

SWARCO

# McCain 2070EN2 NEMA CONTROLLER



McCain's 2070EN2 NEMA Controller brings together the best of the Model 2070 and NEMA controllers. The 2070EN2 controller is the industry-standard 2070E controller adapted for NEMA TS 2 Type 1 applications; offering users a means of upgrading existing intersection controllers without replacing cabinet hardware.



## KEY BENEFITS

- NEMA TS 2 Type 1 compatible
- NEMA and Caltrans compliant
- Easily upgrades installations that may otherwise require cabinet replacement
- Open architecture ensures compatibility with off-the-shelf products
- OS-9 real-time operating system is compatible with third-party firmware

## PRODUCT DESCRIPTION

The McCain 2070EN2 NEMA Controller is designed in full compliance with Caltrans Transportation Electrical Equipment Specifications (TEES) 2009 and NEMA TS 2 2003 standards.

The McCain 2070EN2 controller's open architecture, modular design, and advanced functionality bring together the best of the Model 2070 and NEMA worlds.

The controller's OS-9 real-time operating system affords a robust, flexible, and expandable platform that is compatible with SWARCO McCain's 2033 Intersection Control software and is also compatible with third-party control software. SWARCO McCain offers a variety of compatible software programs to easily integrate the McCain 2070EN2 into an overall Intelligent Transportation System (ITS).

# McCain 2070EN2 NEMA CONTROLLER

## STANDARD FEATURES

### Operating System

- Microware OS-9 real-time operating system (RTOS)

### Modules (standard, included)

- 2070-IE CPU module
- 2070-2N field I/O module
- 2070-3B LCD front panel module
- 2070-4N(A) power supply

### Microprocessors

- CPU Module: Freescale MC68EN360, 32 Bit, 24.576 MHz microprocessor
- I/O Module: Freescale microprocessor, running at 24 MHz

### Memory

- 8MB Flash memory
- 32MB PSRAM
- 2MB non-volatile SRAM

### Backup Real-Time Clock (RTC)

### Memory

- Caltrans TEES 2009
- NEMA TS 2 2003

## GENERAL SPECIFICATIONS

Dimensions <sup>1</sup> :	19"W x 7"H x 12"D
Form Factor:	EIA rack mount compatible
Power:	95 VAC to 135 VAC, 60 Hz (± 3 Hz) +5V            1.0A    10.0A +12V Serial   0.1A   0.5A -12V Serial   0.1A   0.5A +12V ISO      0.1A   1.0A
Environment:	Operating Temperature: -37° C to +74° C Humidity: 0 to 95% (non-condensing)
Weight:	12 lbs

<sup>1</sup>Dimensions rounded to the nearest inch

<sup>2</sup>See separate data sheet for more information

## INTERFACES

### Communication Interfaces

- SDLC ports (2)
- ACIA ports (5)
- 10/100 Mb Ethernet (4), 4 LEDs
- Datakey removable storage device, 8Mbits, (blue color)

### Front Panel Interface

- Display: 8 lines x 40 characters
- Keyboards: 3 x 4 navigation and 4 x 4 data entry keypads
- C50J connector

### Cabinet Interfaces

- NEMA Port 1 C15S
- NEMA TS 2 Type A connector

## SOFTWARE

Compatible with McCain's 2033 intersection control firmware<sup>2</sup>

## OPTIONS

### Available Modules

- 2070 ATC CPU module
- 2070-3A large 4 x 40 character display
- 2070-4A-220 international voltage: 190VAC to 253VAC, 50 Hz (± 3 Hz)
- 2070-6A dual 1200 baud modem
- 2070-6B dual 9600 baud modem
- 2070-7A dual RS232 serial ports
- 2070-7B dual RS485 serial ports