



300C and 350C OEM Wiring Notes

Version A

Low Voltage Connections – Discrete Components

To connect together an OEM chopper with discrete components the following connections should be made.

Motor

The motor should be connected between Terminals 1 (or 2) and 18 of the PCB. Positive connection to Terminal 1 (or 2). Negative connections to Terminal 18.

A power on LED can be connected between Terminals 3 and 4. Source voltage is 26V with a 3.3KΩ resistor in series.

A 20kΩ speed control potentiometer needs to be connected between Terminal 5, 6, and 7 with the wiper connected to Terminal 5. With the wiper turned so it is shortened to Terminal 7 the motor will be stationary. With the wiper turned so it is shortened to Terminal 6 the motor will turn at maximum speed. (The maximum speed of the motor can be adjusted through the turning of the trim pot mounted on the PCB. Care must be taken not to overdrive the motor.)

Opto-Switch

The opto-switch should be connected to as follows:
LED Anode and Photodetector +5V to Terminal 9
LED Cathode to Terminal 16
Photodetector 0V to Terminal 18
Photodetector Output to Terminal 14

A buffered TTL output reference is available from Terminal 12 and an inverted version from Terminal 13.

If required a second opto-switch can be connected as follows:

LED Anode and Photodetector +5V to Terminal 8
LED Cathode to Terminal 17
Photodetector 0V to Terminal 18
Photodetector Output to Terminal 15

A buffered TTL output reference for the second opto-switch is available from Terminal 10 and an inverted version from Terminal 11.

Low Voltage Connections – Standard 300H Chopper Head

To connect an OEM chopper PCB to a standard 300H chopper head the following connections should be made.

PCB Connection	300H Connection
Terminal 1 (or 2) – Motor Positive	Pin 2 – Motor Positive
Terminal 18 – Motor Negative	Pin 4 – Motor Negative
Terminal 4 – 0V	Screen – 0V
Terminal 9 - +15V	Pin 3 - +15V
Terminal 16 – LED Cathode	Pin 5 – LED Cathode
Terminal 4 – Reference Input	Pin 1 – Reference Output

Power Supply Voltage Connections

Warning

Voltage is tracked across the PCB. It is the user's responsibility that it is not possible for any operator to touch these tracks.

It is also important that the supply to the board is fused with a 1A fuse

The live power supply connection should be made to Terminal 19. The neutral power supply connection should be made to Terminal 22.

For 115V operation connect Terminal 19 to Terminal 21 and Terminal 20 to 22.

For 230V operation connect Terminal 20 to Terminal 21.



Version B

Low Voltage Connections – Discrete Components

To connect together an OEM chopper with discrete components the following connections should be made.

All motor and opto-switch connections are made via a 9 pin D-Type connector.

Motor

The motor should be connected between pins 6 and 9. Positive connection to Pin 6. Negative connection to Pin 9.

Opto-Switch

The opto-switch should be connected as follows
LED Anode and Photodetector +5V to Pin 4
LED Cathode to Pin 5
Photodetector 0V to Pin 8
Photodetector Output to Pin 2

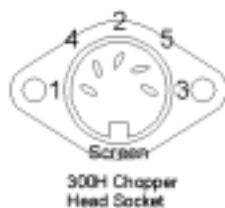
A buffered TTL output reference is available from the bottom left hand BNC connection.

If required a second opto-switch can be connected as follows:

LED Anode and Photodetector +5V to Pin 4
LED Cathode to Pin 7
Photodetector 0V to Pin 8
Photodetector Output to Pin 3

A buffered TTL output reference for the second opto-switch is available from the top left hand BNC connection if fitted.

These diagrams should be used with reference to the preceding comments to connect up a Model 300C/350C OEM unit.



- 1) Reference Output (Blue)
- 4) Motor Negative (Black)
- 2) Motor Positive (Red)
- 5) LED Cathode* (Yellow)
- 3) +5V (White)
- Screen 0V (Green)

* The LED Cathode should be connected to 0V via a 150 Ohm resistor.

Low Voltage Connections – Standard 300H Chopper Head

To connect an OEM chopper PCB to a standard 300H chopper head the following connections should be made.

9 Way D-Type Connection	300H Connection
Pin 6 – Motor Positive	Pin 2 – Motor Positive
Pin 9 – Motor Negative	Pin 4 – Motor Negative
Pin 8 – 0V	Screen – 0V
Pin 4 - +15V	Pin 3 - +15V
Pin 5 – LED Cathode	Pin 5 – LED Cathode
Pin 2 – Reference Input	Pin 1 – Reference Output

Power Supply Voltage Connections

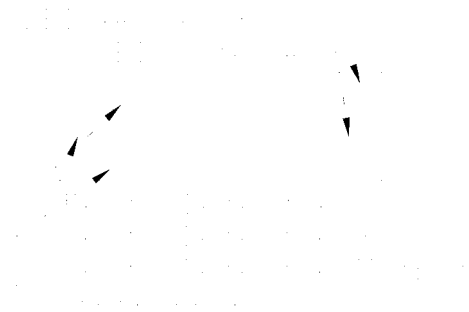
Warning

Voltage is tracked across the PCB. It is the user's responsibility that it is not possible for any operator to touch these tracks.

It is also important that the supply to the board is fused with a 1A fuse

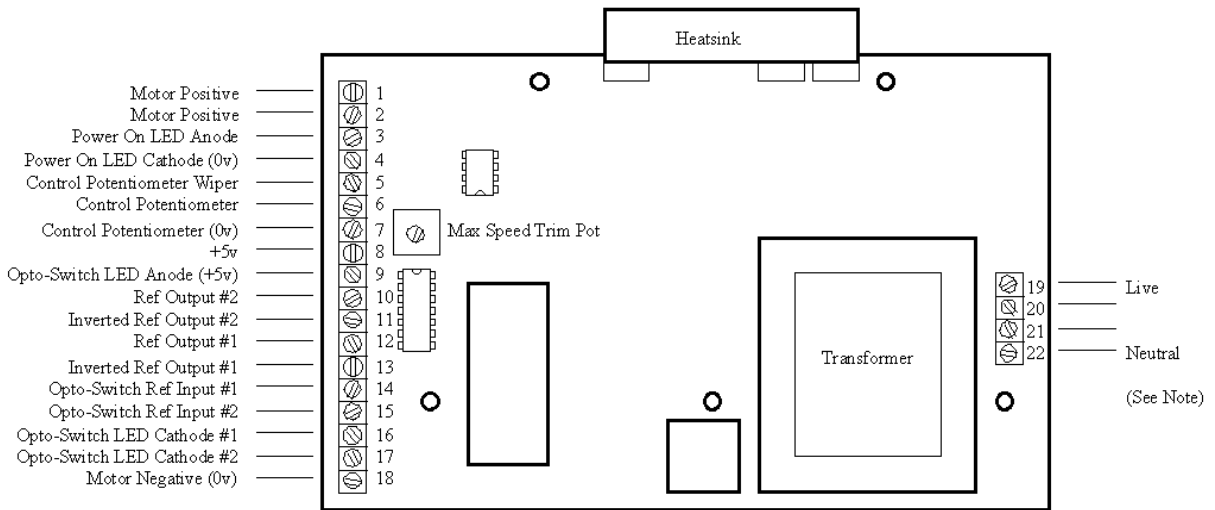
The live power supply connection is made via the IEC connector on the top edge of the board.

A voltage select switch is mounted on the board. Please select the correct voltage before applying power



300S Opto-Switch Top View

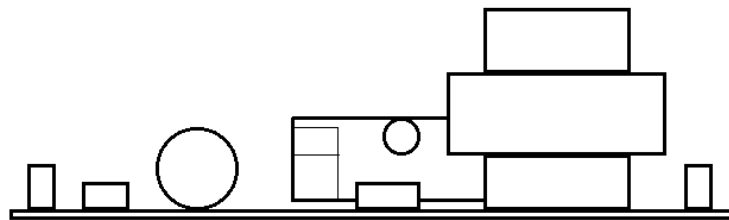




Note:

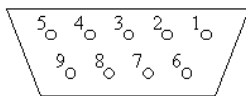
For 115v Operation Connect 115v
Live to Terminal 19, 115v Neutral
to Terminal 22 and Link Terminal
19 to 21 and Terminal 20 to 22

For 230v Operation Connect 230v
Live to Terminal 19, 230v Neutral
to Terminal 22 and Link Terminal
20 to 21



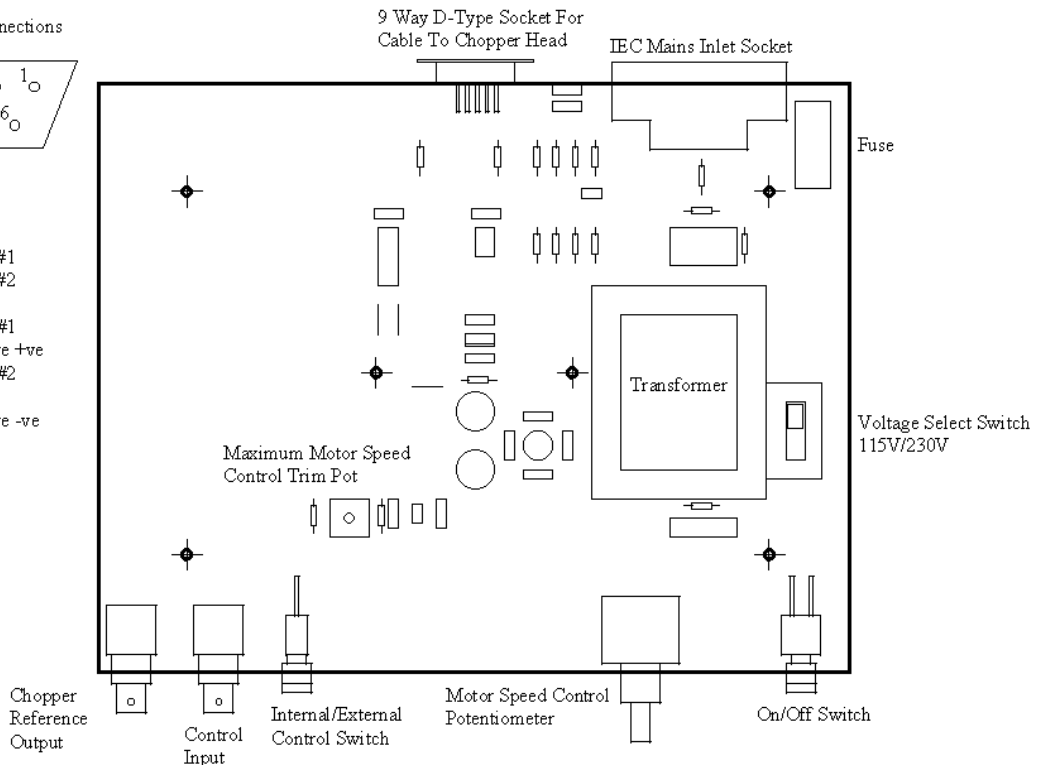
300C and 350C OEM Version A Board Layout

9 Way D-Type Connections



PIN

- 1 Unused
- 2 Reference #1
- 3 Reference #2
- 4 +5v
- 5 Led Drive #1
- 6 Motor Drive +ve
- 7 Led Drive #2
- 8 0v
- 9 Motor Drive -ve



300C and 350C OEM Version B Board Layout

