Trafficware

Engineered by **Naztec**

981 NEMA TS2 Type 1 Master Controller with Ethernet

Traffic Responsive Master

The Model 981 NEMA Traffic Signal Master Controller is designed using state of the art electronics to ensure reliability, a long life, and superb performance in all signal control applications. The advanced architecture and NTCIP compliance provide the traffic engineer with a flexible platform for the future.

The Model 981 Master Controller meets and exceeds NEMA TS2 specifications, allowing simultaneous intersection control and including advanced functionality for complex phasing, detector processing, coordination, preemption, communications, adaptive timing, as well as full systems operation in a closed-loop, hybrid, or centralized configuration.

The advanced LCD display and menu-driven software provides a user-friendly approach to programming and access, and built-in diagnostics permit rapid evaluation of operational status. The use of Flash Memory allows software upgrades without PROM replacement. The Ethernet-enabled controller allows communication across an TCP/IP network.

Voltage:	89 to 135 VAC 60 HZ
Power:	30 Watts Maximum
Temperature:	-30° F to 165° F
Humidity:	0 to 95 percent
Dimensions:	Height: 10.50"
	Width: 14.75"
	Depth: 8.20"

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Features

FLASH PROMS

The Model 981 Master Controller is easily configured to various firmware versions by the utilization of FLASH PROMS, which eliminate the need for obsolete EPROM technology. A complete firmware update requires only ten minutes, and does not require hardware changes or EPROM replacements.

MASTER/ SECONDARY

Operation in a Closed Loop System requires only the 981 Master Controller to be located at the master cabinet. Both the master and secondary functions are simultaneously provided by a single controller.

DISPLAY

A backlit, 4-line by 40-character supertwist LCD display provides full-menu screens for easy data entry. The display maintains an optimum contrast and brightness over the entire NEMA specified temperature range, using special temperature-compensating circuitry. The menu-driven format and context sensitive help screens eliminate need for programming instructions or look-up codes.

EASILY SERVICED

The Model 981 Master Controller consists of only two printed circuit boards (three with optional modem) and an open frame power supply. The CPU/display board and the I/O board utilize machine-tooled sockets for all integrated circuits for easy maintenance. An identification silkscreen on each circuit board clearly labels all components. No special tools or extender cards are needed for troubleshooting.

REAL-TIME CLOCK

The real-time clock maintains accurate timing by utilizing a "super capacitor" which allows for 0.005% accuracy during a 24-hour time period. Retention time during power failures for the real-time clock is extendible to 30 consecutive days.

BARRIERS

Unique to the Trafficware traffic controller product line is the flexibility of user programmable barriers. Four (4) separate batteries allow programming for applications from one (1) to eight (8) phases in each barrier.

KEYBOARD

A 20-position keyboard containing four (4) red function keys, six (6) gray cursor movement keys, and ten (10) white digit keys with built-in audio/tactile feedback provides user-friendly enhanced data entry.

DIAGNOSTICS

Built-in diagnostics provide for improved maintenance and easier repairs. Internal diagnostics allow operator tests on all input and output signals, RAM devices, and memory. A built-in EEPROM eraser allows for a "clear-all" memory function.

COMMUNICA- TIONS

Four RS-232 ports and an optional FSK port are available with each Master unit. These ports are keyboard programmable with selectable baud rates from 300 to 19.2K with full and half duplex options. Various communication configurations allow the user multiple interfaces to other cabinet devices: conflict monitor, preemption equipment, detectors, WWV clocks, modems, notebooks, printers, etc. A RS-485 SDLC Bus Interface Port is provided for all TS2 applications. The NTCIP protocol is fully supported.