

# ***Xtra-Sense* Merlin Eco Data Signalling System**

The ***Xtra-Sense* Merlin Eco Data Signalling** system is an innovative product for transmitting simple data over long distances within a building or complex of buildings, without the need for new wiring.

It is ideal for sending a wide variety of data from remote sensors or measurement devices to a central data collection and information management system. Examples include temperature, humidity, tank levels, and meter readings etc.



The data signal is transmitted through the fixed mains-power wiring from one location to another within the building or complex using a powerful and reliable proprietary data transmission technology, enabling long distance signalling.

Through integration with appropriate measurement devices, applications include monitoring environmental conditions within buildings, the performance and status of machinery and processes, and the usage of consumables, such as power, in office buildings, industrial premises, retail sites, schools, hospitals, nursing homes, banks, universities and residential properties.

## **Key Benefits**

- Long distance signalling without the need for new wiring.
- Easy installation. The signal transmitting and receiving units are simply wired or plugged into a mains power point where they are required
- Reliable signalling. The existing mains-power wiring provides an extremely reliable wired communication network, which is considerably more dependable than wireless radio communication
- Signalling can be achieved throughout a multi-storey building or complex which is fed by the same main power feed cable, and the range is not affected by the factors e.g. walls that limit radio signals
- Signals can cross phases enabling communication across three phase as well as single phase ring mains networks

The key to the success of the units is the proprietary electronic filters which enable the data signals to be detected in the presence of high levels of electrical noise, especially that generated by the proliferation of computer switch-mode power supplies and transformer-less battery chargers.

To achieve this, the data rate is limited to approximately 20 bits per second, making it ideal for the transmission of simple data. It is not suitable for high speed or complex signals. The system can provide either uni-directional or bi-directional communication.

**Patent pending**

### Merlin Eco Data Transmitter

Designed to be housed in a two-gang plastic enclosure, the Transmitter unit takes an input from a sensor or measurement system. The input can be either analogue or digital. The data is encoded and injected into the ring mains wiring. Multiple Transmitters can report to a single receiver.

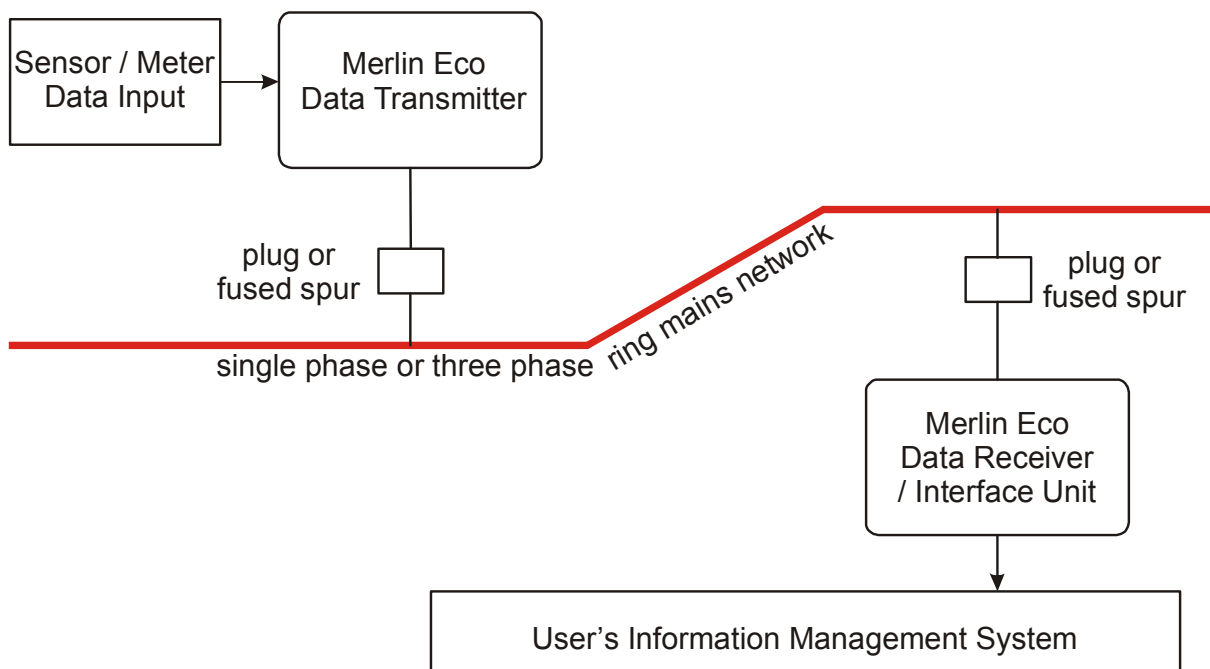


Linking the measurement system with the Merlin Eco Data Transmitter can include the full integration of the two systems into a single device.



### Merlin Eco Data Receiver / Interface

Designed to be housed in a two-gang plastic enclosure, the Receiver monitors the mains wiring for the Transmitter signals. Signals are decoded and supplied to the main user management information system through a RS232 serial link. Co-ordination of signals from multiple transmitters is controlled by the Data receiver.



Bi-directional communication can be achieved by specifying the devices to include the capability to both transmit and receive signals.

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