



Midi-10

Remote Terminal Unit



“An Intelligent, Modular Solution for all Remote Control and Monitoring Applications”

Industrial Design

The Midi-10 is an intelligent Remote Terminal Unit offering PLC type control algorithms, designed to work in harsh environments. It has serial and wireless communications and supports a wide range of industry standard protocols. With multiple I/O options using onboard and additional expansion modules, the Midi-10 suits applications of any size.

The RTU has a high performance and low power processor, a built-in real-time operating system, and a real-time database held in Battery Backed RAM.

The Midi-10 power management module with a supporting lead-acid battery provides UPS functionality that supports operation during mains failure.

An IP66 rated polycarbonate enclosure for wall mounting, the Midi-10 use of industrial grade components allows the circuit boards to be used in extremes of temperature. (-40 to 70°C).

The Midi-10 allows data to be collected from a large range of external field devices, including VSD's, PLC's and Intelligent Meters.

Inputs / Outputs

As standard the Midi-10 has 8 isolated Digital Inputs, 8 differential isolated Analogue Input, 4 open-collector Digital Outputs and 4 on-board expansion slots for a range of plug-in I/O modules.

The Digital Inputs can support internally or externally wetted contacts. The analogue inputs accept ± 10 V, ± 2.5 V, 0 to 20 mA, 4 to 20 mA signals. Digital Outputs are open collector (sink, 8 to 30 V DC).

The Midi-10 also offers internal I/O for self-monitoring and control. Additional I/O can be achieved by adding expansion modules or introducing slave RTU's.

Data Communications

The Midi-10 supports connections including:

Protocols	Modbus/TCP, DNP3, IEC-60870-5-104
Ethernet Port	2 x RJ-45 10/100Mbps
Serial Ports	1 x RS232/RS485 (DB9) 2 x RS485 (Screw Terminals)
USB Ports	1 x USB 2.0

The Midi-10 provides PLC Driver support for Siemens/Mitsubishi/Omron/Allen-Bradley etc.

Cyber Security

The Midi-10 includes a firewall and supports SSL, SSH and white list security.

Expansion Options

I/O capacity can be increased using four plug-in expansion modules. Both the onboard and expansion I/O modules provide LED status indication.

8 Channels	Digital Input Module (Inc. Pulse Counter)
4 Channels	Analogue Input Module
8 Channels	Digital Output Module
4 Channels	Analogue Output Module

Further expansion can be achieved by the addition of Slave RTU's or other I/O devices (either serial or Ethernet connection). An optional Sitewatch Live Touch Panel provides a local user interface (HMI).

System Health Monitoring

The Midi-10 has several self-monitoring and built-in test routines, hardware, software watchdogs, and operational indicators:

- ✓ Mains Power available
- ✓ Battery Charger
- ✓ RTU Wake/Sleep Management
- ✓ Power Control for two auxiliary DC supplies
- ✓ Battery Monitor and Health Test
- ✓ Error and Program Status LED indication
- ✓ System Healthy - Watchdog
- ✓ System Status LED's
- ✓ Communication Status indication

Diagnostics enable the Midi-10 to remotely monitor serial and Ethernet port status and send alarm information during communication failures.

Signal I/O Connection

All signal connections are wired to plug-in screw terminals located within the RTU enclosure.

Power Supply Options

- ✓ 230/115 V AC mains power supply or
- ✓ 12V DC power

Dimensions

RTU enclosure is (h)380 x (w)185 x (d)130.

“Ideally suited for use with the Sitewatch® Anywhere Cloud Based Telemetry (IOT)”

- ✓ Silo and Tank Farms
- ✓ Pump Stations (Pumps/Weed screens)
- ✓ Flood/Environmental Monitoring
- ✓ LNG and CNG Compressor Packages
- ✓ Waster Compactors and Tippers
- ✓ VMI Systems
- and more



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