needs. The simplicity of installation, removal of cabling costs and increased reliability of control signals makes a Deeter Wireless Sensor System a very viable alternative to conventional control and instrumentation systems."

The Deeter Group product range includes level sensors, industrial weighing equipment, reed and proximity switches, security switches, termination assemblies, litz and magnetic wire and solar power systems. For more information on the Deeter Electronics range of wireless sensing products call +44 (0)1494 566046 or visit www.deeter.co.uk

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