

# AUTOMOTOR

## TYPE EX10 CONTROLLER

The Automotor Type EX10 Traffic Signal controller is the smallest in the range of traffic signal controllers we manufacture, and was designed after many years of experience in this field, primarily to cope with ever-increasing scarcity of maintenance personnel and adverse weather conditions in South Africa. The Automotor Type EX10 controller was first manufactured in 1996 and has proved to be very reliable and is easily maintained over extended periods.

### POWER SUPPLY

The controller is designed to operate on a 230 Volt 50Hz supply but will operate satisfactorily on any voltage between 180 and 280 Volts and will withstand normal line surges.

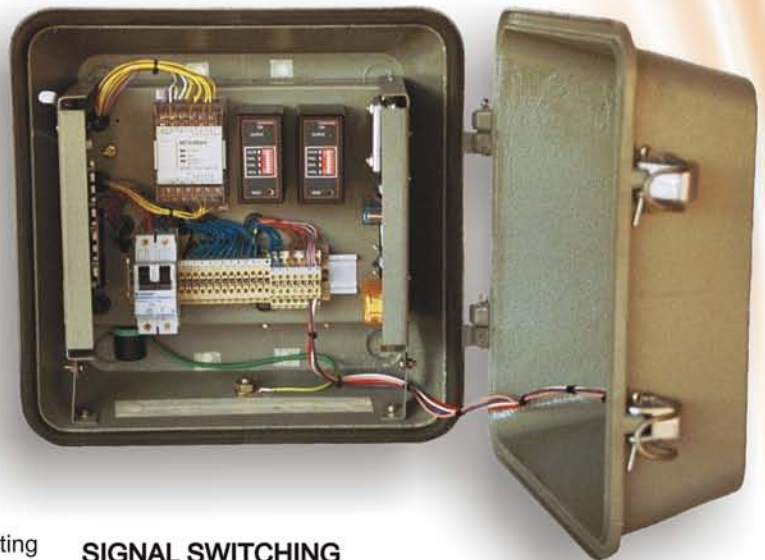
### CABINET

The controller is supplied complete with a robust Die Cast aluminium cabinet suitable for side of pole mounting or alternatively, the cabinet can be mounted On a hot-dip galvanized steel pedestal with a separate foundation frame to facilitate maintenance.

We also supply heavy gauge hot-dip galvanized steel cabinets for areas where vandalism and theft are rife. The steel cabinet can also either be side of pole, or pedestal mounted.

### LIGHTNING PROTECTION

The unit has substantial lightning protection including a lightning arrester, fast acting surge arrestors, opto isolators and relay isolation. This has proved to be very effective, when the controller is properly earthed, even in the severe lightning conditions experienced in Southern Africa.



### SIGNAL SWITCHING

The controller can switch a maximum of Two Vehicular phases with Two Pedestrian E.C.O. phases. We also include software for Two Vehicular phases with an Independent Pedestrian phase or One Vehicular phase with a Pedestrian phase on demand from pushbutton stations. Pedestrian crossings can be switched in the conventional manner or in the Pelican Pedestrian mode. All lamp switching devices are solid state triacs which can be individually replaced to facilitate maintenance

### PLANS AND MODES OF OPERATION

Eight signal switching plans are available and any combination of the following modes can be configured on each plan at an isolated intersection or within a co-ordinated system

- Fully vehicle actuated operation
- Semi vehicle actuated operation
- Fixed time control
- Manual Operation
- Emergency flashing

Each plan includes timers for the following:

- Background cycle
- Co-ordination offset
- Maximum permissible main road green when resetting co-ordination
- Minimum green time for each vehicular phase
- Maximum green extension time for each vehicular phase
- Pedestrian green time for each pedestrian phase
- Pedestrian clearance time for each pedestrian phase





## CO-ORDINATION

The Automotor Type EX10 controller can be reliably co-ordinated by any of the following methods:

- Conventional multi core link with a master controller
- The Automotor single-core link.
- A Ripple Relay, Pager or GSM pulse to correct the Real Time
- Clock on a daily basis

## REAL TIME CLOCK

The controller has an integral Real Time Clock, which can select any one of eight plans on a time of day, day of week basis.

Different combinations of plan selection can be set on:

- Sundays
- Mondays to Thursdays
- Fridays
- Saturdays

## FUNCTIONAL SAFETY

Each controller is fitted with a hardwired dual circuit Green Conflict Monitor, which can detect a conflict due to a controller malfunction or fault on the installation.

On fault detection, the controller switches to Emergency flashing.

## POLICE SWITCH

The cabinet is fitted with a key switch, which allows the user to choose between normal operation, manual control or emergency flashing. Under Manual Control, critical times such as Inter-green periods and Minimum Greens are controlled automatically.

## USER INTERFACE

An FX20P Programming Console is available, which can be used to edit, upload or download programs on site. The programming console is also ideal for setting the Real Time Clock, or transferring programs from the controller's RAM to the EEPROM or vice versa and to monitor elements within the software while the controller is running.

We also supply software for a laptop or desktop computer which can be used to edit the software in its entirety and monitor the controller while in operation. The user can also store copies of each intersection's software under various directories for different areas in a traffic control system.

Controller	Automotor Type EX10	Vehicular Phases	2
Controller Class	C	Pedestrian Phases	2
Mass (c/w Aluminium cabinet)	12.8 kg	Loop Detector Jacks	2
Dimensions (H x W x D) mm	383 x 430 x 220	Pedestrian Pushbutton inputs	2
Supply Voltage	230V AC $\pm$ 20%	Mounting (standard)	Side of Pole
Circuit Breaker Rating	10 AMP/ 15 AMP	Pedestal mounting	Optional

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