

SUMMARY OF QUESTIONS

- Q1. [How do I choose a circuit breaker or wire size for connecting the AC input power to my P63 / R63 / R63 or P66 / R66 power supply?](#)
- Q2. [Can I power-up my P63 / R63 / R63 or P66 / R66 using single-phase AC input power?](#)
- Q3. [Can I change the AC input power voltage required for my P63 / R63 / R63 or P66 / R66?](#)
- Q4. [What is the connection orientation for phase rotation of my input AC line phases and where do I connect neutral?](#)
- Q5. [What is the slew rate of my P63 / R63 / R63 or P66 / R66?](#)
- Q6. [When I have the P63 / R63 / R63 or P66 / R66 front panel switch off, the top of the unit gets warm. Is this a problem?](#)
- Q7. [Can I use an "R" option and a standard P63 / R63 / R63 or P66 / R66 model unit in parallel?](#)
- Q8. [I want to parallel two "R" option P63 / R63 / R63 or P66 / R66 model units and the slave is only reading about 1/2 current, what is wrong?](#)
- Q9. [How many P63 / R63 / R63 or P66 / R66 model units can I parallel?](#)
- Q10. [When using the RS232 or GPIB option does my P63 / R63 / R63 or P66 / R66 send an identification string at start up or connection?](#)
- Q11. [Can I send a query via RS232 or GPIB option while using front panel local control?](#)
- Q12. [Why does the output of my unit shutdown when I remover the J1 mating connector?](#)
- Q13. [Do I have to connect remote sensing to operate my P63 / R63 / R63 or P66 / R66 product line?](#)
- Q14. [What maintenance is required for my P63 / R63 / R63 or P66 / R66?](#)
- Q15. [What is the efficiency of my P63 / R63 / R63 or P66 / R66 and how do I use this to calculate input power?](#)
- Q16. [What does the Fault indicator light or analog Fault indicator mean when it is active?](#)

QUESTIONS AND ANSWERS

- A1. How do I choose a circuit breaker or wire size for connecting the AC input power to my P63 / R63 / R63 or P66 / R66 power supply?

For 3.3 kW - 10 kW output P63 / R63 / R63 models, a general recommendation of 75 Amp circuit breaker or fuse is suggested For 13 kW – 20 kW output P66 / R66 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.

[\[Return to Summary of Questions\]](#)

- A2. Can I power-up my P63 / R63 / R63 or P66 / R66 using single-phase AC input power?

No. P63 / R63 / R63 & P66 / R66 power supplies require 3-phase AC input power to power up. See Operation manual electrical characteristics and installation section for more details.

[\[Return to Summary of Questions\]](#)

A3. Can I change the AC input power voltage required for my P63 / R63 / R63 or P66 / R66?

No. P63 / R63 / R63 & P66 / R66 power supplies AC input power is dedicated by design and is not economical to change once a unit is built. P63 / R63 / R63 & P66 / R66 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 dependant as well. See Operation manual for more details.

[\[Return to Summary of Questions\]](#)

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

P63 / R63 / R63 & P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A5. What is the slew rate of my P63 / R63 / R63 or P66 / R66?

P63 / R63 / R63 and P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A6. When I have the P63 / R63 / R63 or P66 / R66 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 P63 / R63 / R63 & P66 / R66 power supplies is a soft enable/disable shutdown and not a circuit breaker. If the input power to the P63 / R63 / R63 & P66 / R66 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 P63 / R63 & P66 / R66 that was designed to limit the inrush current at power up. Removing external power from the P63 / R63 & P66 / R66 supply will eliminate this heating effect.

[\[Return to Summary of Questions\]](#)

A7. Can I use an "R" option and a standard P63 / R63 or P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A8. I want to parallel two "R" option P63 / R63 or P66 / R66 model units and the slave is only reading about 1/2 current, what is wrong?

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

[\[Return to Summary of Questions\]](#)

A9. How many P63 / R63 or P66 / R66 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 Ametek Programmable Power sales for information if you are considering this as a new application. See Operation manual for standard parallel connection.

[\[Return to Summary of Questions\]](#)

A10. When using the RS232 or GPIB option does my P63 / R63 or P66 / R66 send an identification string at start up or connection?

No. P63 / R63 & P66 / R66 series power supplies do not send any communications unless it is requested by a query.

[\[Return to Summary of Questions\]](#)

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

No. P63 / R63 & P66 / R66 series power supplies do NOT allow query's to be sent without putting the unit into remote control.

[\[Return to Summary of Questions\]](#)

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. P63 / R63 & P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A13. Must I connect remote sensing to operate my P63 / R63 or P66 / R66 product line?

No. Remote sensing is not required or recommended for P63 / R63 & P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A14. What maintenance is required for my P63 / R63 or P66 / R66?

P63 / R63 & P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A15. What is the efficiency of my P63 / R63 or P66 / R66, and how do I use this to calculate input power?

Typical P63 / R63 & P66 / R66 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.

[\[Return to Summary of Questions\]](#)

A16. 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.

[\[Return to Summary of Questions\]](#)