

Elevation Window Actuator System Wiring Guide

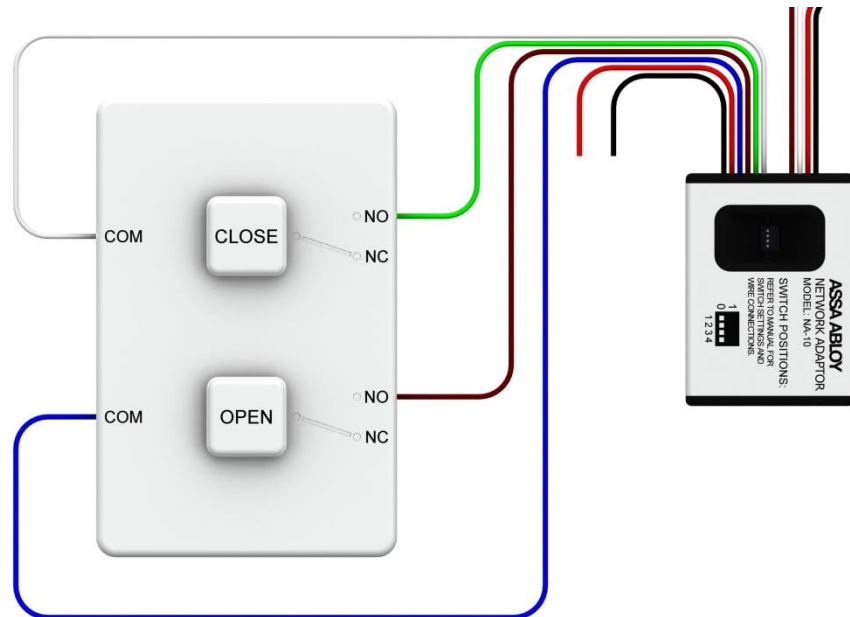


What Type of System?

Keypad



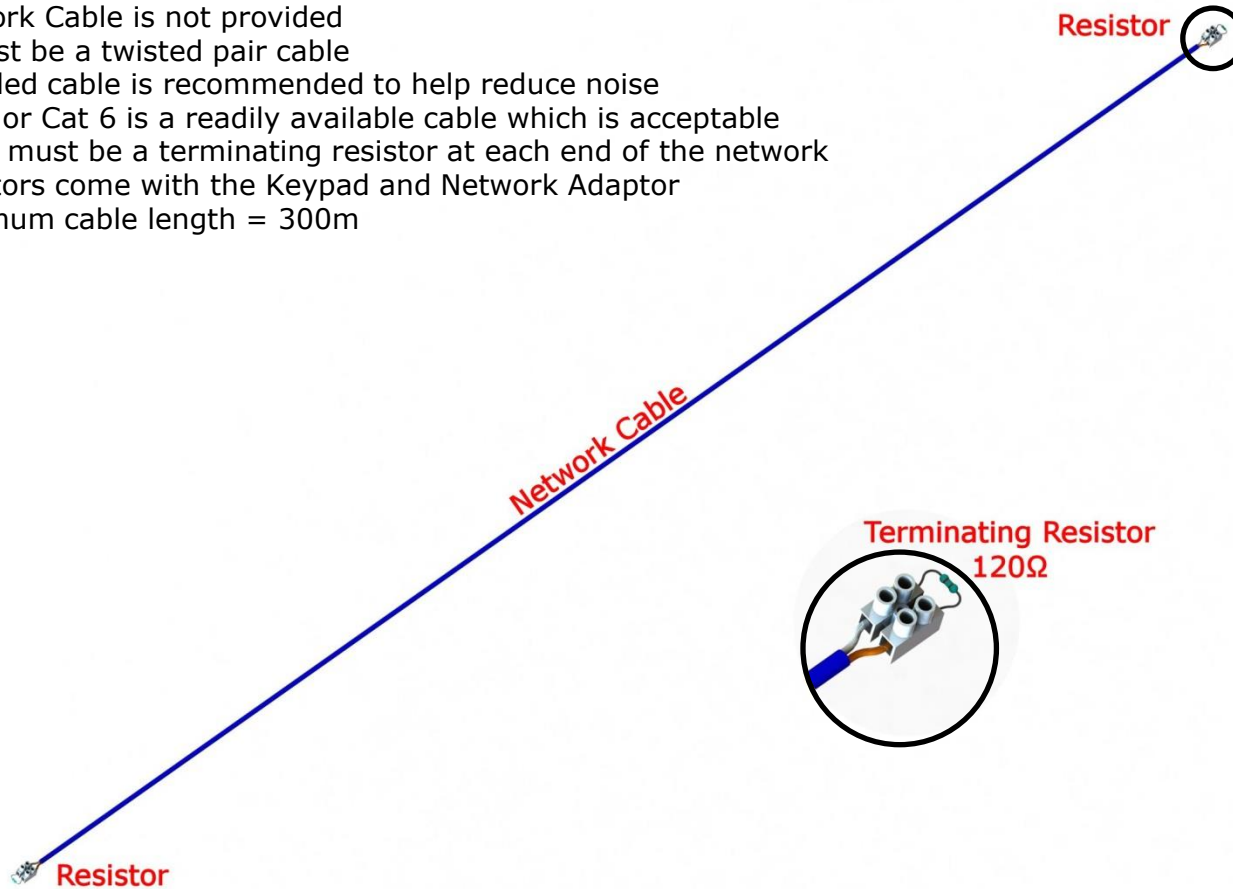
Wall Switch or Smart Home



- You cannot use a Keypad and Wall Switch on the same system
- Connecting to a 'Smart Home' is the same as using a Wall Switch, except, replace the open and close buttons with Relays which get triggered by the Smart Home system

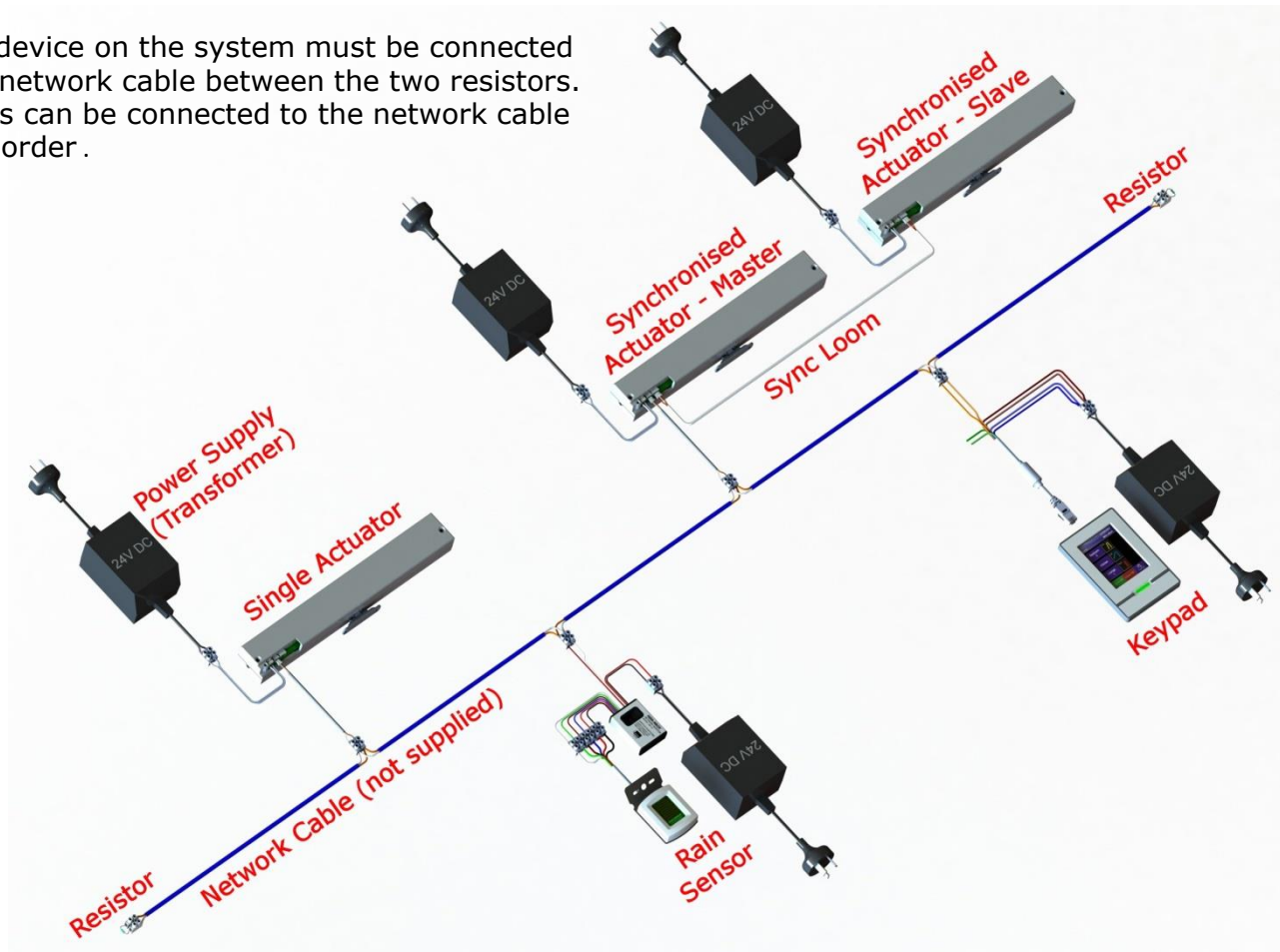
Network Cable

- Network Cable is not provided
- It must be a twisted pair cable
- Shielded cable is recommended to help reduce noise
- Cat 5 or Cat 6 is a readily available cable which is acceptable
- There must be a terminating resistor at each end of the network
- Resistors come with the Keypad and Network Adaptor
- Maximum cable length = 300m



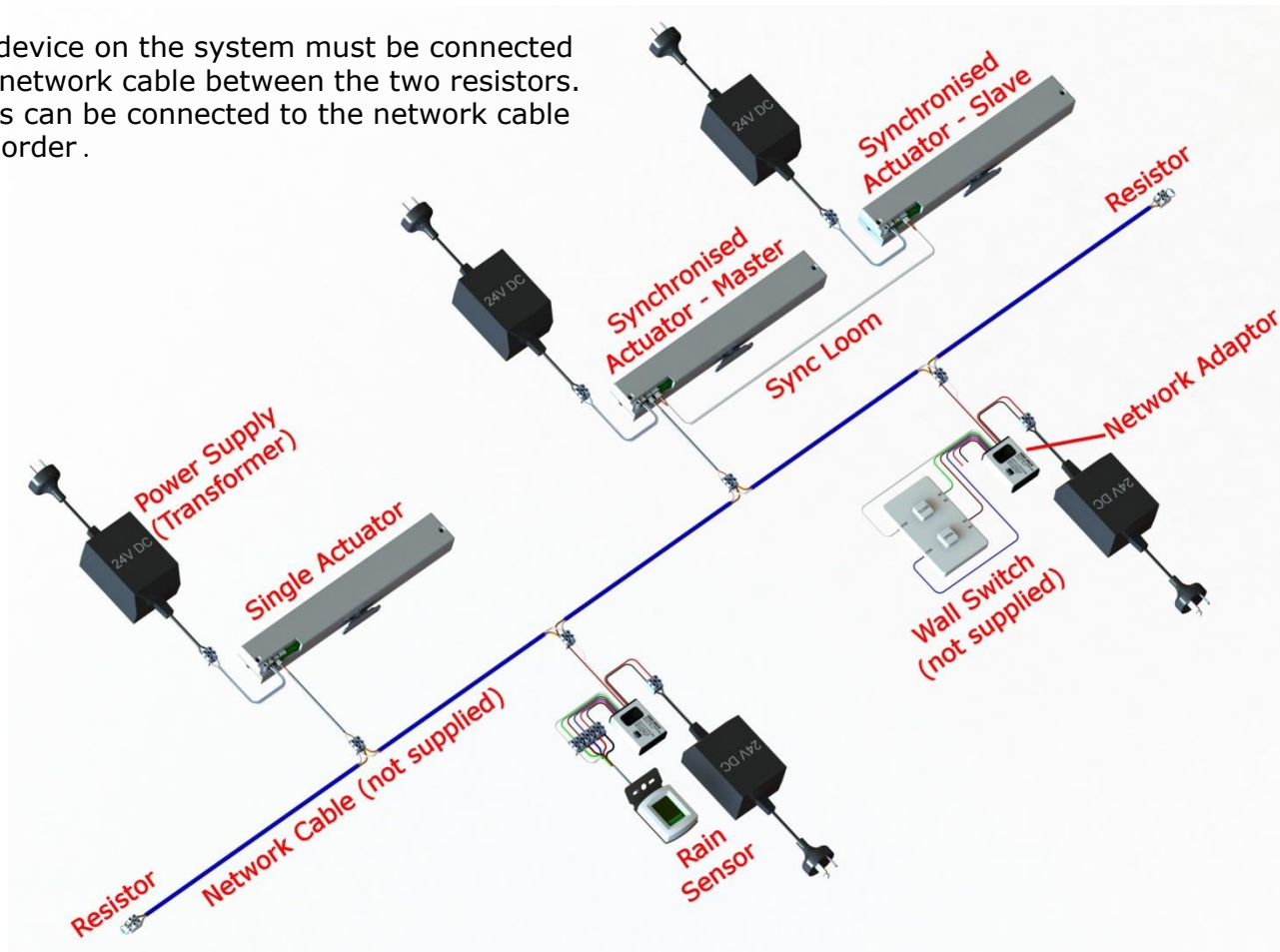
Basic Keypad System

- Every device on the system must be connected to the network cable between the two resistors.
- Devices can be connected to the network cable in any order.

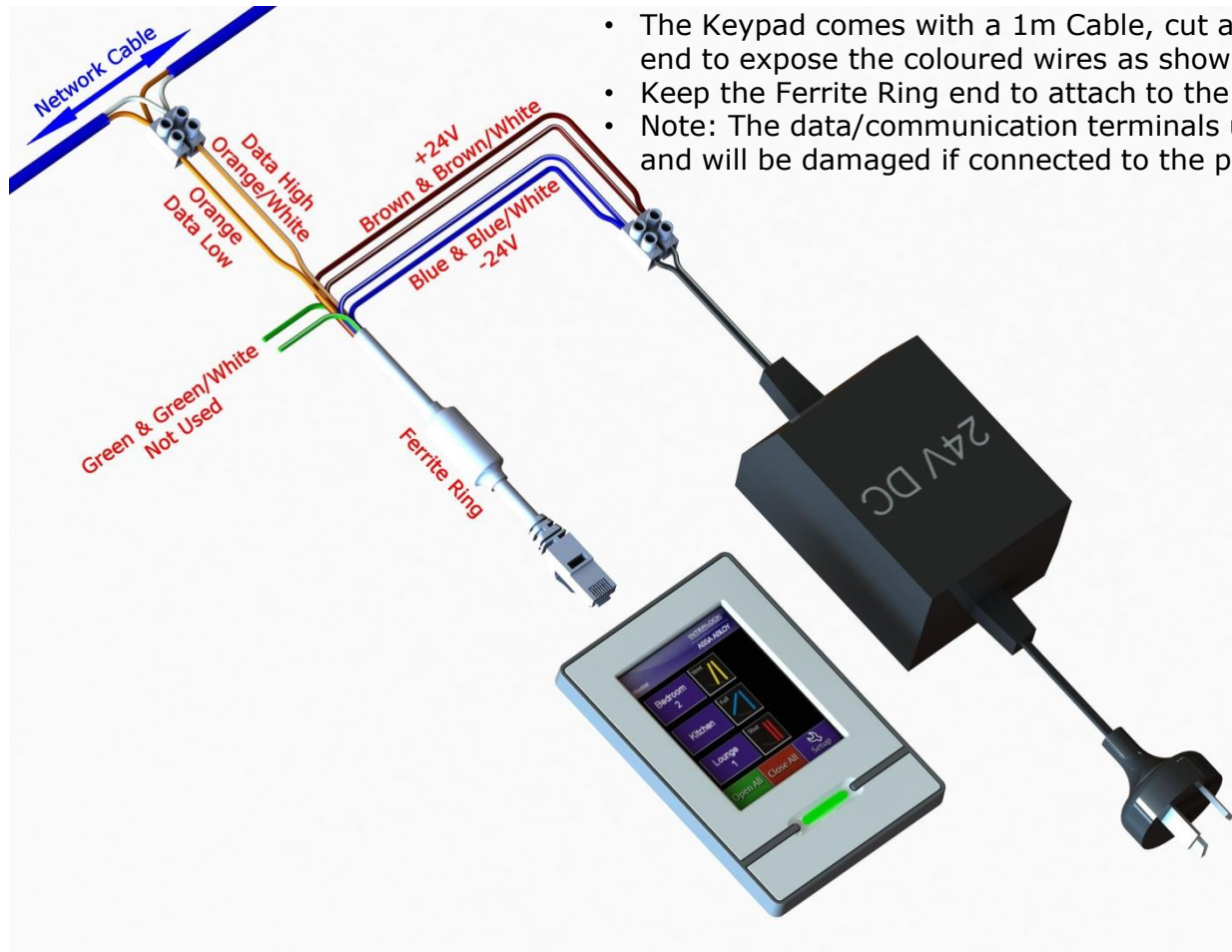


Basic Wall Switch System

- Every device on the system must be connected to the network cable between the two resistors.
- Devices can be connected to the network cable in any order.

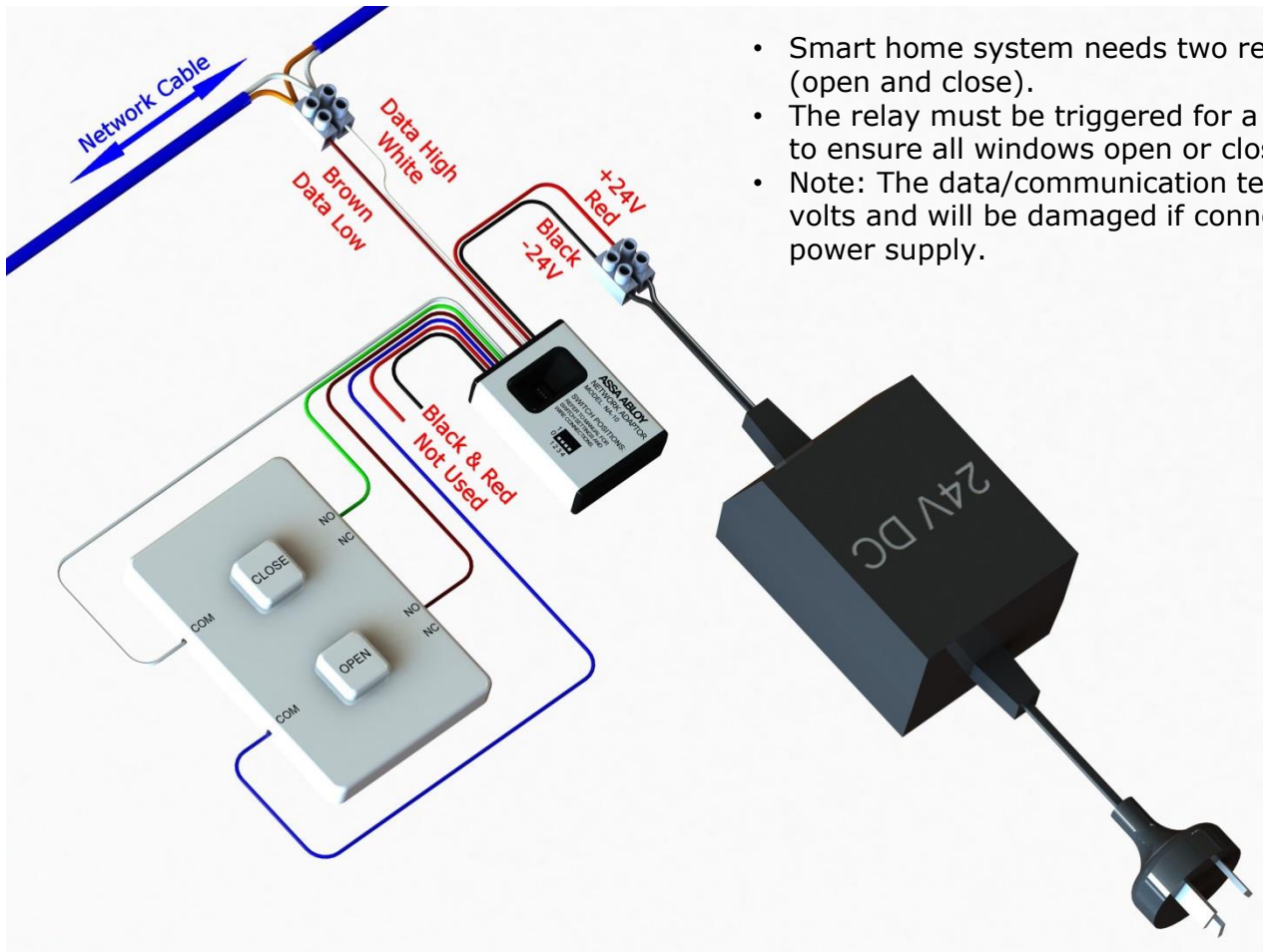


Keypad Connection



- The Keypad comes with a 1m Cable, cut and strip the end to expose the coloured wires as shown.
- Keep the Ferrite Ring end to attach to the Keypad.
- Note: The data/communication terminals use 5 volts and will be damaged if connected to the power supply.

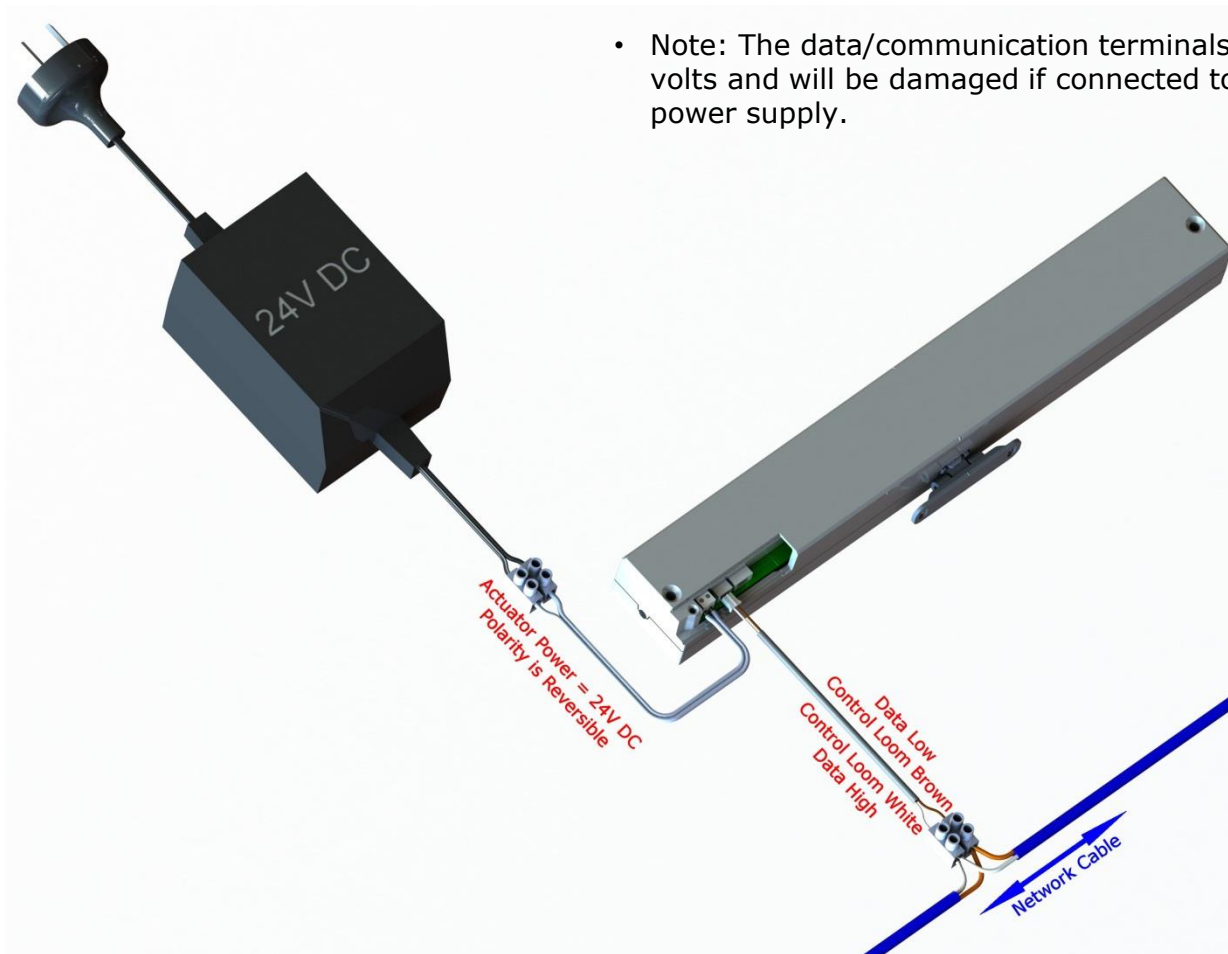
Wall Switch or Smart Home Connection



- Smart home system needs two relay outputs (open and close).
- The relay must be triggered for a 2 second pulse to ensure all windows open or close.
- Note: The data/communication terminals use 5 volts and will be damaged if connected to the power supply.

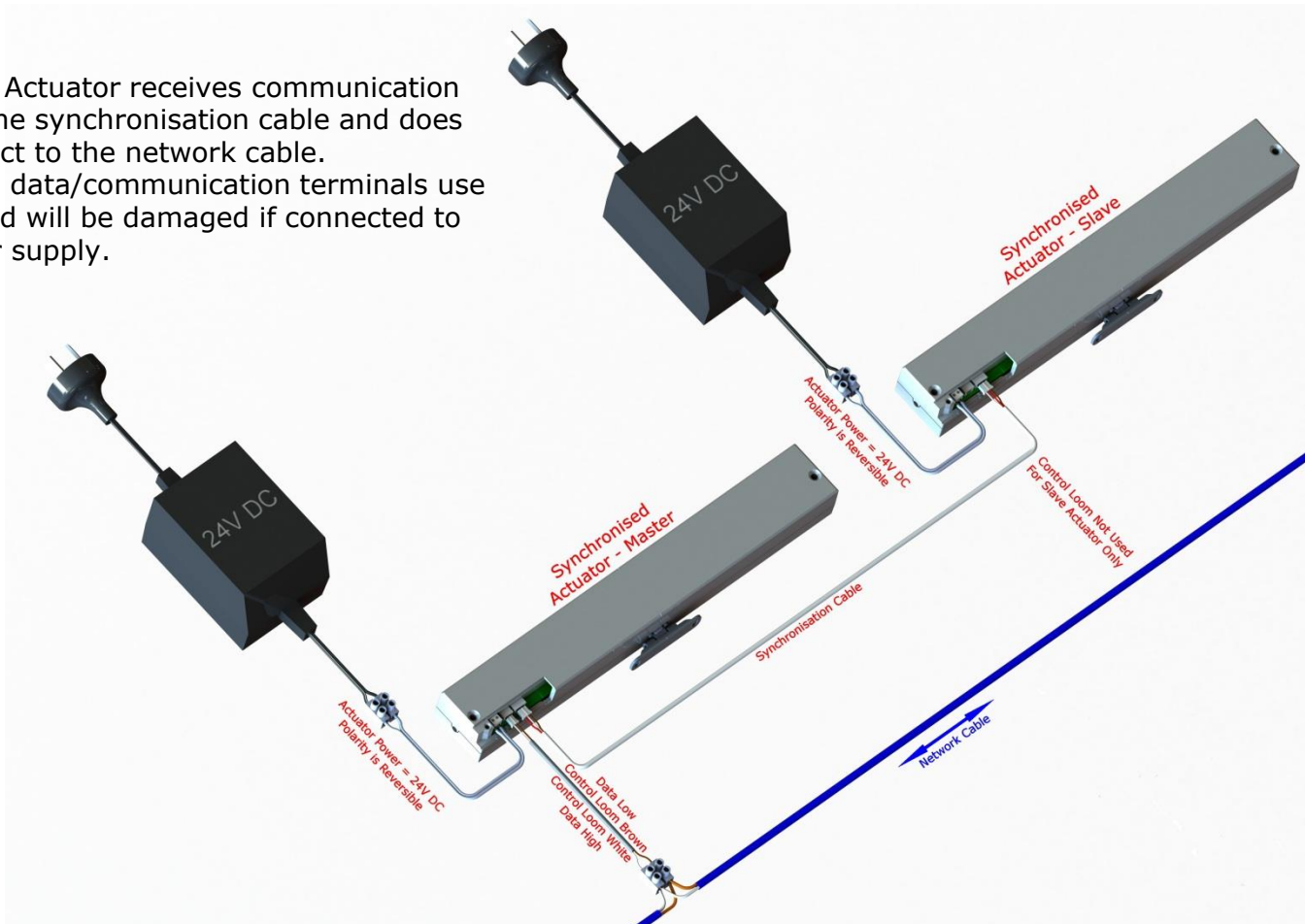
Single Actuator Connection

- Note: The data/communication terminals use 5 volts and will be damaged if connected to the power supply.

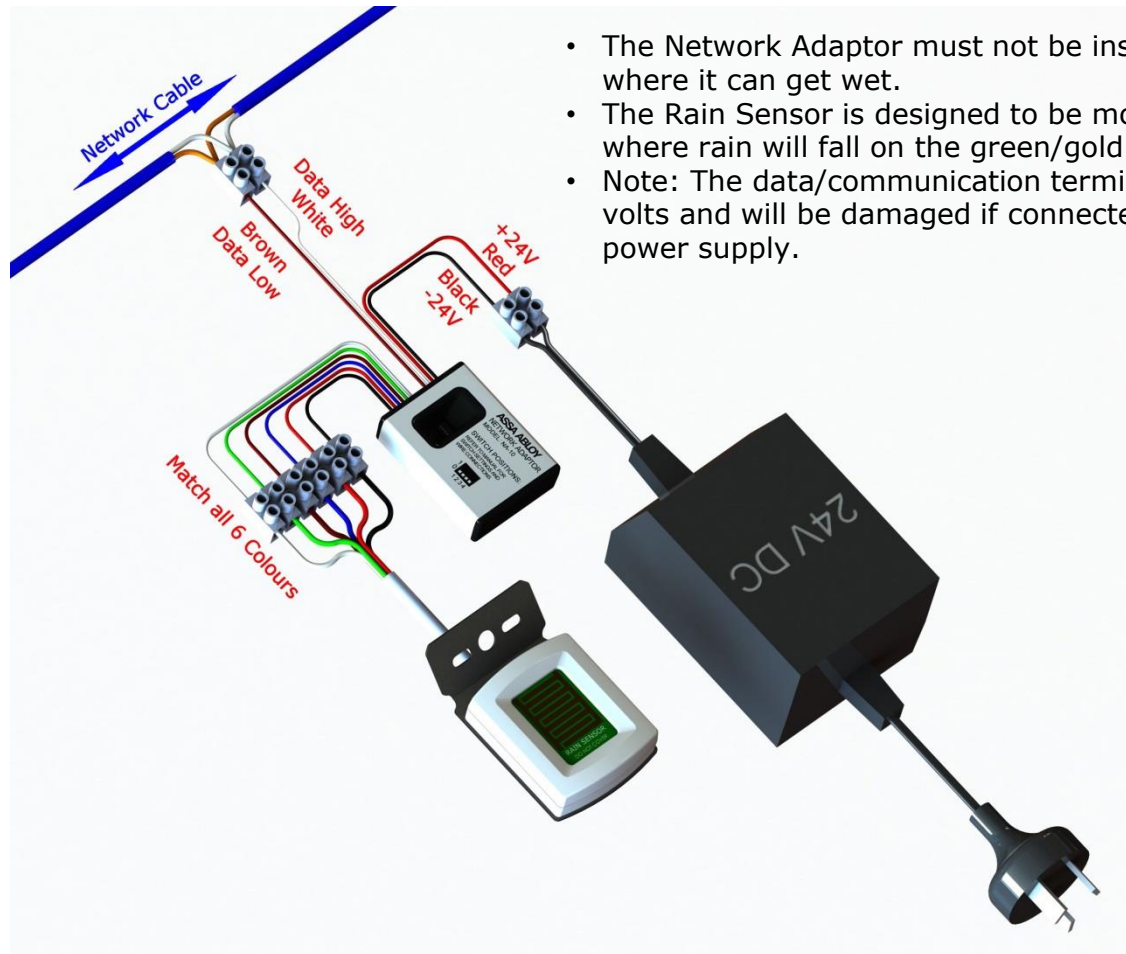


Synchronised Actuator Connection

- The slave Actuator receives communication through the synchronisation cable and does not connect to the network cable.
- Note: The data/communication terminals use 5 volts and will be damaged if connected to the power supply.



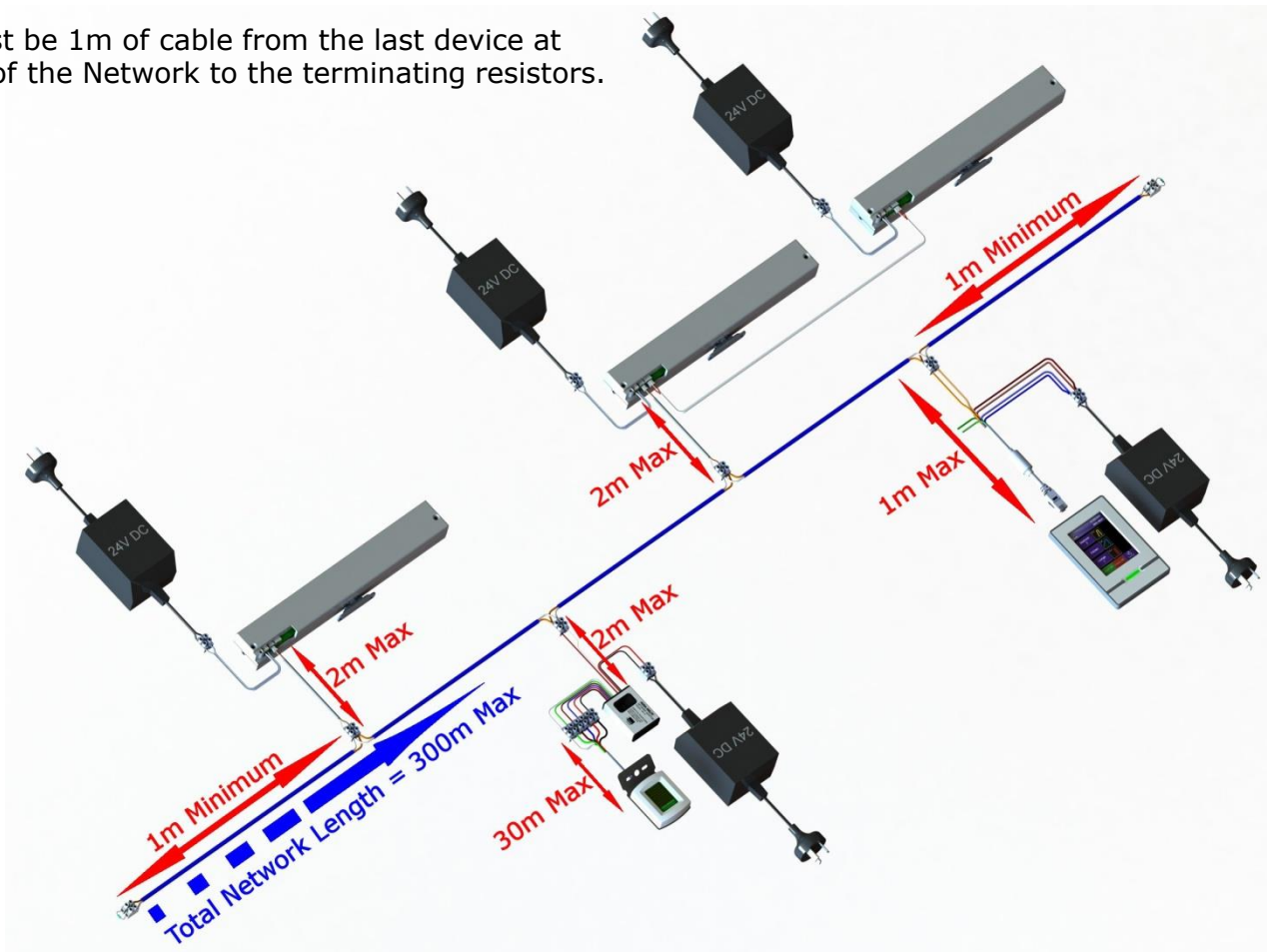
Rain Sensor Connection



- The Network Adaptor must not be installed outside where it can get wet.
- The Rain Sensor is designed to be mounted outside where rain will fall on the green/gold surface.
- Note: The data/communication terminals use 5 volts and will be damaged if connected to the power supply.

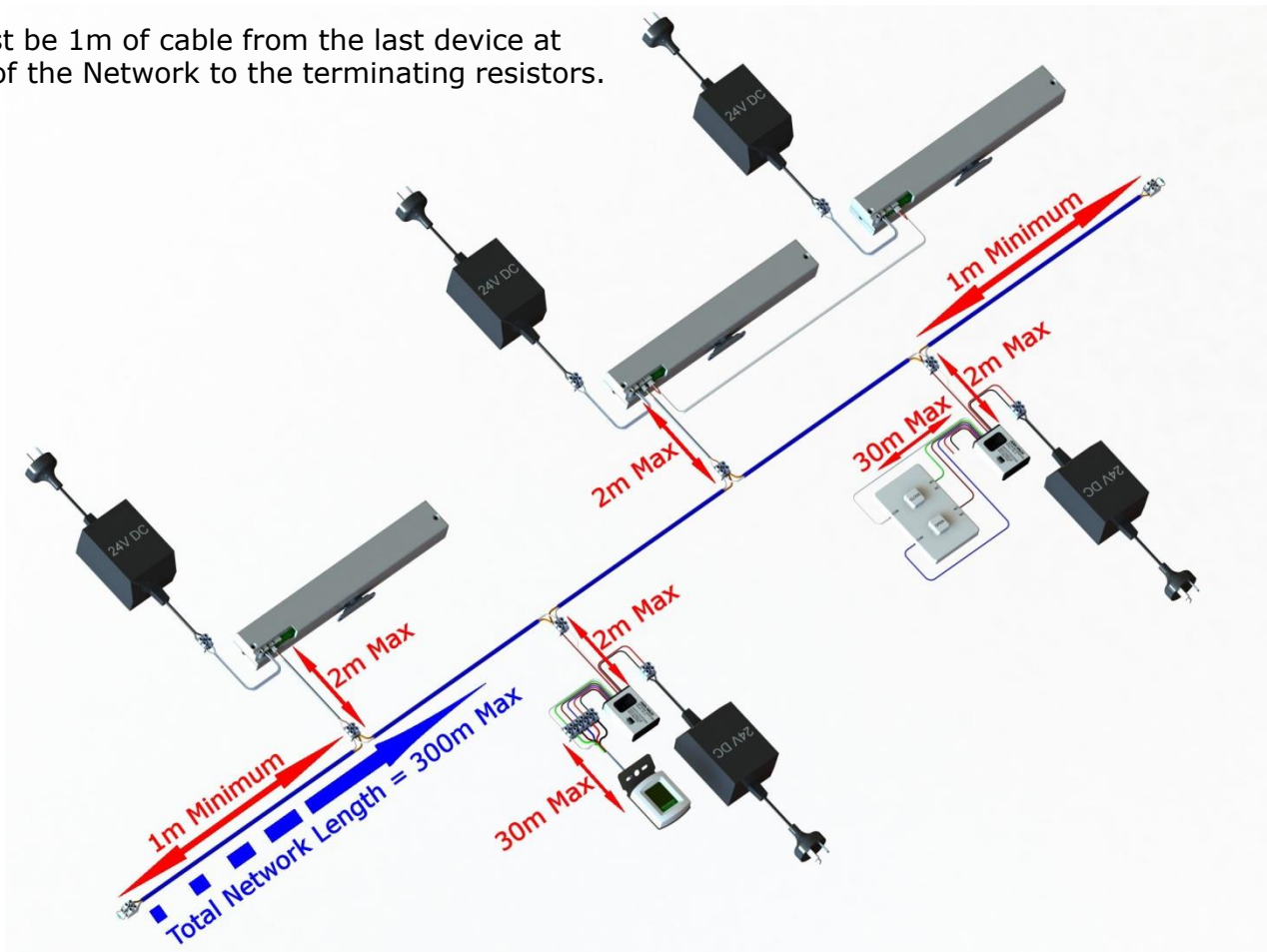
Keypad System Cable Lengths

- There must be 1m of cable from the last device at each end of the Network to the terminating resistors.



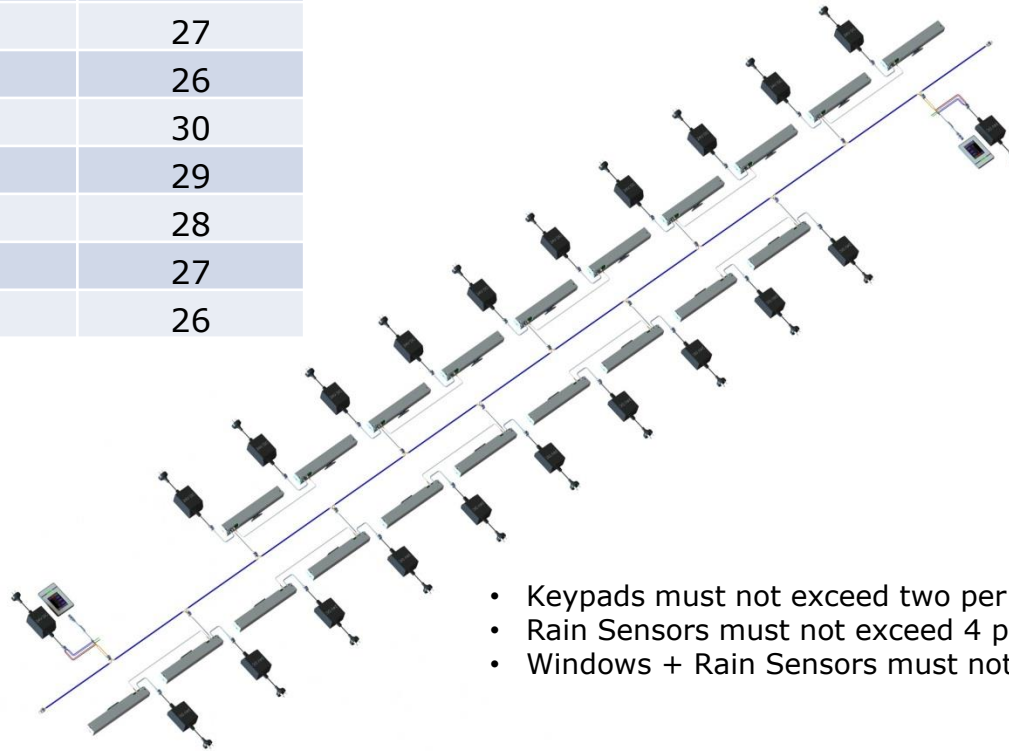
Wall Switch System Cable Lengths

- There must be 1m of cable from the last device at each end of the Network to the terminating resistors.



Keypad System Limits

Keypads	Rain Sensors	Windows
1	0	30
1	1	29
1	2	28
1	3	27
1	4	26
2	0	30
2	1	29
2	2	28
2	3	27
2	4	26

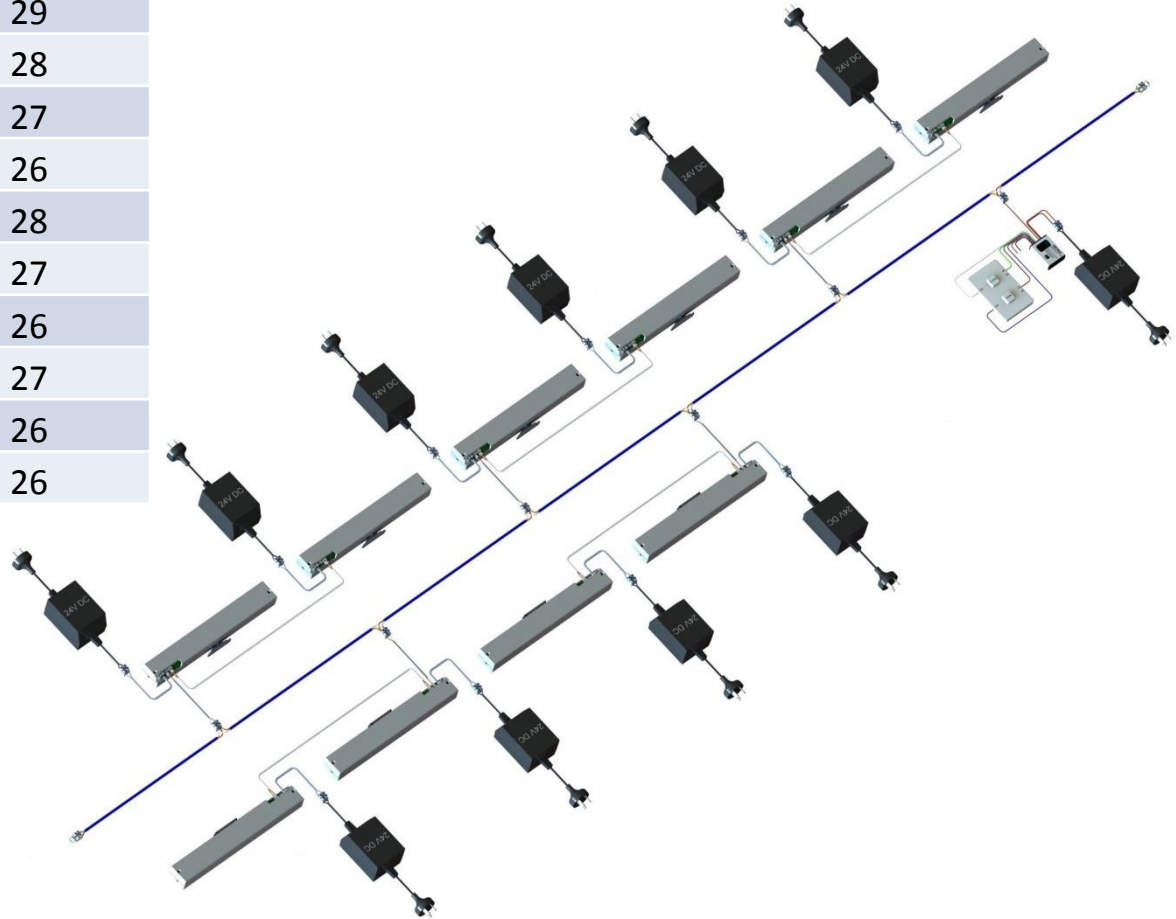


- Keypads must not exceed two per network
- Rain Sensors must not exceed 4 per network
- Windows + Rain Sensors must not exceed 30

Wall Switch System Limits

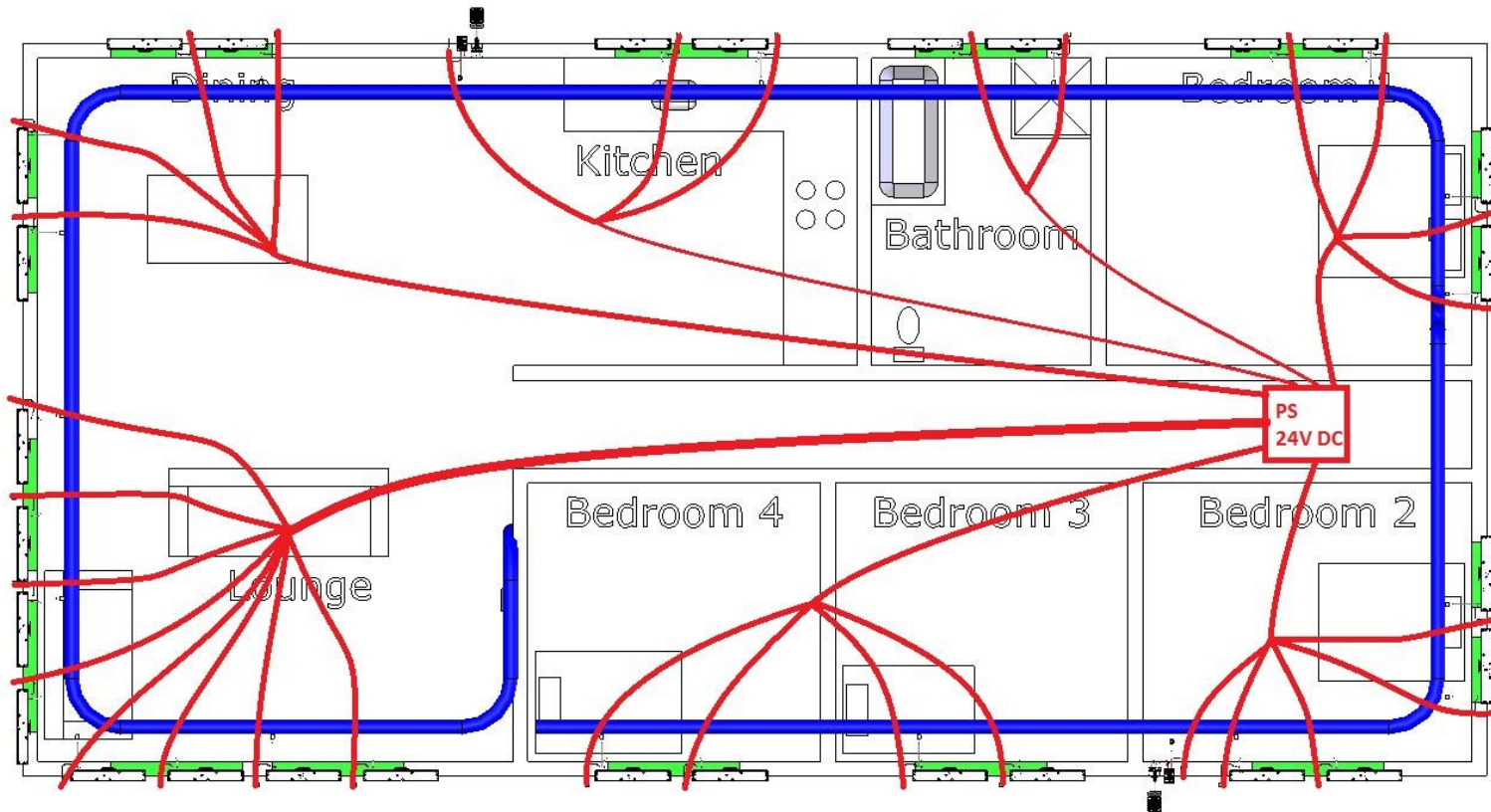
Switches	Rain Sensors	Windows
1	0	29
1	1	28
1	2	27
1	3	26
2	0	28
2	1	27
2	2	26
3	0	27
3	1	26
4	0	26

- Switches + Rain Sensors must not exceed 4
- Switches + Rain Sensors + Windows must not exceed 30



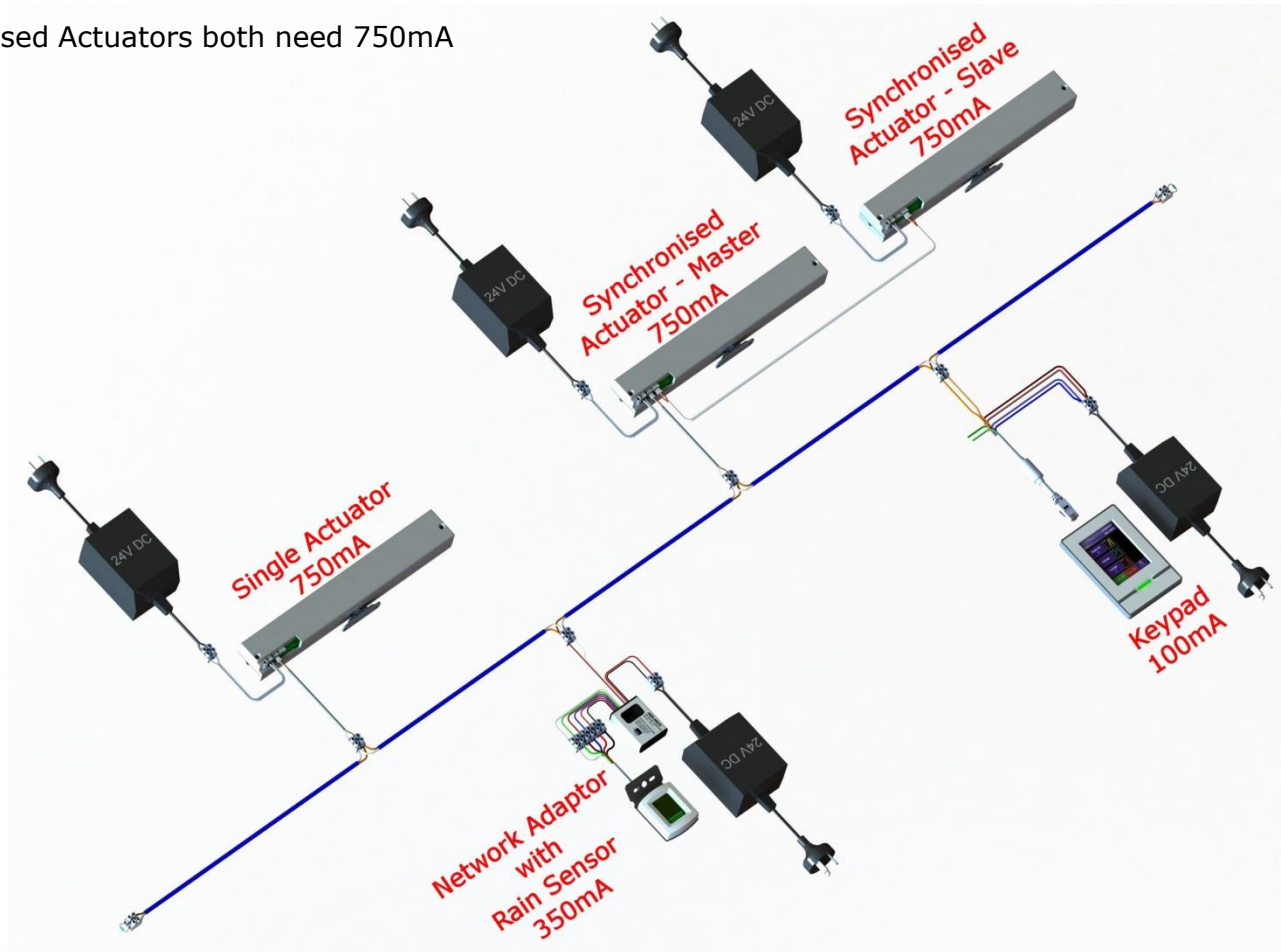
Elevation System Single Power Supply

- It is possible to use one large power supply to power multiple devices.



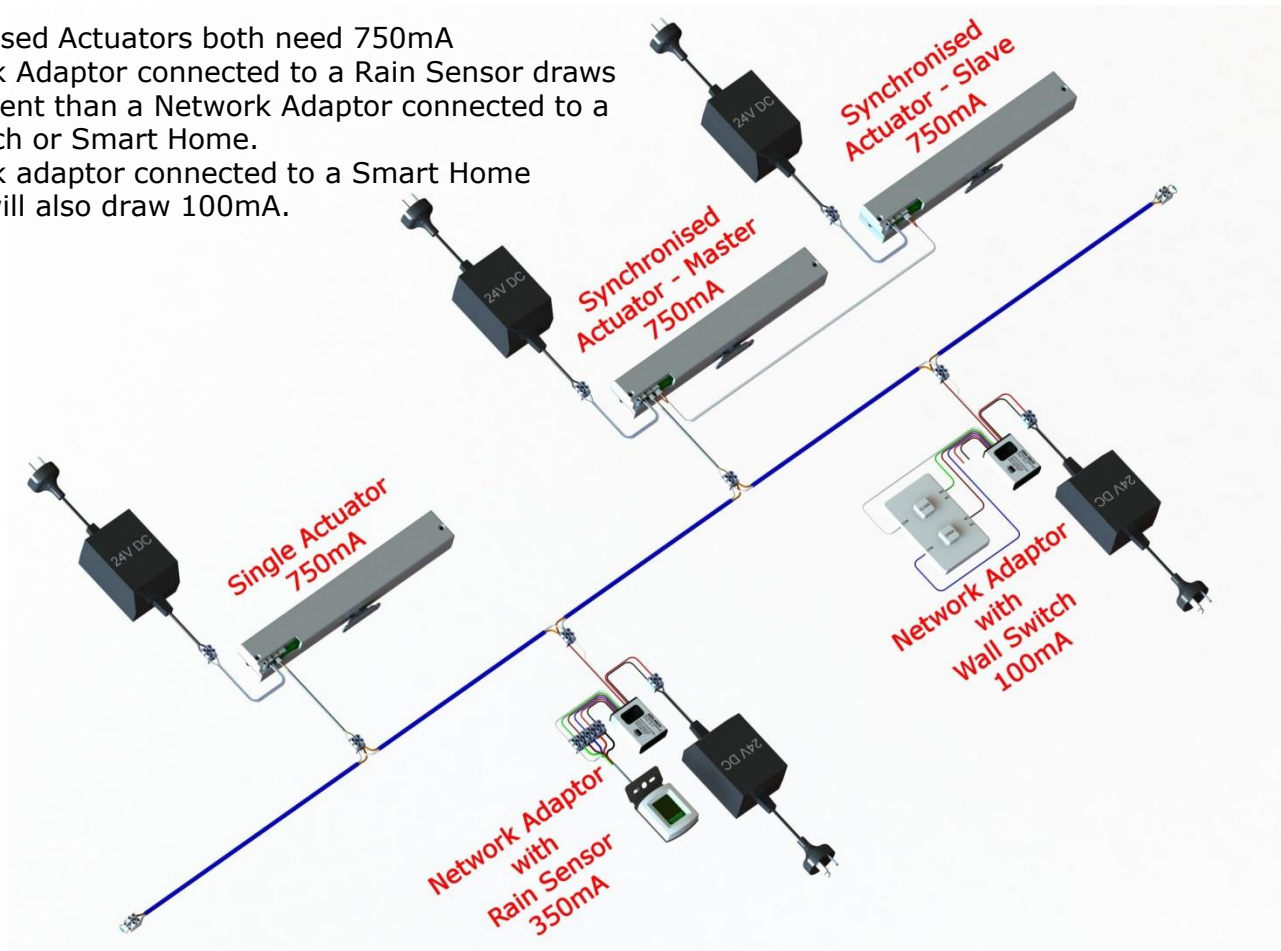
Keypad System Power Requirements

- Synchronised Actuators both need 750mA

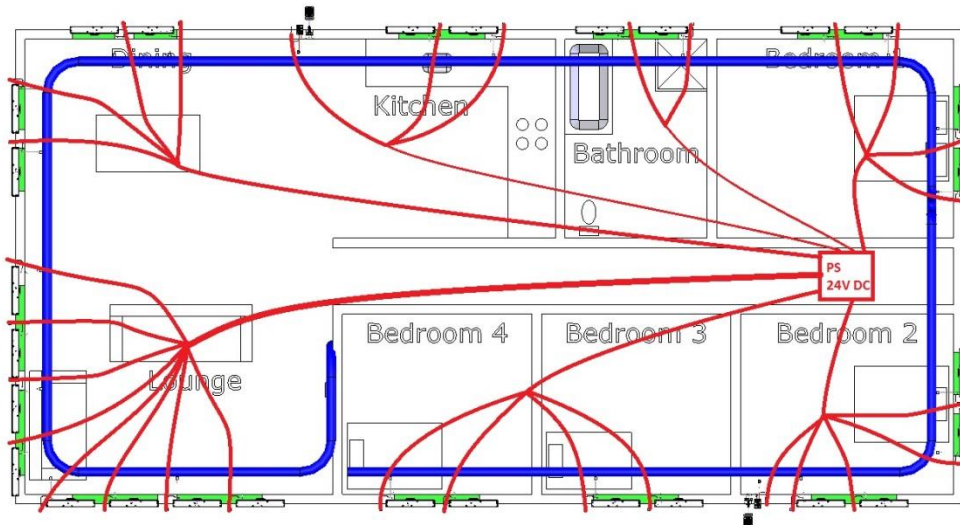


Wall Switch System Power Requirements

- Synchronised Actuators both need 750mA
- A Network Adaptor connected to a Rain Sensor draws more current than a Network Adaptor connected to a Wall Switch or Smart Home.
- A Network adaptor connected to a Smart Home (relays) will also draw 100mA.



Elevation System Single Power Supply



- Power supply must always be 24V DC.
- Power supply must have a current rating high enough for all devices it is powering.
- Electrician must ensure voltage drop does not exceed 1V (must have 23V minimum at all devices).

Device	Max Current Draw	Quantity	Total (max current x Quantity)
Actuator	750mA	28	21000
Keypad	100mA	2	200
Rain Sensor	350mA	2	700
		Total	21900mA = 21.9Amps