



The Topping Electronics Model 170MC Controller is a solid-state microprocessor-based controller designed for use in harsh environments such as those found in traffic control applications. The 170MC is built with plug-in printed circuit modules and runs a Motorola 6802 microprocessor-based stored program providing logic control for traffic or other control applications. Operator interface with the controller is achieved by means of a front panel keypad and associated display indicators.

Designed for ease of installation, use and maintenance, the model 170MC controller can be installed in a wide variety of industry standard type 170 cabinets.

**Local intersection control, ramp metering, freeway management, sign control and other special applications.**

**Meets or exceeds Ontario Ministry of Transportation specifications.**

**Dual communication ports supported.**

**Accepts 400 series Modems for communications over telephone lines.**

**Battery backup and down time accumulator for preserving timing & programmed Data during power failures.**

## SPECIFICATIONS

**DIMENSIONS:** 7" High x 17" Wide x 12 ¾" Deep (19" EIA Rack).  
(17.78cm High x 43.18cm Wide x 32.39cm Deep (48.26cm EIA Rack)

**Weight:** 17 lb. (7.71 Kg).

**Power Requirement:** 95 to 135 VAC, 60HZ ± 3 Hz, 45 VA nominal.

**Environment:** -37°C to +74°C, 0% to 95% relative humidity.  
All units are given a minimum 100 hours burn-in and  
full range temperature test prior to shipment.

## Design

The 170MC Controller is modular in design. All modules are easily removable for service and are readily accessible for in-unit maintenance by the use of extender cards.

## Microprocessor

The Model 170MC uses an 8 bit Motorola 6802 or 6808 processor with a jumper selectable system clock frequency of 768 kHz or 1536 kHz.

## Program Module

The Model 412C Program Module can provide a variety of memory types and sizes as well as other features to enhance controller operation. The 412C meets all requirements of the CALTRANS and Ontario Ministry of Transportation specifications.

Features of the 412C include a Real Time Clock Adjust (RTCA), a battery voltage monitor and programmable switches for use as program feature selection or intersection/controller identification.

## Inputs and Outputs (I/O)

The 170MC Controller provides 44 input, 56 output and 4 logic ground circuits to the user via an Amp 104 pin M series connector. This connector (C1) is located in a recessed panel on the left rear (as viewed from the front panel) of the controller chassis.

## Communications

Two Asynchronous Interface Adaptors (ACIA) are provided with baud rates selectable from 300 to 9600 baud. The addition of an external modem or an internal Model 404 Modem will provide either 2-wire half duplex or 4-wire full duplex communications over standard telephone lines.

## Approval

The Topping Electronics Model 170MC controller is approved by the Ontario Ministry of Transportation and is on their Qualified products list.