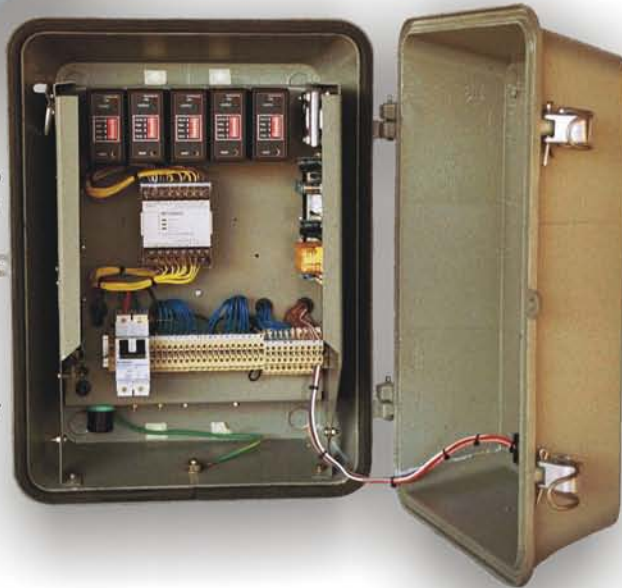


AUTOMOTOR

TYPE EX16 CONTROLLER

The Automotor Type EX16 traffic signal controller is of the same design as the EX10 controller but also includes a right turn phase with parallel left turn movement. First manufactured in 1998, the Type EX16 controller has proved to be very reliable and is easily maintained over extended periods. The unit was designed primarily to cope with the adverse weather conditions in South Africa and the ever-increasing scarcity of maintenance personnel.



SIGNAL SWITCHING

The controller can switch a maximum of one right turn phase with a parallel left turn movement, three vehicular and two pedestrian E.C.O. phases.

The right turn phase can either be switched in parallel with a vehicular phase or as an independent dual right turn movement, either in a leading or lagging mode. A parallel left turn movement can be programmed to overlap the inter-green period to ensure smooth traffic flow.

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. Alternatively, the cabinet can be mounted on a hot-dip galvanised steel pedestal with a separate foundation frame to facilitate maintenance.

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

LIGHTNING PROTECTION

The unit has substantial lightning protection including a lightning arrestor, 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.

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 replaced individually 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 the right turn phase
- Maximum green extension time for the right turn phase
- 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 EX16 controller can be co-ordinated reliably 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 EX16	Right Turn Phases	1
Controller Class	C	Left Turn Phases	1
Mass (c/w Aluminium cabinet)	16.4 kg	Vehicular Phases	3
Dimensions (H x W x D) mm	520 x 430 x 220	Pedestrian Phases	2
Supply Voltage	230V AC \pm 20%	Loop Detector Jacks	5
Circuit Breaker Rating	10 AMP/ 15 AMP	Pedestrian Pushbutton inputs	2
Mounting (standard)	Side of Pole	Pedestal mounting	Optional



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