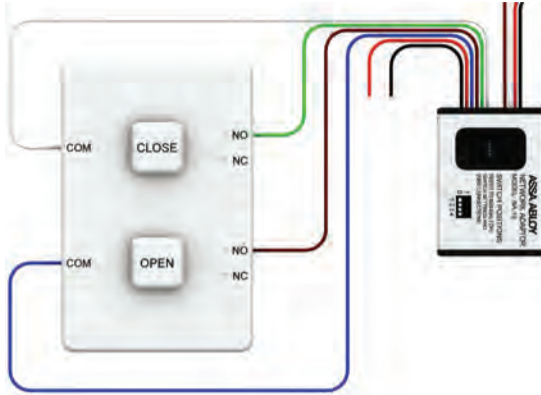


WHAT TYPE OF SYSTEM WILL YOU USE?

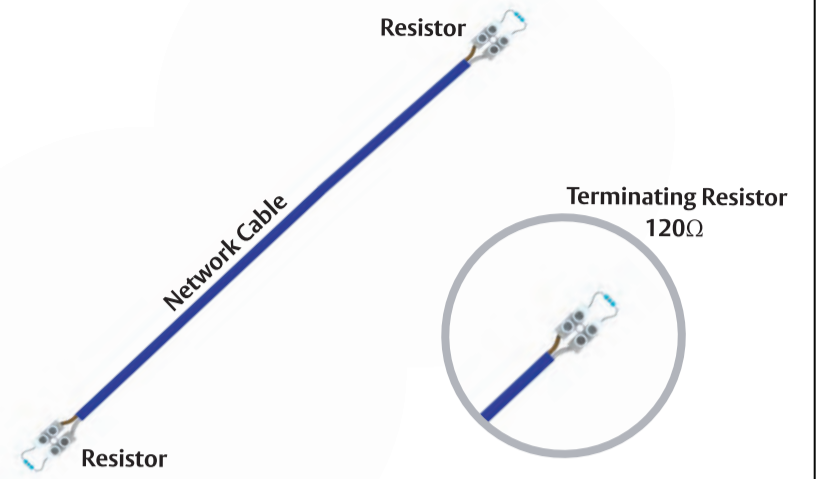
Keypad



Wall Switch or Smart Home



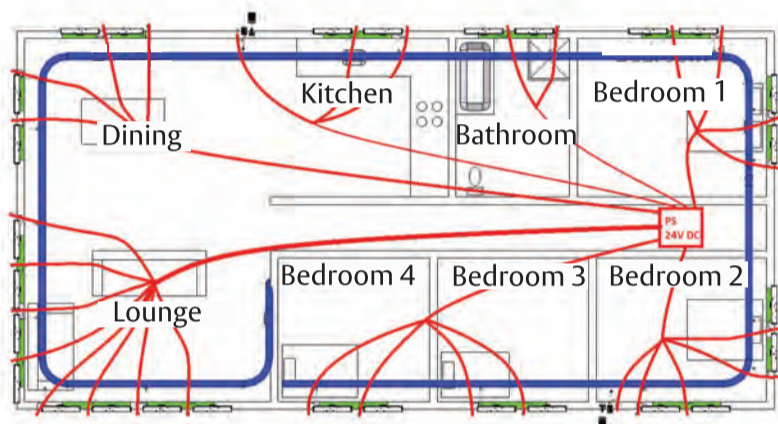
RECOMMENDED NETWORK CABLE



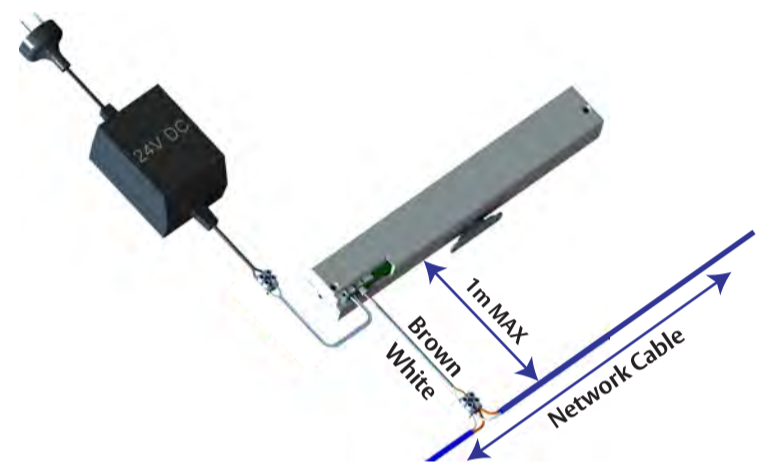
1. Select the type of system you will use. You cannot use the a keypad and wall switch on the same system. If connecting to a smart home system, replace the open and close buttons with relays which will be triggered by the smart home system.

2. We recommend Cat6 twisted pair cable. Network cable is not included. There must be a terminating resistor at each end of the network. Resistors come with the Keypad and Network Adaptor. Maximum cable length = 300m.

ELEVATION SYSTEM SINGLE POWER SUPPLY OPTION



SINGLE ACTUATOR CONNECTION

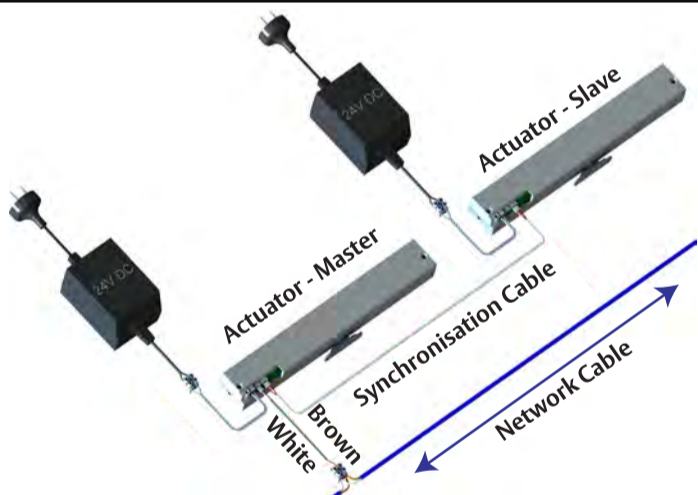


3. *Power supply must always be 24V DC. electrician must ensure voltage drop does not exceed 1V (must have 23V minimum at all devices).

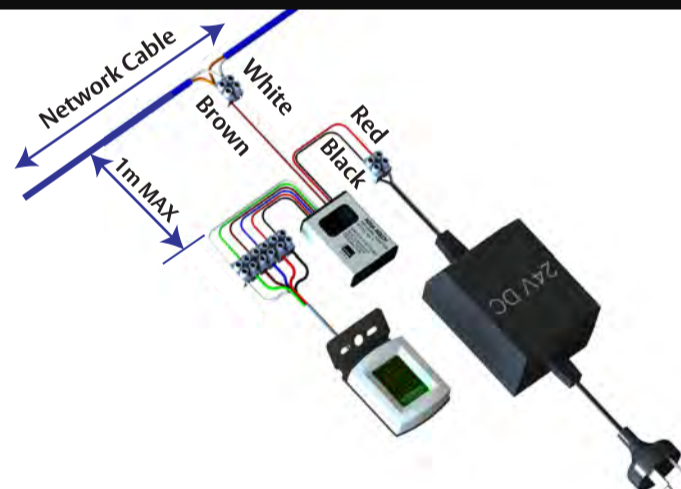
Device	Max Current Draw	Quantity	Total (max current x Quantity)
Actuator	750mA	28	21000
Keypad	100mA	2	200
Rain Sensor	350mA	2	700
		Total	21900mA=21.9Amps

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

SYNCHRONISED ACTUATOR CONNECTION



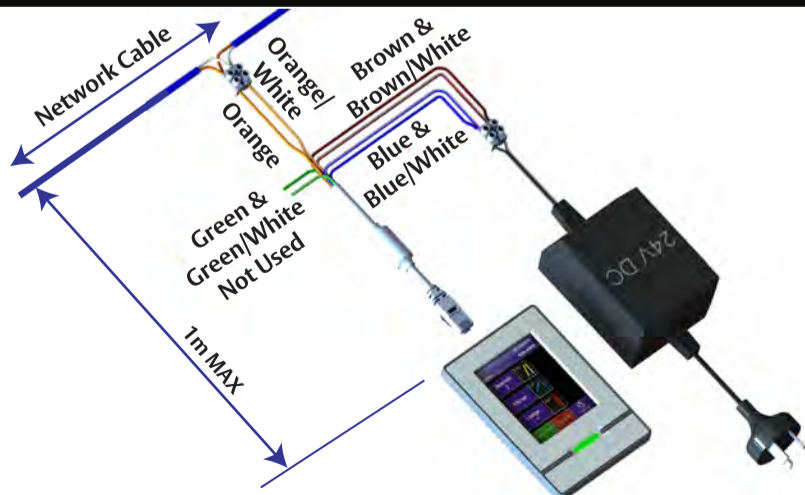
RAIN SENSOR CONNECTION



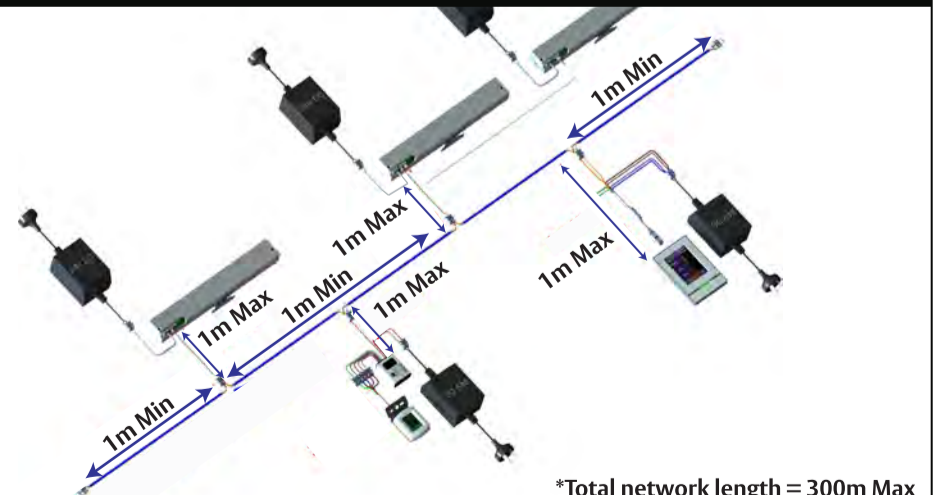
5. The slave Actuator receives communication through the sychronisation cable and does not connect to the network cable. Note: the data/communication terminals use 5 volts and will be damaged if connected to the power supply.

6. 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 CONNECTION



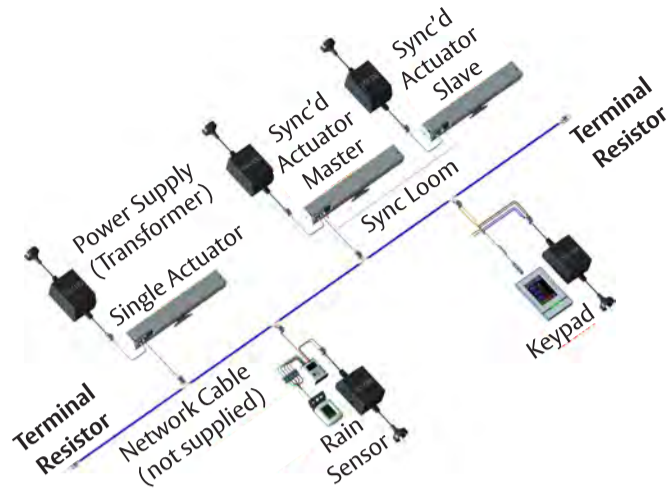
KEYPAD SYSTEM CABLE LENGTH



7. 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.

8. There must be a minimum of 1m cable between the last device on the Network and the terminating resistors.

BASIC KEYPAD SYSTEM



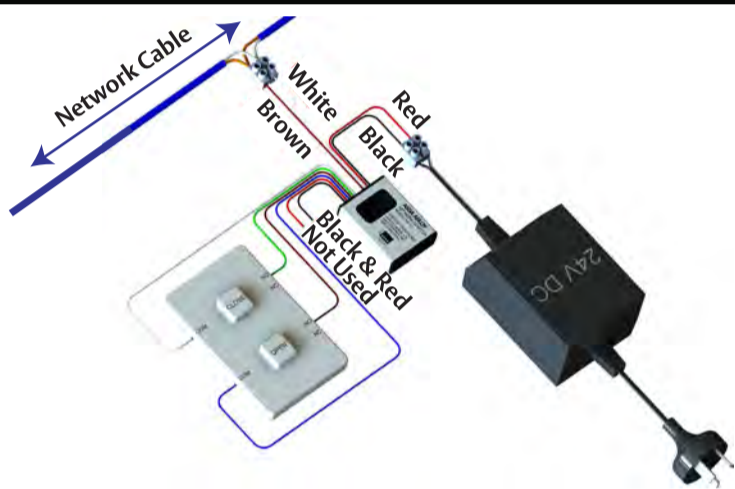
KEYPAD SYSTEM LIMITS

Key Pads	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

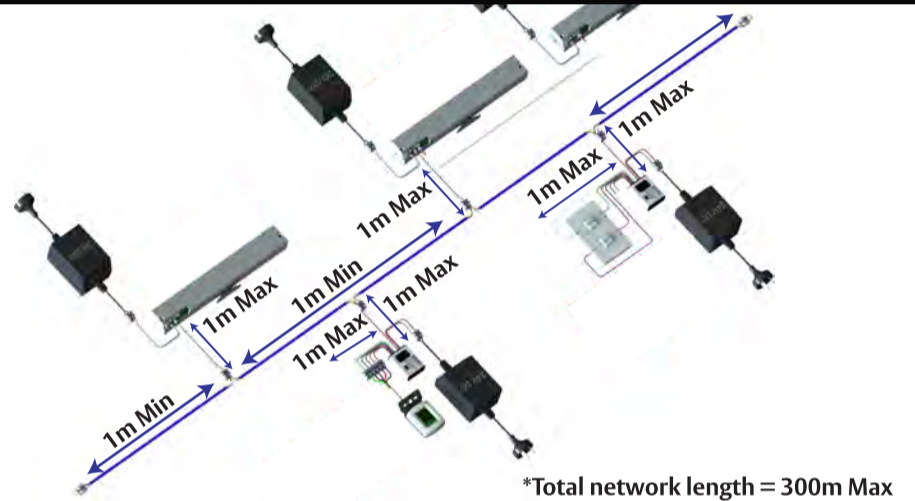
9. Every device on the system must be connected to the network cable between the two resistors.
Devices can be connected to the network cable in any order.

10. Keypads must not exceed two per network.
Rain Sensors must not exceed 4 per network.
windows + rain Sensors must not exceed 30.

WALL SWITCH OR SMART HOME CONNECTION



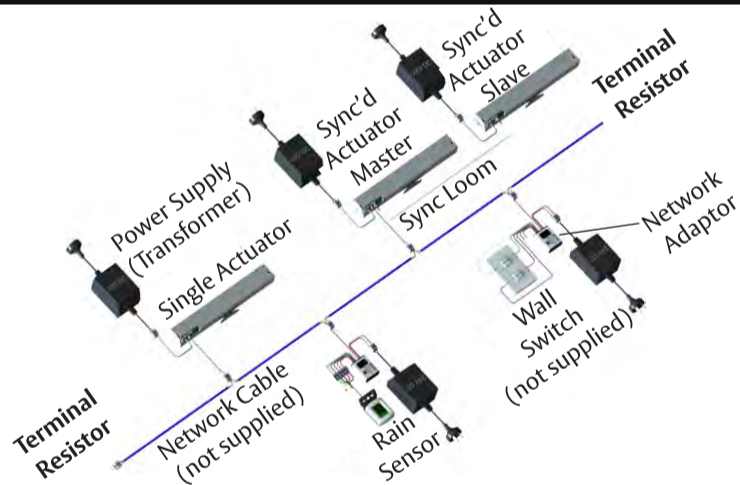
WALL SWITCH SYSTEM CABLE LENGTHS



11. Smart home system needs two relay outputs (open and close).
The relay must be triggered for more than 2 seconds 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.

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

BASIC WALL SWITCH SYSTEM



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

13. 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.

14. Switches + Rain Sensors must not exceed 4.
Switches + Rain Sensors + Windows must not exceed 30.

GENERAL NOTES

1. Cat 6 Twisted Pair Network Cable recommended to be used. 2. A maximum of 30 devices per network. 3. Maximum network cable length 300m. 4. A maximum of 30 devices can be assigned to one network, each Actuator, and Network Adaptor counts as a device, eg. 28 Actuators and 2 Network Adaptors can be placed on one network. 5. A maximum of 4 Network Adaptors per network. 6. Place Switch as close as possible to the Network Adaptor.

CALIBRATION AND BASIC FUNCTION:

The system must calibrate before use. Power up the system, wait one minute, then press the open switch. The windows will open and close twice. Wait at least one minute before operating the system.
Note: If a window stops during calibration it means that it has safety stopped due to too much load. Press the close switch. Remove the obstruction. Then press the open switch to continue.
WALL SWITCH BASIC FUNCTION:
Press the open switch for at least 2 seconds to open the windows.
Press the close switch for at least 2 seconds to close the windows.
Press any switch for at least 2 seconds to stop the windows.

POWER CABLE REQ:

LENGTH (m)	WIRE Ø MIN	AWG
12	0.7mm	22
19	0.8mm	20
29	1.0mm	18
47	1.3mm	16
74	1.6mm	14
119	2.0mm	12

FINAL CHECKLIST:

- ENSURE:
- Each plug is properly located.
 - Check that the two Network terminal resistors are installed as shown.
 - Check **all** connections again
 - Check the dipswitches are in the correct position
 - Check the power is turned on

TECHNICAL SPECIFICATION:

INPUT VOLTAGE	24V DC
MAXIMUM CURRENT	750mA Per Actuator
OPENING TIME	Approx 40sec
OVERALL DIMENSIONS	308mm x 44mm x 3
OPERATING TEMPERATURE	0 - 50 C
HUMIDITY	0% - 95%
NETWORK CABLE LENGTH	300m MAX

KEY:

NSW1 = Network Signal Wire 1.
NSW2 = Network Signal Wire 2.
NO = Normally Open contact.
NC = Normally Closed contact.
COM = Common contact.

FREQUENTLY ASKED QUESTIONS

- **How many devices can I run on a 'network'?**
The 'network' can handle 30 devices. Each Actuator acts as one device, each Network Adaptor also acts as one device. The use of synchronisation of two Actuators only counts as one device.
- **Can I use two operators on one window?**
Yes. The Synchronisation Loom (purchased separately) is required for two Actuators on one window.
- **How do I know which power lead goes where?**
The system allows for the power loom to be inserted in either terminal.
- **What is the largest sash size for one Actuator?**
We recommend that the maximum sash width of 900mm and maximum weight of 30kg for one Actuator. A maximum sash width of 1800mm for two Actuators. Please refer to the web-site for additional information.
- **Can I use more than one Rain Sensor?**
Yes. You can use up to four Rain Sensors on the one network.
- **Will all the windows close when the Rain Sensors detect rain?**
Yes.
- **Can the Rain Sensor control individual windows?**
No. The Rain Sensor will control all the windows on the network. This however can be achieved with a Keypad Network.
- **Will my windows re-open automatically once the rain has stopped?**
No. You will have to press the open button to re-open the windows after the rain has stopped. However, this automatic re-open function is available on a Keypad network.
- **Can you override a Rain Sensor that has closed the windows?**
Yes. However the Rain Sensor will not reactivate until it has dried and reset.
- **3rd Party Control System Connectivity**
"Smart Home" applications are NON-STANDARD and require particular features to operate with this system. Replace all switch connections with two relays. Follow basic function steps to activate and control the system. Ensure activation time is at least two seconds.

