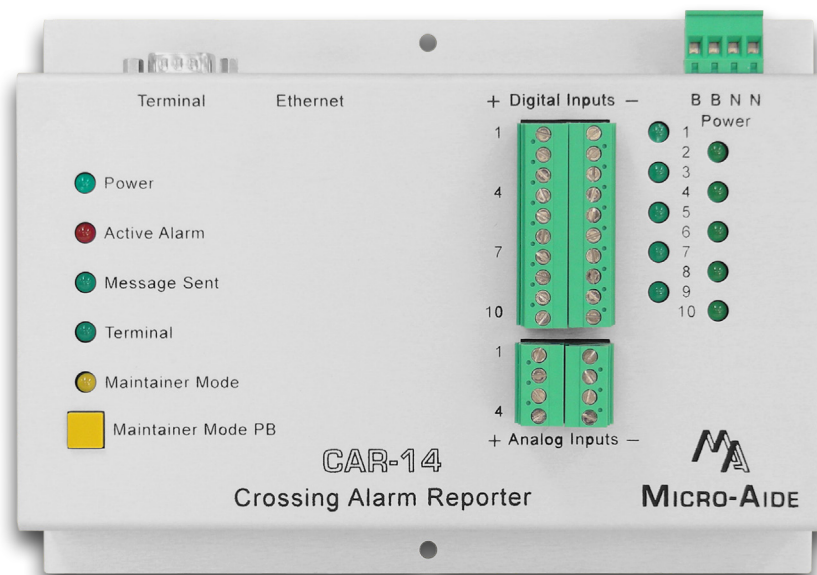


# MICRO-AIDE



[www.micro-aide.com](http://www.micro-aide.com)

## CAR-14 CROSSING ALARM REPORTER



### FEATURES & CAPABILITIES

- ▶ Automatically detects and reports numerous crossing failures
- ▶ Reports alarms to a server via a VPN (requires external cellular modem) or LAN
- ▶ 20 different alarms can be defined to report real-time crossing status
- ▶ Message forms include state of XR, gates, AC power and battery voltages
- ▶ Automatic IP and server name resolution via DHCP and DNS
- ▶ Uses SNTP-Unicast method to provide accurate time stamping
- ▶ Companion product to Micro-Aide's CAR-24
- ▶ 10 Digital and 4 Analog Inputs
- ▶ 8 programmable Virtual Inputs
- ▶ Compact, portable size

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## SPECIFICATIONS

### Physical

#### Size

L: 8.2" H: 5.9" D: 2.6" Weight: 1.3lb.

#### Operating Environment

**Temperature:** -40°C to 72°C

**Humidity:** 0 to 95%, non-condensing

#### Mounting

Shelf or backboard

#### Construction

Fully enclosed, anodized aluminum with externally accessible LEDs and connectors

All components mounted on conformal coated, internal PCB

### Power

#### Voltage

**Range:** 9 to 36 Vdc

#### Consumption

**Maximum:** 2W

### Isolation

**Power Terminals, Digital and Analog Inputs, Ethernet Port**

**Minimum:** 3800 Vdc to chassis and any terminal

### Alarms

**Quantity:** 20 total, user-defined

**Types:** Set, Cleared and periodic Health Check

#### Definitions

User-assigned inputs, input states and time durations validate establish Alarm criteria

#### Operating Modes

**Automatic:** messages sent via VPN or LAN using DNS or fixed IP Addressing

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

### Inputs

#### Types

**Digital:** 10, all opto-isolated

**Analog:** 4 total, voltage only

**Virtual:** 8, user assigned

#### Input Impedances

**Digital:** minimum 10KOhms

**Analog:** minimum 10MOhms

#### Range

**Digital Input-On:** 9 to 36 Vdc

**Digital Input-Off:** 0 to 2Vdc

**Analog Voltage:** 1 scale, 0 to +51.1 Vdc

#### Validation Times

**Digital:** .001 to 32.767 seconds

**Analog:** as defined by Alarm Configuration Table, 0 to 99,999 seconds

### Analog Inputs

**Typical Accuracy:** ±.15 Vdc

**High and Low Limits:** 0 to 51.1 Vdc in multiples of .1 Vdc

### Temperature Sensing

**Usage:** logs abnormal internal temperatures

**High and Low Limits:** -67°F to 257°F

### Ports

#### RS-232

**Quantity:** 1, for use with a PC, set for ANSI terminal emulation

**Baud Rates:** 300 to 115,200

**Bit Format:** 8-N-1

#### Ethernet

**Type:** 10/100 Base-T, to cell modem or LAN

**Protocols:** HTTP-Get, TCP/IP, Telnet, SNTP-Uncast

### Ports (continued)

**User interface:** provides remote or local access via TCP/IP connection

**Settings:** user assignable IP Address, port, sub-net mask, dual IP Addresses for time server

### Indicators and Controls

#### System Status LEDs (5)

**Power, Message Sent, Terminal:** green

**Alarm:** red, illuminates when Alarm is active

**Maintainer Mode:** yellow

#### Input Status LEDs (10)

**Digital Inputs:** green, illuminates when input is on

#### Maintainer Mode Pushbutton

Controls Maintainer and Remote Port Modes

### Memory

Setup Database is non-volatile with loss of power

### Internal Clock

#### Accuracy

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

**Volatility:** maintains accuracy for minimum of 30 days with loss of power

#### Sync

**SNTP-Uncast:** via primary or secondary time servers, once per day at 00:05:00

#### Operation

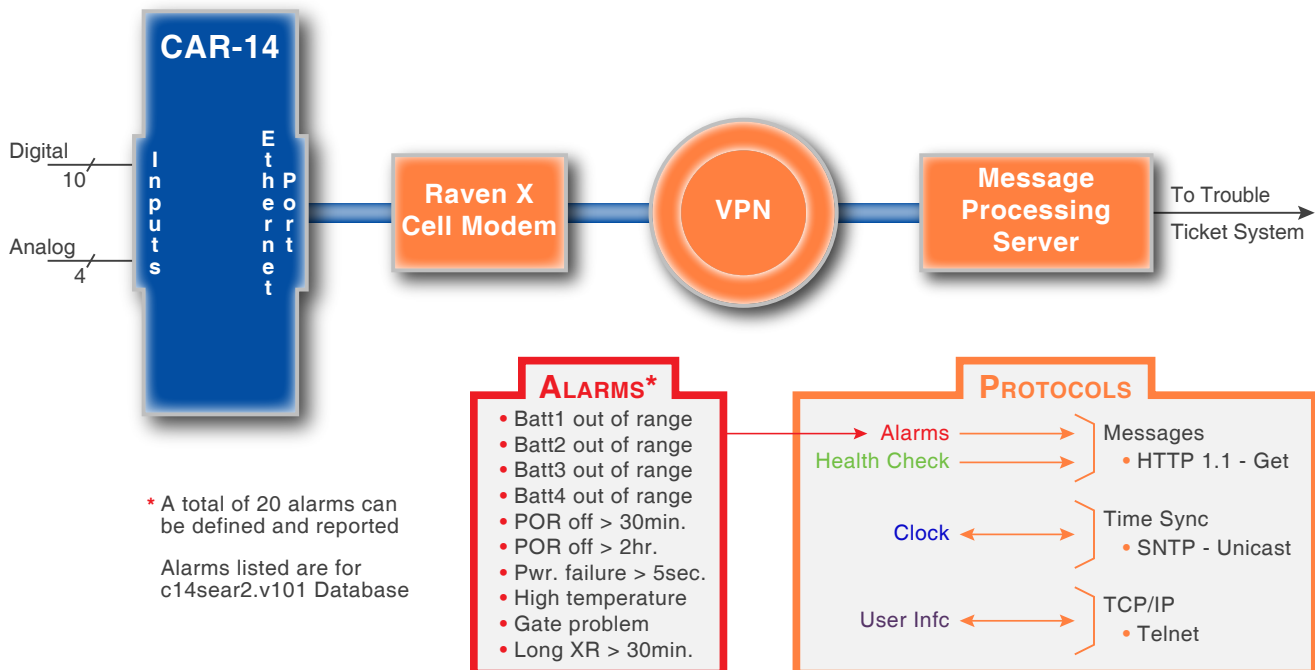
**Time Zones:** selectable from 7 different North American settings

**Daylight Saving Time:** enable or disable automatic adjustment

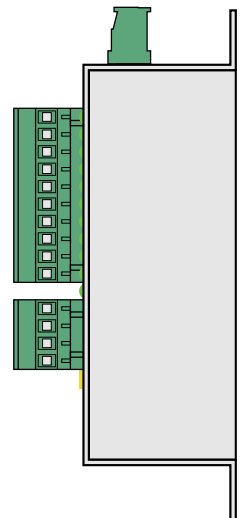
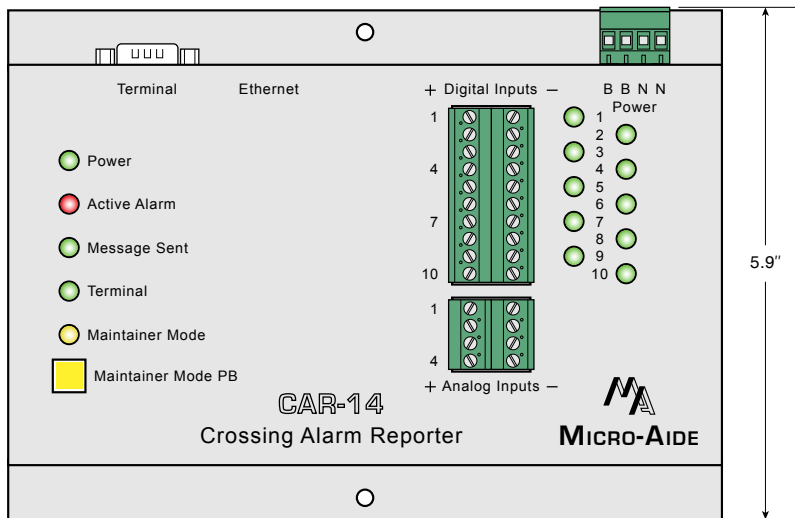
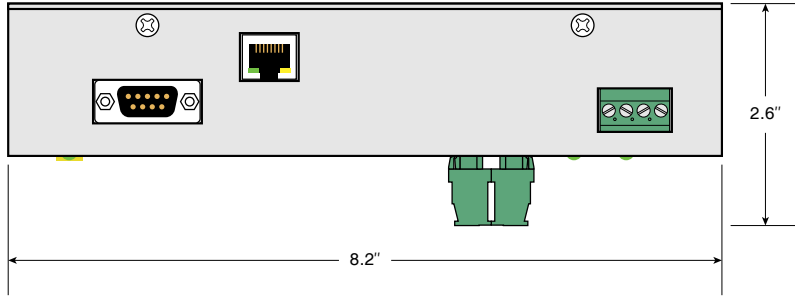
**Leap Year:** automatically adjusted

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

## MESSAGE HANDLING



## DIMENSIONAL DRAWING



## MOUNTING DIMENSIONS

