PRODUCT DESCRIPTION & APPLICATION

The generic identification for the complete system is TruckLOG. A TruckLOG system is a complete integrated information system for fork lift truck fleet management. A typical system would comprise of the following components:-

(a) A number of TruckLOG EV16 Series Access Control and Event Loggers fitted to the fork lift trucks on a customer's site.

(b) Normally one (could be more on a large site), Base Station unit(s). This is a small microprocessor controlled unit controlling a master transceiver unit which communicates periodically with the truck mounted EV16 units. Data collected from the trucks or data to be transferred to the trucks is held in the Base Station memory until communication with the trucks is achieved.

(c) A Master Station unit (normally one). This is basically a Pentium PC running Davis Derby Easyview Direct software. The Master Station is usually situated off site and is able to interrogate the Base Station via a modem link. Data retrieved from the trucks via the Base Station can be processed in the Master Station to produce utilisation reports, damage reports, maintenance schedules etc. Similarly data to be sent to the truck mounted EV16 units via the Base Station (e.g. pin numbers, log off timer value etc) is set up in the Master Station to be transferred when appropriate. I have enclosed an Easyview Direct leaflet for more detailed information.

The components of the TruckLOG system we are seeking certification for are:-

(a) EV16 Access Control and Event Logger.

(b) Base Station Controlled Master Transceiver.

This part of the system works as follows:-

When the trucks are in use, data representing the driver identification (pin number) drive time, lift times, impact levels etc are stored in the EV16 data logger. When the truck comes within range of a Base Station (typically 50 metres) the truck mounted transceiver is 'polled' by the Base Station and if data is available from the data logger, this is transmitted back to the Base Station where it is stored prior to being analysed by Davis Derby PC based software. All the truck mounted transceivers and Base Station transceivers are identical in hardware terms but the truck mounted units are fitted with 'Slave' software, the Base Stations with 'Master' software. All units operate at 914.5 MHz. I have enclosed the full data sheet of the Radiometrix devices for your evaluation. The system operates as follows:-

The Radio Modules operate in transmit and receive mode. The module operating as the master initiates the data transfer cycle by sending:-

Preamble
Start of message tag bytes
Slave address – the address of destination Radio Module data limited to 255 bytes

CRC 16 bits

After sending the data packet the module goes into receive mode to allow the slave module to transfer its data to the master module.

Polling Cycle

Poll Slave 1

Wait for reply – go into receive mode
Poll Slave 2
Wait for reply – go into receive mode
Etc, etc.

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Poll Slave 255

The transmission bit rate is 19.2 K bits/sec but we would like to keep our options open to increase the rate up to 40 K bits/sec.

To enable other equipment that may be on site with similar operating frequencies to function, transmission gaps are inserted in the master transceiver control software. Typically this gap is 2 seconds in every 40 seconds although this is user configurable.

When the system is first installed on a customer's site, data relating to drivers' pin numbers, log off timer setting etc may be transferred from the Master Station via the Base Station to the EV16's. After this initial commissioning data transfer from the Base Station to the trucks is very infrequent.

The truck mounted EV16 Datalogger can be supplied with either a keypad assembly on the front lid to enable Driver P.I.N. numbers to be entered, or with a Smart Card interface to enable the Drivers' Passive Transponder 'Category Card' to be presented to the unit. Entering either a valid P.I.N. number or presenting a valid Category Card to the unit will cause a relay (not supplied) normally connected to the interface unit to be energised and hence the truck to be enabled. These types are identified as EV16 SR keypad and EV16 SR Smart. The 'S' denotes standard temperature range and 'R' denotes integral radio. Two other variants designated EV16 LR keypad and EV16 LR Smart denote low (L) temperature variants of these units i.e. operation down to –20°C.