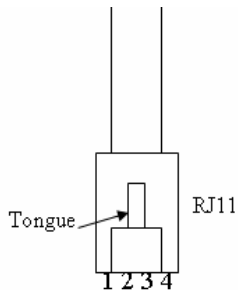
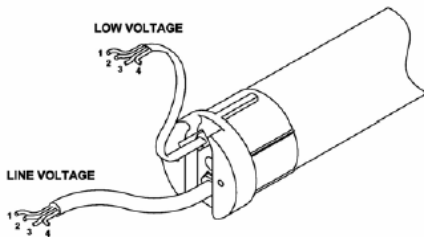
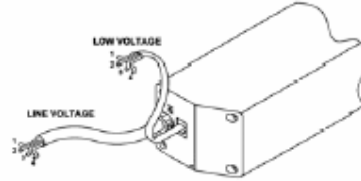


Elegine Motor Wiring Guide

ETM 50



ECM 30 and ECM80



Extra Low Voltage (RJ11) connection:

1	Black	0V
2	Red	5V
3	Green	Direction 1
4	Yellow	Direction 2

Supply Line Voltage connection:

1	Green/Yellow	Earth
2	Blue	Neutral
3	Red or Brown	Supply (110/230V)
4	White or Black	Supply (110/230V)

Control options are (after programming)

Option 1 - RTS remote or Extra Low Voltage control

Note the switch used can be either a standard wall switch or a controllable relay switch as part of a Building Automation System (BAS).

Connect both supply line voltage Red (or Brown) and White (or Black) conductors together into 110/230V supply. Connect Neutral and Earth.

This will activate the RF receiver and the RJ11 low voltage control circuit permitting both low voltage BUS line and RF control at the same time.

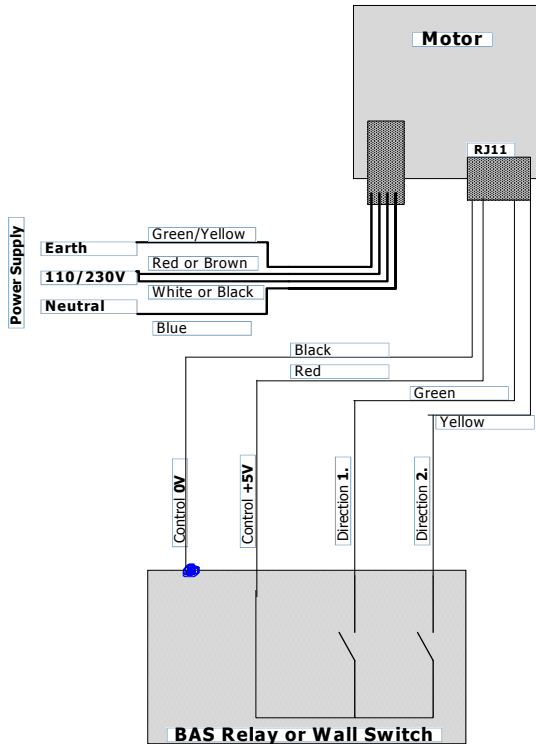
Option 2 - line voltage BAS or switch control for switch power models ONLY

Connect the Red (or Brown) and White (or Black) to 110/230V supply through interlocking relays or independent switch. Connect Neutral and Earth.

This will deliver a supply line switched power to the motor for switched supply control only (no RF or RJ11 extra low voltage control is possible).

To program the motors, please refer to the relevant programming guide for instructions.

ELV (extra low voltage) switching



Wiring notes:

- ELV switching. To initiate 5V control signalling (and also Elegine RF remote control of motors) common up the twin 110/230V supply cables
- No parallel connection of low voltage control cables from motors
- For RF control only there is no requirement to connect the ELV (RJ11) control cable.

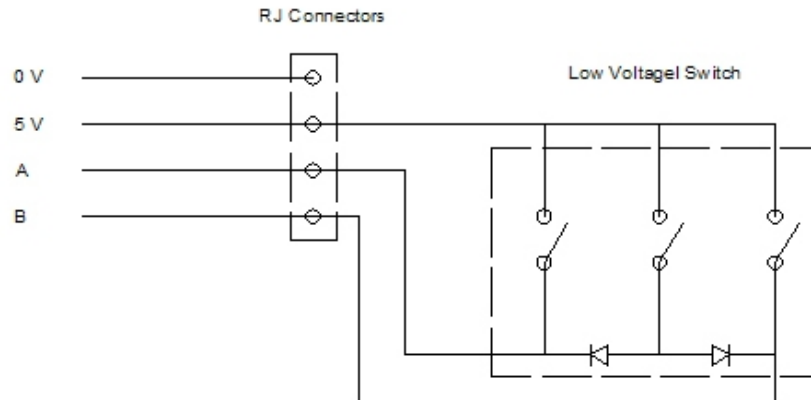
Control hardware interface to the motor or group:

- Controllable relay with two (2) x dry contacts (One for open, one for close and a common).
- For ELV control 4 core cable (minimum 4x0.75mm) (Options include approved shielded phone cable type JY-ST x 0.6 mm or Cat5e) terminated to RJ11 for connection to motor socket.

Control interface program parameters:

- 1 second closure of up or down relay sends motor to programmed end limits.
- To program the relays controlling the motor set the key or button function to "Timer" in "Toggle" mode. Set timer for one (1) second.

Where a STOP function is required from a BAS; the following wiring configuration is required



Notes:

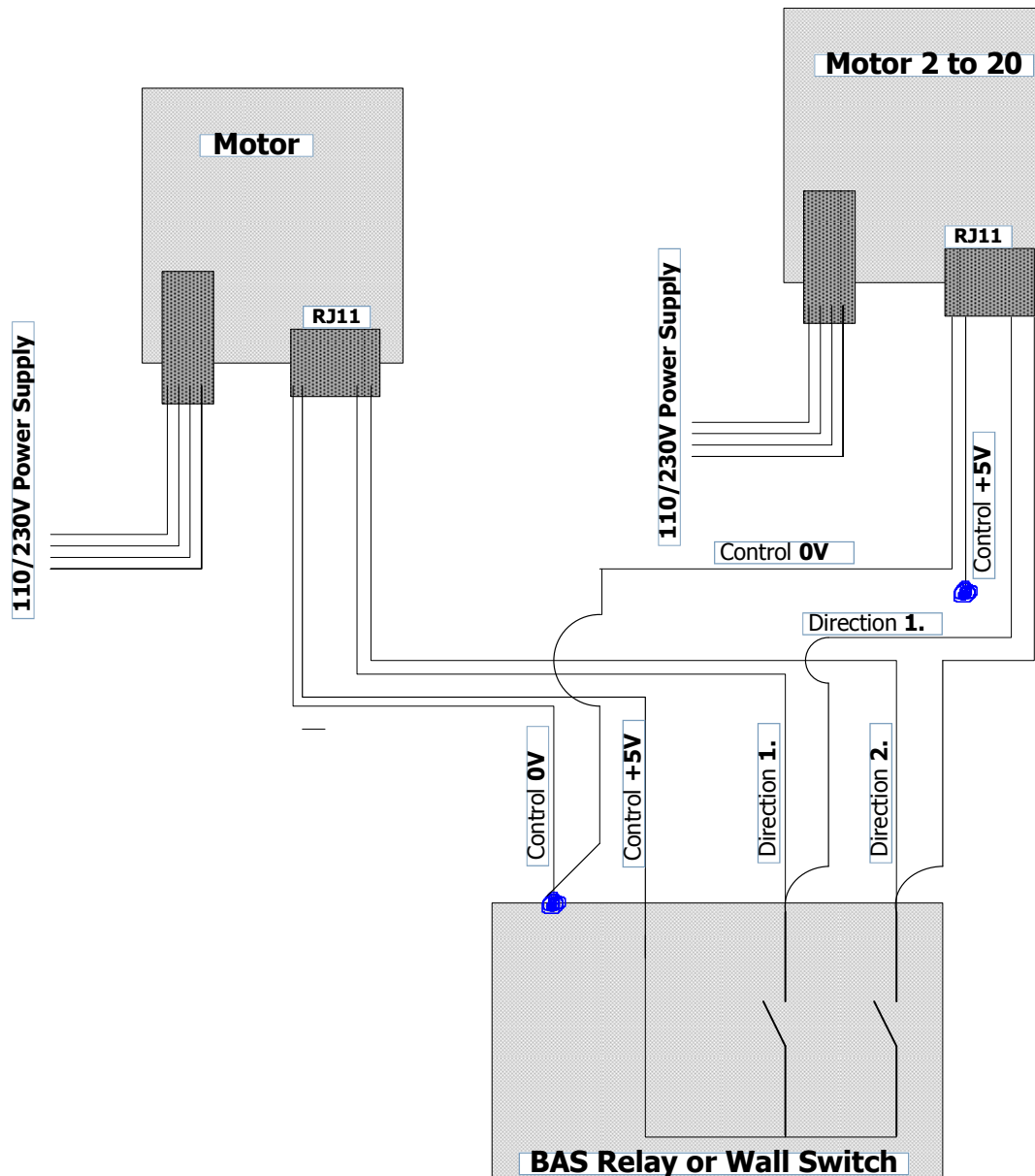
- The two outside relays control motor, direction A and direction B.
- The centre relay provides the **STOP** function. Once the switch is closed, regardless of which direction of motor travel, the motor will STOP.
- The diodes used should be rated to a minimum capacity of 5V

Group Control using ELV switching

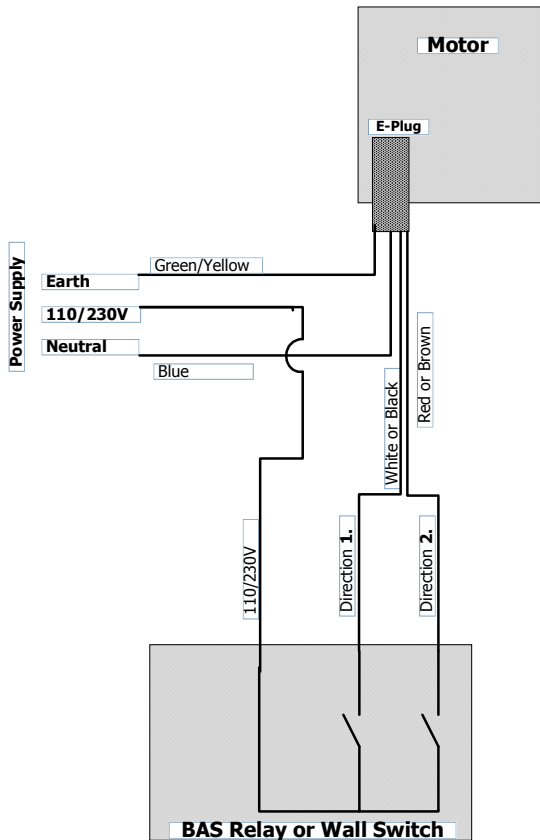
To allow group control it is required to common up all the 0V and utilize the +5V signal from a single motor to loop back (through a controlled relay) to all IEA & IEB inputs of each motor in the group.

Notes:

- All motors must be commissioned (limits set) prior to commoning up ELV cables.
- Up to 20 motors can be connected in this way with ONLY one +5V control signal providing directional control commands. If more than 20 motors need to be grouped by a low voltage switch, the output of +5V from each motor should be linked together at a special connecting box provided by Elegine.
- Each additional +5V control cable should be suitably terminated to prevent short circuit feedback.



110/230V supply switching



Wiring notes:

- Connect motor with a 4 wire flexible cable. Mains power switched between two active supplies for directional control. The Neutral wire is Blue and Earth is Green/Yellow.
- No parallel connection of motors. DO NOT connect 2 or more motors to a single switch function. The capacitor between the open and close supply of one motor will cause feedback to other motors connected in parallel.

Control hardware interface to the motor or group:

- Controllable relay with two (2) x dry contacts (One for open, one for close and a common).
- A timed closure of 'open' or 'close' relay sends motor to programmed end limits. Initially set timer for two (2) minutes. Use timed trial to ensure motor run-time allowance is sufficient to allow window covering to reach end limits.
- A 1000ms (1 sec) break between switching motor drive direction is recommended.
- While motor is running, opening the directional supply voltage relay will stop motor.