

GENERAL NOTES

XXIV - TRAFFIC RESPONSIVE MASTER CONTROLLER (Continued)

Interrupter dial transfer shall be accomplished by the signals from the Master Coordinating Units.

The interrupter unit shall be equipped with indicating lights for cycle, offset and/or split functions in effect and include test switches to determine cycle and/or split called for by the Master.

The interrupter unit shall be plug connected to the controller panel.

Dial units used in the interrupter shall be identical to and interchangeable with the dial units of the Master Coordinating Units.

F) WEEKLY PROGRAMMER AND TIME SWITCH:

The programmer shall be used to program up to ten functions at twelve daily intervals.

The programmer shall be an electronically controlled, solenoid operated device used in conjunction with a time switch to close ten miniature switches.

The cylindrical dial on the face of the programmer shall have 84 equally spaced slots divided into 12 daily intervals for each of the seven days of the week.

Snap-in type keys, each with 10 break-off tabs shall be placed into the slots. Each key shall be capable of programming up to 10 daily functions.

A recessed 18 point multi-pole plug shall be mounted on the front of the frame which will electrically connect the switches to the rear panel through a multi-pole receptacle and color coded wiring harness.

A time switch shall be used to energize the rotary type solenoid in the program unit.

The time switch shall contain 96 2-position keys in 15 minute increments.

The keys shall be permanently retained in the outer rim of the dial on the front of the time switch.

The keys shall actuate the switch arm of the time switch sending an impulse to the solenoid of the program unit and, in turn, causing the drum of the program unit to move one position.

G) PANEL LIGHTS AND SWITCHES:

The Master Controller shall contain a panel of indicating lights and toggle switches.

The panel lights shall be neon lamps of sufficient size to properly illuminate a red color screen and provide a clear indication even in bright sunlight.

The indicating lights shall be used for all the functions called for by the master, dial, offset and split in effect.

Each of the indicating lights shall be properly marked with a silk screened or anodized identification plate mounted directly beneath the light.

The toggle switches shall be double pole, double throw, maintained contact and shall be located on the panel directly beneath the corresponding pilot light.

XXIV - TRAFFIC RESPONSIVE MASTER CONTROLLER (Continued)

The toggle switches shall be used to override the automatic functions of the Master Controller or to manually select program functions.

The panel lights and switches shall be located in the upper most portion of the controller cabinet and shall be of a neat and clean-cut appearance.

H) CABINET:

The Master Controller and all associated electrical components shall be housed in a free standing cabinet rack.

The rack frame shall be welded into a solid unit made of 14 gauge cold rolled steel channels.

The sides of the rack shall have channel braces with a double row of perforations to which adjustable vertical mounting rails are fastened.

The rails shall support, in addition to standard 19" panels, all necessary shelves and brackets required to mount all the timing equipment and accessories.

A hinged rear door shall be provided permitting complete access to the interior of the cabinet.

The standard finish shall be a smooth baked enamel over a prime finish.

All internal wiring shall be placed into wire raceways and all terminations made on terminal strips.

All field terminals shall be permanently identified.

Relays that may be used to provide any features of the Master Control System shall be socket or jack mounted.

All wiring of the terminals shall be 105°C stranded, with polyvinyl chloride (PVC) insulation, wiring shall be of adequate current carrying capacity. (PAYMENT)

XXV - SPECIFICATION FOR A 2 THRU 4 PHASE DIGITAL SOLID STATE TRAFFIC TIMERA) PURPOSE:

The purpose of this specification is to set forth minimum design and operating requirements for two through four phase solid state traffic control timers using fully digital timing techniques.

B) GENERAL DESCRIPTION:

The timer shall be capable of providing digital timing for two through four vehicle phases with the options of pedestrian and volume density timing available for any or all phases. It shall be equipped with phase modules as specified on plans or elsewhere.

The timer shall be phase modular using a maximum of one phase module opening for each phase.

Timers shall use single ring, sequential timing.

The timer shall be capable of skipping any phase in the absence of demand and shall serve only phases with actual demand.

XXV - SPECIFICATION FOR A 2 THRU 4 PHASE DIGITAL SOLID STATE TRAFFIC TIMER - ContinuedC) PROGRAMMABLE FEATURES:

The following standard features shall be provided on each timer with the programming options as outlined: Programming variations shall be accomplished by a simple jumper change.

Manual Operation - standard manual operation shall be to service all phases and intervals in sequence. Each actuation of the pushbutton will advance the timer one interval. Pedestrian calls will be serviced only when actual pedestrian actuations have been received.

Two programming options shall be available for manual. The first disconnects the manual operator from timing yellow and red clearance intervals. When so programmed, the timer will automatically time these critical intervals. With the second option programmed, the timer shall serve only phases where actual vehicle or pedestrian demand exists.

When the TRUE MAX function is programmed the MAX timer will start at the beginning of the Initial or Pedestrian intervals providing an opposing call was stored prior to the start of the phase. The MAX timer shall start during the Initial, Pedestrian, Pedestrian Clearance or Extension when an opposing call is placed after the start of the phase.

Not Rest - normally when there is no opposing demand and the phase timing completes an Extension with no further demand the timer will Rest in Green in that phase. By programming to call for NOT REST, the timer shall not rest in the phase programmed, but will place an artificial call in another pre-selected phase. This operation shall be similar to the minor movement except for actual demand. If there are actual calls present on any phase, the Not Rest function shall be pre-empted and service the actual demand.

Semi-Mode - where required phase shall be programmed to time a Minimum Green interval as in non-actuated operation. Remote selection of Semi-Mode shall use MAX II special input.

Initialization - timers shall be programmable to initialize in any phase and interval. The Initialization procedure shall place a vehicle and pedestrian call on all other phases.

Green Rest - shall be energized whenever the timer is resting in green and used for Mutual Coordination.

D) SPECIAL EXTERNAL FUNCTIONAL INPUTS:

These circuits shall be provided through the timer MS connector on a per phase basis to activate special functions.

Hold - presence of this signal during an EXTENSION will hold the phase in green providing the MAX timer has not started before application of the Hold signal. Once the Hold signal is applied the MAX timer cannot start. Release from Hold returns the timer to normal operation. Force-off will over-ride the Hold signal for coordination purposes.

MAX II - this signal activates a second Maximum time setting, replacing the normal MAX for phase timing.

Omit Red Clearance - this circuit remotely eliminates the timing of the Red Clearance interval.

Omit Skip - this function places the phase on extendible recall, so it cannot be skipped.

Payment for item 625 "Traffic Responsive Master Controller" will be made at the contract unit price, completely assembled and in place, including all accessories and incidentals necessary to make a workable installation.