

# 2070 NEMA CONTROLLER

EN1



CABINETS

CONTROLLERS

DETECTION

PARKING

SIGNALS

SIGNS

SOFTWARE

SPECIALTY

## Overview

McCain's 2070EN1 NEMA Controller has an open architecture and modular design, bringing together the best of the Model 2070 and NEMA worlds. The 2070EN1 controller is the industry-standard 2070E controller adapted for NEMA TS 1 and NEMA TS 2 Type 2 applications; offering users a means of upgrading existing intersection controllers without replacing cabinet hardware.

## Benefits

- NEMA TS 1 and NEMA TS 2 Type 2 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 2070EN1 NEMA Controller is designed in full compliance with Caltrans Transportation Electrical Equipment Specifications (TEES) 2009 and NEMA TS 2 2003 standards.

The controller's OS-9 real-time operating system affords a robust, flexible, and expandable platform that is compatible with third-party control software. McCain offers a variety of compatible software programs to easily integrate the 2070EN1 into an overall Intelligent Transportation System (ITS).

# 2070EN1 NEMA Controller

## Standard Features

### Operating System

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

### Modules (standard, included)

- 2070-IE CPU module
- 2070-2B field I/O module
- 2070-3B LCD front panel module
- 2070-4A power supply
- 2070-8 NEMA adaptor

### 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)

### Applicable standards

- Caltrans TEES 2009
- NEMA TS 2 2003

## General Specifications

Dimensions:	19" W x 12" H x 12" D (rounded to the nearest inch)
Form Factor:	EIA rack mount compatible
Power:	95 VAC to 135 VAC, 60 Hz ( $\pm 3$ Hz) + 5 VDC                      1.0 A    10.0 A +12 VDC    Serial    0.1 A    0.5 A -12 VDC    Serial    0.1 A    0.5 A +12 VDC    ISO        0.1 A    1.0 A
Environment:	Operating Temperature: -37° C to +74° C Humidity: 0 to 95% (non-condensing)
Weight:	17 lbs

## 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

- Rear connector C12S
- NEMA connectors A, B, & C
- D connector with standard TEES pinout

## Software

Compatible with McCain's 2033 intersection control firmware, see separate data sheet for more information.

## Options

- McCain control software

### Available modules

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