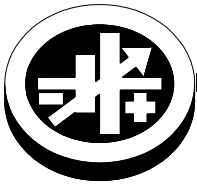


# QUICK START GUIDE



**KEPCO** An ISO 9001 Company.

**HSF A, AM**  
**300W, 600W**

## SINGLE OUTPUT 3U HOT SWAP PLUG-IN POWER SUPPLIES

### I — INTRODUCTION

**SCOPE OF MANUAL.** This Quick Start Guide covers the installation and operation of the Kepco HSF (A, AM) 300W and 600W Series of Hot Swap Plug-in Power Supplies, identified by the “A” or “AM” suffix following the model number. Full specifications are listed in the applicable Operator manuals covering 300W and 600W A (non-metered) and AM (metered) models which can be downloaded from the Kepco web site at:

[www.kepcopower.com/support/opmanls.htm#hsf](http://www.kepcopower.com/support/opmanls.htm#hsf)

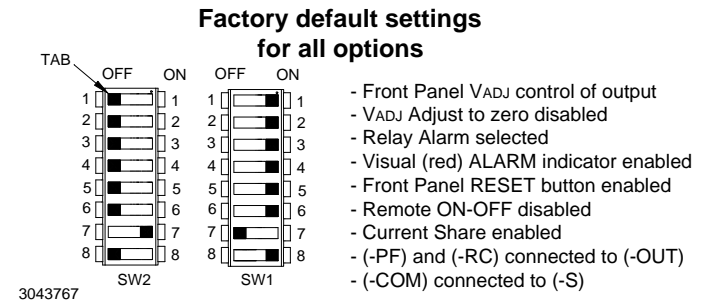
These power supplies are designed to be installed in Kepco’s RA 19-4C Rack Adapter. The RA 19-4C Operator Manual can be downloaded from the Kepco web site at:

[www.kepcopower.com/support/opmanls.htm#ra19-4c](http://www.kepcopower.com/support/opmanls.htm#ra19-4c)

**FACTORY DEFAULTS.** This guide covers only units as shipped from the factory with the two internal DIP switches set to default configuration (see Figure 1). For other configurations, refer to applicable Operator Manual.

**DESCRIPTION.** The Kepco HSF (A, AM) 300 and 600 Watt Series are hot swappable, high frequency switching, plug-in power supplies. Models may be selected for outputs of 5V (300W only), 12V, 15V, 24V, 28V or 48V. They employ power factor correction and are designed to operate in a fault tolerant power system with a nominal a-c input of 100V a-c to 240V a-c (input voltage range 85 to 265 V a-c), 50-60 Hz (input frequency range 47-440Hz). A built-in

current balancing circuit and OR-ing diodes allow configuration for hot-swap and parallel-redundant N+1 operation. A minimum output voltage is required for the VDC ON/ALARM indicator, meter (AM models) and alarm relay to function.



**FIGURE 1. DIP SWITCH FACTORY DEFAULTS**

**OPTIONS.** AM models include a digital meter which displays either voltage or current as determined by a front panel switch. AM Models (except HSF 5-60AM) require a minimum output voltage to power the meter, alarm relay and VDC ON/ALARM indicator. HSF 5-60AM can be adjusted down to 0V output without affecting operation of the meter and alarm relay, however the VDC ON/ALARM indicator requires a minimum output of around 3V to function.

**TABLE 1. HSF (A, AM) HOT SWAP MODELS**

| MODELS | 5V        | 12V        | 15V        | 24V        | 28V        | 48V        |
|--------|-----------|------------|------------|------------|------------|------------|
| 300W   | HSF 5-60A | HSF 12-27A | HSF 15-22A | HSF 24-14A | HSF 28-12A | HSF 48-7A  |
| 600W   | N/A       | HSF 12-53A | HSF 15-43A | HSF 24-27A | HSF 28-23A | HSF 48-13A |

NOTE: Options: add suffix M for Meter      N/A = Not Available

### II — INSTALLATION

**PRIOR TO MOUNTING.** Two internal DIP switches are preconfigured for the factory defaults listed above. To change the factory defaults, refer to the applicable operator manual and configure the DIP switches prior to installation.

**KEYING.** The units are keyed by voltage at the factory. Refer to the RA 19-4C Operator Manual to make the rack adapter slot match the HSF (A, AM) power supply.

**MOUNTING THE POWER SUPPLY.** Release the two cap head screw retaining latches (see Figure 2) by loosening the cap-head screw approximately 1/2 turn CCW (use 5/32" hex key) and slide to open (up) position. Insert power supply in the slot, then retighten the cap-head screws CW until snug. **DO NOT OVERTIGHTEN!** To release, follow the same procedure, except lift the latch to the top of the slot. Be sure to move the latch completely up or down to ensure full engagement/disengagement of the latching mecha-

nism. When HSF (A, AM) is not installed in rack adapter, secure latch in open (up) position to prevent damage.

CONNECTIONS. All connections are made at the rear panel of the RA 19-4C Rack Adapter (see RA 19-4C Operator Manual).

REMOVAL. To remove a power supply, first use the POWER switch to turn off the unit. Release the two cap

head screw retaining latches (see Figure 2) by loosening the cap-head screw approximately 1/2 turn CCW (use 5/32" hex key) and slide to the open (up) position. Then extract the unit from the RA 19-4C Rack Adapter. **CAUTION: The ON/OFF switch must be set to OFF before removing the unit from the rack adapter.** Leave the latches in the open position when not installed.

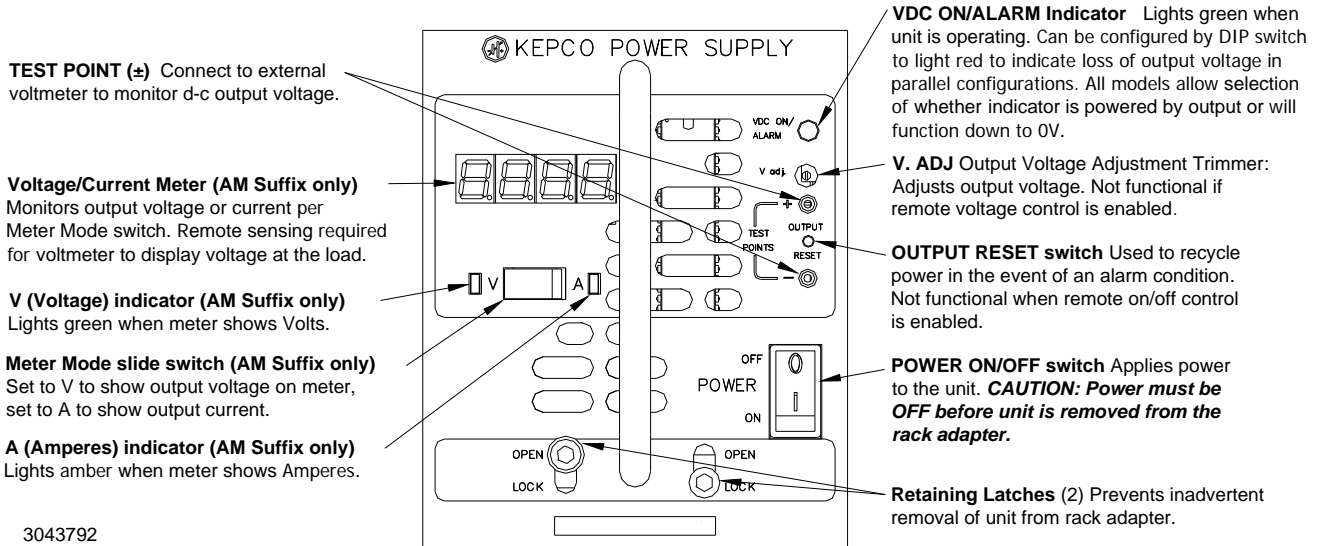


FIGURE 2. COMPONENT LOCATIONS

### III — OPERATION

Turn the unit on using the front panel POWER switch (see Figure 2). **CAUTION: DO NOT repeatedly toggle the POWER on/off switch as this may cause unit to fault.**

When output voltage is within range specified in applicable Operator Manual, the VDC ON LED is on (green). The VDC ON indicator can be configured to light red to indicate a loss of output voltage (see applicable Operator manual). **NOTE: A minimum output voltage is required to keep the VDC ON/ALARM indicator, internal relay and optional meter functioning** (5V model: 4.5V min. (except HSF 5-60AM: 3V min. for indicator, no minimum for relay and meter), 12V models: 6V min., 15V, 24V and 48V models: 7V min.).

While monitoring output voltage at the front panel test points, the V ADJ Output Voltage Adjust trimmer allows adjustment of the output voltage. The unit can also be configured to control output voltage using a remote resistance or voltage (see applicable Operator manual).

The OUTPUT RESET switch can be used to recycle power in the event of an alarm condition. This switch does not function if the remote on/off feature has been enabled (see applicable Operator manual).

The following features of the HSF (A, M) 300W and 600W power supplies are covered in the applicable Operator manual:

- Parallel Operation, including current balancing requirements. Parallel operation with current balancing (forced current sharing) is recommended to increase reliability and results in minimal output voltage bus variation upon shutdown of one unit in a fault-tolerant configuration.

**NOTE: To enable current share and to avoid false alarm triggers or unit shutdown when operating units in parallel, the output voltage of parallel connected units should be adjusted at same value (difference less than 0.5% of nominal output voltage). Please see restrictions as specified in the applicable Operator Manual.**

- Remote On/Off and Voltage adjustment
- Protection Circuits
- Alarms
- Keying
- Local/Remote Sensing (Remote error sensing is recommended for correct setting of output voltage.)
- Options