Plug-in Function Cards and Outputs
Compatible with the following series:

• R
• RC
• RX/RY
• CM
• A936
• BLF 303
• A941

Autotron offers a complete line of plug-in function cards and outputs. These allow the customer to adapt any compatible Autotron ON/OFF control to accomplish a variety of different functions, from simple jobs such as single time delays to tasks as complex as batch counting. All controls operate in the ON/OFF mode with no card installed. Cards and outputs are easily installed in the field so last minute relay logic changes can be performed after the equipment is installed.

Versatile • Reliable
**T320 One-Shot Timer**

**OUTPUT SEQUENCE**

- "One shot" actuation: Light or Dark energized.
- Time delay (t) adjustable. Output energizes on selected input transition and begins time delay at same time.

**APPLICATIONS**

- Cut-to-length control
- Pulse stretching or shortening
- Stop motion indicator

**T300 Five Function Timer**

**OUTPUT SEQUENCE**

- The T300 Five Function Timer allows a user to select by means of a 4-position DIP switch, any of five most commonly used functions now offered on separate cards.

  These functions are:
  - T380 Single Timer (OFF Delay)
  - T310 Single Timer (ON Delay)
  - T330 Dual Timer (ON and OFF Delay)
  - T320 One-Shot (OFF Delay)
  - One-Shot (ON Delay)

**APPLICATIONS**

- Function card inventory reduction
- User uncertain what function will eventually be needed

**T342 Batch Counter**

**OUTPUT SEQUENCE**

- Two-digit batch counter. Output energizes for 0.1 second once pre-set count is reached. Circuit resets in 2.5 ms.

**APPLICATIONS**

- Batch counting
- R-to-1 counter

**T370 Delayed One-Shot Timer**

**OUTPUT SEQUENCE**

- Output energizes for an adjustable time (t) beginning an adjustable time (t) after the completion of an appropriate signal. Should another signal be completed before (t) expires, no pulse occurs and the time delay begins again. Time (t) is adjustable from 0.2 to 2.5 seconds. Delay (t) follows normal time delay ranges available.

**APPLICATIONS**

- Delayed reject on conveyor line

**T380 Shift Register (Delay Line)**

**OUTPUT SEQUENCE**

- One or a sequence of events is received at the input, then delayed (shifted) by the amount of time (t). This sequence then occurs at the output in the same pattern as it was received. A 128-bit CMOS shift register integrated circuit is used. It is controlled by an on-board pulse generator. Time delay (t) is adjustable and follows normal time delay ranges available.

**APPLICATIONS**

- Gluing on packaging machines
- Automatic paint spraying
- Delayed reject on conveyor line

**T390 Over or Under Speed Detector**

**OUTPUT SEQUENCE**

- Output energizes in the over speed condition and de-energizes in the under speed condition. If the time between input pulses is longer than the set time (t), or if pulses stop, under speed is indicated. If the time between pulses is shorter than the set time (t), over speed is indicated. The time (t) is adjustable. LIGHT time and DARK time is limited by the control’s response time. Only over or under speed can be detected.

**APPLICATIONS**

- Detect excessive rate of container flow on conveyor line
- Detect if shaft RPM is too slow
**T399 Output Latch**
- **Applications**
  - Tear detection on web process
  - Surveillance

**T1330 Repeat Cycle Timer**
- **Applications**
  - Spraying glue spots on carton flaps
  - Sounding pulsing alarm for a fault condition

**T349 Single-Digit Toggle Batch Counter**
- **Applications**
  - Diverting equal batches of containers onto two lines
  - Prescaling counters for longer counter life and higher speed

**T3200 Long Delay One-Shot Timer (Off Delay)**
- **Applications**
  - Yard light control upon entry
  - Timing industrial processes

**T348 Externally Clocked Shift Register**
- **Applications**
  - Missing container on filling machines
  - Delayed reject on varying speed conveyor
  - Rotary index table assembly inspection

**T3600 Long Delay Single Timer (Off Delay)**
- **Applications**
  - Intrusion detection alarm
  - Timing industrial processes
PLUGIN OUTPUTS
All models that accept plug-in function cards also accept any of these outputs. These outputs allow AUTOTRON controls to be compatible with practically any type and style of load. Output types can be changed in the field.

Standard Relay
- Used for conventional general purpose switching

Output Diagram

Optional Solid-State AC Switch
- Used for highly repetitive, long life or electrically "quiet" switching

Output Diagram

P846 Relay
- DPDT contact arrangement
- Maximum contact rating: 10 Amps (resistive) at 120 VAC or 28 VDC
- Contact life: 10,000,000 cycles mechanical
- 100,000 cycles at maximum contact rating
- Response time (add to control circuit response): 20 ms.
- Relay coil: 120 VAC, 160 ohms resistance
- All models supplied with P846 relay output unless otherwise specified

Glossary of Terms
Signal represented by proper modulated LED light for photoelectric or metal to metal pressure switches. Light energized output turns ON when signal received by sensor. Dark energized output turns ON when signal removed from sensor.

ORDERING INFORMATION
Plug-in Function Cards and Outputs can be purchased separately to be installed in an Autotron control - or can be included in a complete control package at the time of purchase.

CARDS (SEPARATE)
To order, simply specify the card number desired.

CARDS (PACKAGE)
To order a complete control with a function card installed, substitute the card number for "F393" in the control model and add the control and card prices. For example, the RP7900 ON/OFF Control with the TS80 Single Timer Card is ordered as: RP7900 Timing Control

OUTPUTS (SEPARATE)
To order, simply specify the part number desired among those found below:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Suffix Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>P846</td>
<td>Relay</td>
<td>None</td>
</tr>
<tr>
<td>P970</td>
<td>AC Switch</td>
<td>K</td>
</tr>
<tr>
<td>P971A</td>
<td>Opto-isolated logic</td>
<td>GA</td>
</tr>
</tbody>
</table>

OUTPUTS (PACKAGE)
To order a complete control with a plug-in output installed, add the suffix code to the end of the model number and add the control price and output price (all control prices include the relay). For example, the RP7900 Control with the P970 AC Switch installed is ordered as: RP7900 Control

TIMING RANGES
Timing function card time ranges are specified in the last digit of the card number. The standard range is shown.

Range No.: 0: 1-10 seconds (standard)
1: 0-1
2: 0-2
3: 0-3
4: 0-4
5: 0-5
6: 0-6
7: 0-7
8: 0-8

Others available upon request.

Notes:
1. On timer cards where two separate time delay adjustments are provided, it is assumed that both delay ranges are the same, and are specified in the last digit of the card number. Two different ranges can be supplied, on request, at no extra charge.
2. If card is to be used in the ELE355, AG41B, etc. A096, please specify so a poly latch can be added

For current pricing, please call the factory at 800-437-3648 or your local AUTOTRON sales representative or authorized distributor.

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