



GAMA Electronics, Inc.

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RF Receiver Model RF120V1PR3P-WP Instruction Manual

Overview.

The RF120V1PR3P-WP is a RF remote control operating at a fixed frequency of 340 MHz. The receiver operates from 120 VAC single-phase, 60 Hz power source and provides a polarity reversing output for use with certain AC powered hoists. The system consists of the RF receiver/power relay module and a RF transmitter. The control is designed to be interconnected to the hoists' wired switch pendent. The output is rated at 20-amperes for a motor rated at 1HP.

Secure communication is accomplished by each transmitter having a unique address that is transmitted when a switch is pressed. The address code must be received by the RF receiver to activate the particular command function. A "program" button is provided on the receiver to program the transmitter(s) address into the receiver's memory. An LED on the receiver indicates the receiver's programming status and illuminates when the receiver is energized. The receiver is encased in urethane potting compound and installed in a weather resistant enclosure. The operating range is at least 100 feet.

Polarity reversing output:

The transmitter has two buttons assigned to the motor output. The transmitter up (^) switch runs the motor in one direction and down (v) switch runs the motor in the opposite direction. A toggle switch is mounted on the receiver and provides manual control of the output in case the transmitter is not available.

Maximum ratings:

Power for the receiver can be in the range of 100 to 132VAC. The relay contacts are rated at 20 Amperes, 1HP. The operating temperature range is 0° F to 160° F.

Note: The relay contacts are isolated from the AC input to the receiver. Power consumption of the RF120V1PR3P-WP is less than 1.0-ampere.

Dimensions:

Receiver dimensions are approximately 5.75" L x 4" W x 2.5" H.

Input/output connections:

Refer to the wiring diagram for input power and motor output connections. The RF remote control is supplied with a cable that contains 5 wires that are terminated with ¼-inch male push-on connectors. You will need to document the existing wiring of the pendent hoist since the pendent will be taken apart and wires removed so the RF remote control can be interconnected. This information will also be needed in case the pendent has to be rewired to the switch to operate the hoist in the future. Perform the following steps to interconnect the input power to the RF receiver and output to the hoist.

1. Disconnect AC power to the hoist. Locate the hand held switch pendent and remove the hardware to access the wires connected to the switch.
2. Carefully document the color and location of each wire connected to the pendent switch terminals, this will be needed for future reference if the pendent has to be reconnected for operation of the hoist. The wires connected to the switch have ¼-inch female connectors.
3. Refer to the wiring diagram that shows the colored wires from the remote control output cable and interconnect these wires to the wires that were terminated to the pendent switch.
4. Connect the Line and Neutral AC input power to the input power terminal block on the receiver.
5. Reconnect AC input power to the hoist.

Momentary/Latching Operation:

The remote control is designed to operate in a momentary mode, so the transmitter switch must be pushed and held down to run the outputs. This is the recommended mode of operation for safety reasons since the operator should be present while operating the remote control and can stop an output by releasing the transmitter switch. The operator can elect to configure the remote control output to latching operation; the transmitter switch is pushed and released and the output will continue to run until the transmitter switch is pushed again. To configure the remote control for latching operation, open the receiver enclosure cover to access the circuit. Locate the red wire jumper as shown in the installation diagram. Using wire cutters, cut the jumper wire, the unit is now configured for latching operation.



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Programming instructions:

Each transmitter has its own unique internal address that is transmitted whenever a switch on the transmitter is pressed. The receiver needs to be programmed to respond only to the transmitters it is intended to operate with. The following steps configure the receiver to operate with a particular transmitter(s). Up to thirty transmitters can be programmed to one receiver. Please read the entire programming procedure before starting. Prior to programming the receiver, verify that the receiver is connected to the input power. When the receiver enters the program mode, all previous transmitter addresses that were programmed will be erased from the receiver's memory.

1. Locate the pushbutton labeled "PROGRAM" on the receiver. Press and hold this switch until the red LED next to the program switch illuminates (approximately 5 seconds). The receiver is now in the transmitter program mode. Release the program switch. At this point all previously programmed transmitter addresses are erased from the receiver's memory.
2. Press and release any switch on the transmitter and verify that the red LED on the receiver extinguishes and then illuminates (blinks once).
3. Within 5-seconds of Step 2, press a switch on the next transmitter to be programmed. The red LED on the receiver will extinguish and illuminate one time for the first transmitter being programmed, twice for the second, three times for the third, four times for the fourth etc. The receiver will not respond to transmitters that have already been programmed.
4. After 5-seconds of no switch being pressed on the transmitter(s) the receiver will return to normal operation. The red LED on the receiver will blink rapidly, then extinguish. The receiver is now in the normal mode of operation. This completes the programming instructions. The receiver will retain all of its programming even when power is removed.

Long Range Antenna operation:

The standard remote control is supplied with an antenna that provides an operating distance of 100-feet under ideal conditions. To increase the operating range or if the receiver is mounted in a metal enclosure you can purchase the long range antenna assembly, model LRA-340. The internal antenna circuitry must be disabled to use the long range antenna. Open the receiver enclosure cover to access the circuitry. Locate the white jumper wire shown on the installation diagram. Using wire cutters, cut the jumper wire. Route the long range antenna connector and cable through the strain relief. Locate the white 3-position connector on the receiver; plug the mating half from the long range antenna into the connector. The unit is now configured with the long range antenna. For best possible range mount the antenna housing facing upwards and vertically, away from motors or other devices that generate interference.