

APPROACH LIGHTING

PAPI-PPSS

Power Supply Selector Unit
020507



Application

The ADB Safegate type 020507 PAPI Power Supply Selector unit provides a standby power supply to PAPI systems helping to prevent the formation of frost and condensation on the lenses or front glass of the PAPI units. It is designed to work with ALL manufacturer's quartz type PAPI units that are powered from a constant current series circuit.

In accordance with Transport Canada Aerodrome Safety Circular ASC 2002-014, PAPI units are to be maintained in a manner which will prevent frost or condensation from giving a false signal upon energizing the PAPI units. The PAPI Power Supply Selector unit provides power to the PAPI lamps via a constant voltage circuit to maintain lamp output at approx. 30W. Through bypassing of the constant current regulator, the unit provides power cost savings of approx. 90% at some locations, when compared to powering PAPI units from the lowest brightness step (B1 – 2.8A) of a typical CCR.

Remote airports with high electricity rates and all airports with after hours ARCAL control will receive the greatest benefit from application of this unit.

Features & Benefits

- Greatly reduced electrical cost versus powering PAPI units from CCR at 2.8 A (B1).
- Works with all PAPI units from any manufacturer.
- One unit can power up to eight of the three-lamp PAPI units in standby mode.
- Available with an optional remote thermostat to automatically switch PAPIs off at a preset ambient temperature, further reducing operating costs.
- Low wattage operation of PAPI lamps has minimal adverse effect on lamp life.
- Unit has integral lightning arrestors.
- 120 VAC input power, 120 VAC or 24 VDC control voltages.
- No modifications required to PAPI units.
- Failsafe control logic, PAPIs will not turn on if heating circuit fails.

Ordering Code

020507 - X X X

Number of PAPI Lamps

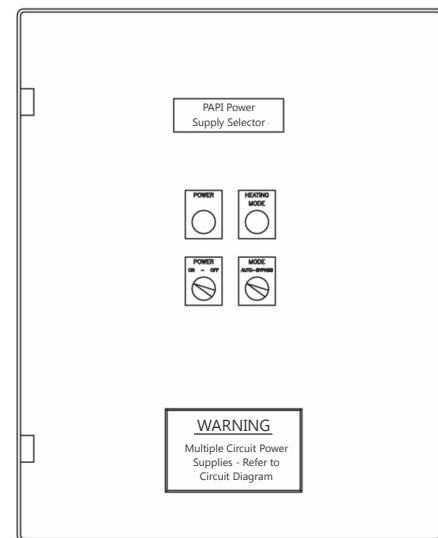
- 1 = 4 to 8 Lamps Max.
- 2 = 12 to 16 Lamps Max.
- 3 = 18 to 24 Lamps Max.

Control Voltage

- 1 = 120 VAC, 60 Hz
- 2 = 2 – 24 VDC

Options

- 0 = None
- 1 = Remote Thermostat Option
(Total number of lamps, NOT PAPI units)



Enclosure Front View

Operation

An input supply voltage of 120 VAC is applied to the Selector unit. In standby mode, a voltage is sent thru the selector relay to the field lighting circuits to power the PAPI lamps at the reduced wattage. This maintains the temperature of the PAPI units and helps prevent formation of frost or condensation on the PAPI lenses or front glass. If the ambient temperature is above a preset level, the optional thermostat will maintain the selector in the off mode.

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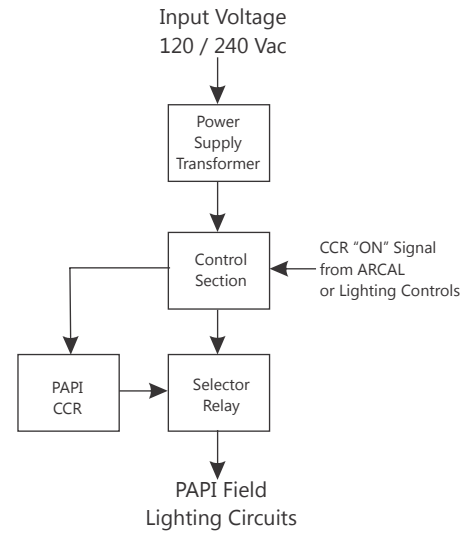
Upon receipt of a control signal (from the ARCAL or airfield lighting controls) to energize the CCR, the selector will first switch the field lighting circuits to the CCR circuit and then energize the CCR. This prevents the CCR from tripping out on an open circuit condition. An industrial microprocessor based logic module is used for control and monitoring functions.

If multiple PAPI systems are powered from the same CCR, the PAPI Heating Selector must be installed up-stream of the MGL or Circuit Selector Switch in order to maintain heating in both PAPI systems.

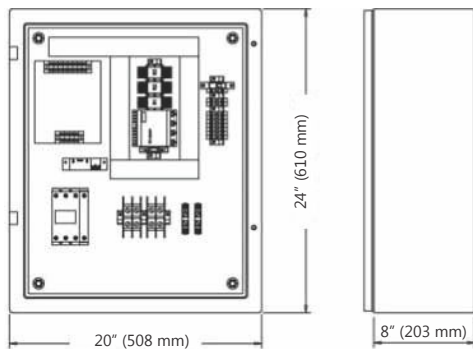
Note: Due to the various PAPI control schemes used by different airports it is suggested that you contact ADB prior to ordering units to ensure that control circuit in Heat Selector unit is made compatible with your system.

Power supplies for voltage-powered PAPI systems are also available with integral standby circuits.

PAPI power supply selectors are not used with ADB LED type PAPIs, which have a built-in frost prevention system.



Functional Block Diagram



Dimensions