

# APF-247U UNIVERSAL FLASHER

Now there's a flasher versatile enough to upgrade your aids to navigation system to the state-of-the-art capabilities without having to replace all your existing lampchangers. Automatic Power's newly-developed microprocessor circuitry packs a wide array of capabilities into one compact, lightweight and highly reliable package.

## UNMATCHED VERSATILITY

Dual filament lamp control.

Solenoid/spring and motorized lampchanger control.

Field selection of a combination of flash rhythms.

Pulse-width modulated voltage regulation system.

Photocell Daylight Control.



## STATE-OF-THE-ART VOLTAGE REGULATION

The heart of the APF-247 U is a microprocessor which controls the pulse width modulated voltage regulation system. This system relies on switched field effect transistors (FET) to chop the direct current input voltage into a square wave pulse train. This system has two outstanding benefits:

- a. The life of incandescent signal lamps is, typically, doubled due to reduced DC notching of the filaments.
- b. Regulation losses are less than 3% regardless of the input/output voltage ratio. Additional energy may be recovered from primary batteries and solar power systems.

## Specifications

**Input Voltage:** 5-30 Volts DC.

**Output Voltage:** Pulse Width Modulation Regulated to 10.3 volts or 12.0 volts for voltages 0.2 volts above regulation point. 2% accuracy. Unregulated Output tracking minus 0.20 volts below input for input voltage less than 0.2 volts above regulation point.

**Lamp Control:** Operates bifilament lamps and motorized lampchanger Model APL-1297, APL-1297A and FU-1297,

and a variety of solenoid/spring lampchangers.

**Output Current:** 10 Amps maximum. For output greater than 5 Amps the reverse polarity protection is removed.

**Power Consumption:** 5 milliamps.

**Reverse Polarity Protected:** Lamp burns fixed as indicator.

**Daylight Control:** Resistance set at: 1700 ohms - switch on; 1200 ohms - switch off. Adjustable.

**Flash Rhythms:** Multiple flash rhythms, factory programmed to customer requirements and field selectable by means of hex switches.

**Timing Error:** One percent.

**Serviceability:** Large screw type terminals to accept 3/8 inch lugs. Nickel alloy plated copper terminals to handle high currents. Terminals for battery, photocell, synchronization, motorized lampchanger, spring-wound lampchanger, or dual filament lamps are color coded to customer requirements.

**Environmental:** Operating temperature -40 C to 85 C. Relative Humidity 0-100 percent. High Temperature Salt Fog. All PC board double coated with humiseal and terminals sealed with O-rings.

**Synchronization:** Terminal provided to allow flashing of multiple lamps in unison via hardwire or UNIFLASH®-II wireless synchronization system.

**Date Dependent Operation 365 Day Timer (optional):** Unit may be programmed to provide on/off control of the light based on preprogrammed dates. Data is stored in EEPROM.

Heirs to the original 1928 patent for lampchangers and the pioneer in the electrification of aids to navigation, Automatic Power manufactures flashers and lampchangers to the quality and reliability standards demand by the marine environment. Staff design engineers are able to adjust product specifications to specific customer needs.