

EPAC 300 Family - MARC Master Controller



Model MARC 38M34 Shown

The MARC300 series controllers are the coordinating masters in Siemens ITS's closed-loop traffic control system. As a master controller, the MARC combines system management control, monitoring, and data collection capabilities for up to thirty-two (32) intersections. One MARC controller can control and supervise the Traffic Program Selection for two (2) independent groups.

The MARC master controller, fully compatible with local controllers, provides continuous real-time monitoring and reporting of conditions for each interconnected SE-PAC equipped controller.

MARC controllers are designed for on-street operation and meet NEMA TS1-1989 and NEMA TS2-1992 environmental standards for actuated controllers. The friendly, English language-based user interface allows full system access from the on-street master or from an optional central office site via ITS's MARCNX Windows™ based software. The remote access allows master and local intersection programming and monitoring, providing improved programming efficiency while reducing errors.

SPECIFICATIONS

Power Requirements:

Voltage: 95 to 135 VAC
Frequency: 57 to 63 Hz
Consumption: 25 watts

Physical Dimensions:

9"H x 15"W x 8"D
(229mm H x 381mm W
x 203mm D)

Temperature Range:

-30°F to +165°F 14 Pounds
(-34°C to +74°C)

Weight:

14 lbs.
(30.8 kg)

Highlights

System Control

- 32 Local Intersections
- 2 Independent Traffic Control Groups
- 64 System Detector
- 48 Traffic Coordination Patterns
- 16 Timing Plans with Cycle Length, Splits, Offsets
- Priority Based Program Selection (Manual, Remote, Time Based, Traffic Responsive)
- Common Group Sync Reference (Crossing Arterials)
- Group Traffic Responsive Operation
- Matching Program Technique (based on V+O)
- Group Time Base Traffic Operation
- 180 Event Capacity
- 10 Week Programs, 99 Day Programs
- Group Time Base, Manual and Remote Traffic Plans Report Generation
- System Data Reporting by User Request
- Reports Output via Hard Copy

- Reports Uploaded to Central System

Parameter Modification and Entry

- Display and/or Modify Field Master Parameters
- Display and/or Modify ALL Local Intersection

Parameters

- Remote Timing Modification
- Remote System Parameter Modification and Entry

System Real-Time Monitoring

- Automatic and Continuous Master/Local Alarms
- Master and Intersection Alarms for Status/Activity
- Automatic Central Dial-up Capability (Modem Option)
- Remote Real-Time Displays

System Logging

- Automatic and Continuous Alarm Logging
- System Detector Status
- System Program Changes
- Traffic Responsive Computations



EPAC 300 Family - MARC Master Controller

Features, Continued-

Hardware Design

MARC controller units are designed for efficient operation and ease of maintenance. The metal chassis offers ready access to boards for testing without disassembly. MARC units have minimum components for maximum reliability. Maintenance and troubleshooting is facilitated using the internal diagnostic program.

Displays & Memory

The MARC controller unit display provides true visibility into program entries, system data and status. Related parameters are visible simultaneously.

EEPROM technology is used to retain all system timing and control parameters to insure the accuracy of traffic control parameters even during power outages. No batteries are required for retention of traffic system parameters. Clock Time and Event Logging functions use RAM memory with long life battery support.

Programmability

The MARC controller unit offers on-site programming via the front panel keyboard and LCD display or upload/download.

Programming is easy using the English Language Menus. Within menu, each parameter may be viewed, and a cursor movement for that parameter makes any changes easy and error free.

System Management

MARC provides the user system configuration and/or operation controls including:

- Add/Delete Controllers and System Detectors
- Enable Traffic Responsive Mode
- Assign Intersections to Groups
- Assign System Detectors to Computational Channels
- Assign Computational Channels to Pattern Select Routines

Front panel access is permitted to each local controller from the master location or from the optional central office for modification of intersection parameters. Special and/or standard detectors can be assigned as system sampling detectors for use with Traffic Responsive computational channels or for historical activity logging.

Security

MARC permits unrestricted viewing of system parameters, data or reports but requires a user-specified security code entry for data alteration. The code can be disabled for perpetual access capability.

Diagnostics

An internal diagnostic program enhances the maintenance and troubleshooting of the MARC controller. Automatic diagnostics begin at power up and continue as long as the unit is operating. ROM, RAM and Processor checks are included. Other features of the Resident Diagnostics Program provide total indication of unit operation including verification of input and output ports, keypad and display.

Warranty

A standard one year warranty from date of manufacture is provided.

Miscellaneous Options

The MARCNX system offers full access capability of on-street controllers from an optional central office location via Windows-based PC software.

System components can communicate via hardwire, cable, optical fiber, or radio.

MARC3_xM34*

- | | | |
|---|---|--|
| 2 | = | "D" Conn +
Port 3 RS-232 (25P) |
| 3 | = | "D" Conn +
Port 3 FSK 2 wire + RS-232 (25P) |
| 4 | = | "D" Conn +
Port 3 FSK 4 wire |
| 5 | = | "D" Conn +
Port 3 FSK 4 wire + RS-232 (25P) |
| 6 | = | "D" Conn +
Port 3 FSK 2 Wire |
| 7 | = | "D" Conn +
Port 3 Fiber Modem Single Mode |
| 8 | = | "D" Conn +
Port 3 Fiber Modem Multi-Mode |
| 9 | = | "D" Conn +
2-Port 3 RS232 (25P) |

x (for use with Fiber Modem options only)

0 = no additional Port 3

1 = Port 3 RS-232 (25P)

* Memory module option available.

