SITEWATCH ™.

MIDI-8R

Remote Terminal Unit

Sitewatch Telemetry
Lee-Dickens Ltd

Sitewatch™
MIDI-8R
REMOTE TERMINAL UNIT
LEE-DICKENS LTD

WATCHDOG

SYSTEM POWER

"A compact and cost effective solution for Wide Area Control and Monitoring"

Industrial Design

The Midi-8R is a small, low cost microprocessor based Remote Terminal Unit (RTU) designed to provide a robust , economical solution for any remote monitoring application.

The Midi-8R is designed for rack mount applications and provides easy handling. The lead free components and manufacturing meet the new environmental regulations (RoHS). The use of industrial grade components allows the circuit boards to be used in both high and low extremes of temperature.

The various communication port facilities of the Midi-8R provide the means to collect data from a large range of external field devices, including PLCs and Intelligent Meters.

Industry standard protocols such as MODBUS are available.

The RTU database is held in Battery Backed RAM ensuring integrity during power failure.

Inputs / Outputs

As standard the Midi-8R has 16 optically isolated digital inputs (dins), 8 isolated differentially selected analogue inputs (ains) and 4 single pole relay digital outputs (douts).

The analogue inputs can be configured to accept either 4 to 20mA or 0 to 10Vdc; the digital inputs can be configured for internally or externally powered contacts.

The Midi-8R also has a small number of internal I/O points for self monitoring and control. Further I/O can be achieved by using expansion cards or slave RTUs.

Communications

As standard the Midi-8R has 3 serial ports, one is used for the main communications interface via a modem. The second serial port is available for connection to a Sitewatch LAN. A maximum of 4 RTUs can be connected on the Sitewatch LAN.
The third serial port is used for local interrogation via a Maintenance terminal.

The Midi-8R supports connections including RS-232; RS-485; Ethernet (TCP/IP); Public Switched Telephone Networks (PSTN); Cellular Networks (GSM); GPRS.

Expansion Card Options

Digital Input capacity can be increased to 24 with the addition of a small plug-in expansion card. Digital

Output and Pulsed input expansion are also available.

A serial expansion card can be fitted to the RTU to support up to 6 additional serial data channels. The additional channels will support interfacing to other intelligent equipment and Local Area Networking (LAN) of Sitewatch RTUs.

System Health Monitoring

The Midi-8R RTU has a number of self monitoring and in-built test routines, hardware and software watchdogs and operational status indicators.

- ☑ Mains Power available
- ☑ Watchdog Healthy - System running
- ☑ Event - Alarm indication
- ☑ Sitewatch Active / Commissioned indication
- ☑ Modem Status indication
- ☑ RAM Checksum error
- ☑ ROM Checksum error

User Panel

The Midi-8R "user panel" circuit board located within the RTU provides two 9 way RS-232 serial connections. The Maintenance Port is provided for local interrogation of the RTU; the Modem Monitor Port provides a connection to "spy" on the communications between the RTU modem and its processor board.

Physical Interconnection

All field interconnections (ains, dins and douts) and serial connections are made by D type connectors. Field connectors are located on the rear of the RTU.

Local Area Network (LAN) connections are made via screw terminations at the rear of the RTU.

Power Supply

230/115 VAC uninterruptible mains power supply (Lee-Dickens UPS100)

D.C. powered option available.

Dimensions

The Midi-8R RTU is supplied in a standard 19" rack mounting assembly. The rack is 2U (88.1mm) in height

Typical Applications

- ☑ Small SCADA systems:
    - Environmental Monitoring
    - Water Industry
    - ATC Applications
    - Gas & Oil Industry
    - Chemical Industry
- ☑ VMI Systems
- ☑ Internet Based Remote Monitoring:
    - Silo & Tank farms
    - Wind farms
    - Pump Stations

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