altronic

Midas

User-Configurable Graphical Touch Screen and Data Hub for Compressor and Other Process Control Panels

10.4" panel-mounted LCD for critical engine and compressor/process data collection and monitoring

Provides a central point for key control panel information while maintaining direct access to individual in-panel instruments and controls

Includes pre-configured system display screens, individual Altronic product databases, and the MIDASBuilder software for simple custom screen development

Acts as a communications hub/protocol converter for a single connection to the plant SCADA or RTU

Compatible with all serial communications-capable Altronic products and suitable products manufactured by others

Incorporates full-featured, user-configurable system data logging and export

Advanced floating-point math engine capable of complex computations

Certified for use in Class I, Division 2, Groups A, B, C and D hazardous areas

MIDAS (Monitored Information Devices And Systems) provides a system touch screen that delivers centralized access to critical information in parallel with the individual instrument and control displays and keypads within the panel. Unlike traditional PLC-based systems in which the only means of displaying system data is through the touch screen, the MIDAS offers an advanced, user-configurable, graphical data presentation capability, while preserving the high level of reliability and in-depth system configuration and access made possible by the individual displays and keypads resident on each of the individual devices. Essentially, the MIDAS incorporates the very best of both approaches by combining the advanced display capabilities of a PLC-based system with the reliability and serviceability of a control panel built around independent, discrete devices.

To minimize both initial configuration and subsequent field modification costs, the MIDAS system utilizes "pre-manufactured" system data screens and a standard display structure. These screens can be used in their standard form, incorporated in a modified form by Altronic Controls, or updated/adjusted in the field via the full-featured MIDASBuilder software package and Altronic product data library included with each system.

The ability of the MIDAS to act as a data collection and presentation hub is made possible by its comprehensive communications capabilities. Acting as a "data collector", the MIDAS system can capture all of the monitored control panel variables via Modbus and/or other serial communications protocols, and deliver them via TCP/IP, OPC, CANbus, Profibus, and other industry-standard protocols to a remote monitoring or control system. The integral Ethernet port and system software will also allow for remote access to panel controls and data via a standard web browser (Internet Explorer, Firefox, etc.). Additional advanced features include on-board datalogging of monitored parameters, and the capacity to perform complex mathematical functions based on those parameters.

HOERBIGER

Altronic Controls Inc – A Company of the HOERBIGER Group

Midas

Monitored
Information
Devices
And
Systems

Detailed MIDAS Feature Set Overview

Each MIDAS system incorporates a 10.4" panel-mounted LCD for critical engine and compressor/process data collection and monitoring.

The MIDAS system is built around 10.4" TFT 256-color VGA 640 X 480 LCD. This innovative display features a resistive analog touch screen (allowing for actuation while wearing work gloves) and a UV-rated overlay for visibility in direct sunlight.

MIDAS provides a central point for key control panel information while maintaining direct access to individual in-panel instruments and controls.

Unlike PLC systems and their associated rack-mounted I/O cards, the MIDAS system provides a convenient point of access to critical monitoring and control information while maintaining the access, reliability, and functionality of the individual displays and keypads integrated into each Altronic instrument and control product.

MIDAS acts as a communications hub/protocol converter for a single connection to the plant SCADA or RTU.

Acting as a "data collector", the MIDAS system can capture all of the monitored control panel variables and deliver them via TCP/IP, OPC, CANbus, Profibus, and other industry-standard protocols to a remote monitoring or control system. The integral Ethernet port and MIDASBuilder system software also allow for remote access to panel controls and data via a standard web browser (Internet Explorer, Firefox, etc.).

MIDAS is compatible with all serial communications-capable Altronic products and suitable products manufactured by others.

Virtually all Altronic products that incorporate serial communications are suitable for use with the MIDAS system. Those products not manufactured by Altronic that meet the communications protocols within the MIDAS are typically accessible by the system as well.

The standard MIDAS system includes pre-configured system display screens, individual Altronic product databases, and the MIDASBuilder system software to do simple custom screen development.

While a MIDAS system integrated into an Altronic Controls panel ships with the standard system displays configured, customization by Altronic Controls and/or the end-user is available utilizing the MIDASBuilder configuration software that is provided with each display at no additional cost.

An integral CompactFlash® card reader offers expanded capability.

By adding a CompactFlash® card to the system, the operator can export datalogs (see below), expand the available system operating memory, and make the system configuration portable for quick display replacement if/when necessary.

MIDAS incorporates full-featured, user-configurable system data logging and export.

To assist in performance analysis and documentation, the MIDAS system can generate datalogs of virtually any monitored parameter taken at pre-specified intervals. These datalogs can be graphically displayed and/or exported in to an Excel-compatible .CSV file for offline analysis and are available via FTP and WWW using a conventional Internet browser and/or USB.

MIDAS display incorporates a full-featured math library capable of advanced FP calculations.

Certified UL-C for use in Class I, Division 2, Groups A, B, C and D hazardous areas.

This is an "out of the box" certification in that the safe operation of the MIDAS system does not require any additional hardware such as power barriers, purging, or explosion-proof enclosures.

Basic MIDAS Screen Configurations

The MIDAS display is equipped with seven "hot keys" which actuate one or more of the pre-configured/user-customizable data screens. Five of the seven keys are allocated to specific application functions. The remaining two keys are user configurable.

BUTTON 1 – HOME

The MIDAS HOME screen displays critical engine and compressor application data both graphically and digitally. This screen also includes ignition status and diagnostic indicators, as well as air/fuel ratio control parameters and status indicators. Critical engine temperatures and/or other process information can also be included.

BUTTON 2 – CONTROLLER

The CONTROLLER screen contains status and data as it comes from the attached controller. This includes values from both analog and digital I/O as well as controller status.

BUTTON 3 – ENGINE

This MIDAS screen represents prime mover-specific parameters. The ENGINE screen graphically represents an engine with the associated engine, cylinder, turbocharger, and manifold temperatures and pressures. Note that individual secondary diagnostic values from a CPU-95 or CPU-2000 are also available. This page could include significant user-customization if desired.

BUTTON 4 – PROCESS

The more generic term PROCESS is used to allow for the use of the MIDAS on not only compression but other applications such as pumps and generators. Standard screens – suitable for use on their own or customization by Altronic Controls and/or the user – are available for such a range of applications. As noted in the example, data presentation of all process pressures and temperatures and other parameters are made available on a single screen giving the user a constant overview of operation.

BUTTON 5 – TRENDING (screen not shown)

The MIDAS delivers tremendous flexibility in monitored parameter trending. Typical functionality that would be suitable for such grouped trending would be exhaust temperatures, process pressures/temperatures, ignition spark reference numbers, and engine detonation or vibration numbers (from DET or VSM).

BUTTONS 6 and 7 – F1 and F2 - USER DEFINED (screens not shown)

These screens are currently un-mapped and would be used for expanded functionality. This may include additional power or process screens or trending.
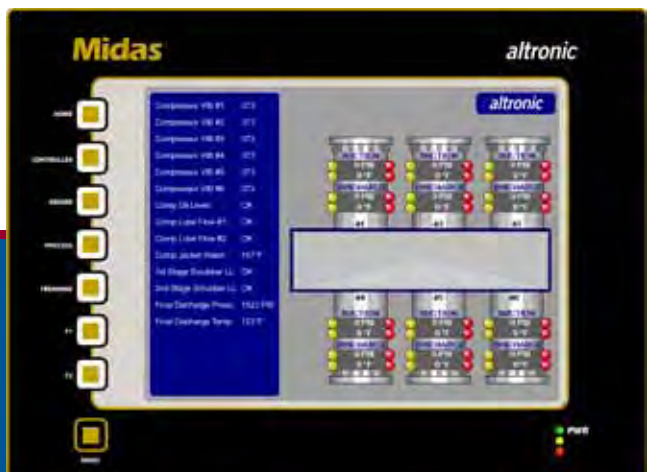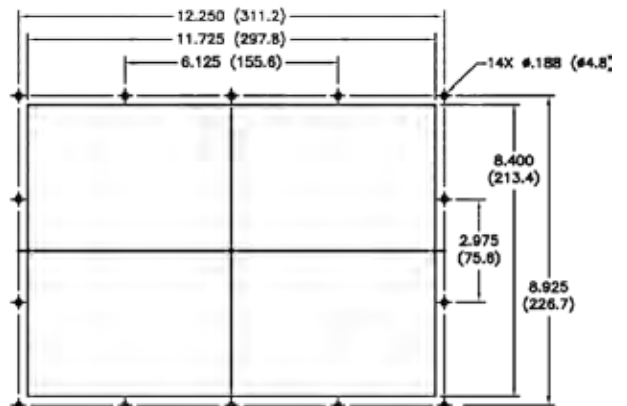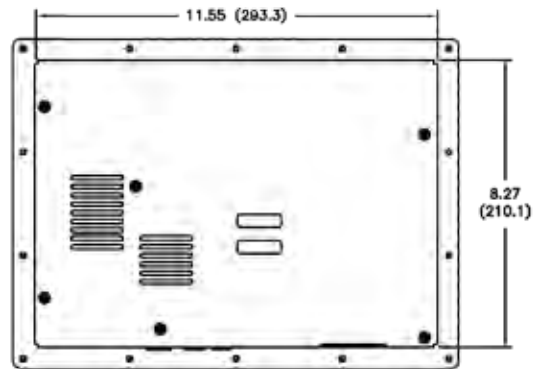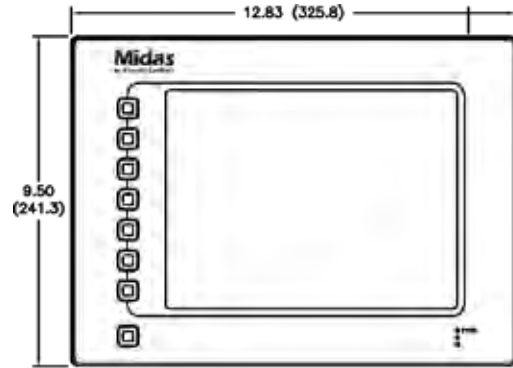
SPECIFICATIONS

DISPLAY.................. 10.4" TFT 256-color VGA 640X480 pixel LCD

SCREEN TECHNOLOGY..Analog resistive

BRIGHTNESS...850 cd/m2

AREA RATING ....Outdoor/indoor
    UV-rated overlay
    Sunlight-readable display

ENCLOSURE.. NEMA 4X, IP66

POWER .... 50 watts max. (2 amps max at 24VDC)

COMMUNICATIONS ....(1) USB
    (2) RS-232
    (1) RS-485
    (1) 10/100 Ethernet

OPTIONAL COMMS ....(1) CAN
    (1) DeviceNet
    (1) Profibus
    (1) RS232 (1) RS485

PROTOCOLS .... MODBUS RTU
    (including all equipped Altronic products)
    MODBUS ASCII
    MODBUS TCP
    TCP/IP
    OPC Server
    Web/E-Mail Server
    CANopen
    J1939
    Most SCADA and industrial communications protocols

KEYPAD ....Eight (8) button keypad for on-screen menu

HAZARDOUS AREA

CERTIFICATION.. UL-C certified
(for use in Class I, Division 2, Group A, B, C, and D hazardous areas)

ORDERING INFORMATION

MIDAS DISPLAY 691500-1
(includes MIDASBuilder software package)

DIMENSIONS