The unitized, building block design of Econolite Traffic Signal controllers permits selection of the features you require. Pages 4 and 5 list the features included as standard on the basic machines at no additional cost. Pages 6 through 8 list additional and alternate features that are most frequently required in intersection controllers, indicate the basic controllers to which they may be added, and any additional cost for adding these features to the controller at the time of manufacture.

In ordering, please designate the basic controller you need—2TC24—(F1, F21, F2 or F3) and then the alternate or additional features desired, using the reference numbers indicated.

Please contact Econolite if you require further information or assistance.
TYPES F1 AND F21
FULLY EXPANSIBLE—INTERCONNECTED

The standard 2TC24F1 controller is mounted in an attractive weather-proof aluminum cabinet. Brackets permitting sturdy and convenient mounting on wood or metal poles are provided.

The timer comes equipped with one, single offset, "jack-in" timing dial. Reliable operation and elimination of maintenance problems are assured by use of the famous Telectron* heavy duty, totally enclosed synchronous motor which always maintains speed, and never requires oiling. A "Run-Resyn" switch on the base of the dial unit permits synchronization or offset of non-interconnected controllers establishing a pre-determined progression pattern on a given street.

The signal switching unit has fourteen signal circuits completely wired, with cams and contacts installed in the six circuits most generally required, (red, yellow and green, on the main and cross street). The standard unit is set up for a 12 interval signal sequence and shipped with cams unbroken to allow maximum flexibility at time of installation.

Reliable off-peak flashing operation is assured by the modern, synchronous motor driven, jack-in flasher, and any radio interference that might be created by its contacts is effectively filtered out. A convenient switch permits the selection of automatic (stop and go) operation, signals off (for testing etc.), or flashing operation of the signals.

Sturdy, built in barrier type terminals make it easy and safe to connect incoming power and outgoing signal circuits to the panel and to arrange the flashing circuits and motor drive circuits for various types of operation.

As your community grows, and the traffic problem becomes more complex, additional units may be jacked in on the timer. Extra signal circuits for pedestrian or special turning movements may be easily added. Several intersections may be interconnected and offsets added to the dial units. Speed and/or favored directional progress of vehicles can be controlled manually or automatically from a centrally located master controller by setting the 5 position selector switch to the "remote" position. A system of Type F controllers requires a minimum interconnecting cable size, and all interconnecting circuits enter the controller through a fused terminal panel.

The Type F controller is designed for economy and reliability today and an ability to grow and change with the ever changing traffic requirements of the modern community.

The "F21" controller is identical to the "F1" except that it provides a total of 19 signal circuits, plus control circuits.

TYPE F2
SINGLE DIAL—INTERCONNECTED

The standard 2TC24F2 controller is identical in construction to the "F1" controller just described, but some of the flexibility and provision for future expansion has been omitted. It is capable of all standard functions performed by the "F1" and may be expanded to a total of 15 signal circuits. It may be progressively timed without supervision of a master (by use of "Run-Resyn" switch) or may be interconnected by cable for manual or automatic supervision of offset selection (expansible to 3 offsets on dial 1), automatic (stop and go) operation, flash, or shutdown etc. The "F2" controller is limited to one dial, so it should be chosen for those areas where one cycle length (adjustable by gear change) and one division of total cycle time percentage between main and cross street (adjustable by key settings) is satisfactory.

TYPE F3
SINGLE DIAL—NON-INTERCONNECTED

The standard 2TC24F3 controller is identical in construction to the "F1" and "F2" controllers just described, but is still further limited in its application. In addition to being restricted to only one timing dial, the "F3" is limited to isolated operation. It may be synchronized with adjacent controllers by use of the manual "Run-Resyn" switch to provide progression on a single pattern. Automatic selection of flash or shutdown can be accomplished by means of an optional time switch accessory installed in the cabinet. The "F3" should be selected where single dial operation and manual synchronization will suffice and where dependability with economy is most important.
## ECONOLITE

**TYPE F TRAFFIC SIGNAL CONTROLLER**

**LOCAL INTERSECTION**

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### The STANDARD TIMER has...

**DIAL ONE**, including—
- **50 Second Gear installed; 40-60; 70-80 Second Gears furnished (stored in cabinet)**
- **Single Offset, with provision (space and wiring) for triple offset**
- **Dial Keys as follows**—
  - [a] 11 "Drum Advance" (unpainted)
  - [b] 1 "Drum Release" (Green)
  - [c] 1 "Offset 1" (Red)

**NOTE:** If Controller is ordered with 16 Interval Drum, 15 Drum Advance Keys are furnished. If Controller is ordered with triple offset, Keys for Offsets 2 and 3 (yellow and white) are furnished.

**Manual "RUN-RESYN" Switch (control dial motor)**

<table>
<thead>
<tr>
<th>Connections and Wiring for Two Additional Dials</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

#### SIGNAL SWITCHING UNIT as follows—
- **Cams and contacts complete for SIX Signal Circuits**
- **Stationary Contacts and wiring for additional (over 6) Signal Circuits as noted**
- **Drum arranged for TWELVE interval signal sequence cams unbroken**
- **Sixteen interval drum optional at no extra charge**

**NOTE:** Cams will be broken out at factory if desired. Specify sequence on order.

<table>
<thead>
<tr>
<th>Connector Plug—for connecting all circuits to controller panel. Permits quick, easy removal of complete Timer for inspection, maintenance or replacement</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plastic Cover—Protects Timer against dirt, moisture or tampering</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### The STANDARD PANEL has...

**FLASHER**—Jack Mounted, Single Circuit type, with built-in Radio Interference Suppressor and separate Synchronous Motor Drive

<table>
<thead>
<tr>
<th>Jacks and Wiring for FLASH Relays. Two Relays required for &quot;Local Time Switch&quot; or &quot;Remote&quot; selection of FLASH, Order relays separately if required.</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**TERMINALS** for Flash Combination Selection. Any combination of Red or Yellow Signals may be flashed on THREE traffic phases.

**SOCKET AND WIRING** for plug-in connection of Time Switch(es) for selection of following functions at Local, Non-interconnected intersections -- --
- (a) Dial 1-2 or 3
- (b) Flash
- (c) Signal Shutdown or other spare function

**JACKS and WIRING** for Dial 2 and Dial 3 Transfer Relays. One Relay required for each dial unit added and is furnished when controller is ordered with additional dials

**SWITCHES** for LOCAL MANUAL SELECTION of...
- (a) Flashing—Off—Automatic (Stop and Go), operation
- (b) Automatic—Hand control of signal timing
  **NOTE:** Order Hand Switch and cord assembly if manual control of signal timing is anticipated.
- (c) Dial 2, Dial 3, Time Switch, Remote (from System Master)

**TERMINALS and WIRING** for...
- (a) Total Signal Circuits as noted
- (b) Hand Switch and Cord (order Hand Switch and cord if required)

<table>
<thead>
<tr>
<th>Catalog No. 2TC24</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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**Standard Equipment**
**ECONOLITE**  
**TYPE F TRAFFIC SIGNAL CONTROLLER**  
**LOCAL INTERSECTION**

**Standard Equipment**

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**The STANDARD PANEL has...** (continued)

- **TERMINAL PANEL with fuses for interconnecting System Cable**
- **Permits Remote Selection (from System Master) of—**
  - (a) Dial 1, 2 or 3
  - (b) Offsets 1, 2 or 3
  - (c) Emergency All Red
  - (d) Flash
  - (e) Signal Shutdown or other spare function

- **CONNECTOR CABLE and SOCKET for Connecting All Circuits to Timer**
- **FUSE, Cartridge Type for Controller power**

**The STANDARD 24" CABINET has...**

- **PANTAGRAPH ARMS and Table to permit lowering the timer for inspection or adjustment**
- **Aeroplane type fasteners to permit easy removal of complete timer from cabinet**
- **Mounting Brackets for attaching cabinet to metal pole (wood pole brackets optional)**
- **Provision for easy attachment of pedestal adapter**
- **Green baked enamel finish, 3 coats**
- **Sturdy lock with one key**
- **Sponge Rubber Gasket on door**

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**BASIC CONTROLLER**

<table>
<thead>
<tr>
<th>CATALOG NO.</th>
<th>APPLICATION (TYPE OF SYSTEM)</th>
<th>STANDARD EQUIPMENT AND EXPANSIBILITY</th>
<th>APPROX. WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2TC24F1</td>
<td>Isolated or Interconnected 1-2 or 3 Dials 1-2 or 3 Offsets</td>
<td>Basic Expansible up to 1 1 6 12 or 16 Specify</td>
<td>61 71</td>
</tr>
<tr>
<td>2TC24F21</td>
<td>Isolated or Interconnected 1-2 or 3 Dials 1-2 or 3 Offsets</td>
<td>Basic Expansible up to 1 1 6 12 or 16 Specify</td>
<td>64 74</td>
</tr>
<tr>
<td>2TC24F2</td>
<td>Isolated or Interconnected Single Dial 1-2 or 3 Offsets</td>
<td>Basic Expansible up to Single Only 1 6 12 or 16 Specify</td>
<td>60 70</td>
</tr>
<tr>
<td>2TC24F3</td>
<td>Isolated Only Single Dial Manual Resynchronize</td>
<td>Basic Expansible up to Single Only None 6 12 or 16 Specify</td>
<td>59 69</td>
</tr>
</tbody>
</table>

*NOTE: All Controllers furnished with 12 Interval Drum—16 Interval is optional.*

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For factory installed alternate and additional features see page 6 through 8