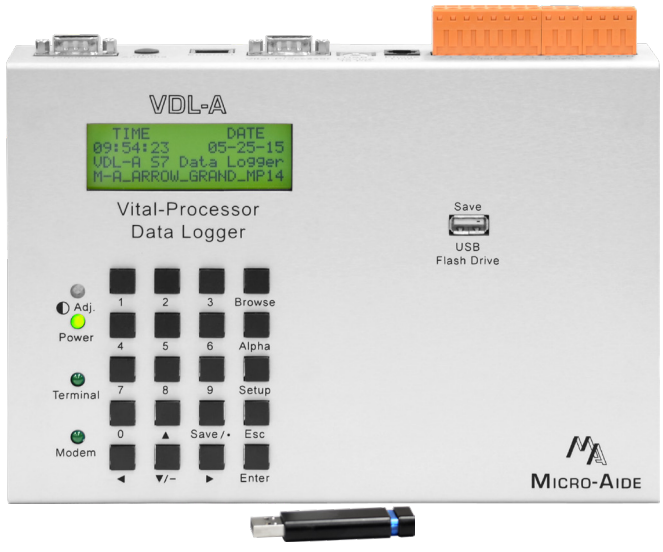
MICRO-AIDE

VDL-A S7
DATA LOGGER

Would you like to add state-of-the-art Event Recording capabilities to your ***Siemens S7-300*** *processor?*

www.micro-aide.com



FEATURES & CAPABILITIES

- Designed specifically for use with a Siemens S7-300
- Connects to serial port of CP 340 using 3964R protocol
- Provides Event Record data for 999 processor bits, time stamped to the nearest .1 sec.
- Samples bit transitions 3 times per sec.
- 4 Analog Inputs
- 8 Virtual and 16 Timer Inputs, all programmable
- Relay Output, programmable
- Memory capacity of 284,785 records (expandable to 1,182,769)
- Records stored for up to 128 days
- Non-volatile flash memory, no internal batteries required
- Selectable time zone and automatic Daylight Saving Time adjustment
- Real-time clock drift of less than ±8 sec. per month
- Zero clock drift with GPS Receiver and Ethernet Port options
- Internal temperature reporting
- User interface via RS-232 and USB Device Ports
- USB Host Port for copying records directly to a flash drive
- Front panel control via 20-position keypad and 80-character LCD
- Minimum 3800 Vdc and 2000 Vac of isolation
- Options include: GPS Receiver, Ethernet Port, internal modem and expanded memory

MICRO-AIDE CORPORATION Tel: 626-915-5502 Fax: 626-331-9484 E-mail: sales@micro-aide.com
685 Arrow Grand Circle Covina, CA 91722

SPECIFICATIONS

Physical
Size (without mounting brackets)
L: 9.5″ **H:** 7.2″ **D:** 2.6″

Weight
2.5 lb.

Operating Environment
Temperature: -40 °C to 72 °C

Humidity: 0 to 95 %, non-condensing

Mounting
Shelf or backboard, includes mounting brackets

Construction
Fully enclosed, anodized aluminum with externally accessible keypad, LEDs and connectors

All components mounted on conformal coated, internal PCBs

Power
Voltage
Range: 9 to 36 Vdc

Consumption
Maximum: 3.5 W (with GPS Receiver, Ethernet and Modem options)

Isolation
Power Terminals, Analog Inputs, USB Ports, GPS Rcvr and Ethernet Ports
Minimum: 3800 Vdc to chassis and any terminal

Internal Modem (optional)
Designed to meet FCC part 68 standards

Capacities
Inputs
Digital: 999 as available from Siemens S7-300

Analog: 4 total, voltage or current (optional)

Virtual: 8, user assigned

Timer: 16, user assigned

Outputs
Relay: 1, form C

Event Storage
284,785 records, expandable to 1,182,769 records

Liquid Crystal Display
Characters: 80 total on 4 lines

Viewing Area: 2.8″ by .8″

Front Panel Keypad
Quantity: 20 keys

Inputs
Input Impedance
Analog: minimum 10 MOhms

Range
Analog DC Voltage: 3 scales, ±25.5, +51.1, ±255

Analog AC Voltage: 2 scales, 25.5, 255

Event Validation Times
Digital: not applicable, Siemens S7-300 transmits 999 bit states 3 times per second using 3964R protocol

Analog: fast and slow filter settings

Analog Limit Values
Voltage
High and Low limits: in multiples of .1 V or 1 V

Internal Temperature
High and Low Limits: -67 °F to 257 °F

Analog Input Accuracy
Typical Voltage: ±.15 V or ±1.5 V

Typical Current: ±.2 A

Virtual Inputs
Any logical association shared by 1 to 4 variables (i.e., Digital, Analog, Timer or Virtual Inputs)

Assigned by defining the state of the Virtual Input for each combination of variable states

Creates standard Event Records

Relay can be controlled by each Virtual Input

Modem (optional), used to dial out Event Records

Timer Inputs
Programming
Any input can be assigned as a trigger or terminating source

Limit Values
High and Low limits: in multiples of .1 seconds

Range: 0.0 to 999.9 seconds

Reporting
Measured Time is reported in each Timer Input Event Record

Violation of Limit Values are also reported

Memory
Type
Non-volatile, Event Records and Setup Database are stored in flash memory chip, newest data over-writes oldest data, 129th day over-writes first day

Storage Longevity
Infinite with power off, rated for 100,000 write operations

Ports
RS-232 Terminal Port
Quantity: 1, for use with a PC

Baud Rates: 300 to 115,200

Vital-Processor Port
Quantity: 1, connects to CP 340 of Siemens S7-300

Bit messaging: Siemens S7-300 transmits 999 bit states 3 times per second

Protocol: Siemens 3964R

Baud Rates: 300 to 115,200; default is 9600

USB Host
Compatible with FAT-32 flash drives, can create a text file of Event Record data from any time span

USB Device
Eliminates need for serial comm port, data transfer rates of 4.71 Mbps

Ethernet (optional)
Type: 10/100 Base-T

Protocols: TCP/IP, Telnet, SNTP-Unicast and -Multicast

Usage: Provides remote or local access via TCP/IP

Data transfer rates of 4.70 Mbps

User assignable IP Address, port, sub-net mask, Unicast IP Address

GPS Receiver (optional)
Used to provide precise, real-time clock control, latitude and longitude coordinates

Modem (optional)
Provides remote access, auto-answer

Connectors
Power, Relay and Analog Inputs
Detachable, tension clamp, 12 to 22 AWG

Terminal and Vital-Processor Ports
DE-9 male, configured as DCE

USB Host Port
USB Type A female

USB Device Port
USB Type B female

Telephone Line
RJ-11 female

Connectors (continued)
GPS Receiver (optional)
MCX female

Ethernet Port (optional)
RJ-45 female

Indicators
LCD Panel
Includes LED back lighting for enhanced visibility

Displays numerous command menus for configuring the Data Logger and retrieving data

LEDs (3)
Power: green

Terminal: green, flashes with send/rcv data

Modem: green, flashes with send/rcv data and ring

Controls
Keypad
Located on front panel, below LCD

Keys: 0-9, Browse, Alpha, Setup, Esc, Enter, Save/., left, right, up, down/-

LCD Contrast Adjust
Single-turn pot., accessible from front panel

Internal Clock
Accuracy
Typical: ±8 seconds per month (3 ppm)

Resolution
.1 seconds for all Event Records

Siemens S7-300 transmits 999 bit states 3 times per second

Sync
SNTP-Unicast and -Multicast (with Ethernet option)

GPS (with GPS Receiver option)

Operation
Full calendar, auto-adjusted for leap year, non-volatile for 30 days with loss of power

Enable or disable of automatic Daylight Saving Time adjustment

Non-drift, precise control with SNTP and/or GPS Receiver options

GPS Receiver (optional)
Includes PCB and external antenna

PCB
Plugs into mating connector inside Data Logger

Antenna
Size: Dia 1.8″ H .6″ (not including mounting screw)

Weight: 2 oz. (less cable)

Operating Temperature: -40 °C to 85 °C

Mounting: bulkhead mountable to surface less than 3/8″ thick

Location: unobstructed skyward orientation, for use outdoors

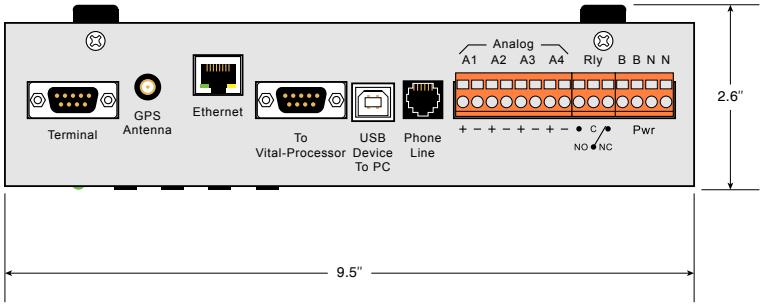
Password Protection
Administrative Level
Access to all functions, limit 8 characters

Restricted Level
Access to Event Record and Setup Database viewing, limit 8 characters

Passcode
Provides limited alterations to Setup Database via front panel, limit 8 digits

MICRO-AIDE reserves the right to make changes, at its sole discretion, to any specification listed herein.

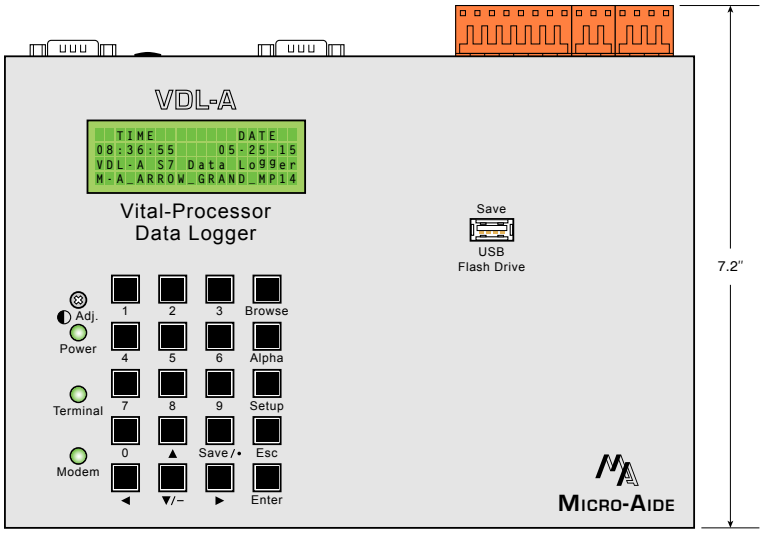
Dimensional Drawing

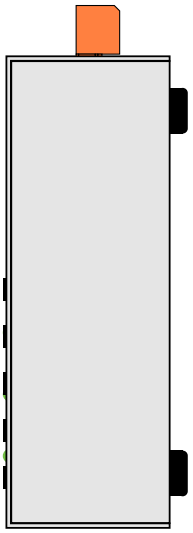


MICRO-AIDE

VDL-A S7

DATA LOGGER





Mounting Dimensions

With mounting brackets installed