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QUESTIONS AND ANSWERS

- A1. How do I choose a circuit breaker or wire size for connecting the AC input power to my DHP 3.3 kW - 20 kW power supply?

For 3.3 kW - 10 kW output DHP models a general recommendation of 75 Amp circuit breaker or fuse is suggested and for 13 kW – 20 kW output DHP models a 125 Amp circuit breaker or fuse is suggested. If you are unfamiliar with electrical high power AC connections, local or national electrical codes, contact your Facilities Manager or Electrician in your area for assistance.

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- A2. Can I power-up my DHP 3.3 kW - 20 kW using single-phase AC input power?

No. DHP 3.3 kW - 20 kW power supplies require 3-phase AC input power to power up. See Operation manual electrical characteristics and installation section for more details.

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- A3. Can I change the AC input power voltage required for my DHP 3.3 kW - 20 kW?

No. DHP 3.3 kW - 20 kW power supplies AC input power is dedicated by design and is not economical to change once a unit is built. DHP 3.3 kW - 20 kW power supplies are based on modular power design. Each power module in a supply has its own separate AC input section and all associated components are

dedicated to a specific AC input voltage. The input filter and other component boards are input AC voltage dependent as well. See Operation manual for more details.

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- A4. What is the connection orientation or phase rotation of my input AC line phases and where do I connect neutral?

DHP 3.3 kW - 20 kW power supplies do not require a specific phase rotation for input AC lines. Neutral is not required or used and should never be connected. See Operation manual electrical characteristics and installation section for more details.

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- A5. What is the slew rate of my DHP 3.3 kW - 20 kW?

DHP 3.3 kW - 20 kW model power supplies have a slew rate of ~ 250 ms typical. Slew rate is defined as the time it takes the output to change from 5-95% of full scale.

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- A6. When I have the DHP 3.3 kW - 20 kW front panel switch off, the top of the unit gets warm. Is this a problem?

No. This is NOT an indication of a problem. The front panel switch on DHP 3.3 kW - 20 kW power supplies is a soft enable/disable shutdown and not a circuit breaker. If the input power to the DHP 3.3 kW - 20 kW is not removed by an external contactor or circuit breaker, portions of the internal circuitry remain live. The heat is generated by this live power feeding the soft-start circuit in the DHP 3.3 kW - 20 kW that was designed to limit the inrush current at power up. Removing external power from the DHP 3.3 kW - 20 kW supply will eliminate this heating effect.

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- A7. Can I parallel DHPs?

No, DHP design is not provisioned for parallel operation. If higher current is needed in your application, contact Ametek Programmable Power Sales for suggestions. SG or P-series supplies offer paralleling at similar power levels as the DHP product line.

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- A8. When using the RS232 or GPIB option does my DHP 3.3 kW - 20 kW send an identification string at start up or connection?

No. DHP 3.3 kW - 20 kW series power supplies do not send any communications unless it is requested by a query.

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- A9. Can I send a query via RS232 or GPIB option while using front panel local control?

No. DHP 3.3 kW - 20 kW series power supplies do NOT allow queries to be sent without putting the unit into remote control.

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A10. Why does the output of my unit shutdown when I remove the J1 mating connector?

The J1 mating connector has several methods to enable and disable the output of the power supply. DHP 3.3 kW - 20 kW series power supplies ship with J1 pins 5 and 6 jumpered together to enable the output. If this jumper is removed and no other enable method is chosen, or if the J1 mating connector is removed all together, the output will be disabled. See Operation manual, Analog Control Connector for more details.

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A11. Must I to connect remote sensing to operate my DHP 3.3 kW - 20 kW product line?

No. Remote sensing is not required or recommended for DHP 3.3 kW - 20 kW series power supplies for operation, unless the load is some distance away from the supply causing a significant change in load regulation. See Operation manual Remote Sensing for more details.

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A12. What maintenance is required for my DHP 3.3 kW - 20 kW?

DHP 3.3 kW - 20 kW series power supplies suggested maintenance is annual inspection and cleaning as required. Annual calibration verification is also recommended and calibration as required. See Operation manual Maintenance section for more details.

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A13. What is the efficiency of my DHP and how do I use this to calculate input power?

Typical DHP 3.3 kW – 20 kW efficiency is ~ 85%. Use the following formula to calculate the approximate

input power required. The example is a 3.3 kW unit calculation: $P_{in} = \frac{P_{out}}{eff} = \frac{3kW}{85\%} \cong 3882W \approx$

This is valid for full output power levels.

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A14. What does the Fault indicator light or analog Fault indicator mean when it is active?

This indicator is provided to notify the user that a hardware fault has occurred within the power supply. The supply requires service and the Ametek Programmable Power Service Department should be contacted.

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