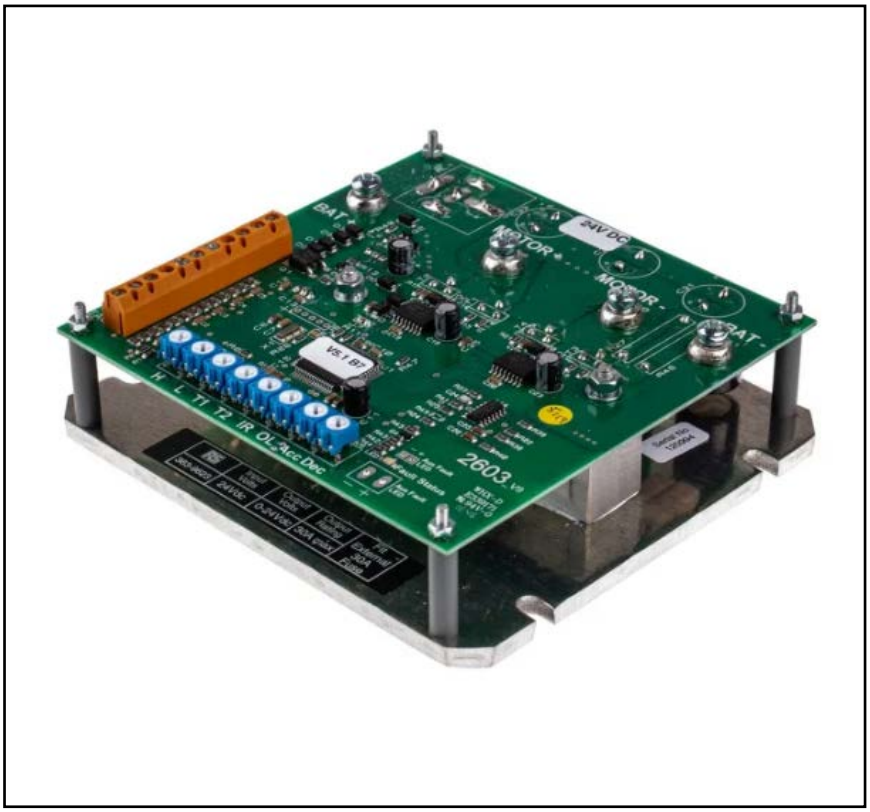
FEATURES

- Potentiometer input control
- Supply voltage of 19 to 34VDC
- Continuous current rating of 15 to 30 A or peak rating of 27 to 56A
- Permanent magnet and shunt-wound motor compatibility
- Skeleton/boxed mounting
- Adjustable acceleration/deceleration
- Momentary or latching operation
- Adjustable current trip
- Thermal protection
- Fault indication
- Electromagnetic Brake output
- Soft Start
- 0 - 100% Speed Control

RS PRO, DC Motor Controller, Potentiometer Control, 19 → 34 V dc, 30 A, Skeleton/Boxed

RS Stock No.: 363-9623



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

These DC motor controllers from our trusted RS PRO range have microprocessors that discretely monitor the load on a motor and adjust the torque accordingly. They're designed for use with permanent-magnet and shunt-wound motors.

General Specifications

Compatible Motor Type	Permanent magnet and shunt-wound motor
Phase	1
Control Input	Potentiometer
Protective Functions	Over current and thermal protection, Protected against short circuit to output and polarity misconnection
Applications	Medical equipment, industrial automation and packaging manufacture

Electrical Specifications

Supply Voltage	19VDC to 34VDC
Current Rating	30A
Voltage Rating	24V
Maximum Output Voltage	0-12VDC at 0-30A continuous, 0-24VDC at 0-30A continuous
Maximum Output Current	30A
Continuous Output Current	15A to 30A
Maximum Time Of Peak Output Current	27A to 56A

Mechanical Specifications

Mounting Style	Skeleton/Boxed
Dimensions	148mm x 132mm x 24mm
Length	148mm
Width	132mm
Depth	24mm

Operation Environment Specifications

Operating Temperature Range	-50°C to +65°C

Approvals

Compliance/Certifications	CE

Adjustments:

	12 V	24 V
H High Speed 0-100 %	0-12 V	0-24 V
L Low Speed 0-66 %	0-8 V	016 V
IR Load Comp 0-33 %		
OL Over Current 0-200 %	0-56 A	0-56 A (Torque Limit)
T1 Current trip 0-200 %	0-56 A	0-56 A Forwards
T2 Current trip 0-200 %	0-56 A	0-56 A Reverse
ACC Acceleration	0.25-25 Seconds	0.25-25 Seconds
DEC Deceleration	0.25-25 Seconds	0.25-25 Seconds

T1fT2 trip functions are disabled for 1 second on selection of Forward or Reverse.
Temperature derating occurs between 45˚C to 65˚C. Temperature trip occurs after 65˚C.

Fault Indication: Green LED

Continuous Flashing No Fault

1. Over Current
2. Current Tripped
3. Low Supply Voltage
4. Over temperature derating
5. Temperature Tripped
6. High Supply Voltage

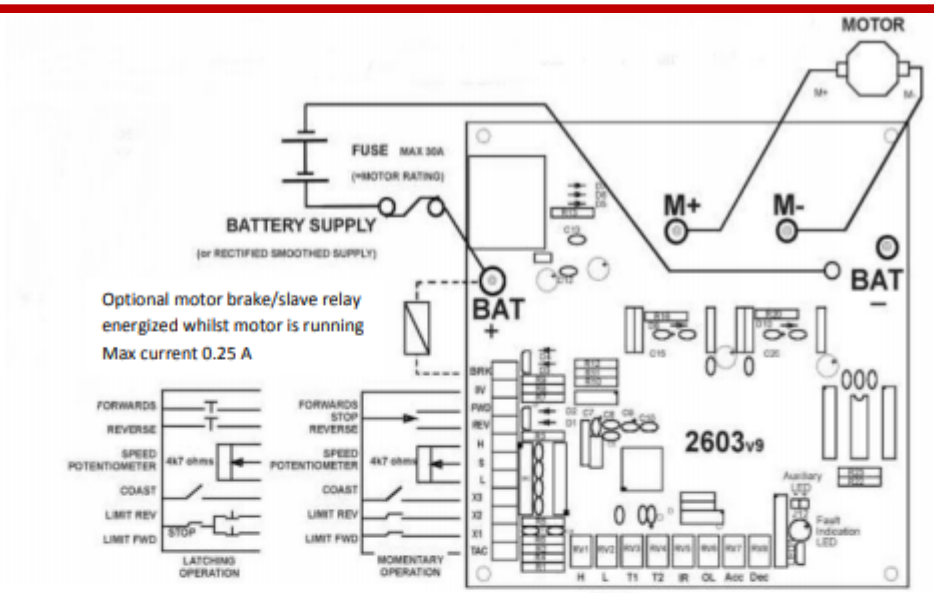
(Fault flashing is reset on reselection of motion)

Operation:

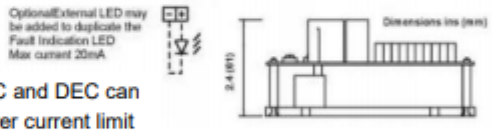
1. Mount the controller on a suitable metal heat conducting back plane to aid thermal dissipation
2. Connect the motor to the M+ and M- connections
3. Choose momentary or latching operation (for latching connect TAC to O V)
4. Connect the speed potentiometer (4k7 ohms) to HSL and connect the forward/reverse/stop switches
5. Connect limit switches or bypass them by connecting X1 and X2 to 0 V
6. Connect battery supply via a suitably rated fuse to BAT+ & BAT-

Presets:

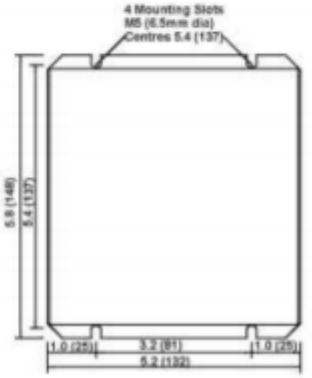
H High Speed
L Low Speed
OL Current Limit
IR Compensation
T1 Current Trip
Forwards
T2 Current Trip
Reverse
ACC Acceleration
DEC Deceleration



When the supply is on, the green LED should glow continuously. Selection of forward or reverse will permit the motor to run dependant on speed.



Adjust presets H and L to give a required speed range. The presets ACC and DEC can be adjusted to give required acceleration and deceleration rates. The over current limit OL may be reduced to match the motor rating, the maximum setting is equivalent to 200 % of the continuous current rating. The load compensation may be increased if required giving better speed holding at low speed under varying torque conditions, care should be taken in order not to overcompensate making the speed regulation unstable. The current trip levels should be set at maximum except when a preset torque limit is required to stop the motor. T1 and T2 operate for forwards and reverse and should be set lower than the instant current limit OL when required. If the trip level cannot be suitable set due to acceleration current, increase the acceleration preset to reduce the peak current when starting! If the continuous thermal rating of the controller is exceeded, the control will reduce the current limit progressively between 50˚C and 65˚C and finally trip out above 65 ˚C. Reduced operation will continue between 50˚C and 65˚C whilst derating, however attention should be given to the suitability of the load and the thermal cooling of the heatsink.



Under fault conditions the green LED will flash repeatedly. The number of flashes will indicate the type of fault present. An external LED can be added to duplicate the fault indication LED.