

LRF120VPR1L

User Manual



Overview

The LRF120VPR1L is an RF receiver operating at a fixed frequency of 340 MHz. The receiver operates from 120VAC and provides one polarity reversing output for use with a four/six lead AC motor. The receiver is not designed to operate with any existing hand or drum switch. The receiver is equipped with a manual toggle switch. An additional latching output is available for connecting to a 120VAC light. Up to twelve, three-button keyfob transmitters can be used to activate the receiver's relay. The receiver has a terminal block for connecting the power and relay contacts. Each transmitter has a unique address that is transmitted when a button is pressed. 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 a waterproof enclosure. The operating range is approximately 500 feet. Operating temperature range - 0° F to 160° F.

Polarity reversing output

The transmitter has two buttons assigned to the motor output. The up (^) button runs the motor in one direction and down (v) button runs the motor in the opposite direction. The reversing function is accomplished by reversing the phase on two of the 4 motor connections at the receiver output.

Manual switch

The receiver is equipped with a manual switch. This switch replaces any hand or drum switch previously connected to the motor.

Light Output

The light output is activated using the "B" button on the transmitter. Press button "B" once to latch this output on. Press button "B" again to turn the light output off. The light function is active at all times and does not require the power up sequence to be performed.

Maximum ratings

Power for the receiver can be in the range of 100 to 132VAC. The relay contacts are rated at 20 Amps.

Dimensions

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

Wiring

The first thing to do is be sure there is no power at any of the motor terminals. Disconnect or turn off the circuit breaker to remove power. If a hand or drum switch is connected to the motor it will need to be disconnected. Take notes before disconnecting the switch in the unlikely event it will need to be reconnected. See wiring diagram. 120VAC power is connected to the L (line) and N (neutral) terminal of the receiver. Look up your motor type in the table for motor connections. (See page 4)

NOTE: After completing the installation if the motor goes in the wrong direction, simply swap the wires connected to terminals 5 and 8 in the receiver. The motor will now rotate in the correct direction.

The 120VAC light connects between "COMMON" and "LIGHT" terminals on the receiver.

Programming instructions

Each keyfob transmitter has its own unique internal address that is transmitted whenever a button on the keyfob is pressed. The receiver needs to be programmed to respond only to keyfob transmitters it is intended to operate with. The following steps configure the receiver to operate with a particular keyfob transmitter(s). Up to twelve keyfob 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 program mode, all previous transmitter addresses that were programmed will be erased from the receiver's memory.

Momentary or Latching Output: The transmitter and receiver can be configured for momentary or latching operation. For momentary operation, the output of the receiver will be active for as long as the transmitter switch is depressed and will turn off when the switch is released. In the latching configuration, the receiver output will turn on as soon as the transmitter switch is depressed and released. To turn off the latching output, the transmitter switch must be depressed and released again.

1. Locate the pushbutton switch labeled "PROGRAM" on the receiver. Press and hold this switch until the red LED next to the program switch illuminates (approximately 3 seconds). The receiver is now in the transmitter program mode, release the switch. At this point all previously programmed transmitter addresses are erased from the receiver's memory.
2. For momentary operation, press and release a switch on the transmitter. The red program LED on the receiver will blink once. For latching output, press and release the same switch a second time, the program LED will flash on and off.
3. Repeat previous step for additional transmitters that you desire the receiver to respond to.
4. The receiver will return to normal mode if no transmitter switches are pressed for 5-seconds. The red LED on the receiver will flash and then turn off. 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.

Motor Connection Table

NOTE: all motors are wired for 120VAC operation!

Standard motors with "T" numbers:

Match the T number to the T number in the receiver.

Standard motors with colored wires:

Use blue wire nuts to connect the receiver to motor wires.

Motor BLUE and ORANGE to receiver T1, T3

Motor WHITE and YELLOW to receiver T2, T4

Motor BLACK to receiver T5

Motor RED to receiver T8

A.O. Smith / Baldor motors with L1, L2 terminals and colored wires:

Use blue wire nuts to connect the receiver to motor wires.

Motor terminal L1 to receiver T1, T3

Motor terminal L2 to receiver T2, T4

Motor BLACK to receiver T5

Motor RED to receiver T8

Century/MagneTek motors with terminals:

Motor terminal 1 to receiver T1, T3

Motor terminal 6 to receiver T2, T4

Motor terminal 5 to receiver T5

Motor terminal 6 to receiver T8

EastBay motors with terminals:

Motor terminal E to receiver T1, T3

Motor terminal D to receiver T2, T4

Motor terminal A to receiver T5

Motor terminal B to receiver T8

Century AC / A.O. Smith C426 and C523 motors with terminals and colored wire:

NOTE motor wires brown and orange must be connected to terminal 3!

Motor terminal 1 to receiver T1, T3

Motor terminal 6 to receiver T2, T4

Motor terminal 5 to receiver T5

Motor RED to receiver T8. Use blue wire nut to connect the receiver to motor wire.

Century AC / A.O. Smith C926 with colored wires:

Motor BLACK to receiver T1, T3

Motor BLUE to receiver T2, T4

Motor YELLOW to receiver T5

Motor RED to receiver T8

Marathon / GE motors with terminals and colored wires:

Use blue wire nuts to connect the receiver to motor wires.

Motor terminal 1 to receiver T1, T3

Motor YELLOW and WHITE to receiver T2, T4

Motor RED to receiver T5

Motor terminal 2 to receiver T8

Leeson / Ace motors with terminals:

Motor terminal 1 to receiver T1, T3

Motor terminal 2 to receiver T2, T4

Motor terminal 5 to receiver T5

Motor terminal 3 to receiver T8

Emerson motors with terminals:

Motor terminal 3 to receiver T1, T3

Motor terminal 1 to receiver T2, T4

Motor terminal 4 to receiver T5

Motor terminal 2 to receiver T8



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