



# CWR-72B Event Recorder



Would you prefer to access your Event Recorder via a browser-based interface?

Need a full feature Event Recorder with extensive and automatic alarm/fault reporting?

Would you like your maintainers to copy record data directly to a flash drive, while not using a PC?

**CWR-72B** ~ *the preferred event recording solution for your mid-capacity requirements.* 

# FEATURES & CAPABILITIES

- Browser-based user interface works with Chrome, Firefox, Edge and IE
- 64 Digital and 8 Analog Inputs
- 32 Virtual and 32 Timer Inputs, all programmable
- Digitally signed and secure Event Record reports
- Memory capacity of 261,632 records (expandable to 3,055,104)
- Records stored for up to 128 days
- Uses SNTP-Unicast method to provide precise time stamping

- Precise flash rate reporting and measurement
- USB Host Port for copying records directly to a flash drive
- 80-character OLED Display and 20-position keypad
- Automatically detects and reports numerous crossing failures
- Reports alarms to a server via existing LAN/WAN/VPN
- Support for primary and secondary DNS assignments

- Dual Ethernet Ports provide redundancy and simultaneous access
- 20 different alarms can be defined to report real-time crossing status
- Message forms can include state of XR, crossing occupancy, gates, AC power and battery voltages, etc.
- Detachable tension clamp style connectors
- Minimum 3800 Vdc and 2000 Vac of isolation
- Options include: GPS Receiver and expanded memory

MICRO-AIDE CORPORATION

Tel: 626-915-5502 Fax: 685 Arrow Grand Circle Covi

Fax: 626-331-9484 Covina, CA 91722

# Physical

Size (without mounting brackets) L: 10.4" H: 7.6" D: 3.4

#### Weight

29lb

# **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: 3.1 W (with GPS option)

# Isolation

#### Power Terminals, Digital and Analog Inputs, Ethernet and GPS Rovr Ports

Minimum: 3800 Vdc to chassis and any terminal

# Capacities

Inputs

- Digital: 64, all opto-isolated
- Analog: 8 total, voltage or current (optional)

Virtual: 32, user-assigned Timer: 32, user-assigned

Alarm: 20, user-assigned

System: various for reporting power on/off, abnor-

mal temp., clock sync, train speed, etc.

Outputs (2) Relays: dual form C

Event Storage

261,632 records, expandable to 3,055,104 records OLED Panel

Characters: 80 total on 4 lines

#### Viewing Area: 2.8" by .8"

Front Panel Keypad Quantity: 20 keys

# **Physical Inputs**

Input Impedance Digital: minimum 10 KOhms, optically isolated

Analog: minimum 10 MOhms

Range Digital Input - On: 9 to 36 Vdc

Digital Input - Off: 0 to 1 Vdc

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

Analog AC Voltage: 2 scales, 25.5, 255

Analog Current: 2 scales, ± 25.5 Adc, 25.5 Aac **Event Validation Times** Digital: .01 to 327.67 seconds, compatible with fixed rate flashing circuits

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: ±.15V or ±1.5V

Typical Current: ±.2A

## Virtual Inputs (32)

Any logical association shared by 1 to 4 variables (i.e., Digital, Analog, Alarm or other Virtual Inputs) Assigned by defining the state of the Virtual Input

for each combination of variable states Can be used to Set or Clear an Alarm

Creates standard Event Records

Can be used to control each Relay Output

# Timer Inputs (32)

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

# Alarm Inputs (20)

#### Types

Set, Cleared and periodic Health Check

Alarm-related Event Records saved to memory

# Definitions

User-assigned inputs, input states and duration times qualify each Alarm

#### **Operating Modes**

Automatic: messages sent via VPN or LAN/WAN using DNS name resolution

Maintainer Mode: disables Alarm transmission while crossing is being tested or repaired

# Memory

Type

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

# Storage Longevity

Infinite with power off, rated for 100,000 write operations (with wear leveling)

# Ports

Ethernet (2)

Usage: Provides remote or local access via browser-based interface, concurrent and independent operation

Browser Support: Chrome, Firefox, Edge, and IE

Data transfer rates: of 3,600 Event Records per second, 2.1 Mbps

Concurrent Sessions: users 4, Modbus unlimited

Assignable Addresses: IP, gateway, sub-net mask, and DNS server (all dual)

Time Server Address: user-assigned

Type: 10/100 Base-T

Protocols: HTTP Get, Modbus, TCP/IP, SNTP-Unicast and -Multicast

# USB Host

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

# GPS Receiver (optional)

Used to provide precise real-time clock control, latitude and longitude coordinates

#### Console Factory use only (no user-access)

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

Ethernet Ports (2) RJ-45 female

# Connectors (continued)

USB Host Port USB Type A female

**GPS Receiver (optional)** MCX female

OLED design provides enhanced visibility and

Located on front panel, below OLED display

Mode, Enter, Save/., left, right, up, down/-

.01 seconds for all Event Records

volatile for 30 days with loss of power

Includes PCB and external antenna

Plugs into mating connector inside recorder

Operating Temperature: -40 °C to 85 °C

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

Mounting: bulkhead mountable to surface less than

Location: unobstructed skyward orientation, for use

Unrestricted access to all functions, limit 8 char-

Limited access to site specific parameters, unre-

stricted Event Record and Setup Database viewing,

Unrestricted access to most functions, limit 8 digits

MICRO-AIDE reserves the right to make changes.

at its sole discretion, to any specification listed

SNTP-Unicast and -Multicast

**GPS Receiver (optional)** 

Weight: 2 oz. (less cable)

**Password Protection** 

Administrative Level

**Restricted Level** 

limit 8 characters

Keypad Passcode

GPS (with GPS option)

Keys: 0-9, Browse, Alpha, Setup, Esc/Maintainer

Typical: ±8 seconds per month (3ppm) when not

Full calendar, auto-adjusted for leap year, non-

Enable or disable of automatic Daylight Saving

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

ing the recorder and retrieving data

Power: green, flashes while running

Displays numerous command menus for configur-

Console Port DE-9 male (no user-access)

temperature stability

Front Panel LEDs (4)

Message Sent: green

Green: link established

Yellow: data activity

Ethernet Port LEDs (2 pair)

Active Alarm: red

Login: green

Internal Clock

synchronized

Resolution

Operation

option

PCB

Antenna

3/8" thick

outdoors

acters

herein

Time adjustment

Sync

Accuracy

Keypad

#### Indicators **Display Panel**



