AMETEK®
PROGRAMMABLE POWER

Frequently Asked Questions
Power Ten P62 and R62 series

SUMMARY OF QUESTIONS

QUESTIONS AND ANSWERS

A1. How do I choose a circuit breaker or wire size for connecting the AC input power to my P62 / R62 power supply?

For P62 / R62 models a general recommendation of 30 Amp circuit breaker of 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 have my P62 / R62 reconfigured to use 3-phase AC input power?

Yes. Although single-phase is standard, P62 / R62 model power supplies had a 3-phase option for input power. This is denoted by the fourth character in the model number. If the fourth character is a "B" the input type is Single-phase. If the fourth character is a "C" the input type is 3-phase. Change of the input power option must be done at the factory. 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 P62?

The only change to the input AC requirement that can be changed on the P62 / R62 is to add or remove the 3-phase option. This must be done at the factory. The input AC range cannot be changed. 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?

P62 / R62 model power supplies do not require a specific phase rotation for the 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 P62 / R62?

P62 / R62 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 P62 R62 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 P62 / R62 power supplies is a soft enable/disable shutdown and not a circuit breaker. If the input power to the P62/ R62 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 P62 that was designed to limit the inrush current at power up. Removing external power from the P62 supply will eliminate this heating effect.

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A7. Can I use an "R" option and a standard P62 model unit in parallel?

Yes, the "R" option unit must be the dedicated master, and can never be used as a slave. See Operation manual for standard parallel connection.

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A8. I want to parallel two "R" option P62 (these become R62 with this option) model units, and the slave is only reading about ½ current; what is wrong?

Two "R" option units CANNOT be paralleled together. The "R" option board uses 10 the volt analog programming circuit to program the unit via a DAC, making the scaling of the signal no longer usable for analog programming purposes.

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A9. How many P62/ R62 model units can I parallel?

Typically 2 units can be paralleled without issues if the load is considered static. Up to 5 units may be paralleled, but load considerations should be addressed and integration by Ametek Programmable Power may be required. Contact the EEC sales for information if you are considering this as a new application. See Operation manual for standard parallel connection.

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A10. When using the RS232 or GPIB option, does my R62 send an identification string at start up or connection?

No. R62 series power supplies do not send any communications unless it is requested by a query.

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A11. Can I send a query via RS232 or GPIB option while using front panel local control?

No. R62 series power supplies do NOT allow query's to be sent without putting the unit into remote control.

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A12. 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. P62 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 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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A13. Must I connect remote sensing to operate my P62/ R62 product line?

No. Remote sensing is not required or recommended for P62 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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A14. What maintenance is required for my P62/ R62 ?

P62/ R62 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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A15. What is the efficiency of my P62/ R62 and how do I use this to calculate input power?

Typical P62 efficiency is ~ 85%. Use the following formula to calculate the approximate input power required. The example is a 2 kW unit calculation: $P_{in} \quad \frac{P_{out}}{eff} \quad \frac{2kW}{85\%} \cong 2353W \; = \qquad \approx$

This is valid for full output power levels.

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A16. What does the Fault indicator light or analog Fault indicator mean when it is active?

This indicator notifies 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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