Model No. FSC-1 Support 877-351-4702

Digital EC Motor Control

This manual covers the following product(s):
FSC-1 Fan Speed Control

Table of Contents

Overview 2
Normal Operation 2
Programming 2
Alarms 3
Menu Map 3
Installation 4
Specifications 4
Wiring 5
Wiring 6
Wiring 7

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Overview

The FSC-1 is a digital EC motor control. The control has a simple five button interface with a four digit LED display. All programmable parameters can be accessed through the user menu with the five button interface. There are two ECM connectors with modulating outputs, one 0-10V output, and one 0-10V DC input (MUST BE ISOLATED). The FSC-1 is compatible with Telco Green, Genteq, Nidec, and U.S. motors. User parameters are stored in non-volatile memory, and are retained even during a power outage. The FSC-1 is powered by 24V AC.

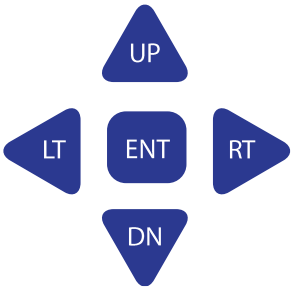
Genteq

Genteq motors use our 0-10V output(Terminal labeled "rpm") as the signal going to the motor. In this case, the motor selection(tyP) in the software does not matter.

Normal Operation

Pulse Application

Every ten seconds the FSC-1 display will toggle between the current percent of run speed and the current RPMs. The percent of run speed can be changed by using the UP▲ and DN▼ keys followed by the ENT key to save your changes. You also have the option of using the control locally or remotely through a 10k potentiometer, 2 Speed Switch, or a 0-10V reference where 0V is 0% and 10V is 100%, unless overridden by the low speed and high speed limits. You can access programming mode by holding the enter key for three seconds.



0-10 Application

In the 0-10V application you are provided a programmable 0-10V reference. The display shows the selected voltage. The voltage is easily changed using the UP▲ and DN▼ keys followed by the ENT key to save your changes.

Programming

Please refer to the "FSC-1 Menu Map" on page 3 for editing parameters within program mode. To enter program mode hold the ENT key for three seconds until "APPS" is displayed. Use the UP▲ and DN▼ keys to navigate to the desired menu parameter shown in column 1 of the menu map on page 3. To edit a menu parameter press the RT▶ key once on the desired parameter. The current value will be displayed in column 2 of the menu map on page 3. Also use the UP▲ and DN▼ keys to change values within a parameter. The parameter will blink until the user presses ENT to save the changes or the LT◀ key to cancel without saving. If a key is not pressed for fifteen seconds, the control will return to normal operating mode. Different parameters are as follows:

1. "APPS": Prompts the user to select which application to utilize.
2. "SP1": Sets the speed of the motor for Setpoint 1.
3. "SP2": Sets the speed of the motor for Setpoint 2.
4. "LSPD": Sets the lowest possible speed the motor will operate at. If the DN▼ button is pressed one more time passed the "LSPD" limit, the control will turn off.
5. "hSPD": Sets the highest possible speed the motor can operate at.
6. "tyP": Sets the type of motor the control is configured for. The FSC-1 is compatible with Telco Green, Genteq, Nidec and US motors.
7. "re": Selects local control or remote control type (10k Potentiometer, 2 Speed Switch or 0-10V Reference). When the 0-10V Reference(MUST BE ISOLATED) is utilized with Low Speed and High Speed limits, the FSC-1 will cap the percentage to what the limits are set to. So if Low Speed is set to 30%, anything up to 3 Volts will output 30%. If High Speed is set to 70%, 7 Volts and above will output 70%.
8. "ver": Allows the user to view the current software version number.

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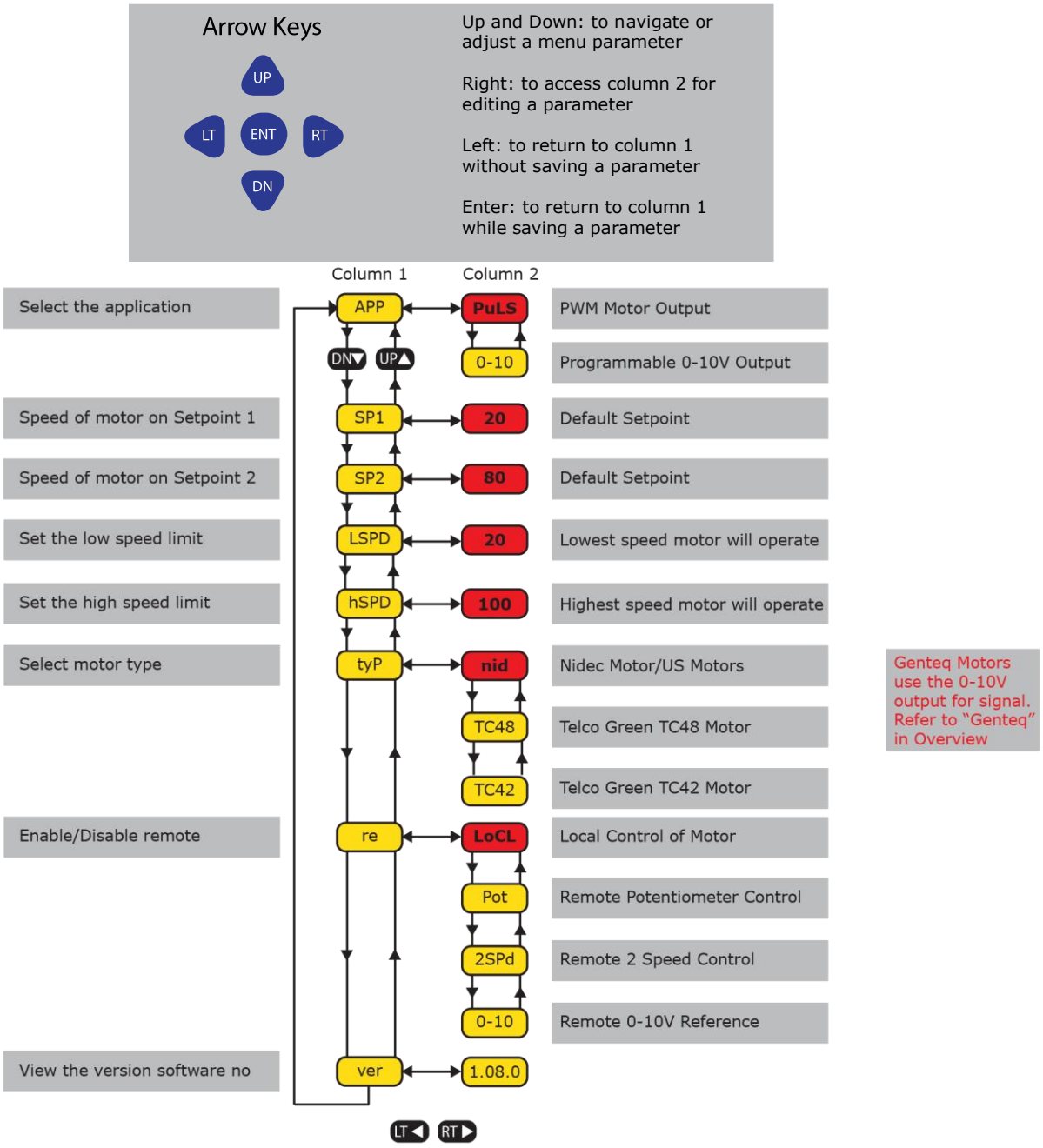
Alarms

Error messages on the FSC-1 will scroll across the display with a detailed message. This will help users to resolve issues faster. Possible errors are as follows:

1. “oFF”- The FSC-1 is not receiving RPM feedback.

To resolve an issue, refer to “Installation” on page 4 for proper wiring connections.



(Red indicates default parameter)

FSC-1 Menu Map

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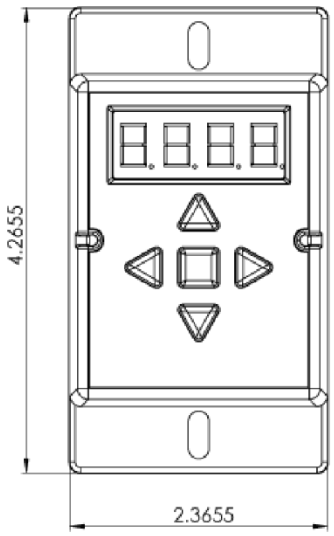
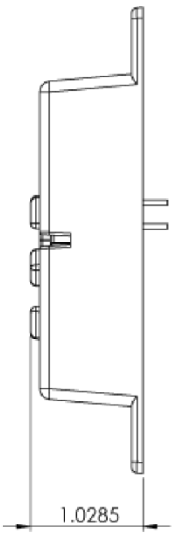
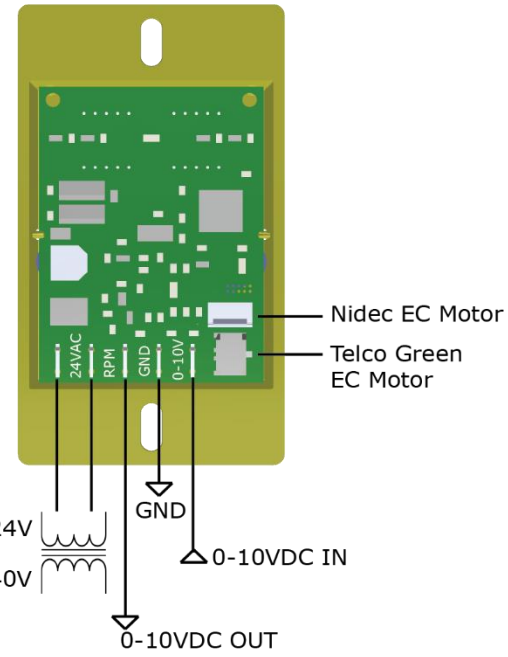
Installation



FSC-1 Front Panel



FSC-1 Side View



Specifications

Power Requirements	24VAC @ 20VA
Ambient Operating Temperature	-40°F-140°F -40°C-60°C

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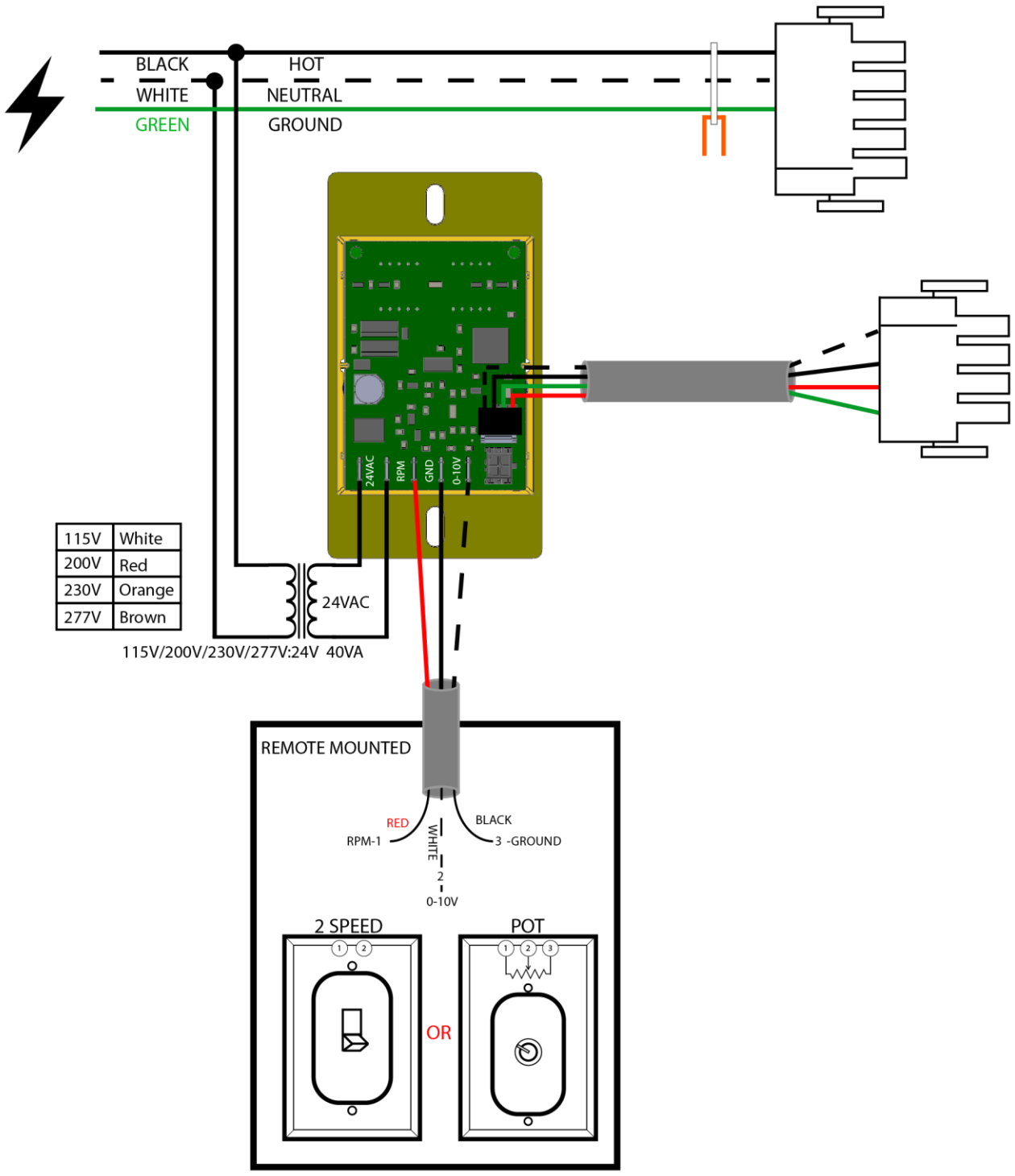
NIDEC/US MOTORS - PERFECT SPEED



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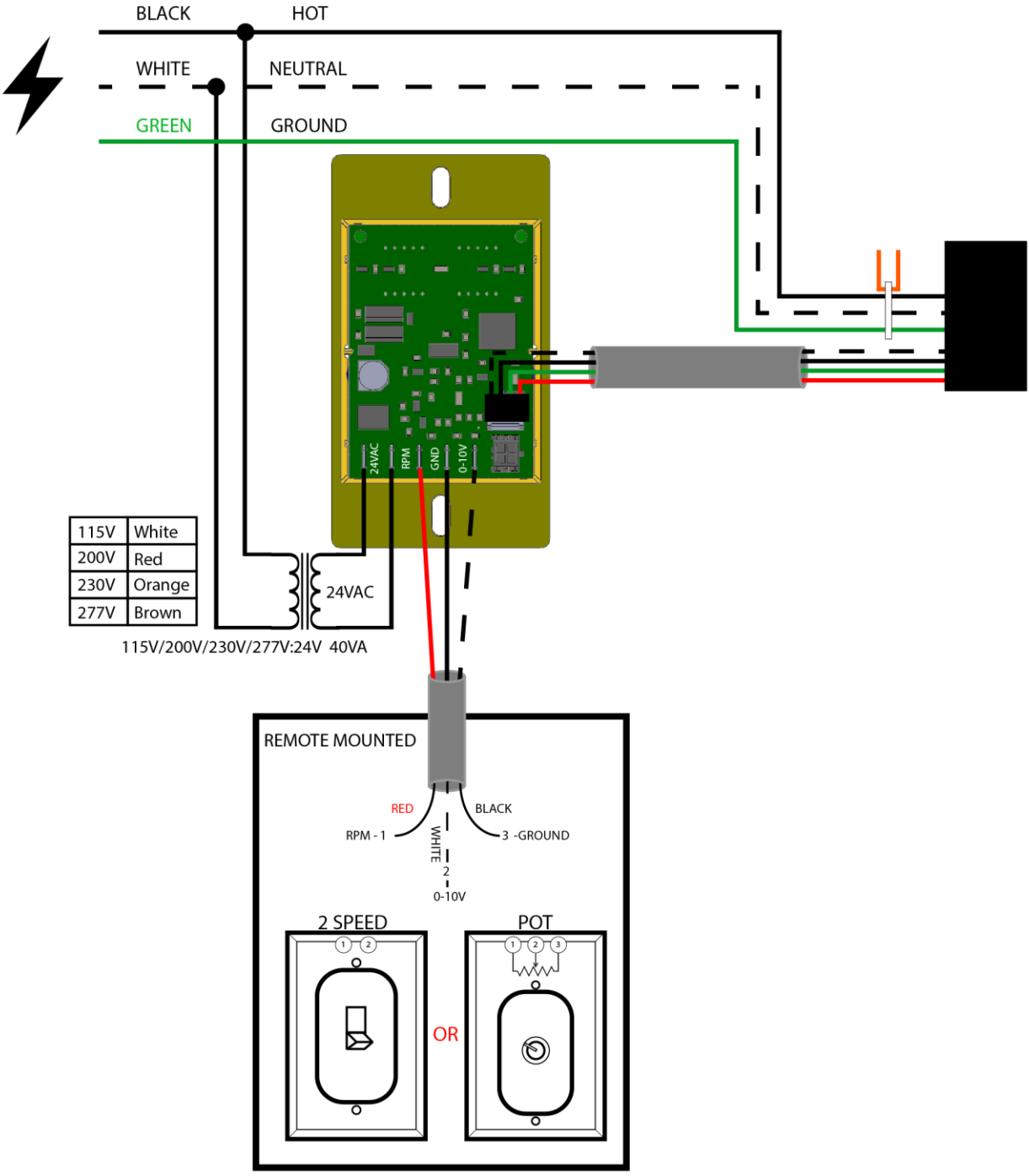
NIDEC/US MOTORS - PERFECT SPEED 120



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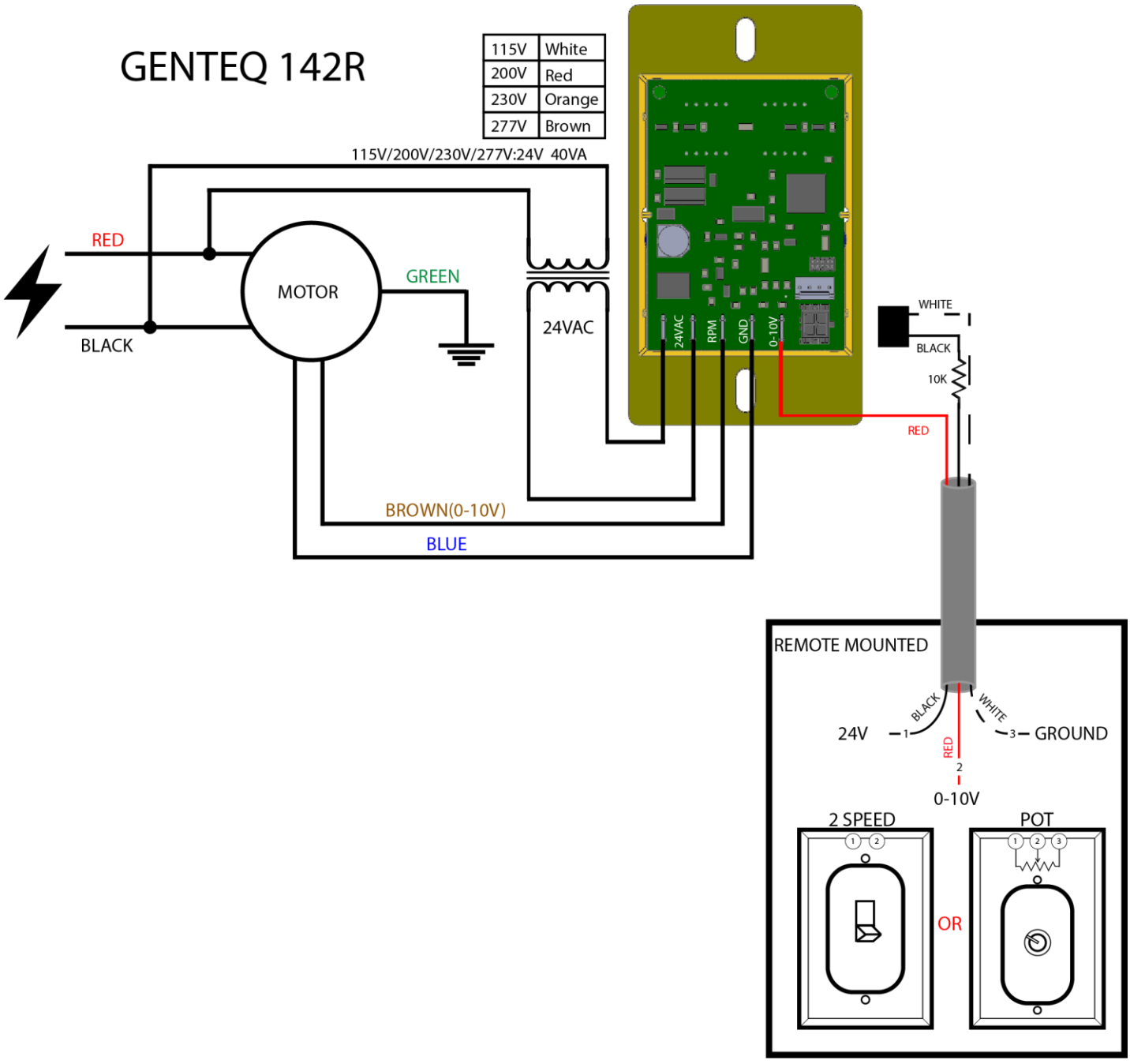

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