

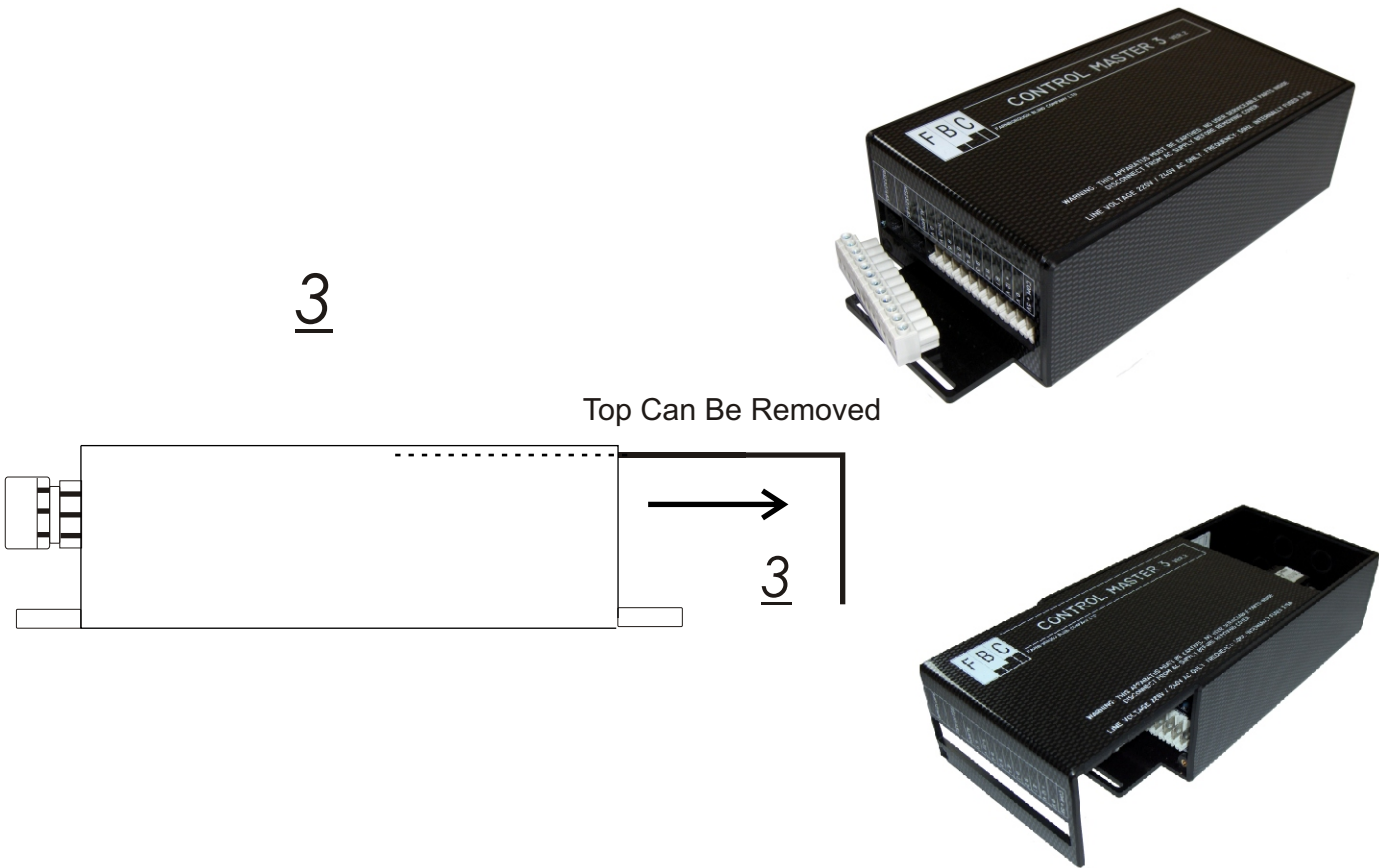
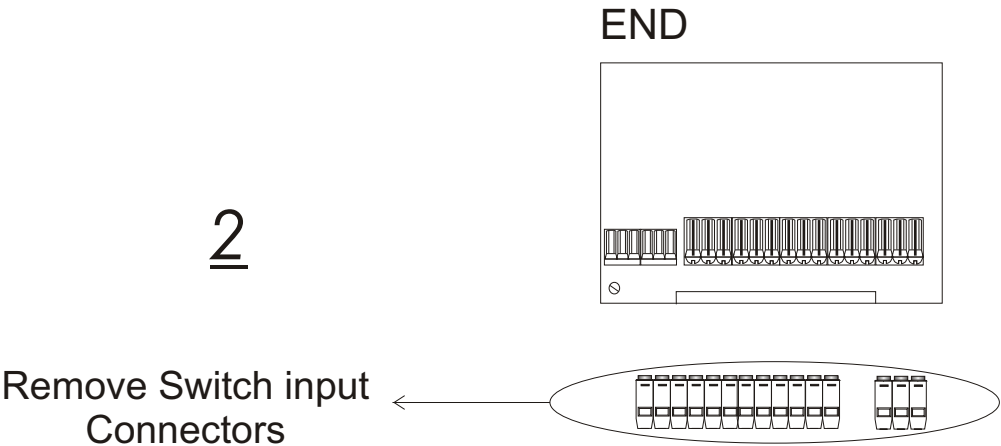
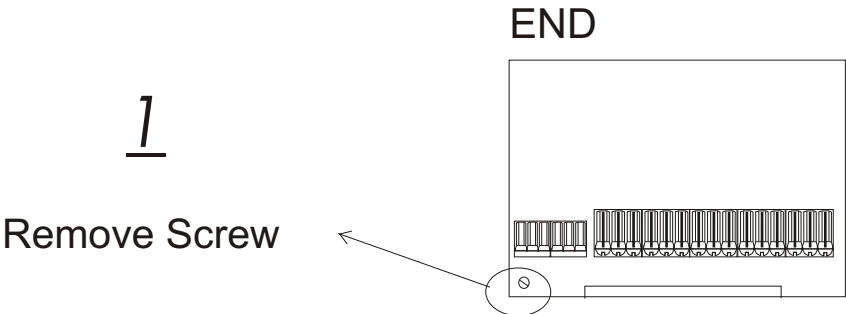
CONTROL MASTER 3

Cm3 CONNECTION DETAILS

Control 
Better. Together.™
Driver Ready



REMOVING COVER



CONNECTING 220/240 VOLT INPUT.

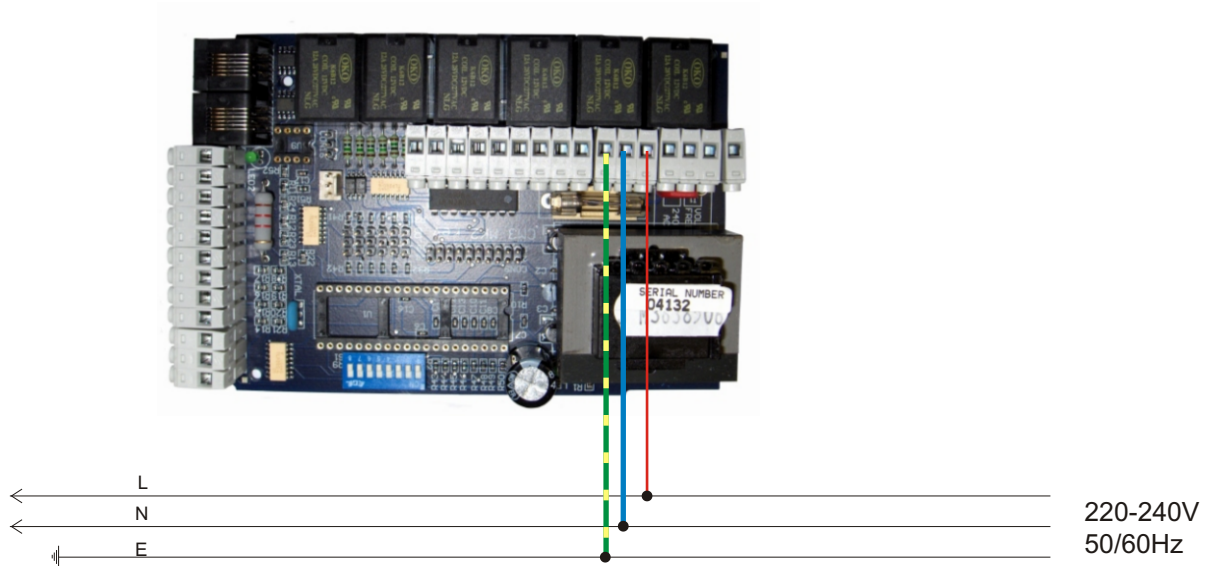
The Cm3 is compatible with all standard EBC electric blinds and electrical components.

Cabling arrangements are shown in the diagram.

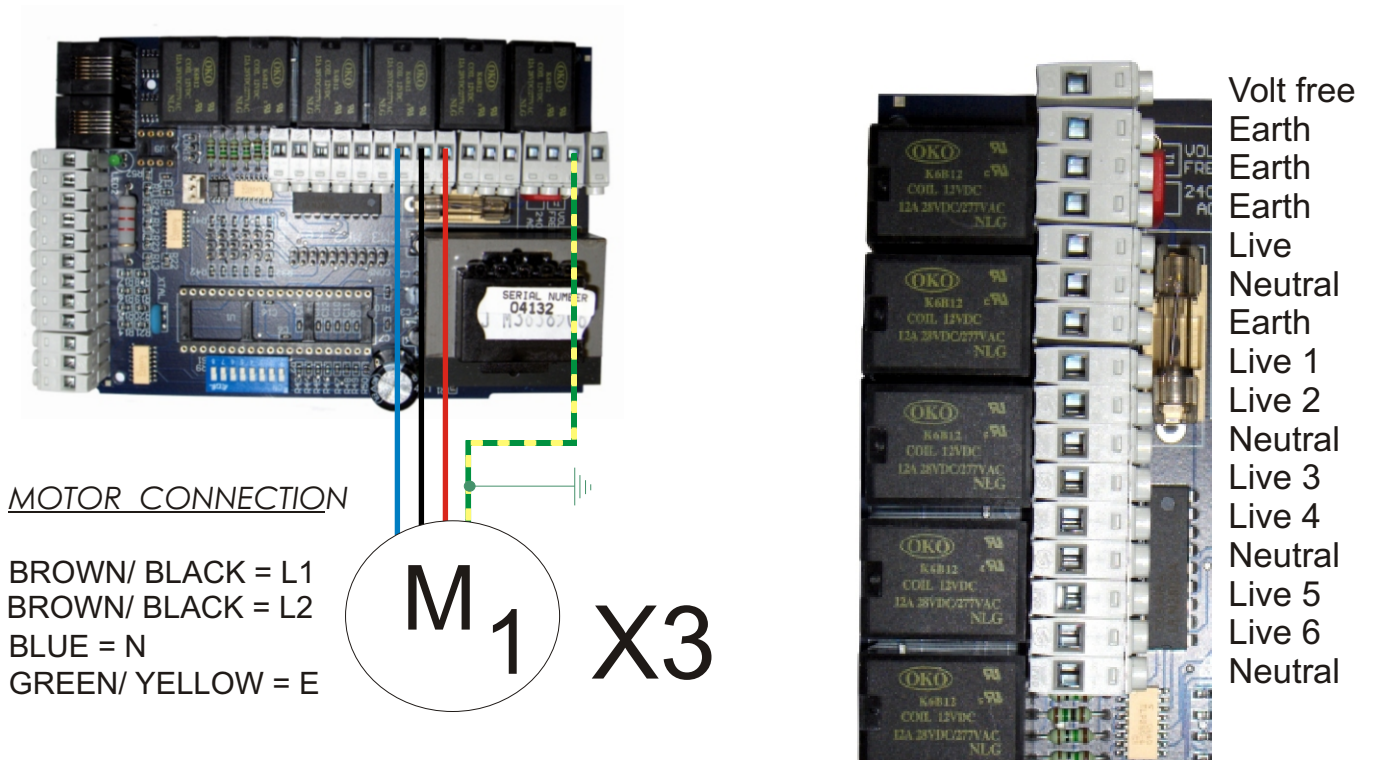
Respect the electrical standards as well as the following points:

A.. Disconnect the main before carrying out any work

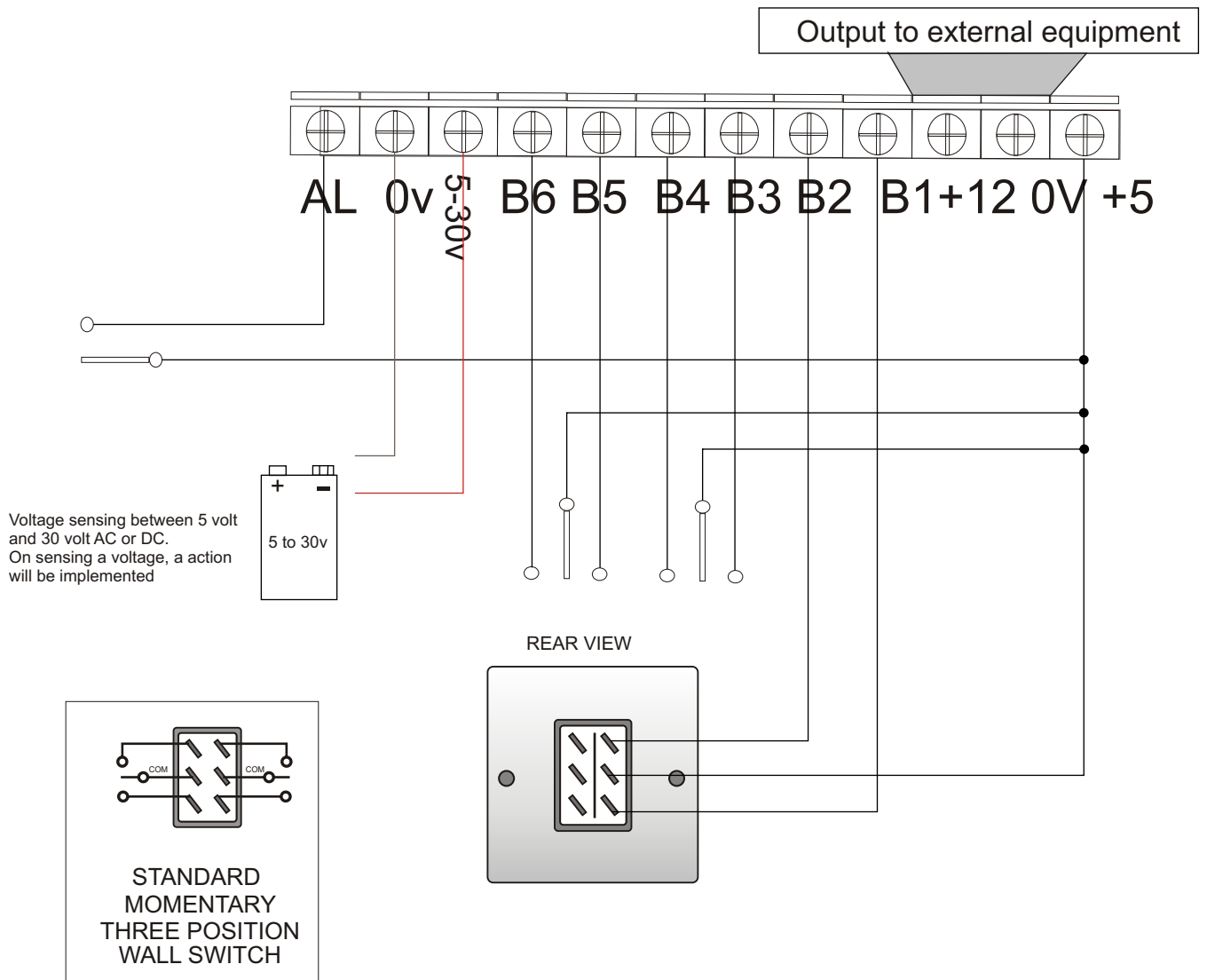
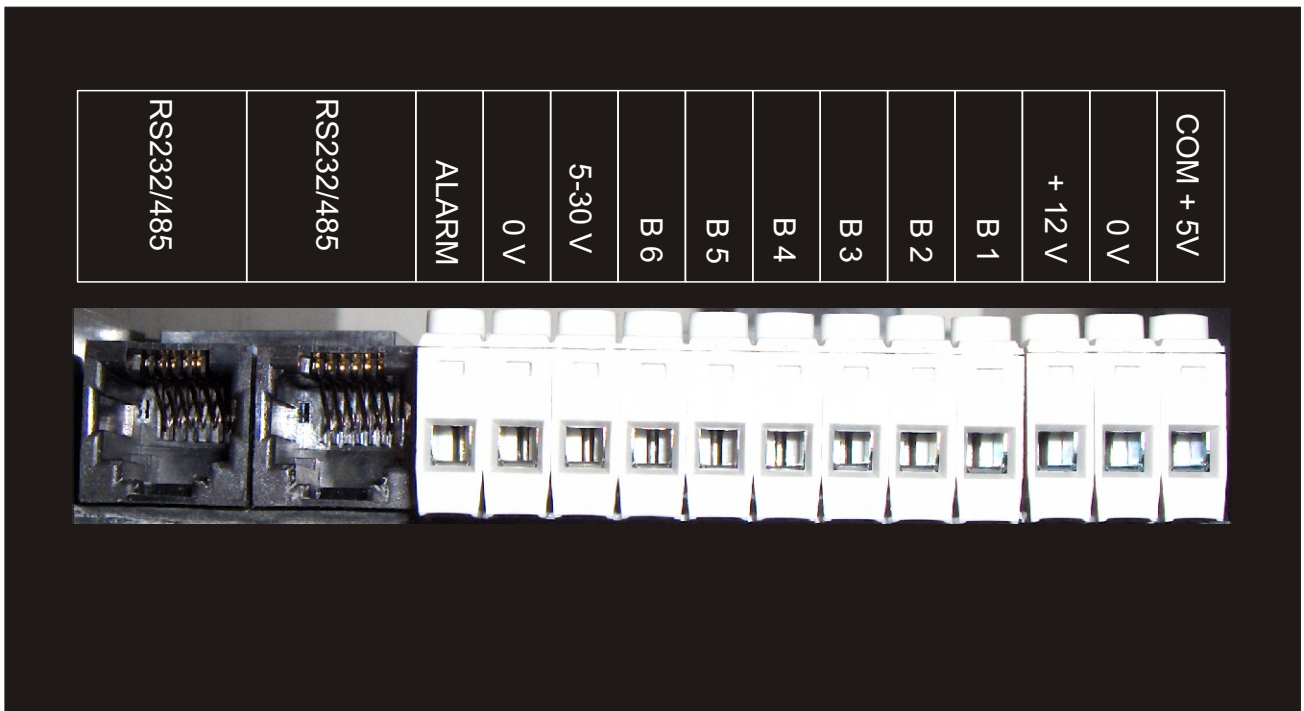
B.. Use 1.5mm max. Flexible cables



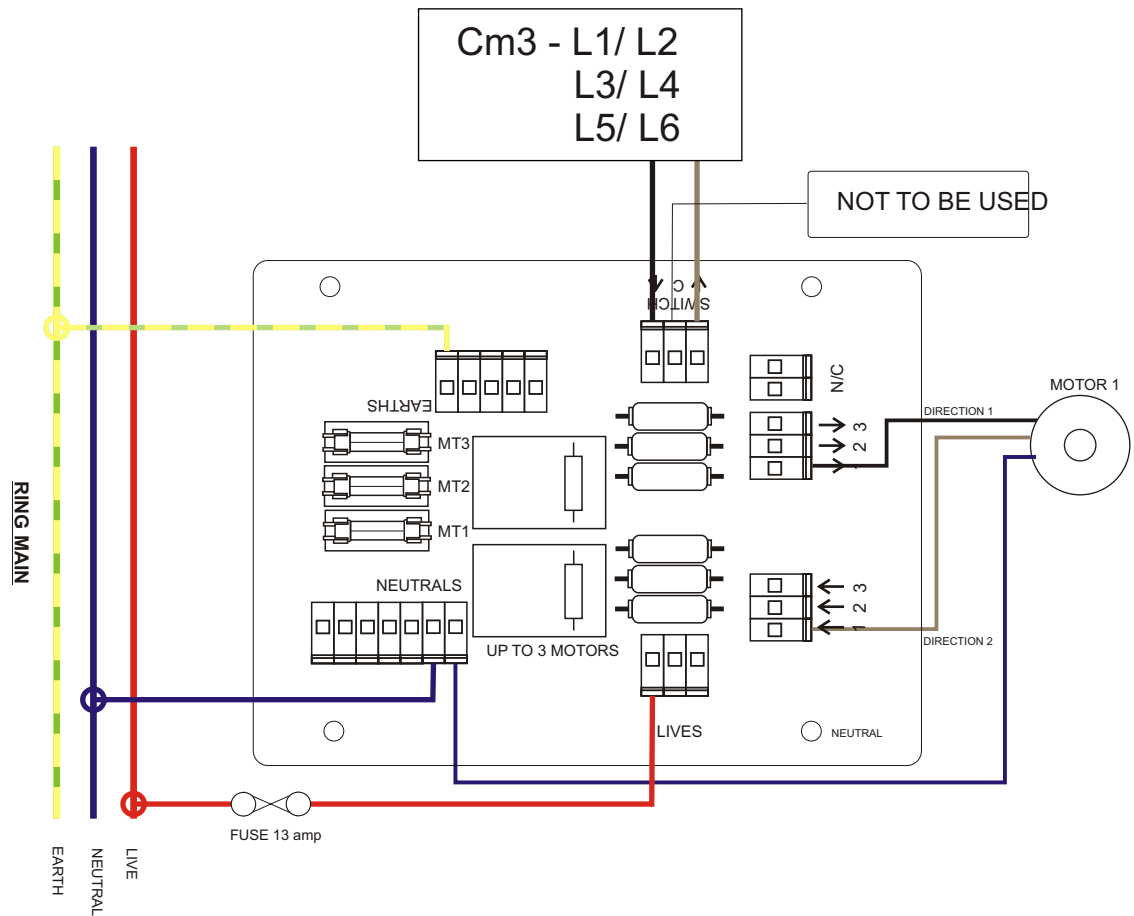
Motor connections



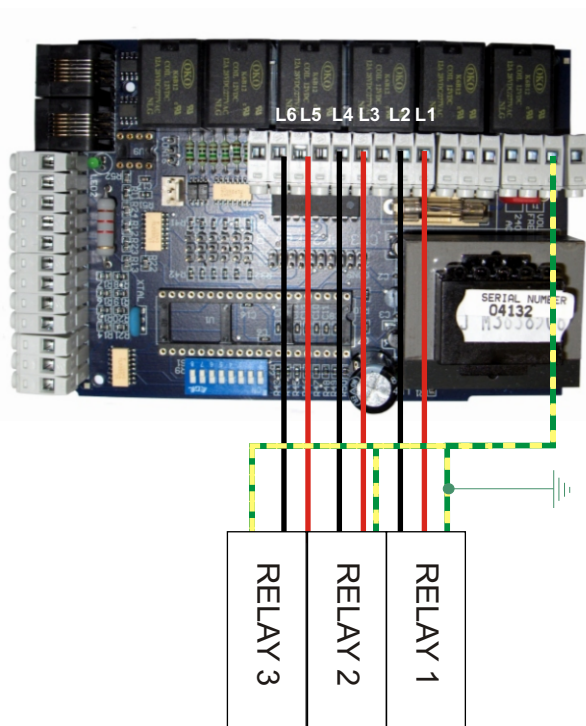
TRIGGER INPUTS



Cm3 - Connection to Relays

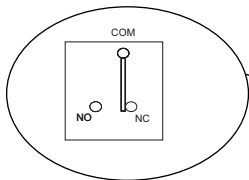
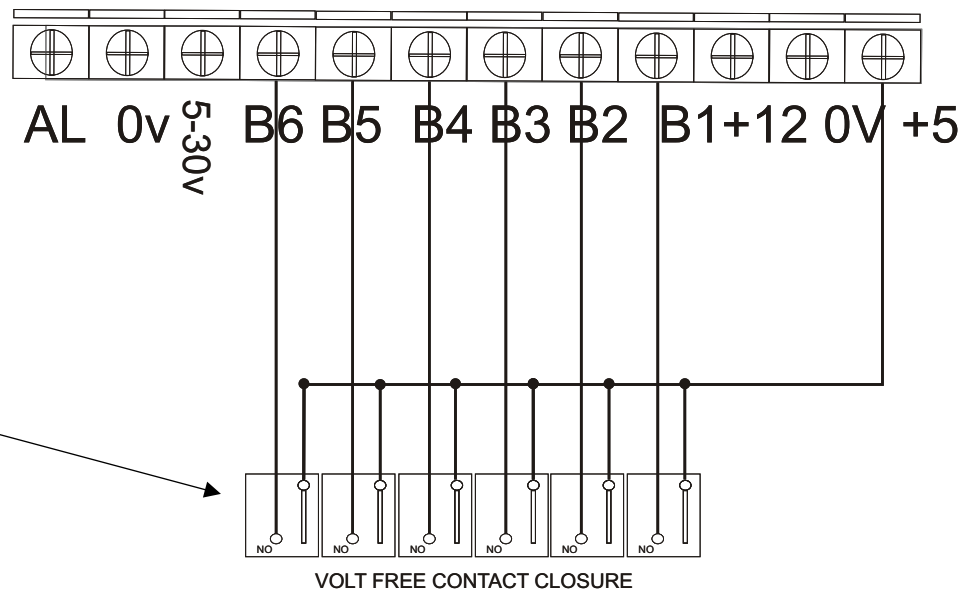
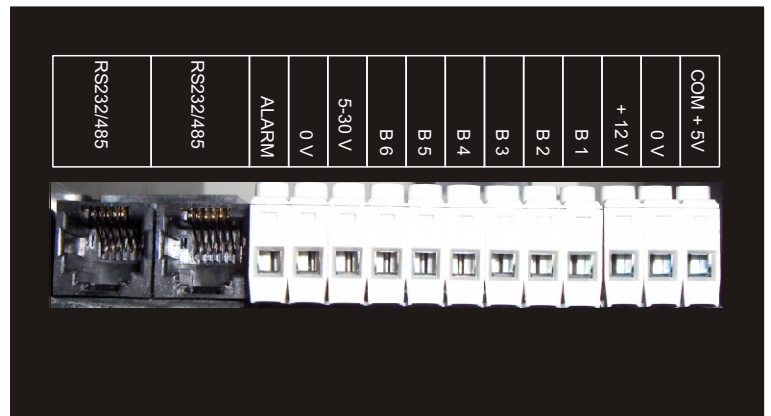


Relay connections



Volt free
Earth
Earth
Earth
Live
Neutral
Earth
Live 1
Live 2
Neutral
Live 3
Live 4
Neutral
Live 5
Live 6
Neutral

Cm3 Volt Free Contact Switching

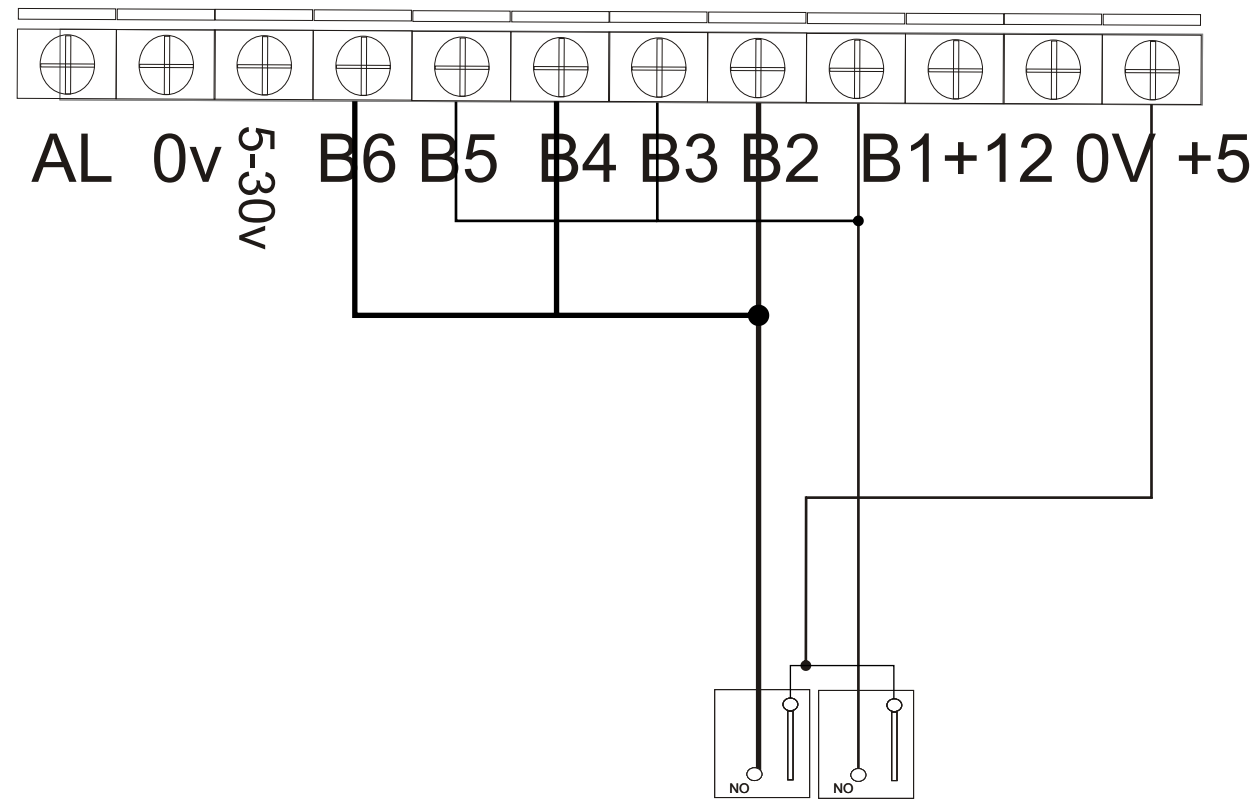
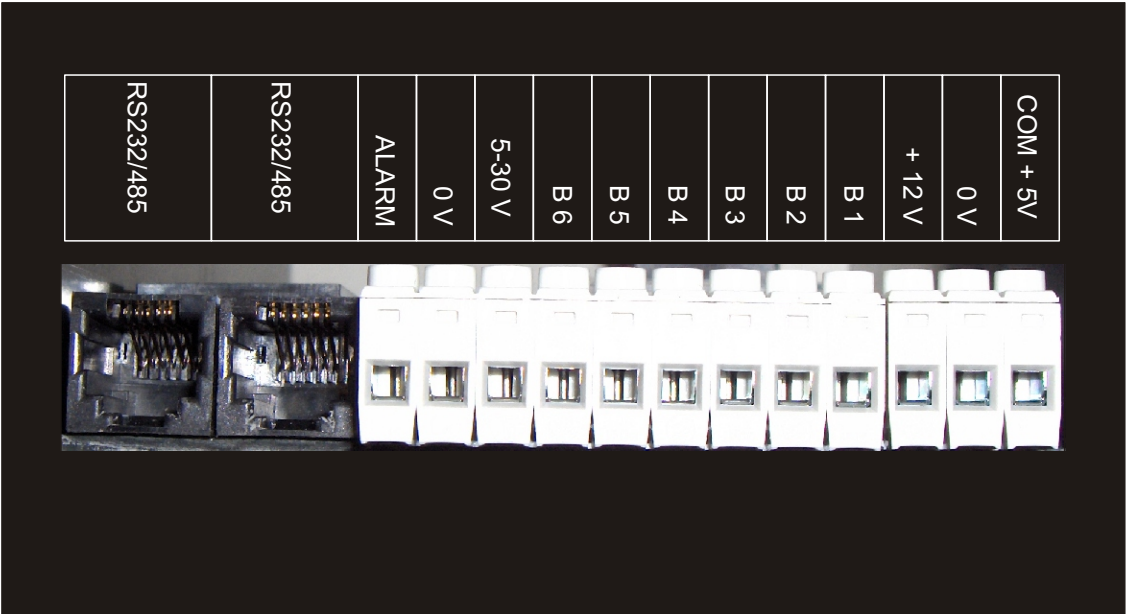


To control blinds from contact closure relay boards require 2 contact closure (1 for up and 1 for down)
To activate a movement, the contact closure relay should be programmed in a momentary pulse state (on **action** - contact should be at the NO position) (on **CUT** - contact should be at the NC position)

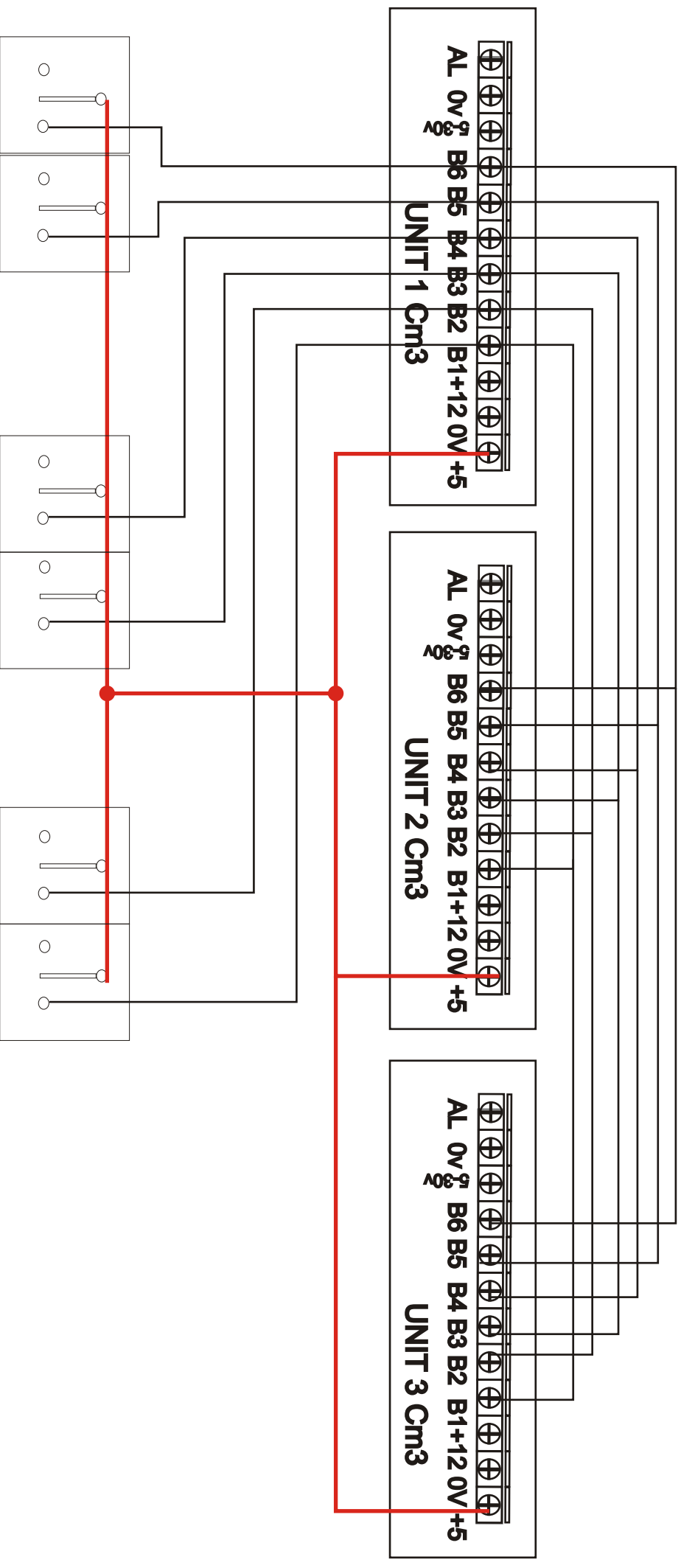
If you need to implement a stop command this is the delay action between either up to down or down to up. To test this; activate a Down command while the blind is in travel, pulse a Up command and you will notice a small delay, then the blind will start to travel up. This delay between Up and or Down to Up is the stop command. A stop command can be activate by pulsing a contact in the apposite direction to the one last implemented.

GROUP SWITCHING

TRIGGER INPUTS

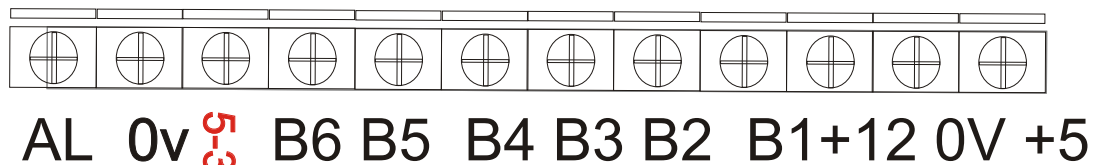
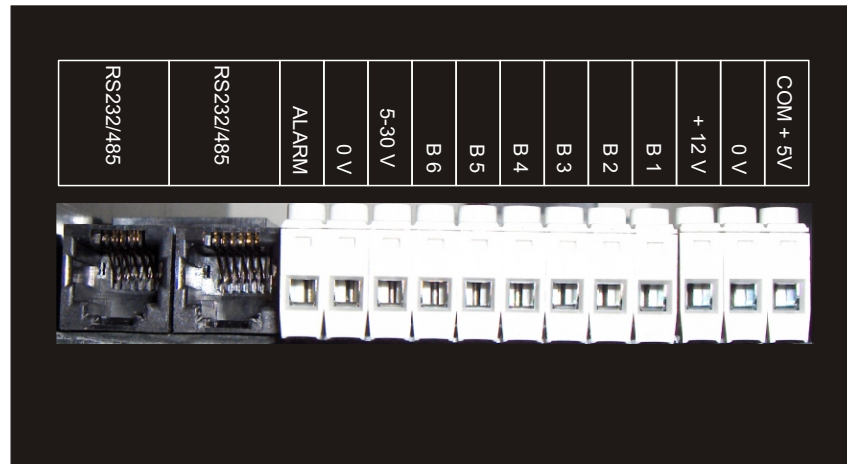


Sample switching diagram to operate three units via volt free contact



Voltage sensing to trigger equipment

TRIGGER INPUTS



Projector

Acoustic
amplifier

Lighting

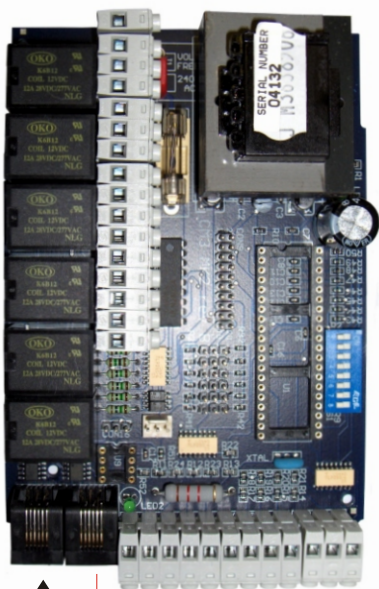
Voltage sensing can be used to trigger an event such as;

- To Switch sequenced lighting on or off
- Darkening a room via motorised blinds
- Activating a projection screen to a relevant position
- Turning on or off equipment to make a scene
- Activating Alarm, Water features, Fountains, Audio and Visual equipment, High Powered Lighting, etc.

Cm3 CONNECTIONS

If more than one Cm3 is being connected to a RS232 control system, each unit must be controlled from individual ports AND NOT CONNECTED TOGETHER.

If only one RS232 port is available then it will be possible to network units using the RS232 to 485 converter ON THE CM3, In this situation the First unit must be on address 0 and the jumper moved to 232 The next unit changed to RS485 using the jumper settings and on address 1 and so on....



Address 0

RS485

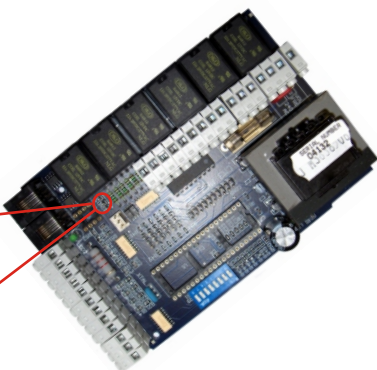
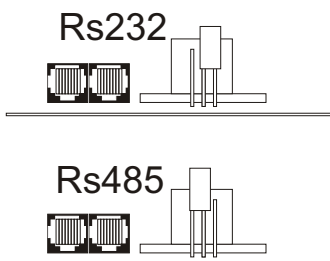
Link for RS232/RS485
LINK MUST BE MOVED
WHEN LINKING UNIT
TO UNIT 1 FOR RS485
NETWORKING.

RS232
LINK
0&3

RS485
LINK
1&2

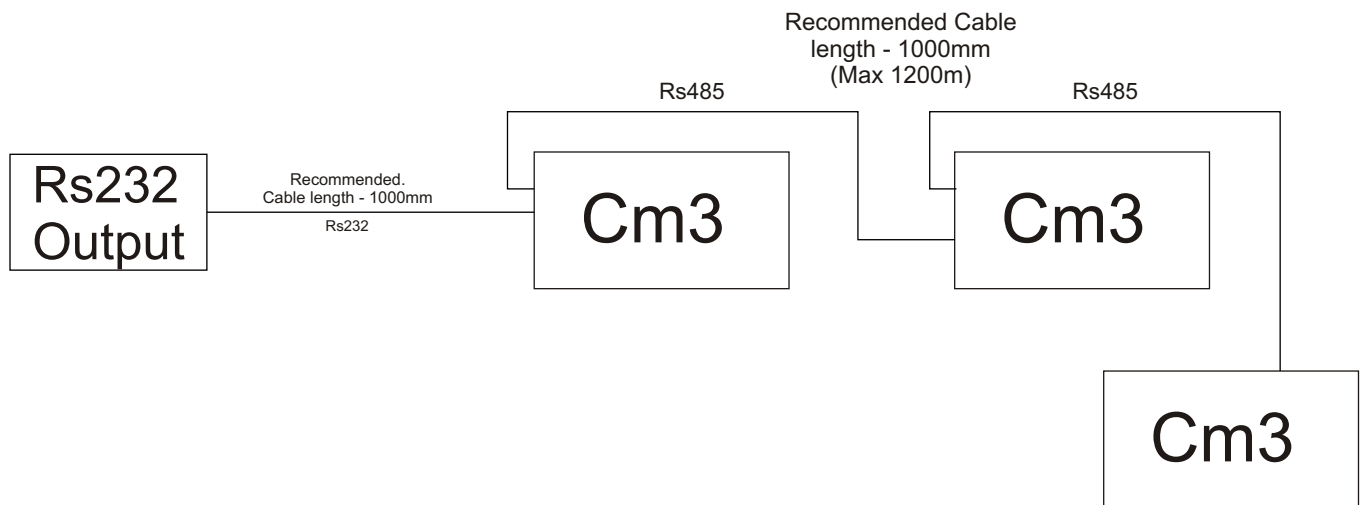
Address 1

Rs232



TO THE NEXT Cm3

Serial Interface



Maximum cable lengths - RS232

The maximum cable length for Rs232 is (50ft) 15m, or the cable length equal to a capacitance of 2500 pF.

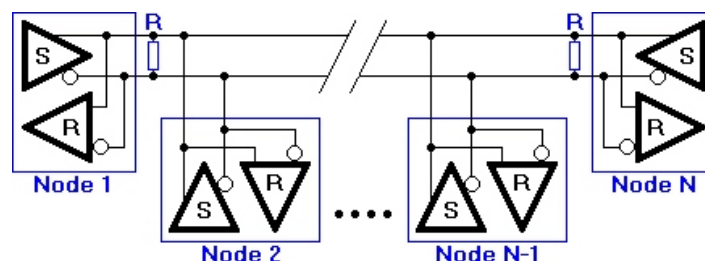
Using a cable with low capacitance allows you to span longer distances without going beyond the limitations of the standard. If for example UTP CAT-5 cable is used with a typical capacitance of 17 pF/ft, the maximum allowed cable length is (147ft) 44m.

We recommend that all communication cables are to be run in a screened cable to ensure clean communication.

Maximum cable lengths - RS485

The maximum cable length for Rs485 is 1200m,

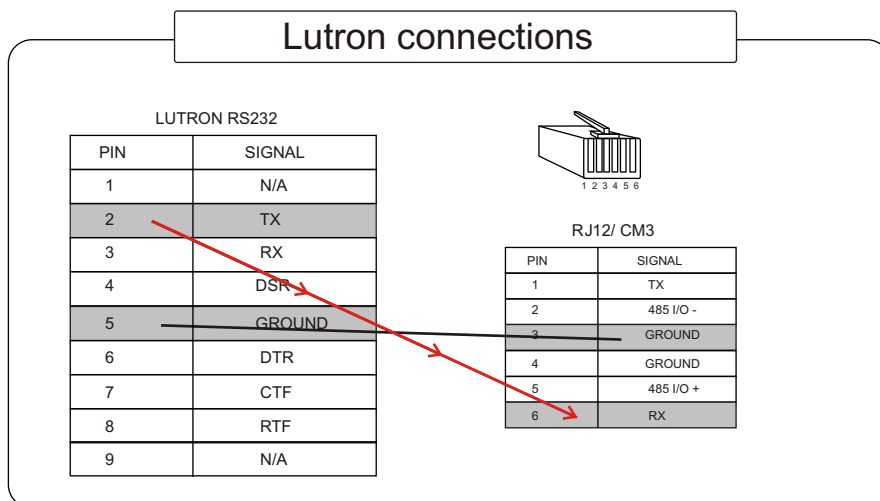
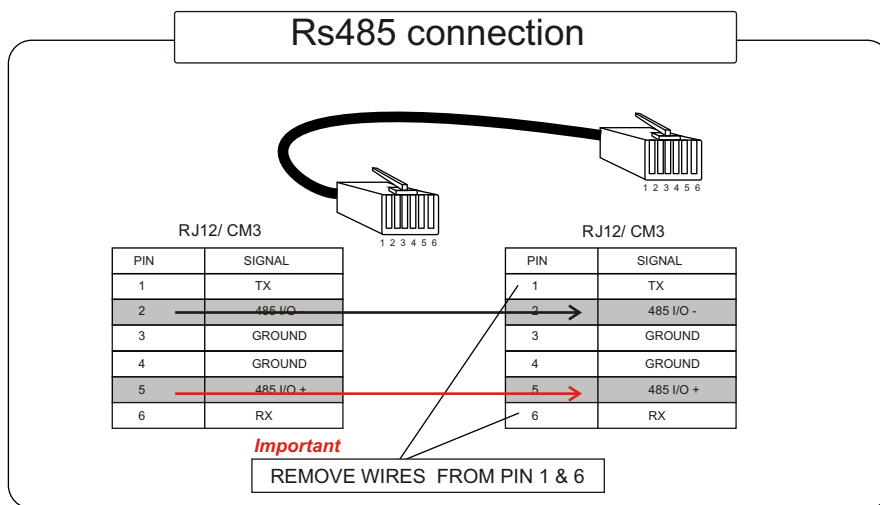
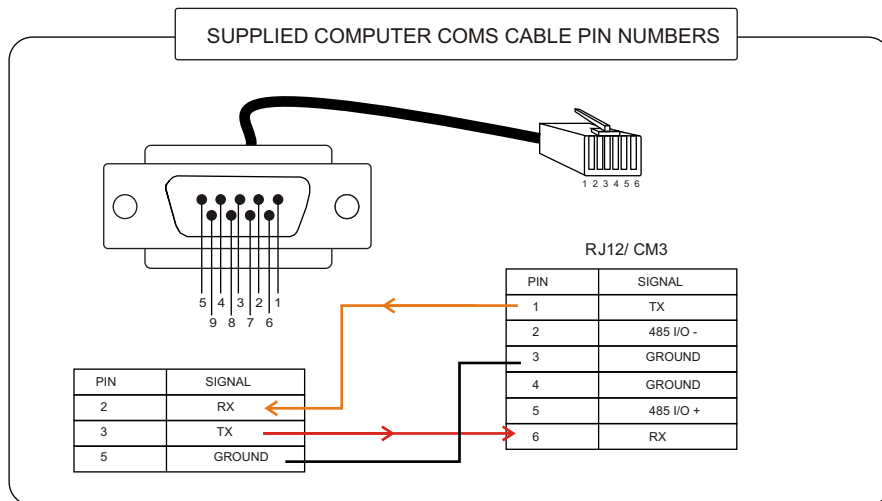
We recommend that all communication cables are to be run in a screened cable to ensure clean communication.



RS485 network topology

The RS485 network must be designed as one line with multiple drops, not as a star. Although total cable length maybe shorter in a star configuration, adequate termination is not possible anymore and signal quality may degrade significantly.

CONNECTION DETAILS

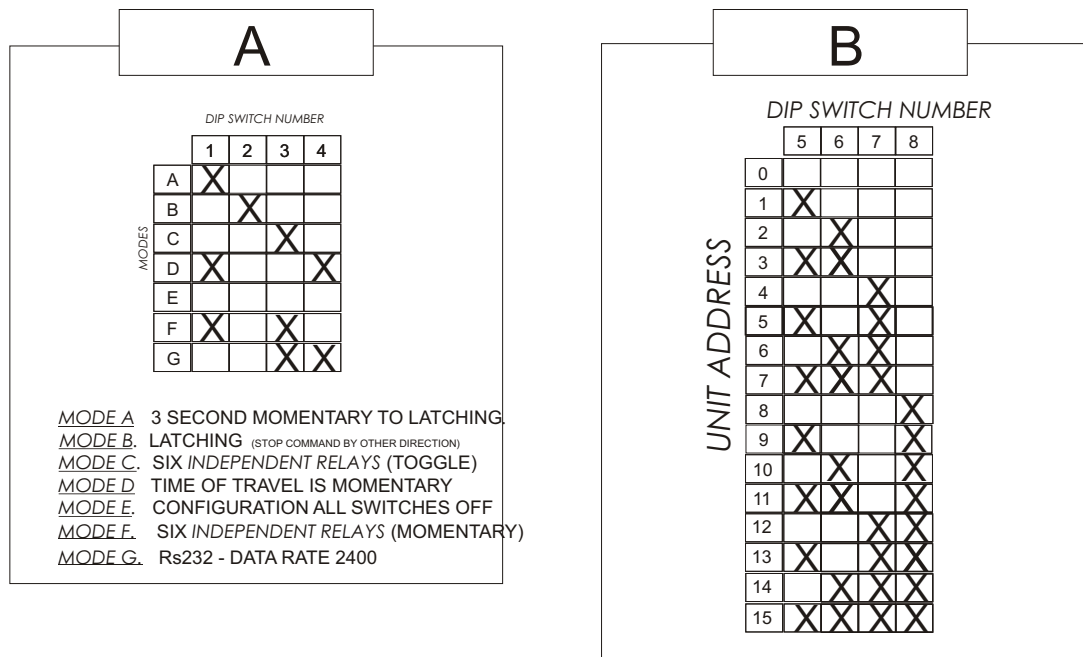


ASCII COMMANDS SENT TO THE Cm3 CONTROL UNIT MUST HAVE A **CARRIAGE RETURN (X0D HEX)** or ASCII **"#"** AT THE END OF THE STRING TO ACTIVATE THE COMMAND SENT. Eg. 03000000#

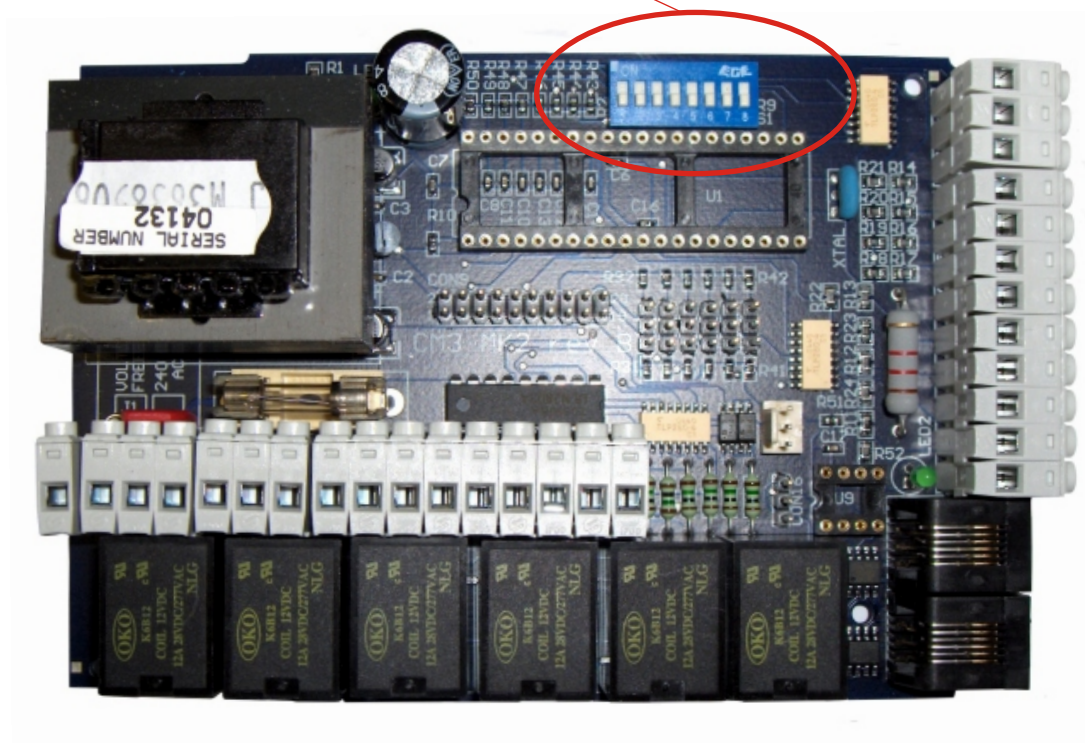
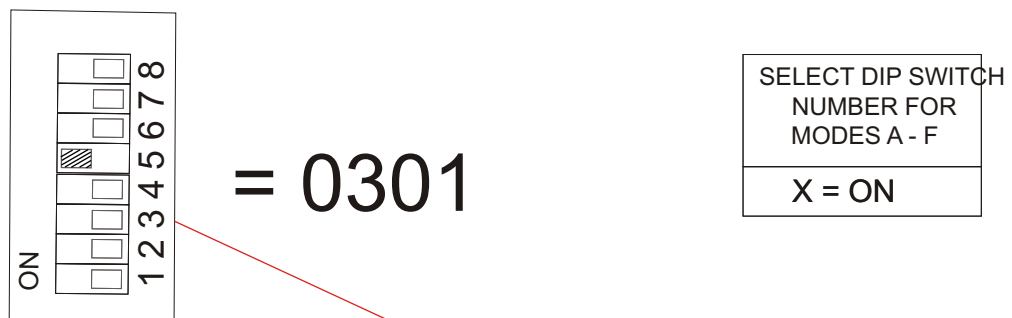
IF SENDING MULTIPLEX OR MULTIPLE ACTIONS, THERE MUST BE A 200 MILLISECOND DELAY BETWEEN EACH COMMAND. THIS CAN BE A LOGIC WRITTEN PROGRAM TO BUFFER THE COMMANDS TO MAKE SURE THAT THERE ARE NO MORE THAN ONE ASCII COMMAND SENT AT ANY ONE TIME TO THE Cm3 CONTROL UNIT(S).

Remember to connect the TX from the control system to the RX of the cm3

MODE SETTINGS AND UNIT ADDRESSES

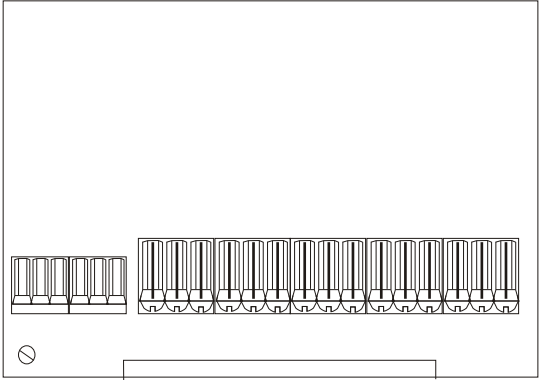


The address of the cm3 units start at 0300 ---- and continue 0301 ----, 0302 ----, 0303 ---- etc. Through to 0314 ----



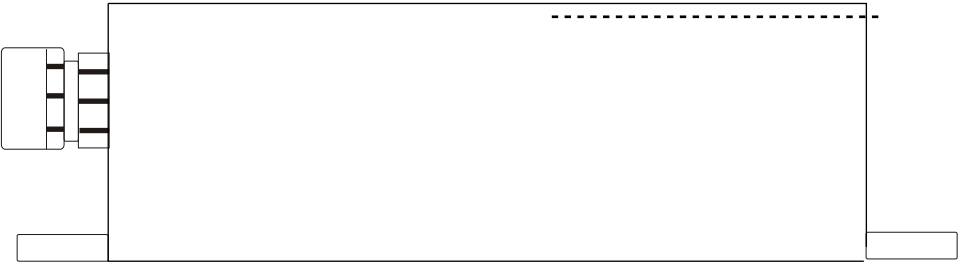
DIMENSIONS

END



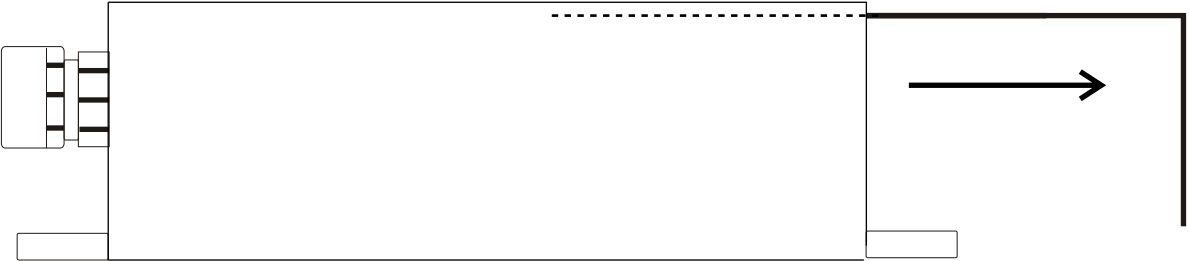
56MM

100MM



234MM

Top Can Be Removed



380MM

Step 1 : Connecting Your PC To The Cm3

The interconnect cable is required to connect your PC to the CM3. This allows the CM3 Hyper Terminal to communicate with the CM3 unit. The cable connects between RS232 Port on the Cm3 and a serial port on the PC. (If you are not using the serial cable supplied by EBC please refer to the installation manual for correct pin connections)

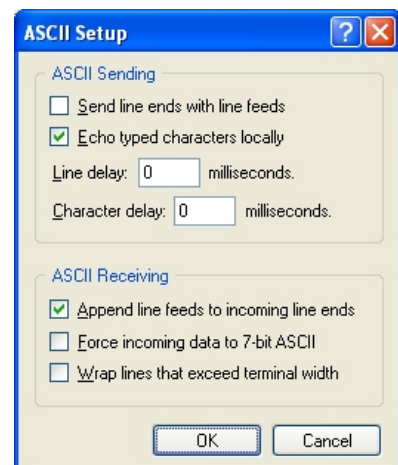
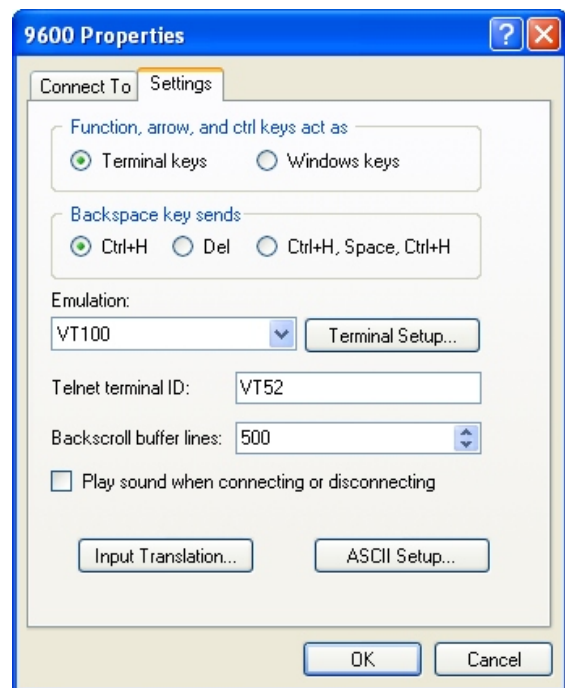
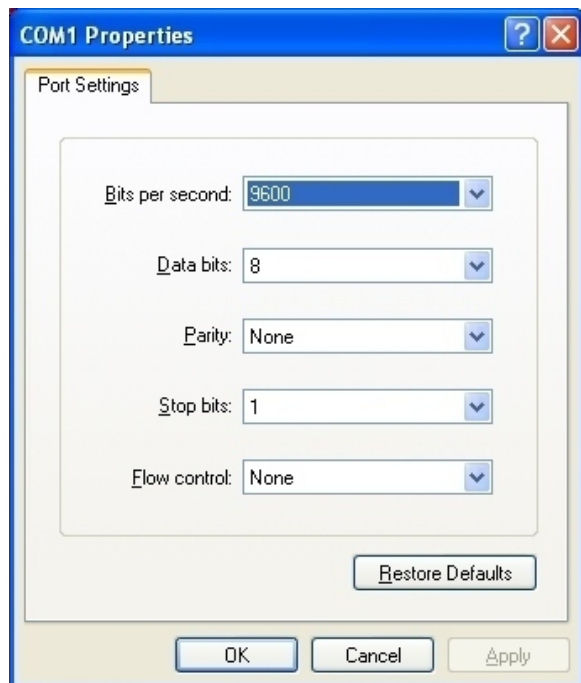
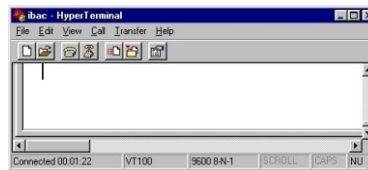


Step 2 : Left Click On START BUTTON
Left Click On ALL PROGRAMS
Left Click On ACCESSORIES
Left Click On COMMUNICATIONS



Step 3 Double Click  To Open Hyper Terminal

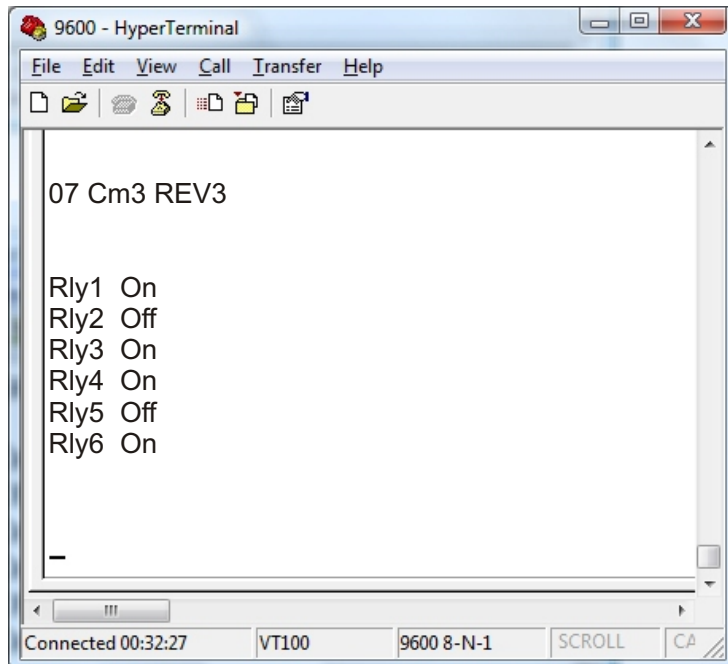
Step 4: set up Properties



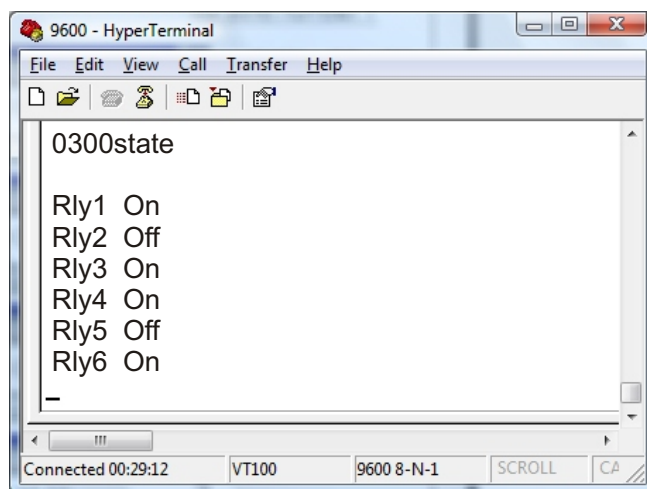
Make sure that Hyper Terminal is setup to use the PC Serial Port that the cm3 is plugged into.

Cm3 Relay Feed-Back Status

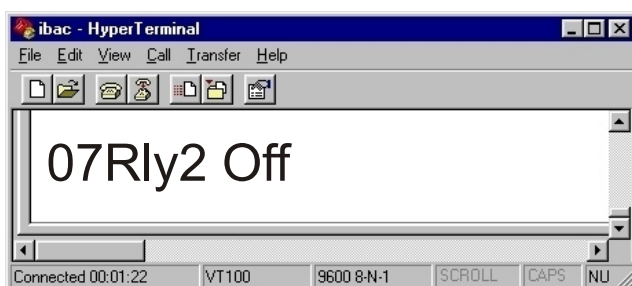
ON Power up, the Cm3 will inform of the Unit Address, Revision Number and the status of the relays (ON OR OFF)



To enquire the relay status, you can send the address and "state" Xod
"****state then Return"

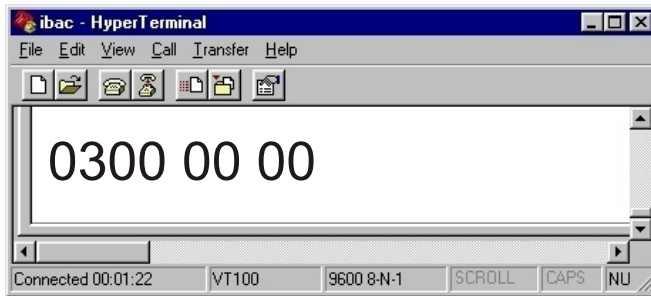


When the relay is turned Off or automatically turned off the address and relay number will be identified



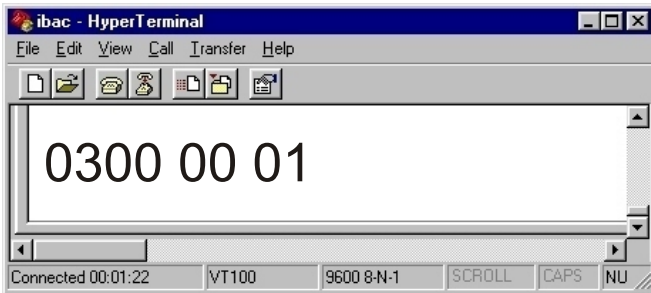
Set to mode B

Cm3 Serial Protocol Code For Blind number 1

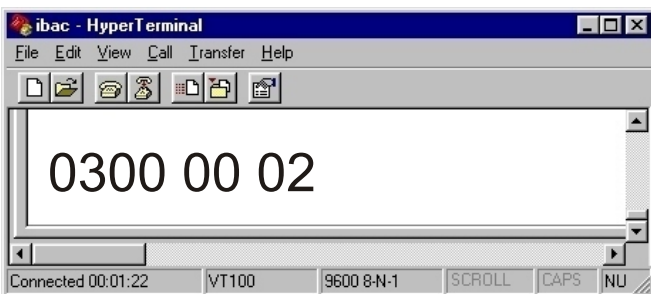


(0300) (00) (01)
ADDRESS BLIND NO. ACTION

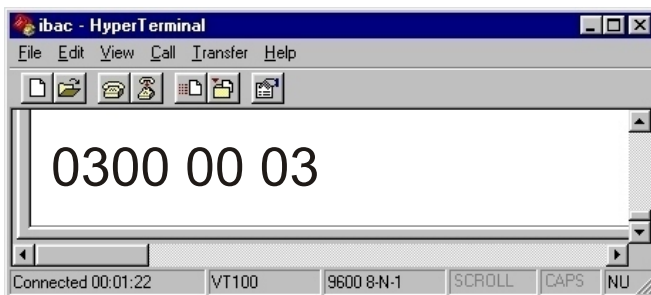
Direction 1



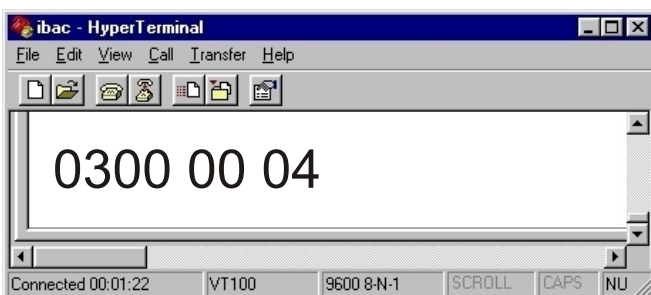
Direction 2



Stop



Tilt 1

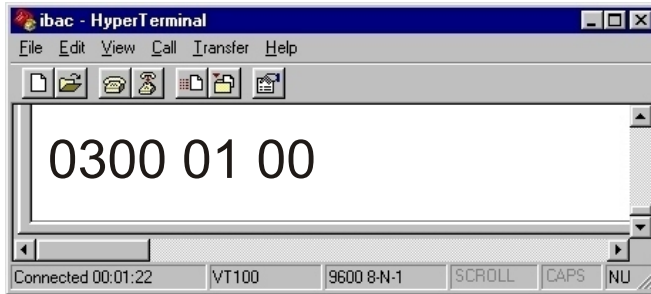


Tilt 2

Sending a Global Command;
03ff 0f 00
All Units/ All Ports/ Action

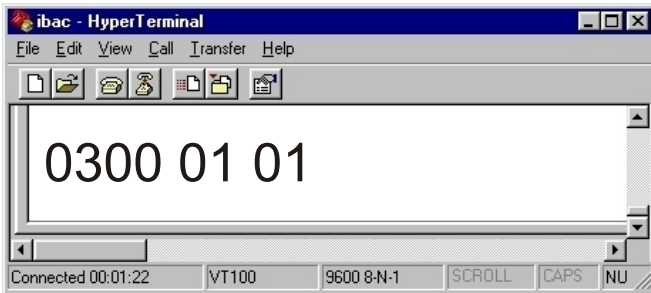
Set to mode B

Cm3 Serial Protocol Codes For Blind number 2

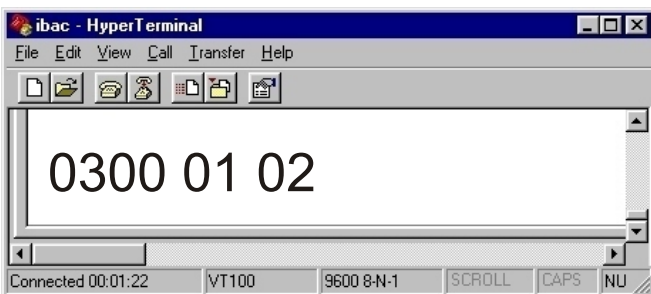


(0300) (01) (01)
ADDRESS BLIND NO. ACTION

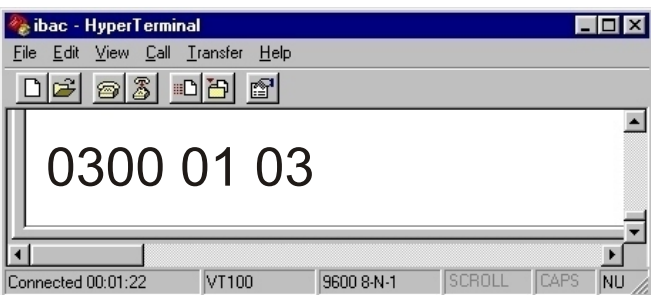
Direction 1



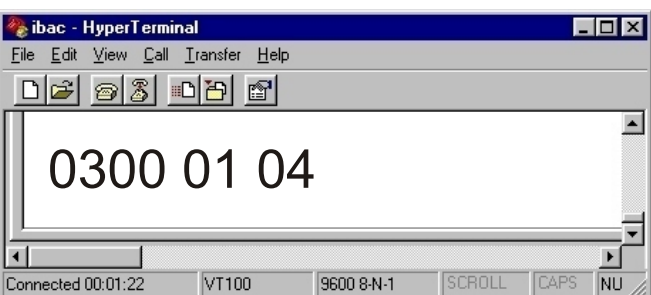
Direction 2



Stop



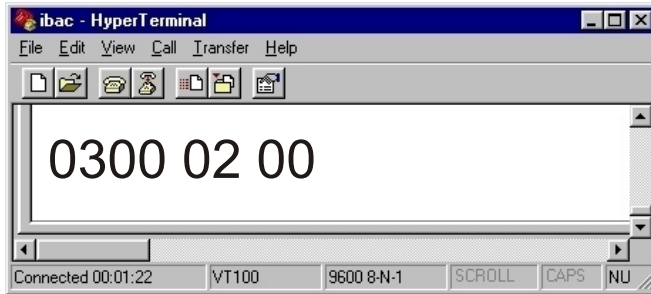
Tilt 1



Tilt 2

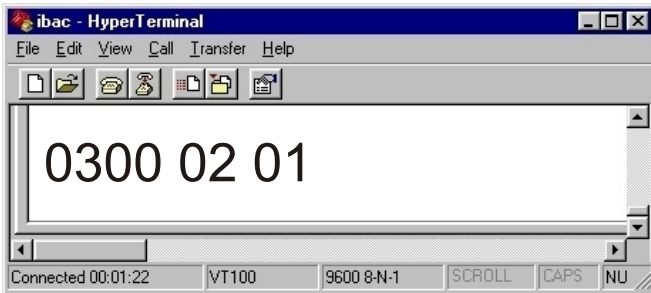
Set to mode B

Cm3 Serial Protocol Code For Blind number 3

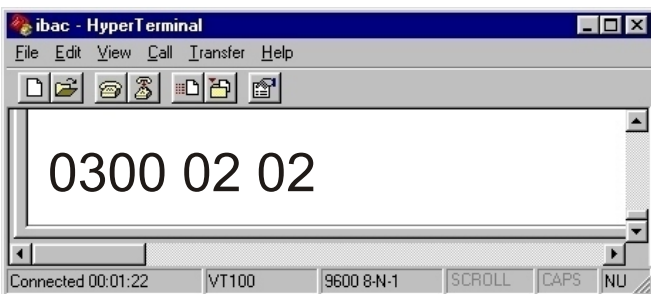


(0300) (02) (01)
ADDRESS BLIND NO. ACTION

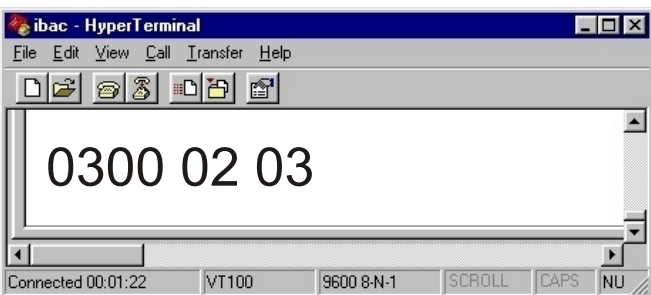
Direction 1



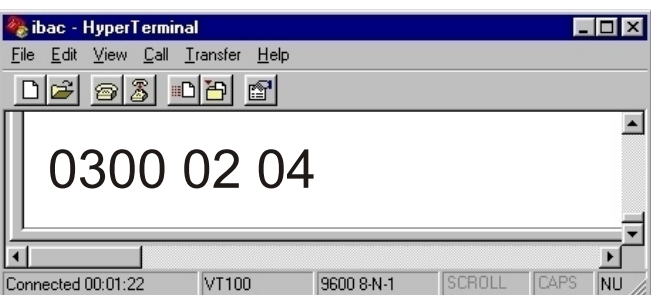
Direction 2



Stop



Tilt 1

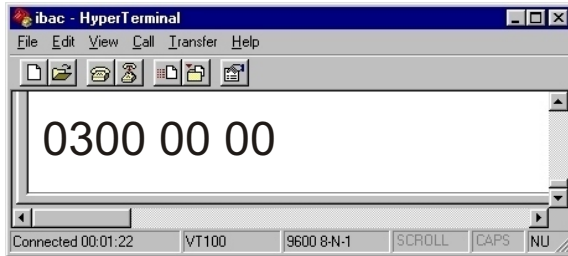


Tilt 2

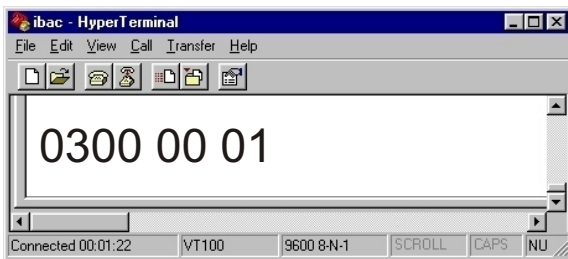
Set to mode c

Cm3 Serial Protocol Codes For independent relay

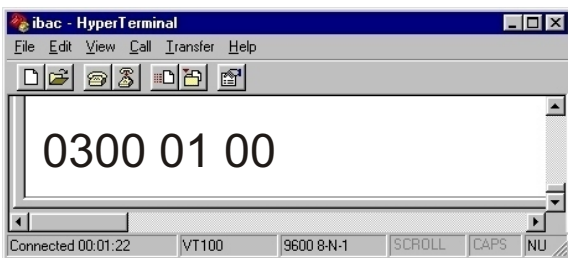
(0300)	(02)	(01)
ADDRESS	RELAY NO.	ACTION



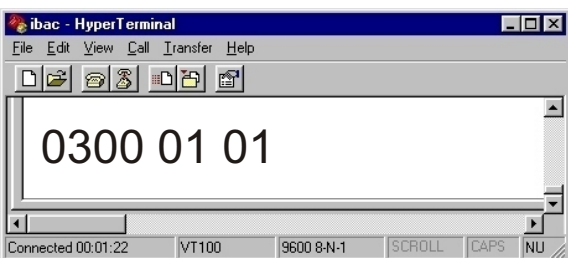
Relay 1 – on or off



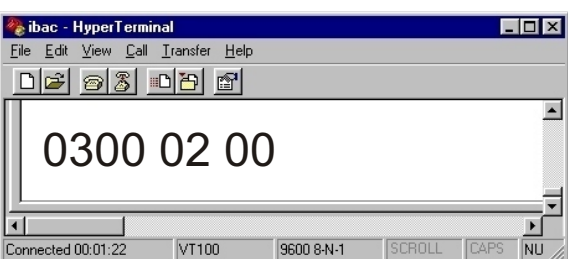
Relay 2 – on or off



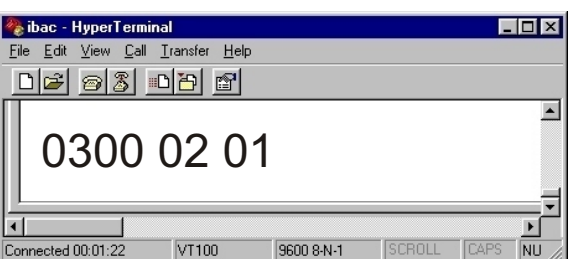
Relay 3 – on or off



Relay 4 – on or off



Relay 5 – on or off

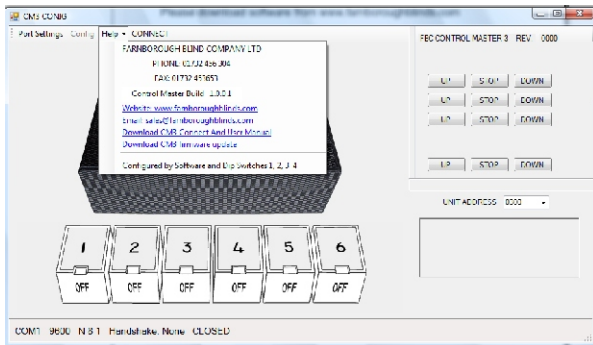


Relay 6 – on or off

Configuration Control

Please download software from <http://www.farnboroughblinds.com/USEFUL.html>

Main Screen

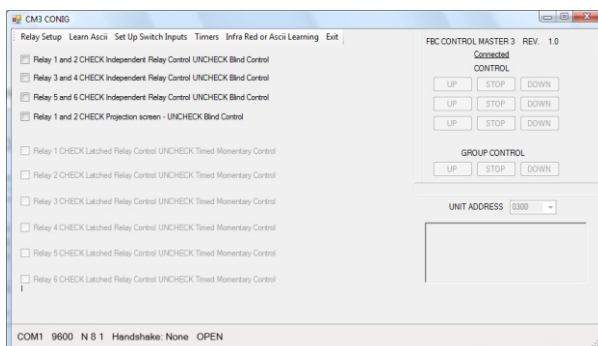


Main Screen

- (1) Control of each Cm3 output with Relay On or Off detection
- (2) Up to 15 unit address can be selected to test outputs
- (3) Online HELP FILE
- (4) Select between Dip switch or configure by Software Only.



Relay Setup Screen

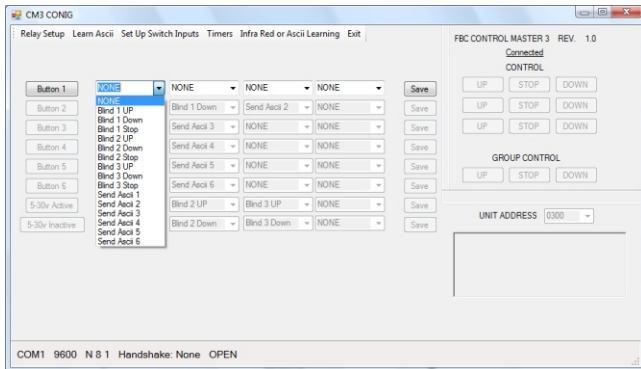
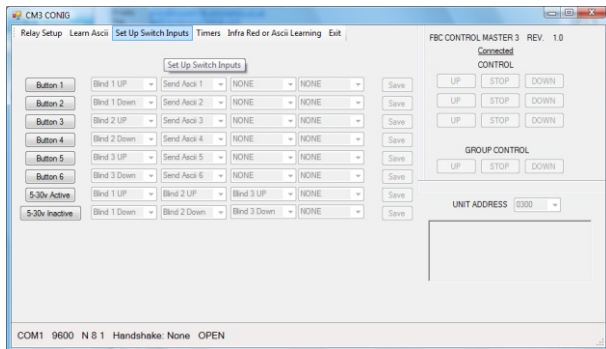


Relay Setup Screen

- (1) Setup of ;
- 6 Independent Relays
 - Blind Control
 - Projection Screen Control
 - Latched Relays

Configuration Control

Trigger Inputs



Trigger Input Screen

- (1) 6 Volt free Inputs
- (2) 1 x 5-30v DC or AC sensing Input (Inactive - Or Active)
- (3) 32 x Events (each Input can be assigned 4 events -)

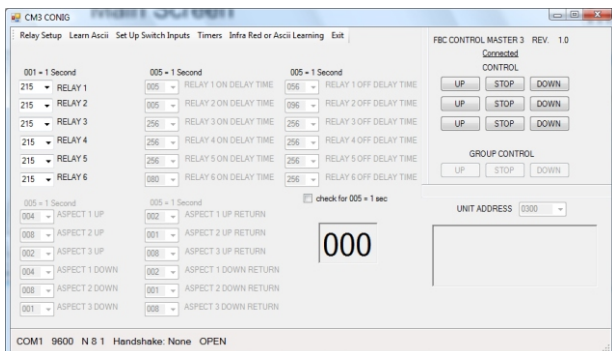
Events as below

Blind 1 Up
Blind 1 Down
Blind 1 Stop
Blind 2 Up
Blind 2 Down
Blind 2 Stop
Blind 3 Up
Blind 3 Down
Blind 3 Stop
Send Ascii Code 1
Send Ascii Code 2
Send Ascii Code 3
Send Ascii Code 4
Send Ascii Code 5
Send Ascii Code 6

Live 1 On
Live 1 Off
Live 2 On
Live 2 Off
Live 3 On
Live 3 Off
Live 4 On
Live 4 Off
Live 5 On
Live 5 Off
Live 6 On
Live 6 Off

Multi Aspect 1 Up
Multi Aspect 2 Up
Multi Aspect 3 Up
Multi Aspect 1 Down
Multi Aspect 2 Down
Multi Aspect 3 Down

Timer Screen

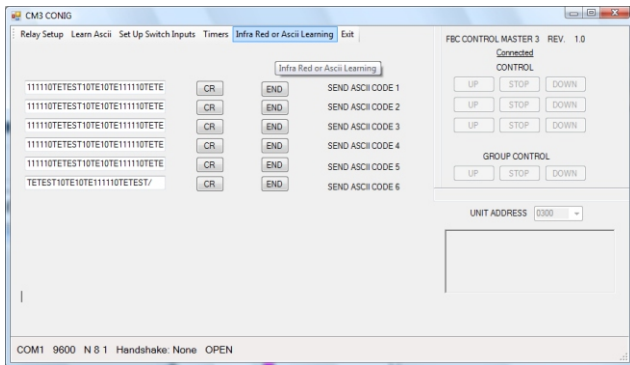


Timer Screen

- (1) 6 Relay On Times
- (2) 6 Relay Delay Before On Times
- (3) 6 Relay Delay Before Off Times
- (4) 3 x Multi Aspect Up Times
- (5) 3 x Multi Aspect Down Times
- (6) Built in Counter

Configuration Control

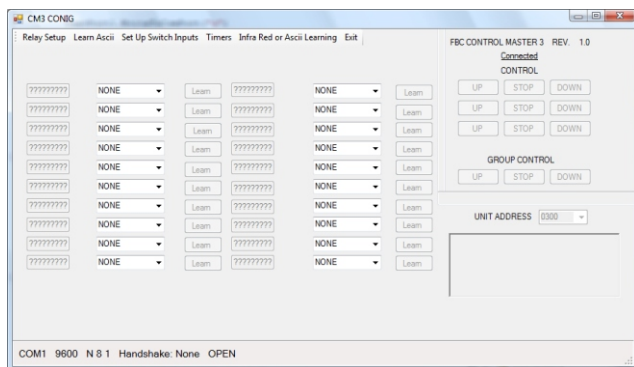
Send Ascii Function



SEND ASCII Screen

(1) 6 Ascii codes that can be sent using
volt free inputs or receiving a unique Ascii function

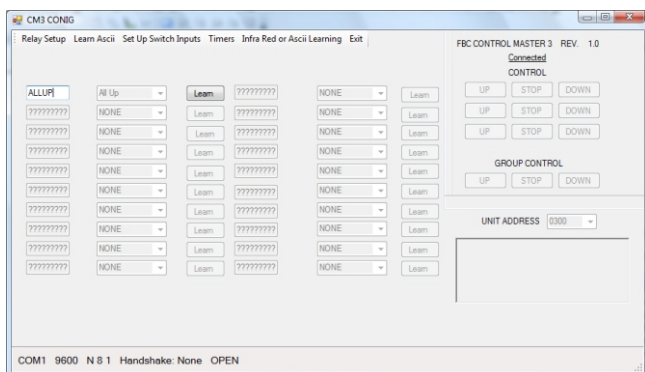
Infra red or ascii trigger events



UNIQUE SEND ASCII OR INFRA RED Rc5 Screen

(1) 20 Ascii codes/ Infra red that can be learn into the
Control master as an event and associated with an output

see below;



Blind 1 Up
Blind 1 Down
Blind 1 Stop
Blind 1 Tilt 1
Blind 1 Tilt 2
Blind 2 Up
Blind 2 Down
Blind 2 Stop
Blind 2 Tilt 1
Blind 2 Tilt 2
Blind 3 Up
Blind 3 Down
Blind 3 Stop
Blind 3 Tilt 1
Blind 3 Tilt 2
ALL UP
ALL DOWN
ALL STOP
ALL TILT1
All TILT 2
Send Ascii Code 1
Send Ascii Code 2
Send Ascii Code 3
Send Ascii Code 4
Send Ascii Code 5
Send Ascii Code 6

Live 1 On
Live 1 Off
Live 2 On
Live 2 Off
Live 3 On
Live 3 Off
Live 4 On
Live 4 Off
Live 5 On
Live 5 Off
Live 6 On
Live 6 Off

Multi Aspect 1 Up
Multi Aspect 2 Up
Multi Aspect 3 Up
Multi Aspect 1 Down
Multi Aspect 2 Down
Multi Aspect 3 Down



FARNBOROUGH BLIND COMPANY LIMITED

UNIT 7 NORTH DOWNS BUSINESS PARK, LIMEPIT LANE, SEVENOAKS, KENT, TN13 2TL



☎ 01732 456304 📠 01732 453653 ✉ sales@farnboroughblinds.com www.farnboroughblinds.com

Declaration of Conformity

Equipment: *RS232/485 Relay Unit*
Model Name: *CM3*

THIS CERTIFIES THAT THE MATERIAL STATED IN THE DOCUMENT HAS BEEN
MANUFACTURED AND INSPECTED TO THE PARAMETERS DETAILED IN THE PURCHASE
ORDER AND PURCHASE SPECIFICATION.
THESE MATERIALS ARE RELEASED WITH MY AUTHORITY.

Signed by:

Name: Bill Wyatt

Date: 25th November 2010