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RF Receiver Model T-SC-12V Instruction Manual

Overview:

Model T-SC-12V is a 12VDC Polarity Reversing Remote Control with speed control and is designed to provide variable speed bi-directional control of DC motors. Output relays rated at 40A @12VDC. The outputs can be programmed for either momentary or latching operation. In the momentary mode, the outputs are active only when either the forward or reverse button on the transmitter is depressed. In the latching mode, pressing the forward or reverse button starts the motor and it will continue to run until the stop button is pressed. This control incorporates a touch screen transmitter. By utilizing pulse width modulation, the output voltage and thus the speed of the DC motor can be varied from 10% to 100% power in 10 increments. The receiver is housed in a metal enclosure and the electronics are encapsulated for waterproofing. The control is suitable for use in harsh environments. Operating temperature range - 0° F to 160° F. Up to 12 transmitters can be used with each receiver. The control uses code learning to program transmitters. Transmit range is greater than 300 feet under normal operating conditions. Additionally, there are three lead wires that can be connected to an external switch which allows the receiver to be operated without using the remote transmitter. **The black switch lead wire is common.** With the auxiliary switch leads, the motor will operate at the last speed selected on the transmitter.

Maximum Ratings: Power for the receiver can be in the range of 10 to 15Vdc. The receiver is reverse polarity protected. The relay contacts are rated at 40 Amps @ 13.8Vdc. **Power consumption:** 10mA when the relays are de-energized, 45mA when the relay is energized.

Input Power Connection: 12Vdc power connects to the 12V and Ground terminals. Transmitter uses two AAA batteries.

Output Connection: The output of the receiver is connected to the motor + & - terminals.

Programming Instructions: Each transmitter has its own unique internal address. The receiver needs to be programmed to respond only to the specific transmitter it is intended to operate with. The following steps configure the receiver to operate with a particular transmitter or transmitters.

Momentary or Latching Output: The transmitter and receiver can be configured for momentary or latching operation. In the momentary mode, the outputs are active only when either the forward or reverse button on the transmitter is depressed. In the latching mode, pressing the forward or reverse button starts the motor and it will continue to run until the stop button is pressed.

1. The long range antenna must be plugged into the receiver and power must be connected. 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 the "forward" switch on the transmitter. The red program LED on the receiver will blink once. For latching output, press and release the "reverse" switch on the transmitter, the program LED will blink once.
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.

Transmitter Operation: To operate the transmitter, first press and release the blue pushbutton switch on the front of the unit to turn it on. There is 2 to 3 second delay before the screen appears. The two arrows on the display adjust the speed of the motor. Select the desired speed and then press either the forward or reverse button to start the motor. In the momentary mode, the outputs are active only when either the forward or reverse button on the transmitter is depressed. In the latching mode, pressing the forward or reverse button starts the motor and it will continue to run until the stop button is pressed. To save battery power, the display will turn off after 1 minute of no activity.