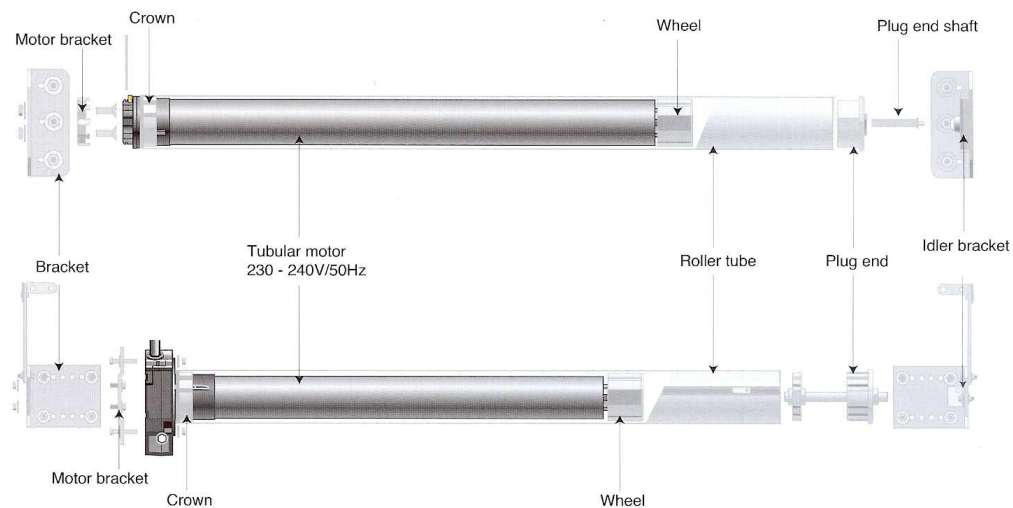




**Motorisation of
Window Coverings
using
Somfy Motors**



Functioning Principal



- The motor drives the wheel
- The wheel drives the roller tube
- The roller tube drives the crown
- The crown drives the limit switch within the motor

ATTENTION

Somfy Motors are not waterproof

Do not hose down with water.

All motors mounted externally require covering!

Motor Range

LS40 Motor

Suitable for roller, roman, 50mm venetian and timber venetian blinds

Power Cable

Blue = Neutral

Brown = Active (direction 1)

Black = Active (direction 2)

Class II double insulated motor (no earth wire)

Nominal Supply Voltage = 220/240V

Current consumption at nominal torque = 100 watts (maximum)

Running Current = 0.5 amps (maximum)

Cable length = 2.5m

Cable size = 3 x 0.75

Important!

LS40 motors must never be wired in parallel.

Damage caused by parallel wiring will not be covered under warranty.

LT50 Motor

Suitable for roller blinds and awnings

Power Cable

Blue = Neutral

Brown = Active (direction 1)

Black = Active (direction 2)

Green/Yellow = Earth

Nominal Supply Voltage = 220/240V

Current consumption at nominal torque = 270 watts (maximum)

Running Current = 1.2 amps (maximum)

Cable length = 2.5m

Cable size = 4 x 0.75

Important!

LT50 motors must never be wired in parallel.

Damage caused by parallel wiring will not be covered under warranty.



Motorisation of Window Coverings using Somfy Motors

ILT Motor

Suitable for roman and roller blinds

Power Cable

Blue = Neutral

Brown = Active

Green/Yellow = Earth

Cable length = 2.5m

Cable size = 3 x 0.75

Data Cable (4 wire flat phone cable)

RJ9 Connections

Red = up command

Blue = common

White = Supply + 5 volts

Yellow = down command

Cable length = 2m

Cable size = Flat 4 core multistrand data cable

Nominal Supply Voltage = 220/240V

Current consumption at nominal torque = 270 watts (maximum)

Running Current = 1.2 amps (maximum)

Altus 40 Motor (integrated Radio receiver)

Suitable for roller and roman blinds

Power Cable

Blue = Neutral

Brown = Active

Class II double insulated motor (no earth wire)

Nominal Supply Voltage = 220/240V

Current consumption at nominal torque = 100 watts (maximum)

Running Current = 0.5 amps (maximum)

Cable length = 2.5m

Cable size = 2 x 0.75



Motorisation of Window Coverings using Somfy Motors

Altus 50 Motor (integrated Radio receiver)

Suitable for roller and roman blinds plus awnings

Power Cable

Blue = Neutral

Brown = Active

Green/Yellow = Earth

Nominal Supply Voltage = 220/240V

Current consumption at nominal torque = 270 watts (maximum)

Running Current = 1.2 amps (maximum)

Cable length = 3m

Cable size = 3 x 0.75

Concept 25 Motors

Suitable for slimline venetians, pleated and cellular blinds

Nominal Supply Voltage = 24V DC

Current consumption = 600 mA (maximum)

Cable length = 2.5m

Cable size = 2 x 0.25

Wiring Considerations LS40 and LT 50 Motors

Do not wire Somfy motors and controls without first consulting the wiring diagrams. Determine which of the brown and black wires correspond to the UP and DOWN direction prior to the final wiring.

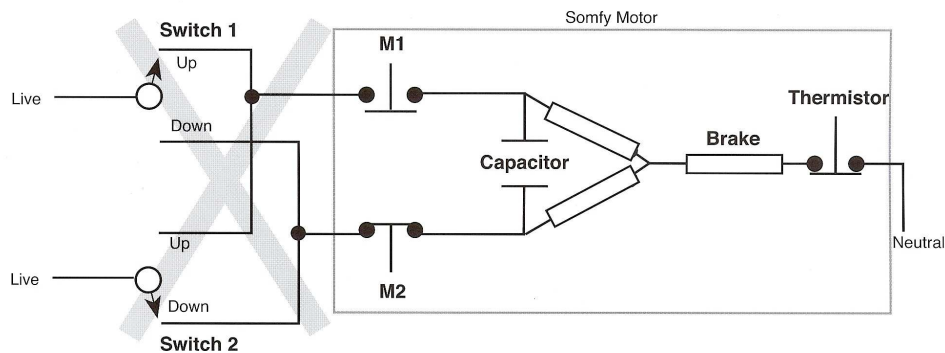
Connect the Earth Wire.

Check that the wire size is in accordance to the number and electrical rating of motors as outlined in local authority guidelines.

Consider climatic conditions such as temperature and humidity when installing Somfy controllers. Install control boxes indoors, or use waterproof boxes for outdoor installations.

Do Not use other switches and controls other than those recommended by Somfy. When using a Somfy control box plug in type, make sure the power supply is switched off before plugging in.

! Use one switch per motor. Do not wire one motor to several switches without using the appropriate Somfy electronic control!



Problem

When 'switch 1' is turned to the UP position, the motor will turn. When it reaches its pre-set position, micro-switch "M1" will open and the motor will stop.

If 'switch 2' is then turned to the down position, the motor will turn in the opposite direction. Micro-switch 'M1' will close. This will cause the capacitor to short circuit through micro-switch 'M1' and 'switch 1'.

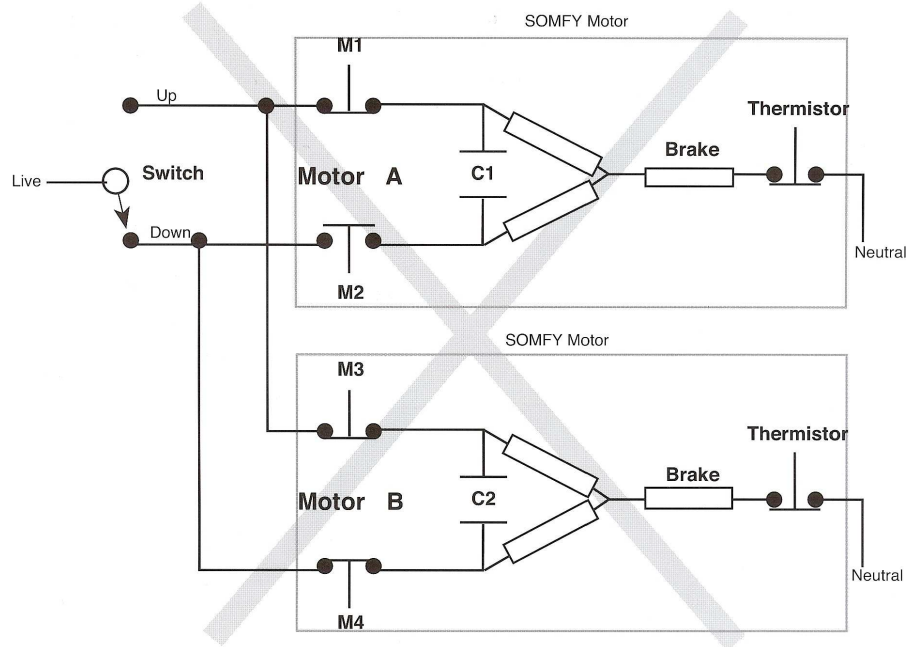
This will damage the contacts in the micro-switch.

Solution

Use Somfy CD4 or other Somfy electronic controller

Wiring Considerations LS40 and LT 50 Motors

! *Do not wire motors in parallel!*



Problem

When the switch is turned to either the up or the down position, both motors will turn together.

One of the motors (A) will stop at its pre-set limit before the other (B).

Current from motor (B) will then flow back through to motor (A) through capacitor C2 and micro-switches M3 and M1.

There will be constant feedback from one motor to the other causing the motors to continuously change direction, but with very little travel.

The motors will eventually burn out.

Solution

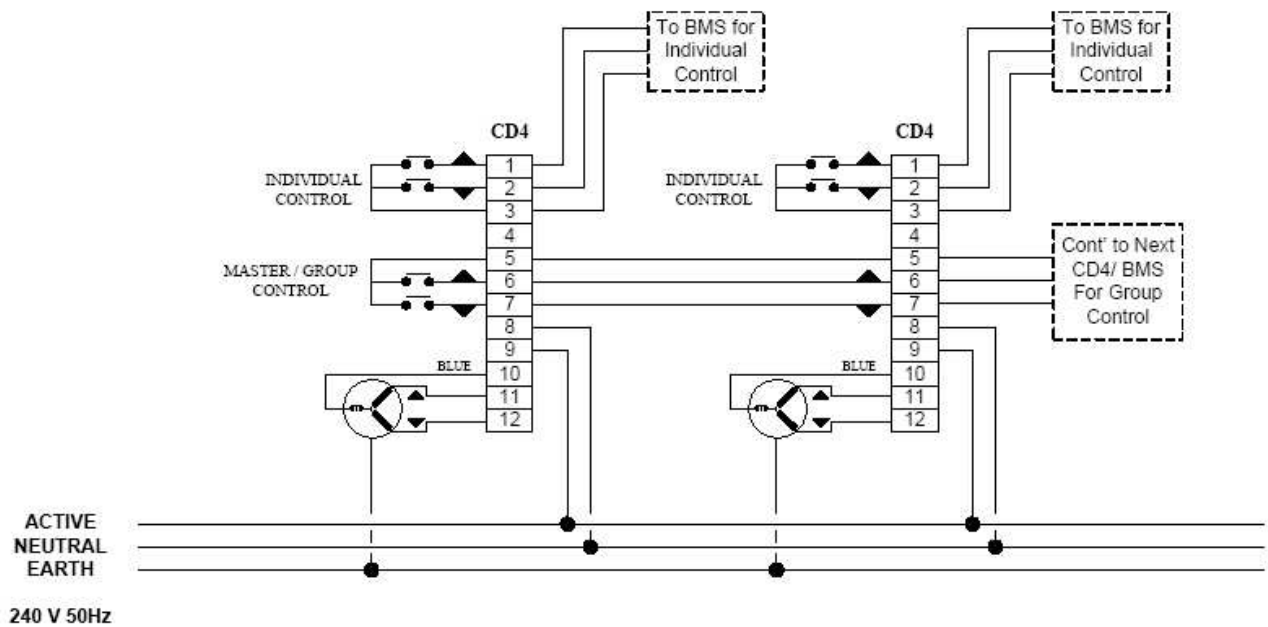
For one or more motors use a Somfy group controller.

Integration to BMS using LS40 or LT50

Option 1

CD4 individual motor controller

- Requires 240V power supply and has 240V latched output
- Provides interlocking between up and down commands
- Dry contact impulse switching (impulse contact closure of 1 second minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop
- CD4 Venetian module available for control of Venetian blinds
- Dimensions: 112 (h) x 52 (w) x 106 (d)



Note: Earth wire not required for LS40 motors

Integration to BMS using LS40 or LT50

Option 2

Moduline Controllers

- DIN rail mounted controllers
- Requires 240 V power supply
- Dry contact impulse switching (impulse contact closure of 1 second minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop

ML9000 Power supply and master controller

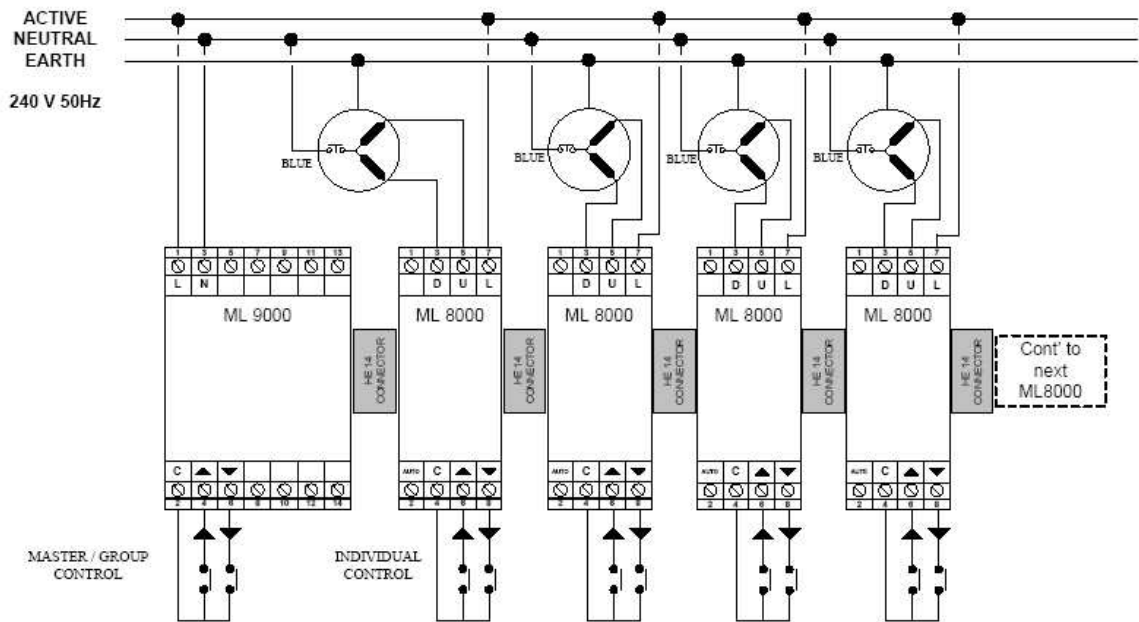
- Can control up to 16 individual motor controllers
- Dimensions: 85 (h) x 70 (w) x 62 (d) – 4 DIN rail slots

ML8000 Individual motor controller

- Control of 1 motor via dry contact impulse switching
- Receives power from a ML9000
- Dimensions: 85 (h) x 35 (w) x 62 (d) – 2 DIN rail slots

ML8100 Individual Venetian motor controller

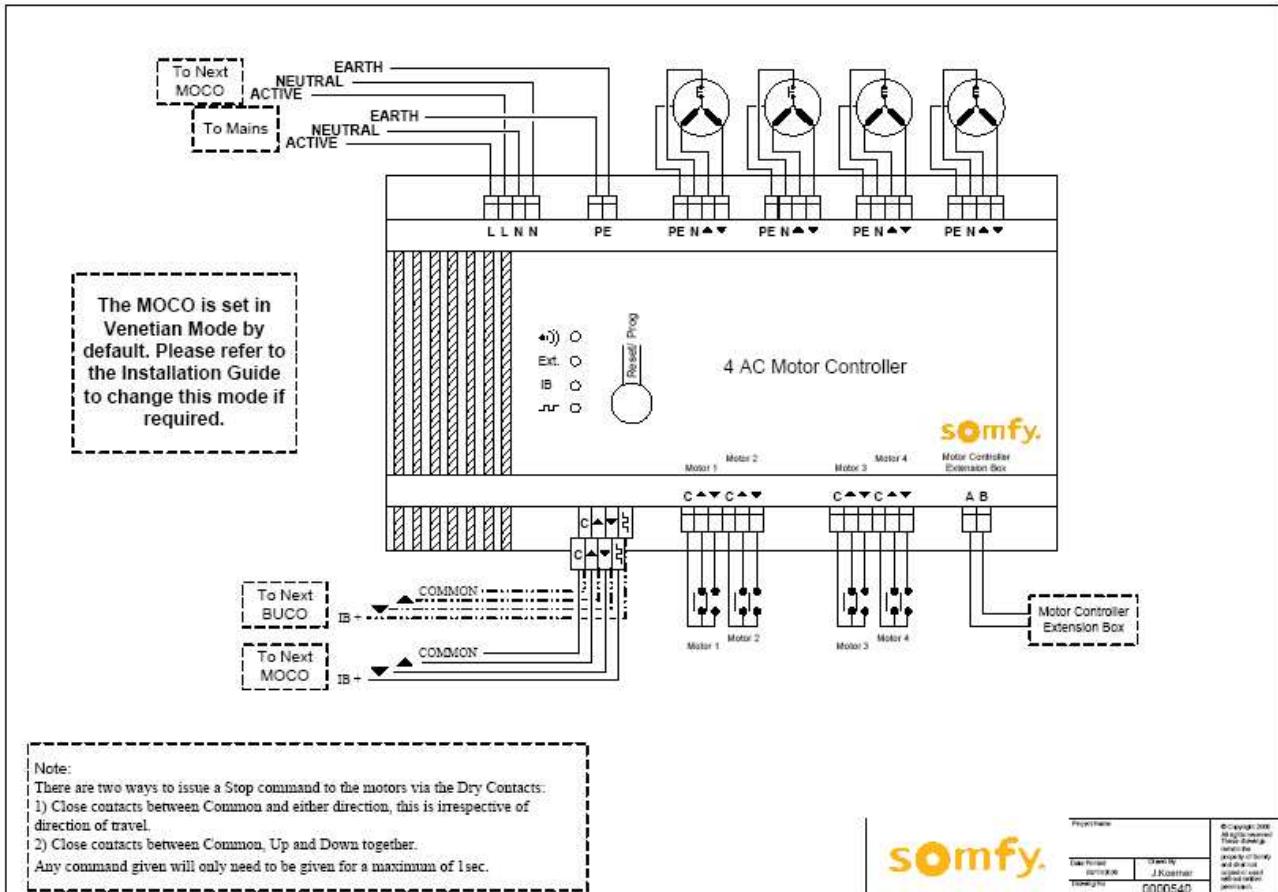
- Control of 1 motor with tilt functionality via dry contact impulse switching
- Receives power from a ML9000
- Dimensions: 85 (h) x 35 (w) x 62 (d) – 2 DIN rail slots



Integration to BMS using LS40 or LT50

Option 3 Animeo IB+ AC Motor Controller

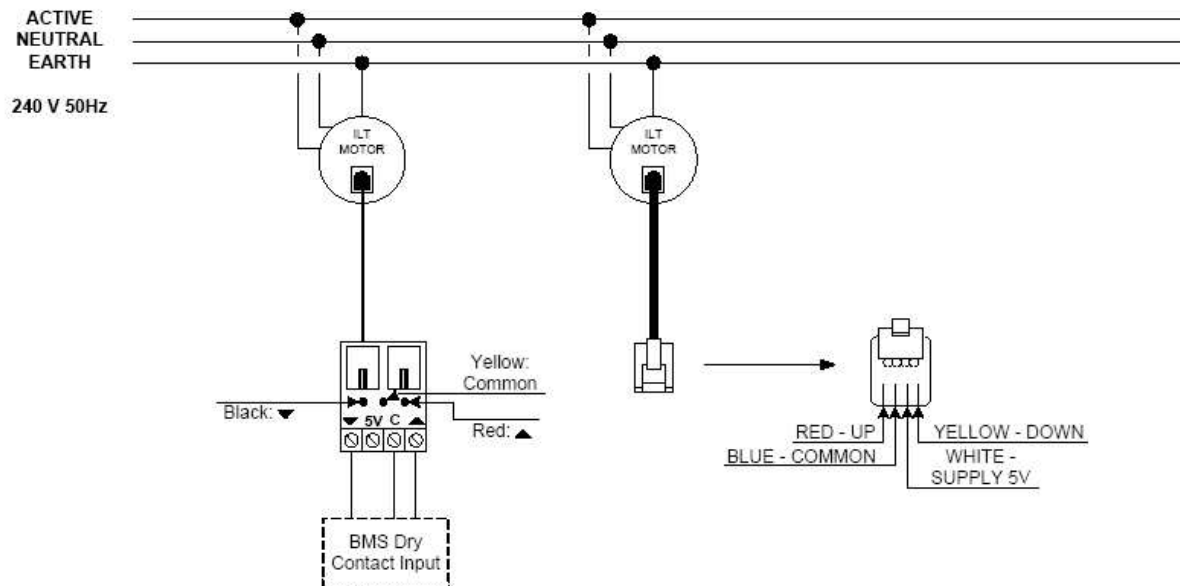
- Requires 240V power supply and has 240V latched output
- Provides interlocking between up and down commands
- Dry contact impulse switching (impulse contact closure of 1 second minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop
- Allows for group and individual control of up to 4 motors
- Surface or DIN rail mountable - 12 DIN rail slots
- Dimensions: 180 (h) x 250 (w) x 63 (d)



Integration to BMS using ILT motors

Phone Plug Connector

- Allows for connection between RJ11 connector and standard data cable
- Dry contact impulse switching (impulse contact closure of 1 second minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop
- Dimensions: 50 (h) x 45 (w) x 17 (d)



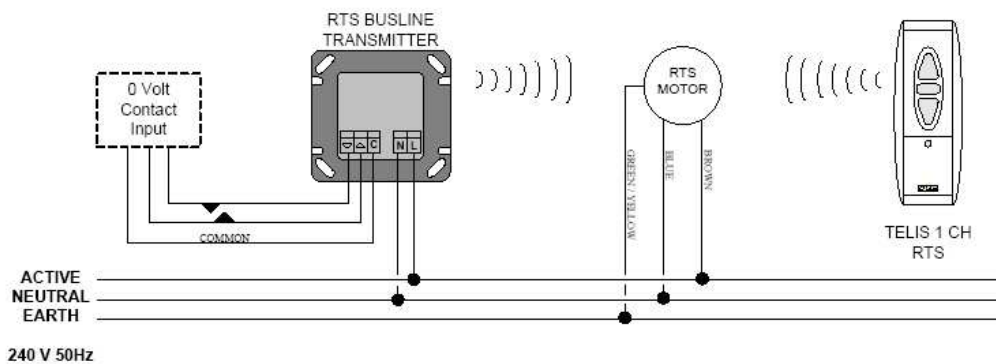
Integration to BMS using Altus motors

Option 1

Busline Transmitter (single channel)

- Requires 240V power supply
- Converts dry contact closure to Radio frequency
- Dry contact impulse switching (impulse contact closure of 5 seconds minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop
- One transmitter for each command required
- Transmission range 30m in open space
- Dimensions: 80 (h) x 80 (w) x 18 (d) (surface mount)
- Dimensions: 80 (h) x 80 (w) x 45 (d) (flush mount)

IMPORTANT: Do not activate more than 1 transmitter at a time. Activation of multiple transmitters simultaneously will result in radio interference and motors will not operate.



Integration to BMS using Altus motors

Option 2

Busline Transmitter (Five channel)

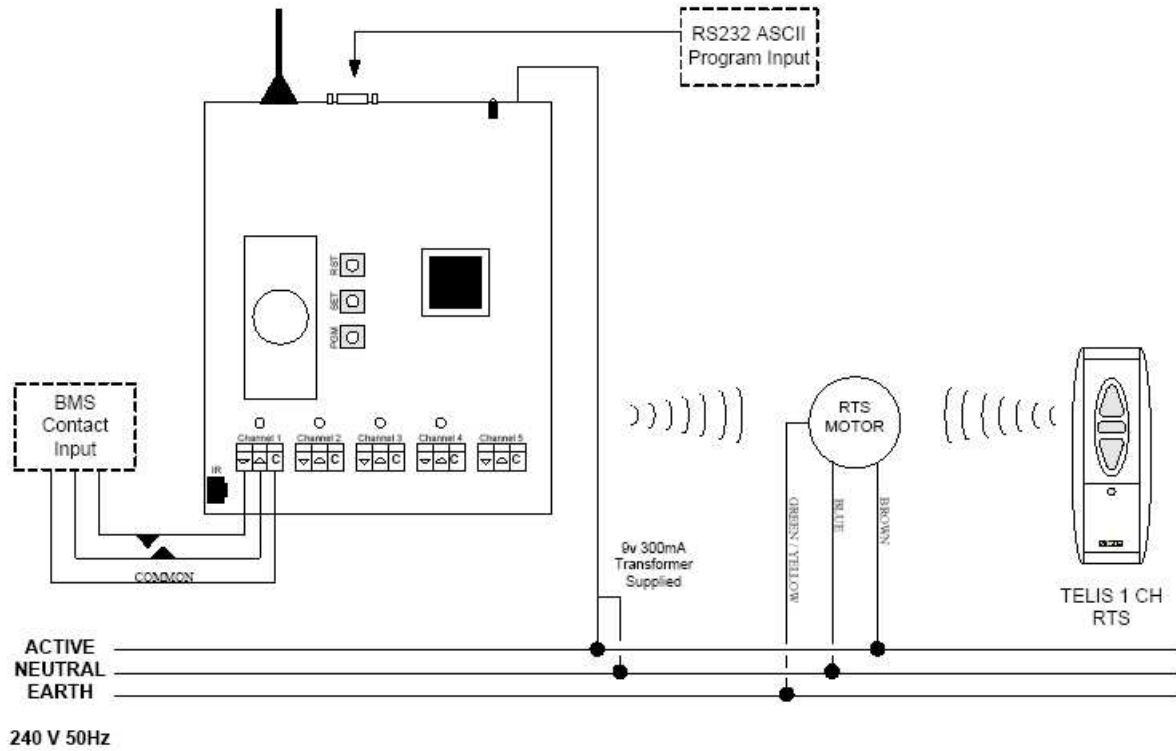
- Control of up to 5 groups of motors
- Requires 240V power supply
- Converts dry contact closure to Radio frequency
- Dry contact impulse switching
 - Impulse contact closure of 5 seconds minimum
 - Contact between common and up or common and down to activate motor
 - Simultaneous contact between a common up and down to create a stop
- RS232 connection
 - Bits per Second- 1200
 - Data bits- 8
 - Parity- None
 - Stop Bits- 1
 - Flow Control - Hardware
 - Commands
 - U1 - Up Command Channel 1
 - S1 - Stop Command Channel 1
 - D1 - Down Command Channel 1
 - U2 - Up Command Channel 2
 - S2 - Stop Command Channel 2
 - D2 - Down Command Channel 2
 - Etc. for the next three channels.
- One channel for each command required
- Transmission range 30m in open space
- Dimensions: 135 (h) x 130 (w) x 50 (d)

IMPORTANT: Do not activate more than 1 channel at a time. Activation of multiple channels simultaneously will result in radio interference and motors will not operate.



Motorisation of Window Coverings using Somfy Motors

Option 2 (cont) Busline Transmitter (Five channel)



Integration to BMS using Concept 25

IRS 300

- Supply voltage 24V DC
- Dry contact impulse switching (impulse contact closure of 5 seconds minimum)
- Contact between common and up or common and down to activate motor
- Simultaneous contact between a common up and down to create a stop
- Dimensions: 76 (h) x 50 (w) x 32 (d)

