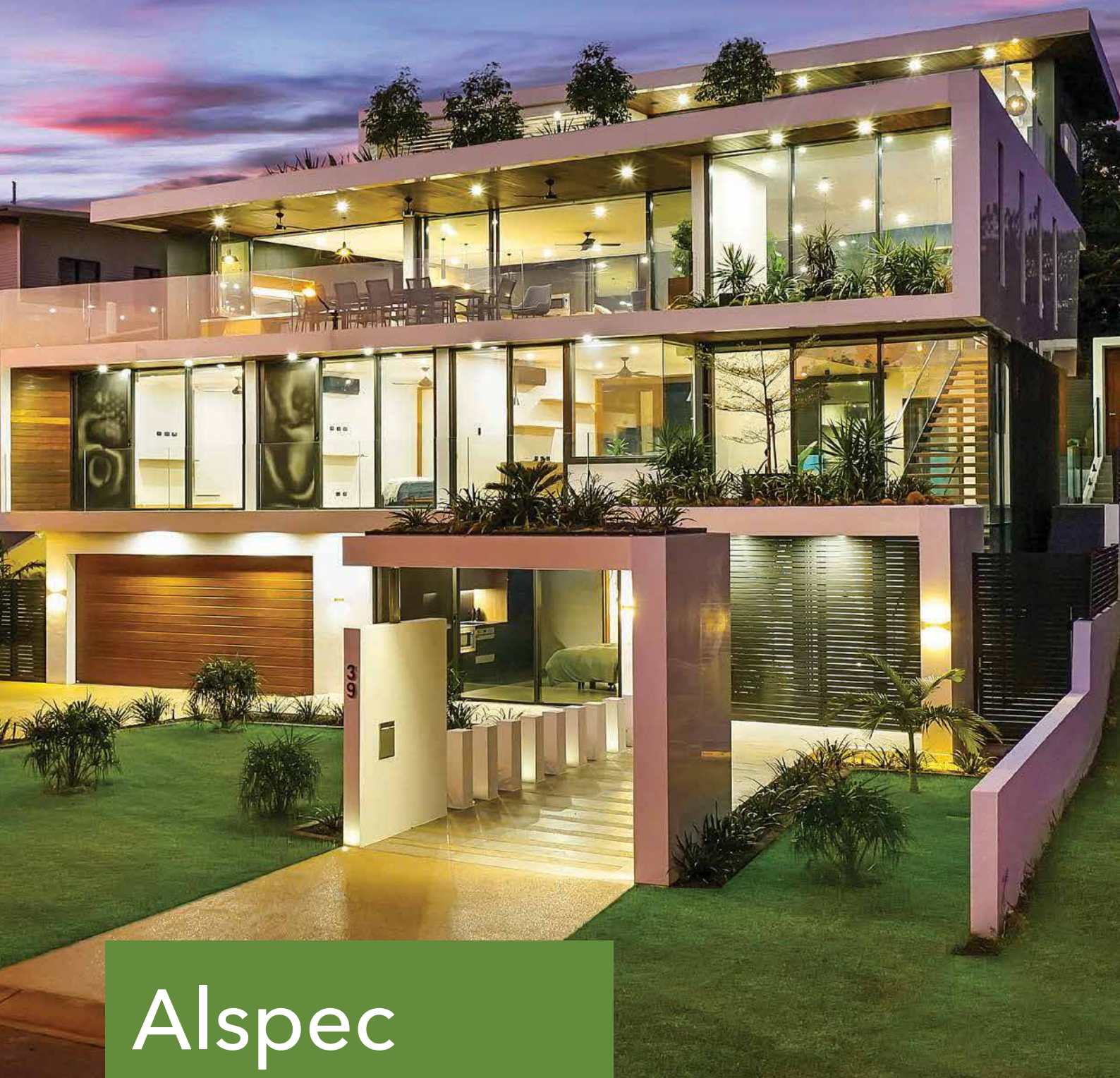




Alspec

Automated Serving Window Power Struts Components and Wiring

alspec[®]
EVERYTHING ALUMINIUM
& HARDWARE

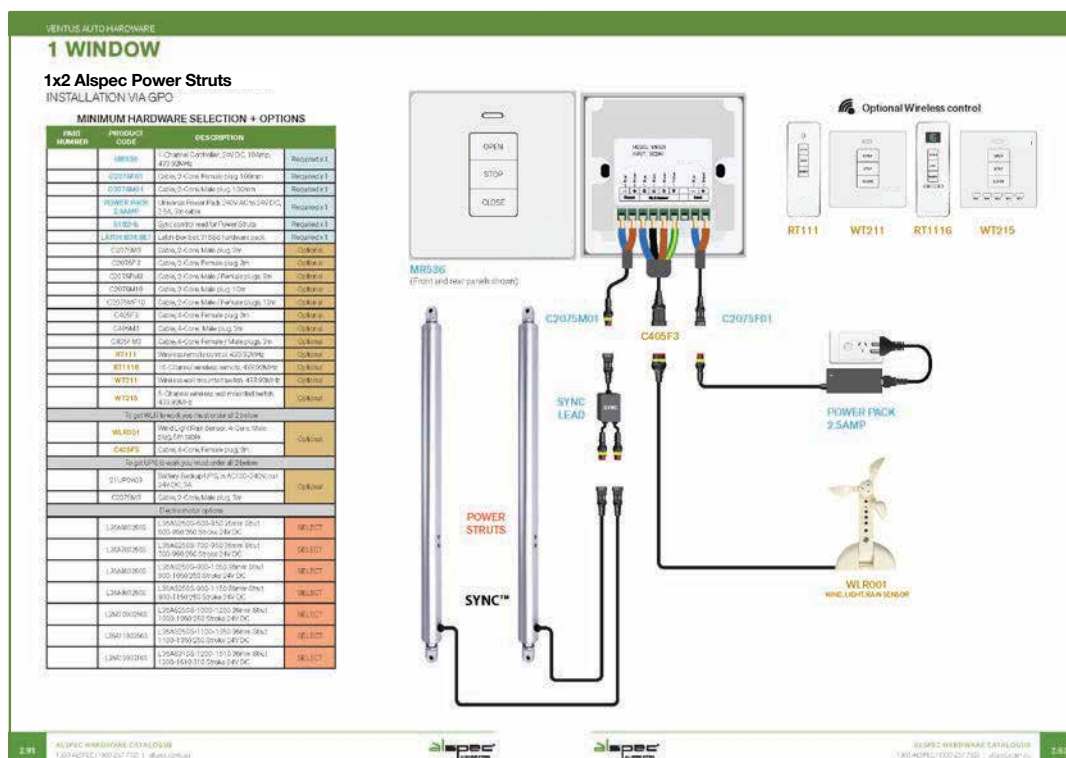
HOW TO USE THE SCHEMATICS

The following easy to follow schematics are set up in relation to a minimum equipment list. This minimum equipment list can be found on each page of the wiring drawings to help reference the necessary parts needed and how they relate to one another. The drawings do not show additional extension cables as your requirements vary; include additional cables where required.

To use this document you need to follow a few very simple steps.

1. Read and understand hardware requirements
2. Refer to the header on each chart to first find the number of windows you need to automate and secondly find the matching hardware.
3. Each chart has a table listing all the parts available for that particular setup. Simply follow the list to help identify, select and show the location of the parts you will use.
4. If you find you have too many motors for the available channels, divide the openings/windows into groups. For example, if there are 7 windows, use two MR551 8-Channel controllers and plan accordingly. Maximum number of struts that can be connected to an 8-channel controller is 4 sets (8 motors).

Parts are designed to plug together via the use of the male and female Quick Connect Plugs that helps remove confusion and speeds installation. Wiring hookups not using the Plug & Play method is possible, electricians can follow the guide on the specifications required.



GENERAL GUIDELINES

Some Basic Ground Rules

- 1 The Alspec system operates on 24V DC outputted from a power pack plugged into 240V AC mains power outlet via "GPO".
- 2 All Plug & Play cables are supplied in 100mm, 3m and 10m lengths.
- 3 Use a Synchroniser Lead (Sync Lead) to operate two Power Struts on the same window.
- 4 If you decide to not use the Alspec plug & play leads, any electrician can cut the plugs and connect to our controls as long as cable joins on site are made with soldered joints.

Step 1. Identify the drawing that you will be wanting to install.

Step 2. Refer to the List of parts

Required	= Item required. The system cannot function without this item.
Optional	= This is an optional item. The user can select optional accessories or parts as required for the system to operate.
Select	= This is a required item with options. The user will need to select at least one of these to operate that setup.

Installation without 'Plug & Play'

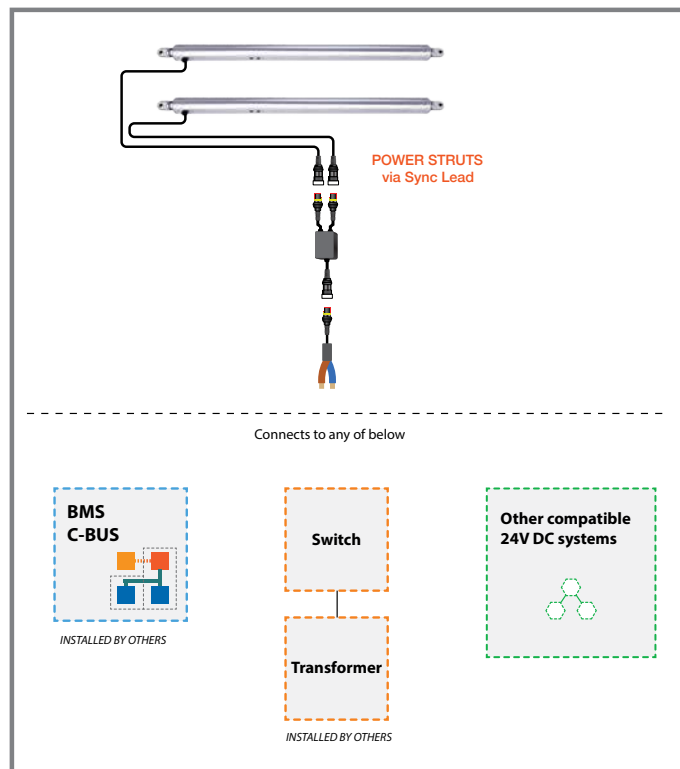
Have your electrician install for you.

When installations do not require the Alspec 'Plug & Play' connectors, the installation can be made using direct connections following the guidelines below.

This must be completed by a Licensed Electrician and support the minimum requirements.

Requirements:

- Motor hardware operates on 24V DC and requires a minimum cable diameter of 0.75mm to reduce voltage loss over longer distances.
- Use a Synchronizer Lead (Sync Lead) to operate two Automated Power Struts on the same window.
- Non 'Plug & Play' cable joins must be a soldered joint.



POWER STRUT ACTUATORS

Power Struts	Closed Length	Open Length	Strut Throw	Sash Height	Latchbox Cutout	Max Sash Weight
605-855 Actuator250	605mm	855mm	250mm	950-1049mm	828mm	53kg
700-950 Actuator250	700mm	950mm	250mm	1050-1149mm	923mm	49kg
750-1060 Actuator310	750mm	1060mm	310mm	1150-1249mm	1023mm	60kg
850-1160 Actuator310	850mm	1160mm	310mm	1250-1349mm	1123mm	55kg
850-1260 Actuator410	850mm	1260mm	410mm	1350-1449mm	1223mm	77kg
950-1360 Actuator410	950mm	1360mm	410mm	1450-1549mm	1323mm	72kg
1050-1460 Actuator410	1050mm	1460mm	410mm	1550-1649mm	1423mm	68kg
1150-1560 Actuator410	1150mm	1560mm	410mm	1650-1749mm	1523mm	65kg

IMPORTANT:

Power Struts are to be used with a Synchroniser Unit to operate set/pair through one channel simultaneously.

Power Supply

The system uses a power pack to supply the required 24V DC to operate. A GPO (general power outlet) should be installed within reach to plug into.

Which power pack to use is dictated by how many motors are connected to the channel controller.

An MR551 8-Channel Controller can power a maximum of eight motors however, as each Power Struts window setup utilises a set of two electric struts linked together with a synchroniser lead, a maximum of four channels can be used.

1 to 2 Sets:

2.5 Amp Power Pack
Max. 4 motors



3 to 4 Sets:

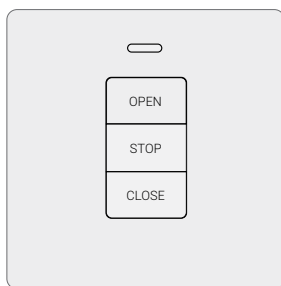
10 Amp Power Pack
Max. 8 motors



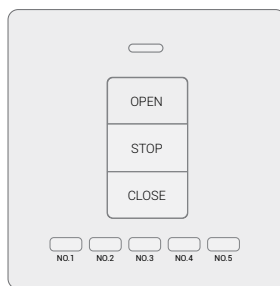
WIRING

The automation products operate off a 24V DC system and requires a minimum cable diameter of 0.75mm to reduce voltage loss over longer distances.

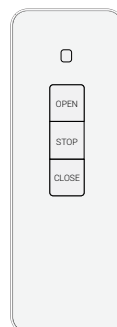
PAIRING WIRELESS TRANSMITTERS



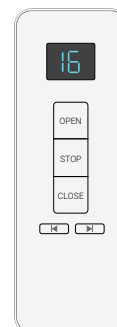
WT211



WT215



RT111



RT1116

SPECIFICATIONS

Model	Channel	Working Frequency	Transmission Distance	Button Battery	Operating Current	Receiving Sensitivity
WT211	1	433.92MHz	< 50m	3V CR2032	≤ 10mA	-100dBm
WT215	5	433.92MHz	< 50m	3V CR2430	≤ 10mA	-100dBm
RT111	1	433.92MHz	< 50m	3V CR2430	≤ 10mA	-100dBm
RT1116	16	433.92MHz	< 50m	3V CR2430	≤ 10mA	-100dBm

Pairing Wireless Transmitters Guide

OPERATION DESCRIPTION

- Before setting multi channel transmitter, please choose a channel you want to program and control.
- Setting method of single channel remote is as same as multi channel remote.

MATCHING CODE

- Power the controller on
- Press [STOP] on the MR536 or the red button on the MR551 for 5 seconds
- Press [OPEN] on the remote
- LED flashes 3 times to confirm pairing has been made

CLEARING SINGLE CODE

- Power the controller on
- Press [STOP] on the MR536 or the red button on the MR551 for 5 seconds
- Press [CLOSE] on the remote *within* 15 seconds
- LED flashes 3 times to confirm pairing has been removed

LOCKING CHANNEL (For RT1116 only)

- Select the required channel
- On the back of the remote, press the small gold button three times quickly to lock and unlock
- It will default back to unlock after power off or reset

REPLACING BATTERY

- Open the back board of the transmitter
- Take out the used battery and place the new one
- Close the back board
- Please dispose of the used battery appropriately

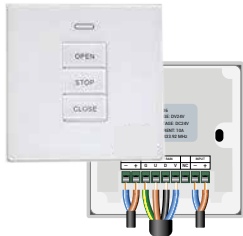
TROUBLESHOOTING

No.	Symptom	Solution
1	LED on the transmitter is off or weak.	1. Make sure the cover is installed ready. 2. Change the battery.
2	The transmitter and the receiver work well, the motor does not work.	1. Check the wiring of motor. 2. Check all control connections.

COMPONENTS AND DESCRIPTIONS

PART NUMBER	PRODUCT CODE	DESCRIPTION
1345580	MR536	1-Channel Controller, 24V DC, 10Amp, 433.92MHz
1345581	MR551	8-Channel Controller, 24V DC, 2.8Amp, 433.92MHz
1345582	C2075F01	Cable, 2-Core, Female plug, 100mm
1345583	C2075M01	Cable, 2-Core, Male plug, 100mm
1345584	POWER PACK 2.5AMP	Universal Power Pack 240V AC to 24V DC, 2.5A, 3m cable
1345585	POWER PACK 10AMP	Power Pack 240V AC to 24V DC, 10 Amp - ELG-240-24A-3Y
1345611	S102HL SYNC	Power Strut Synchronizer control unit
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack
1345618	C1F2M	Motor Control Test Lead
1345587	RT111	Wireless remote control, 433.92MHz
1345617	RT1116	16-Channel wireless remote, 433.92MHz
1345589	WT211	Wireless wall mounted switch, 433.92MHz
1345616	WT215	5-Channel wireless wall mounted switch, 433.92MHz
1345593	C2075M3	Cable, 2-Core, Male plug, 3m
1345592	C2075F3	Cable, 2-Core, Female plug, 3m
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m
1345598	C2075M10	Cable, 2-Core, Male plug, 10m
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m
1345597	C405F3	Cable, 4-Core, Female plug, 3m
1345609	C405M3	Cable, 4-Core, Male plug, 3m
1345612	C405FM3	Cable, 4-Core, Female / Male plugs, 3m
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N
To get MS541 to work you must order all 3 below		
1345605	MS541	Wired wall mounted switch
1345597	C405F3	Cable, 4-Core, Female plug, 3m
1345609	C405M3	Cable, 4-Core, Male plug, 3m
To get WLR to work you must order all 2 below		
1345596	WLR001	Wind Light Rain Sensor, 4-Core, Male plug, 6m cable
1345597	C405F3	Cable, 4-Core, Female plug, 3m
To get UPS to work you must order all 2 below		
1345608	21UP2403	Battery Backup UPS, in AC100-240V, out 24V DC, 3A
1345593	C2075M3	Cable, 2-Core, Male plug, 3m

All the hardware you need and no confusion. The Alspec range encompasses control units at the heart of the system, power supply, control pads and wireless remotes, automated sensors, leads, extensions, accessories and the window operator motors themselves. Alspec also provides compressive wiring diagrams to aid in the 'Plug & Play' installation.



MR536
1-Channel control unit



MR551
8-Channel control unit



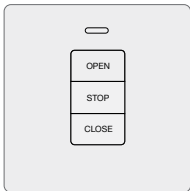
POWER PACK 2.5AMP
Mains power 240V AC
to 24V DC



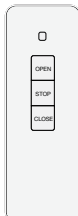
POWER PACK 10AMP
Mains power 240V AC
to 24V DC



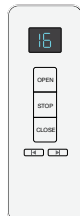
21UP2403
UPS Battery backup power



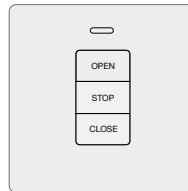
MS541
Wired wall mounted
switch



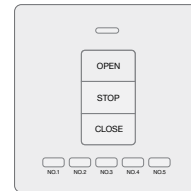
RT111
1-Channel wireless
remote control



RT1116
16-Channel wireless
remote control



WT211
1-Channel wireless
wall mounted switch



WT215
5-Channel wireless
wall mounted switch



WLR001
Wind Light Rain Sensor



C2075F01
2-Core female plug 100mm



C2075M01
2-Core male plug 100mm



C2075F3
2-Core female plug 3m



C2075M3
2-Core male plug 3m



C2075FM3
2-Core female-male plug 3m



C2075FM10
2-Core female-male plug 10m



C2075M10
2-Core male plug 10m



C405F3
4-Core female plug 3m



C405M3
4-Core male plug 3m



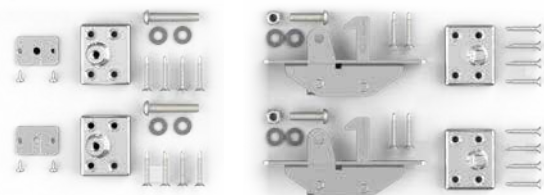
C405FM3
4-Core female-male plug 3m



S102HL
Power Strut SYNC Lead



C1F2M TEST LEAD
On-site test unit



POWER STRUT SYSTEM

1 WINDOW

1x2 ALSPEC POWER STRUTS

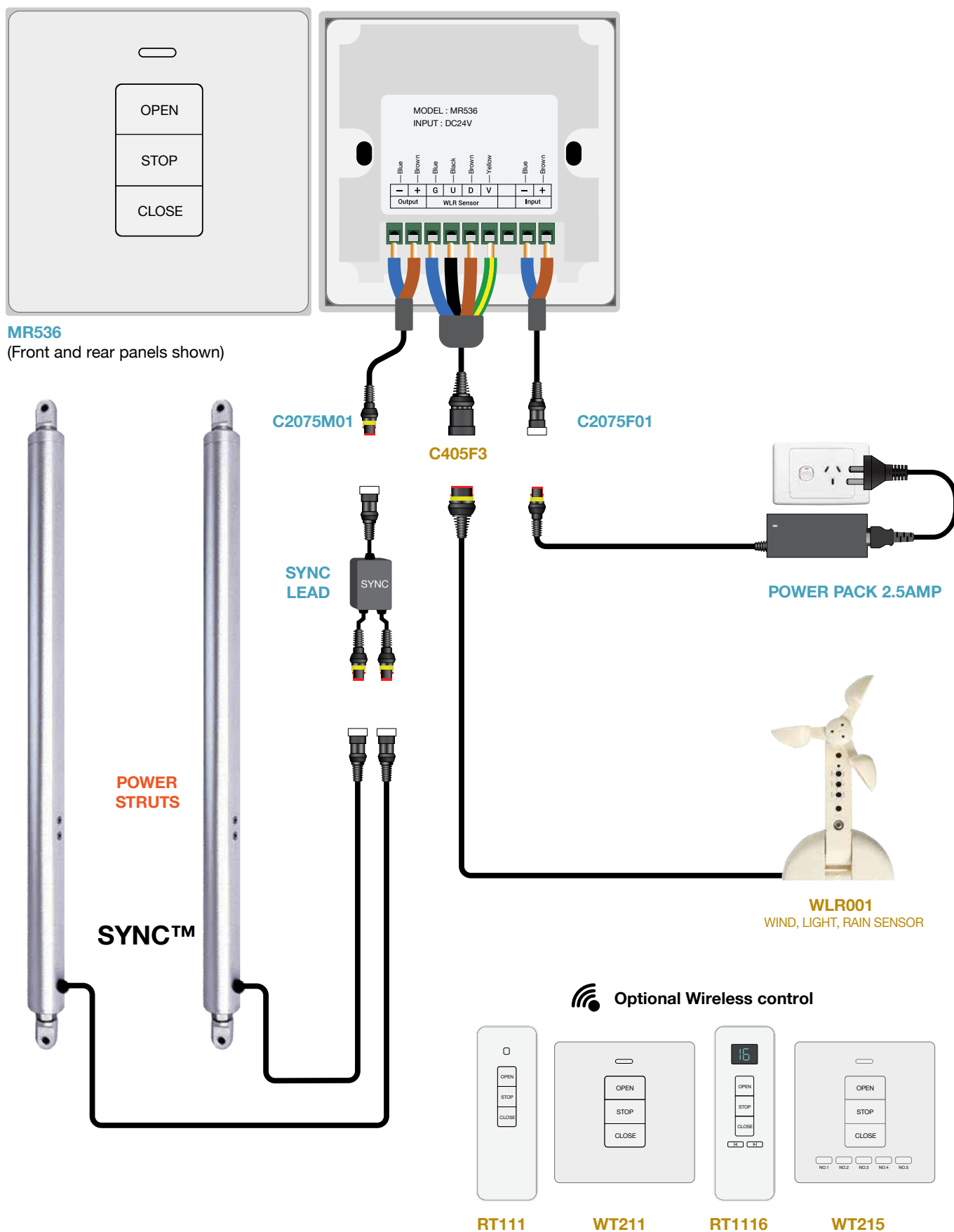
INSTALLATION VIA GPO

MINIMUM HARDWARE SELECTION + OPTIONS

PART NUMBER	PRODUCT CODE	DESCRIPTION	
1345580	MR536	1-Channel Controller, 24V DC, 10Amp, 433.92MHz	Required x 1
1345582	C2075F01	Cable, 2-Core, Female plug, 100mm	Required x 1
1345583	C2075M01	Cable, 2-Core, Male plug, 100mm	Required x 1
1345584	POWER PACK 2.5AMP	Universal Power Pack 240V AC to 24V DC, 2.5A, 3m cable	Required x 1
1345611	S102HL	Sync control lead for Power Struts	Required x 1
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack	Required x 1
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	Optional
1345592	C2075F3	Cable, 2-Core, Female plug, 3m	Optional
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m	Optional
1345598	C2075M10	Cable, 2-Core, Male plug, 10m	Optional
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	Optional
1345612	C405FM3	Cable, 4-Core, Female / Male plugs, 3m	Optional
1345587	RT111	Wireless remote control, 433.92MHz	Optional
1345617	RT1116	16-Channel wireless remote, 433.92MHz	Optional
1345589	WT211	Wireless wall mounted switch, 433.92MHz	Optional
1345616	WT215	5-Channel wireless wall mounted switch, 433.92MHz	Optional
To get WLR to work you must order all 2 below			
1345596	WLR001	Wind Light Rain Sensor, 4-Core, Male plug, 6m cable	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	
To get UPS to work you must order all 2 below			
1345608	21UP2403	Battery Backup UPS, in AC100-240V, out 24V DC, 3A	Optional
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	
Electric motor options			
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N	SELECT
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N	SELECT
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N	SELECT
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N	SELECT
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N	SELECT
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N	SELECT
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N	SELECT
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N	SELECT

1x2 ALSPEC POWER STRUTS

INSTALLATION VIA GPO



1 WINDOW

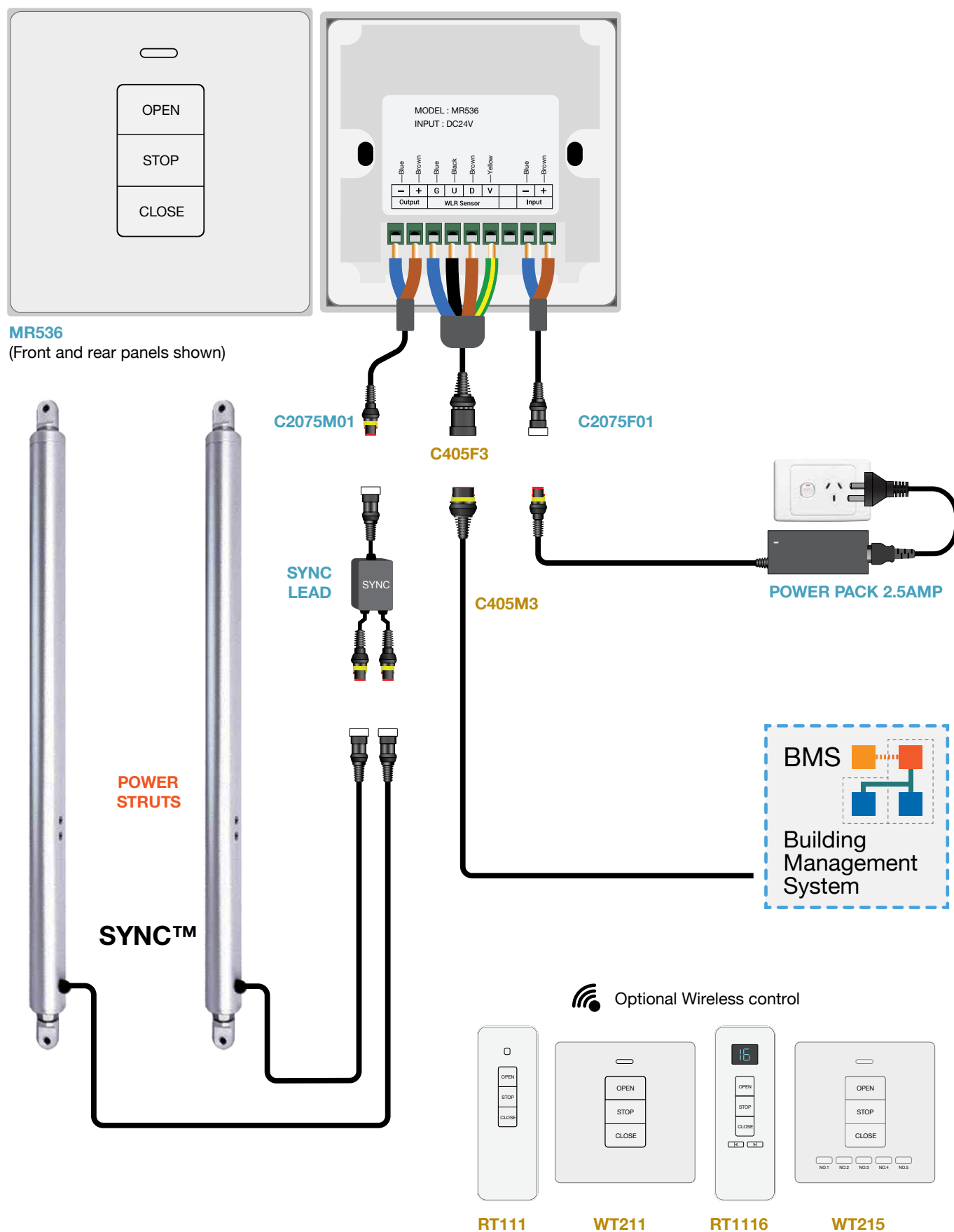
1x2 ALSPEC POWER STRUTS WITH BMS INTEGRATION

MINIMUM HARDWARE SELECTION + OPTIONS

PART NUMBER	PRODUCT CODE	DESCRIPTION	
1345580	MR536	1-Channel Controller, 24V DC, 10Amp, 433.92MHz	Required x 1
1345582	C2075F01	Cable, 2-Core, Female plug, 100mm	Required x 1
1345583	C2075M01	Cable, 2-Core, Male plug, 100mm	Required x 1
1345584	POWER PACK 2.5AMP	Universal Power Pack 240V AC to 24V DC, 2.5A, 3m cable	Required x 1
1345611	S102HL	Sync control lead for Power Struts	Required x 1
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack	Required x 1
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	Optional
1345592	C2075F3	Cable, 2-Core, Female plug, 3m	Optional
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m	Optional
1345598	C2075M10	Cable, 2-Core, Male plug, 10m	Optional
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	Optional
1345612	C405FM3	Cable, 4-Core, Female / Male plugs, 3m	Optional
1345587	RT111	Wireless remote control, 433.92MHz	Optional
1345617	RT1116	16-Channel wireless remote, 433.92MHz	Optional
1345589	WT211	Wireless wall mounted switch, 433.92MHz	Optional
1345616	WT215	5-Channel wireless wall mounted switch, 433.92MHz	Optional
To get UPS to work you must order all 2 below			
1345608	21UP2403	Battery Backup UPS, in AC100-240V, out 24V DC, 3A	Optional
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	
BMS Connection requires at least			
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	
Electric motor options			
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N	SELECT
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N	SELECT
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N	SELECT
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N	SELECT
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N	SELECT
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N	SELECT
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N	SELECT
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N	SELECT

1x2 ALSPEC POWER STRUTS

WITH BMS INTEGRATION



4 WINDOW (MAXIMUM)

4x2 ALSPEC POWER STRUTS

INSTALLATION VIA GPO

MINIMUM HARDWARE SELECTION + OPTIONS

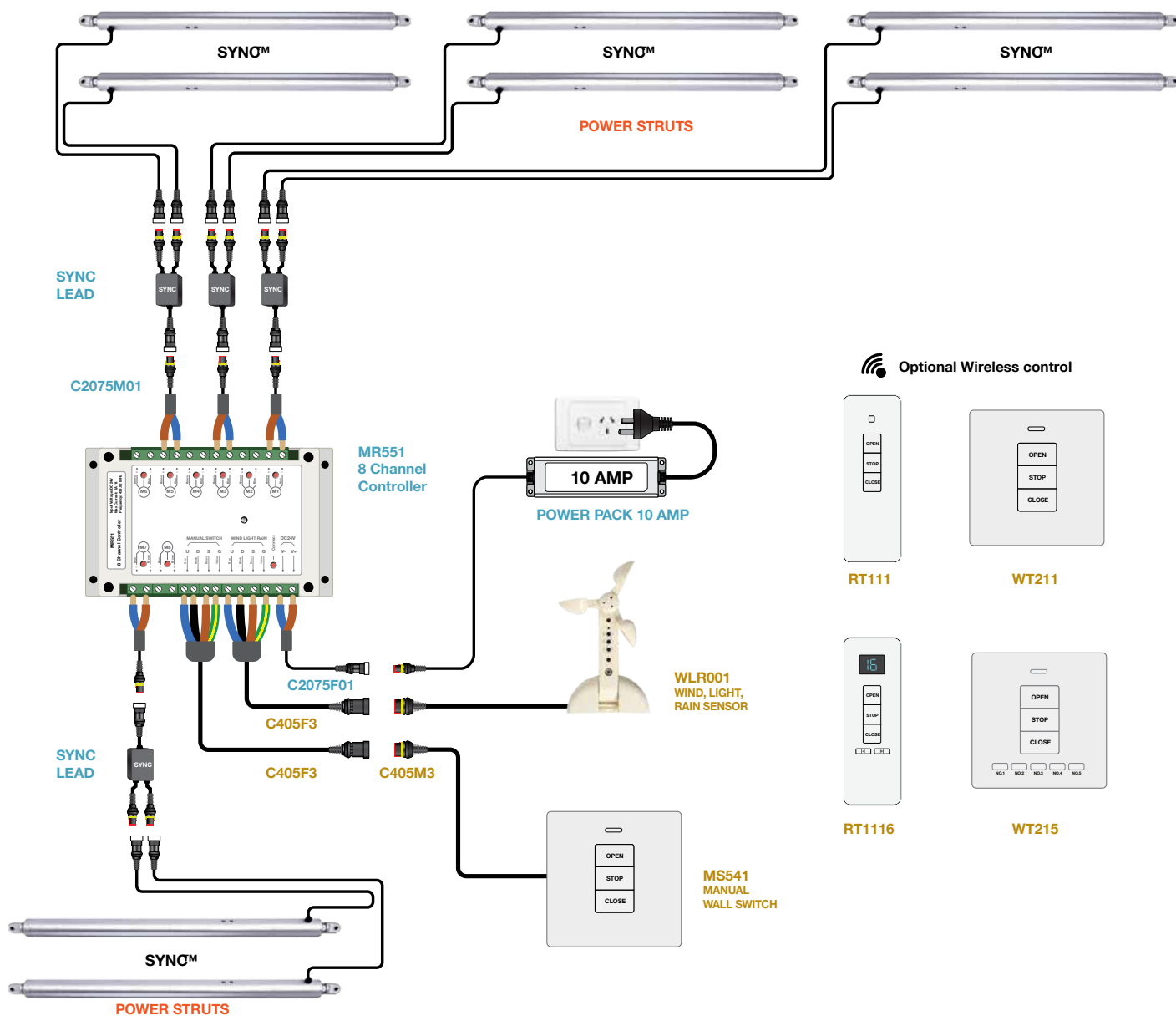
PART NUMBER	PRODUCT CODE	DESCRIPTION	
1345581	MR551	8-Channel Controller, 24V DC, 2.8Amp, 433.92MHz	Required x 1
1345582	C2075F01	Cable, 2-Core, Female plug, 100mm	Required x 1
1345583	C2075M01	Cable, 2-Core, Male plug, 100mm	Required x 4
1345585	POWER PACK 10AMP	Power Pack 240V AC to 24V DC, 10 Amp - ELG-240-24A-3Y	Required x 1
1345611	S102HL	Sync control lead for Power Struts	Required x 4
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack	Required x 4
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	Optional
1345592	C2075F3	Cable, 2-Core, Female plug, 3m	Optional
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m	Optional
1345598	C2075M10	Cable, 2-Core, Male plug, 10m	Optional
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	Optional
1345612	C405FM3	Cable, 4-Core, Female / Male plugs, 3m	Optional
You must select at least one remote below or MS541			Required
1345587	RT111	Wireless remote control, 433.92MHz	SELECT
1345617	RT1116	16-Channel wireless remote, 433.92MHz	SELECT
1345589	WT211	Wireless wall mounted switch, 433.92MHz	SELECT
1345616	WT215	5-Channel wireless wall switch, 433.92MHz	SELECT
To get MS541 to work you must order all 3 below			
1345605	MS541	Wired wall mounted switch	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	
1345609	C405M3	Cable, 4-Core, Male plug, 3m	
To get WLR to work you must order all 2 below			
1345596	WLR001	Wind Light Rain Sensor, 4-Core, Male plug, 6m cable	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	
To get UPS to work you must order all 2 below			
1345608	21UP2403	Battery Backup UPS, in AC100-240V, out 24V DC, 3A	Optional
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	
Electric motor options			
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N	SELECT
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N	SELECT
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N	SELECT
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N	SELECT
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N	SELECT
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N	SELECT
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N	SELECT
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N	SELECT

Please Note:

Each Strut equals 1 Channel / 1 Motor. Maximum of 4 windows / 8 struts per controller.

4x2 ALSPEC POWER STRUTS

INSTALLATION VIA GPO



4 WINDOW (MAXIMUM)

4x2 ALSPEC POWER STRUTS WITH BMS INTEGRATION

MINIMUM HARDWARE SELECTION + OPTIONS

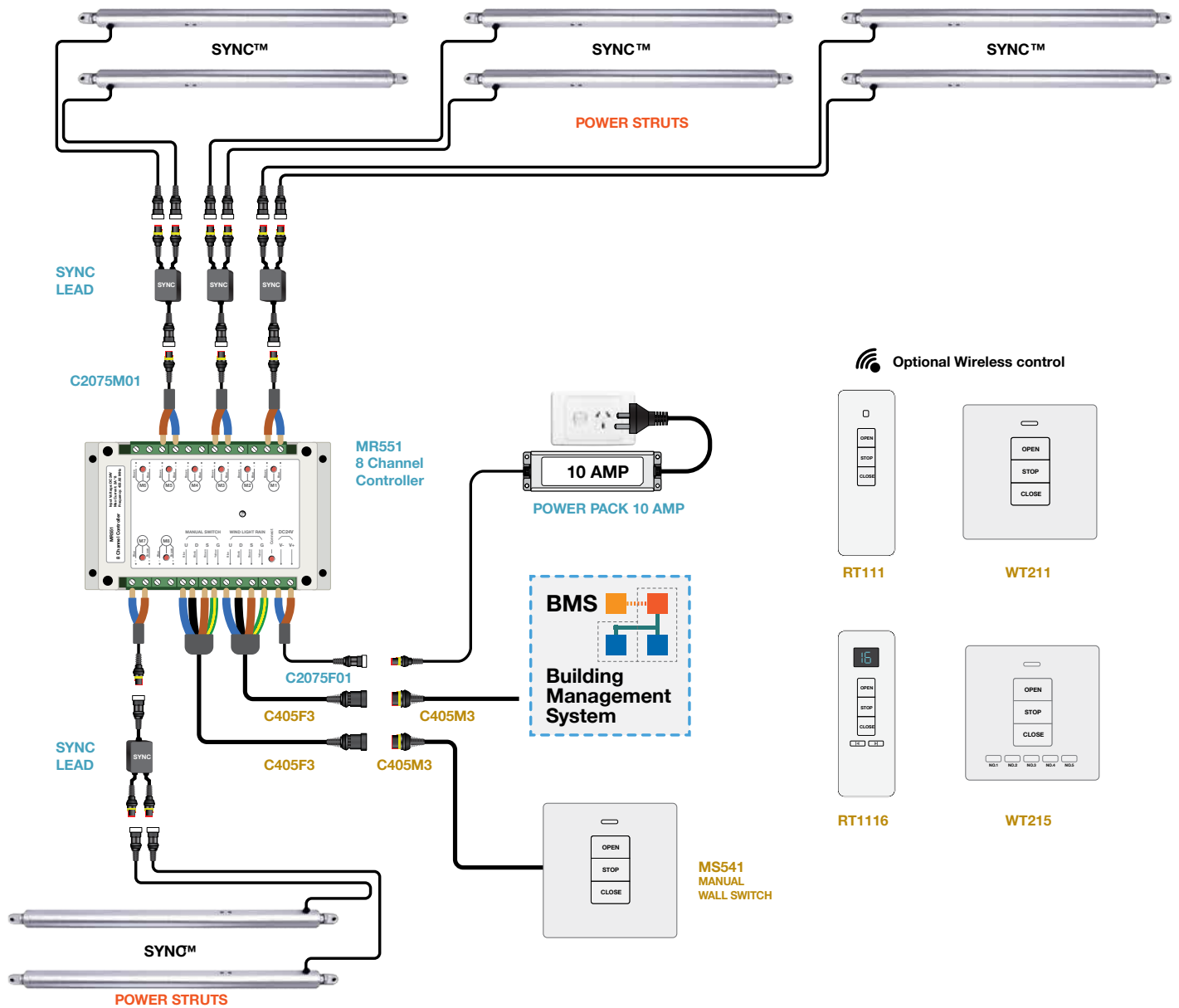
PART NUMBER	PRODUCT CODE	DESCRIPTION	
1345581	MR551	8-Channel Controller, 24V DC, 2.8Amp, 433.92MHz	Required x 1
1345582	C2075F01	Cable, 2-Core, Female plug, 100mm	Required x 1
1345583	C2075M01	Cable, 2-Core, Male plug, 100mm	Required x 4
1345585	POWER PACK 10AMP	Power Pack 240V AC to 24V DC, 10 Amp - ELG-240-24A-3Y	Required x 1
1345611	S102HL	Sync control lead for Power Struts	Required x 4
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack	Required x 4
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	Optional
1345592	C2075F3	Cable, 2-Core, Female plug, 3m	Optional
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m	Optional
1345598	C2075M10	Cable, 2-Core, Male plug, 10m	Optional
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	Optional
1345612	C405FM3	Cable, 4-Core, Female / Male plugs, 3m	Optional
You must select at least one remote below or MS541			Required
1345587	RT111	Wireless remote control, 433.92MHz	SELECT
1345617	RT1116	16-Channel wireless remote, 433.92MHz	SELECT
1345589	WT211	Wireless wall mounted switch, 433.92MHz	SELECT
1345616	WT215	5-Channel wireless wall switch, 433.92MHz	SELECT
To get MS541 to work you must order all 3 below			
1345605	MS541	Wired wall mounted switch	Optional
1345597	C405F3	Cable, 4-Core, Female plug, 3m	
1345609	C405M3	Cable, 4-Core, Male plug, 3m	
To get UPS to work you must order all 2 below			
1345608	21UP2403	Battery Backup UPS, in AC100-240V, out 24V DC, 3A	Optional
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	
BMS Connection requires at least			
1345597	C405F3	Cable, 4-Core, Female plug, 3m	Optional
1345609	C405M3	Cable, 4-Core, Male plug, 3m	
Electric motor options			
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N	SELECT
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N	SELECT
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N	SELECT
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N	SELECT
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N	SELECT
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N	SELECT
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N	SELECT
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N	SELECT

Please Note:

Each Strut equals 1 Channel / 1 Motor. Maximum of 4 windows / 8 struts per controller.

4x2 ALSPEC POWER STRUTS

WITH BMS INTEGRATION



DIRECT CONNECTION

AUTO HARDWARE DIRECT CONNECTION SUPPLY ONLY

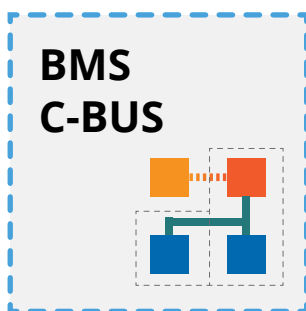
MINIMUM HARDWARE SELECTION + OPTIONS

PART NUMBER	PRODUCT CODE	DESCRIPTION	
POWER STRUTS			
1345611	S102HL SYNC	Power Synchronizer control unit	Required
1345619	LATCH BOX SET	Latch Box Set, 316SS hardware pack	Required
1345621	605-855 Actuator250	605-855 Strut 250 24V DC 1000N	SELECT
1345620	700-950 Actuator250	700-950 Strut 250 24V DC 1000N	SELECT
1345627	750-1060 Actuator310	750-1060 Strut 310 24V DC 1000N	SELECT
1345626	850-1160 Actuator310	850-1160 Strut 310 24V DC 1000N	SELECT
1345625	850-1260 Actuator410	850-1260 Strut 410 24V DC 1000N	SELECT
1345624	950-1360 Actuator410	950-1360 Strut 410 24V DC 1000N	SELECT
1345623	1050-1460 Actuator410	1050-1460 Strut 410 24V DC 1000N	SELECT
1345622	1150-1560 Actuator410	1150-1560 Strut 410 24V DC 1000N	SELECT
CABLE AND EXTENSION OPTIONS			
1345593	C2075M3	Cable, 2-Core, Male plug, 3m	SELECT
1345592	C2075M10	Cable, 2-Core, Male plug, 10m	SELECT
1345613	C2075FM3	Cable, 2-Core, Male / Female plugs, 3m extension	Optional
1345599	C2075MF10	Cable, 2-Core, Male / Female plugs, 10m extension	Optional

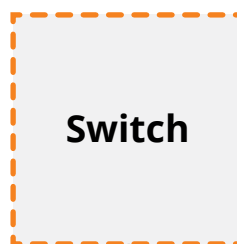
POWER STRUTS via Sync Lead



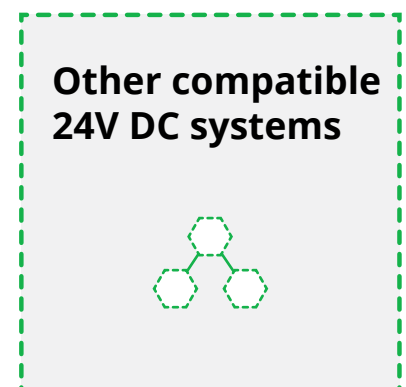
Connects to any of below



INSTALLED BY OTHERS

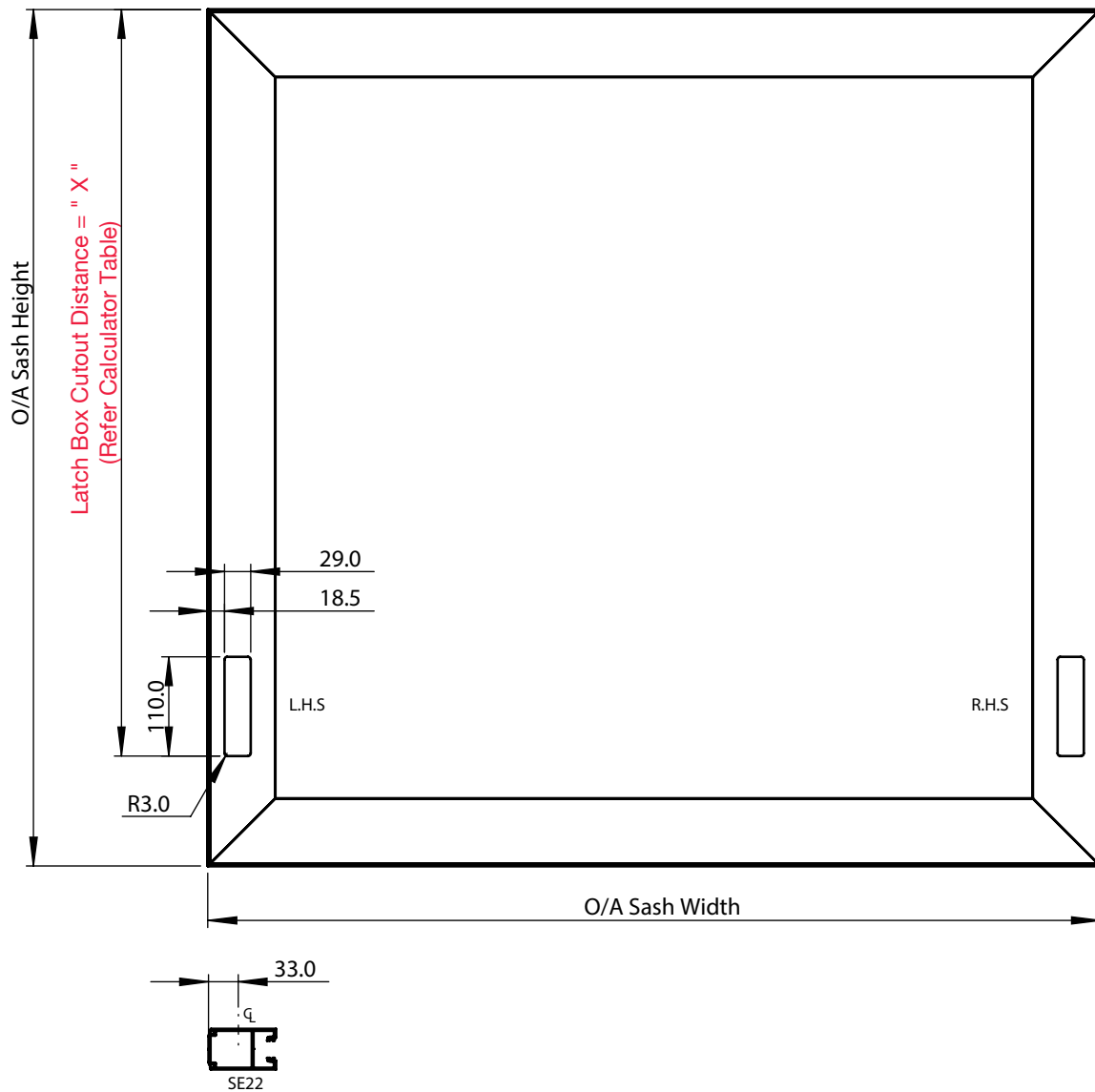


INSTALLED BY OTHERS



MACHINING DETAILS

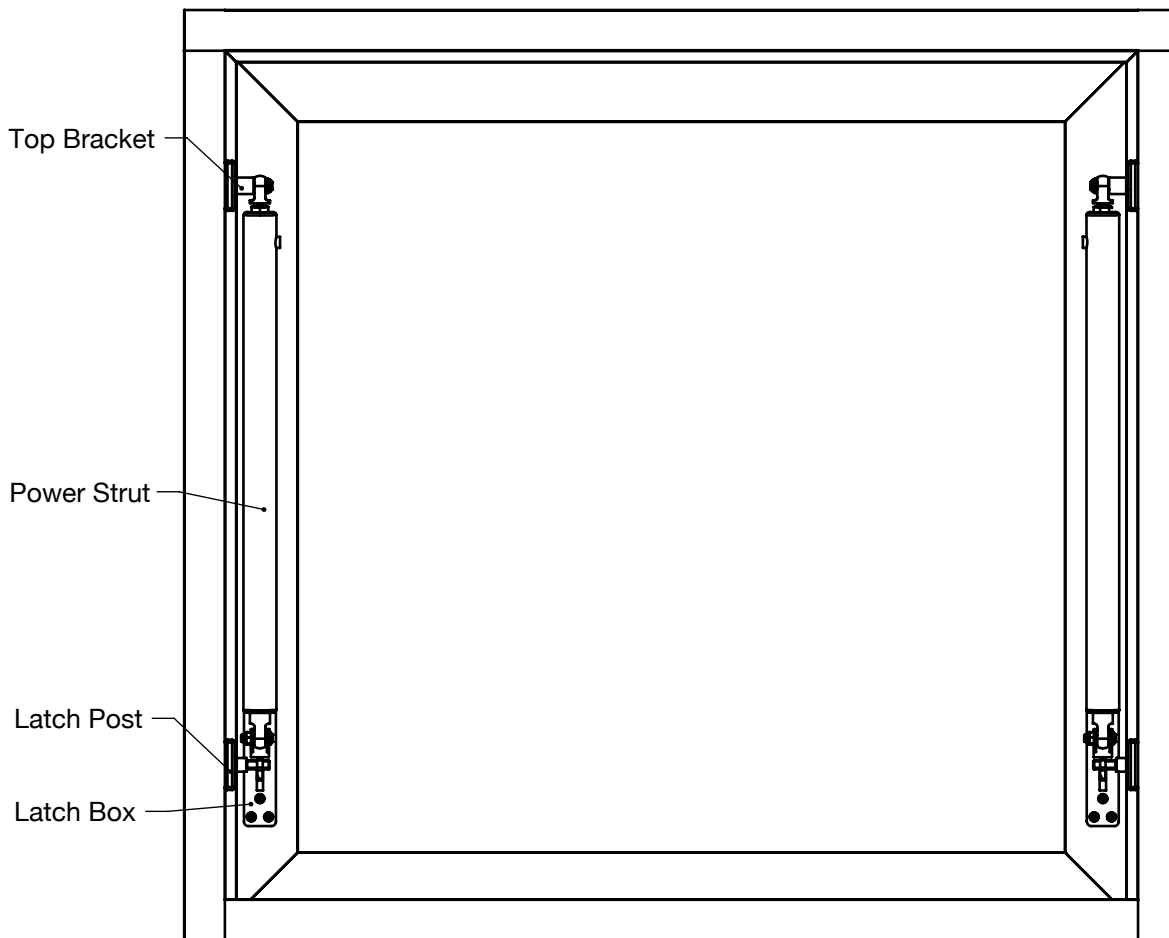
LATCH BOX MACHINING DETAIL



Calculator Table For Latch Box Cutout

Alspec Code	Description	Closed Length (mm)	Open Length (mm)	Strut Throw (mm)	Sash Height (mm)	Latchbox Cutout Dimension "X" (mm)	Max Sash Weight (kg)
1345621	605-855 Strut 250 24V DC 1000N	605	855	250	950-1049	828	53
1345620	700-950 Strut 250 24V DC 1000N	700	950	250	1050-1149	923	49
1345627	750-1060 Strut 310 24V DC 1000N	750	1060	310	1150-1249	1023	60
1345626	850-1160 Strut 310 24V DC 1000N	850	1160	310	1250-1349	1123	55
1345625	850-1260 Strut 410 24V DC 1000N	850	1260	410	1350-1449	1223	77
1345624	950-1360 Strut 410 24V DC 1000N	950	1360	410	1450-1549	1323	72
1345623	1050-1460 Strut 410 24V DC 1000N	1050	1460	410	1550-1649	1423	68
1345622	1150-1560 Strut 410 24V DC 1000N	1150	1560	410	1650-1750	1523	65

FULLY ASSEMBLED FRAME



Important Notes:

The head section must run through to support the sash weight when using automated power struts.

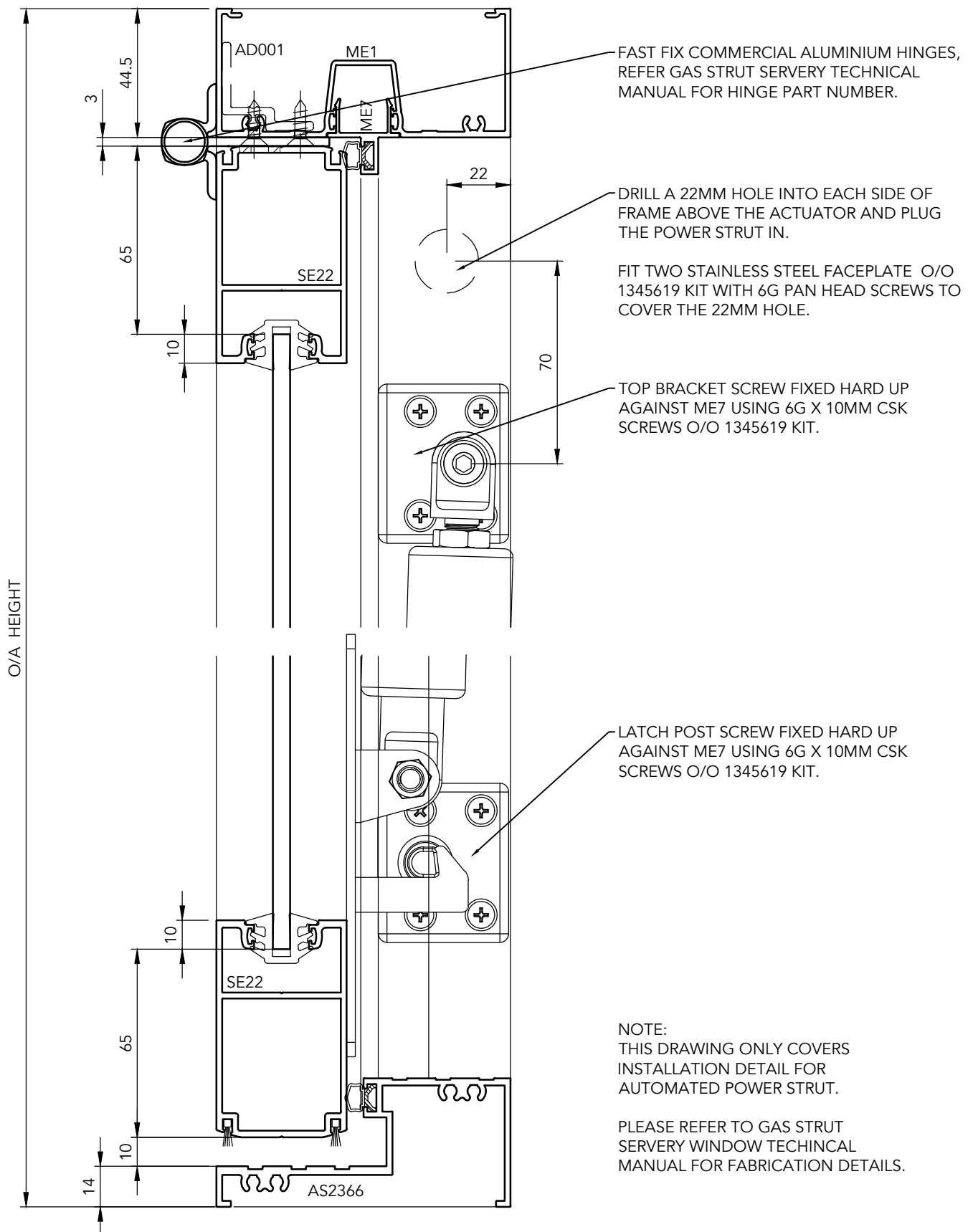
We have successfully tested the servery window using Swan Evo system with automated power struts.

The frame size that we have successfully tested is 1850mm High X 1350mm Wide (Test Report No. OT22-102).

SERVERY WINDOW SECTION VIEWS

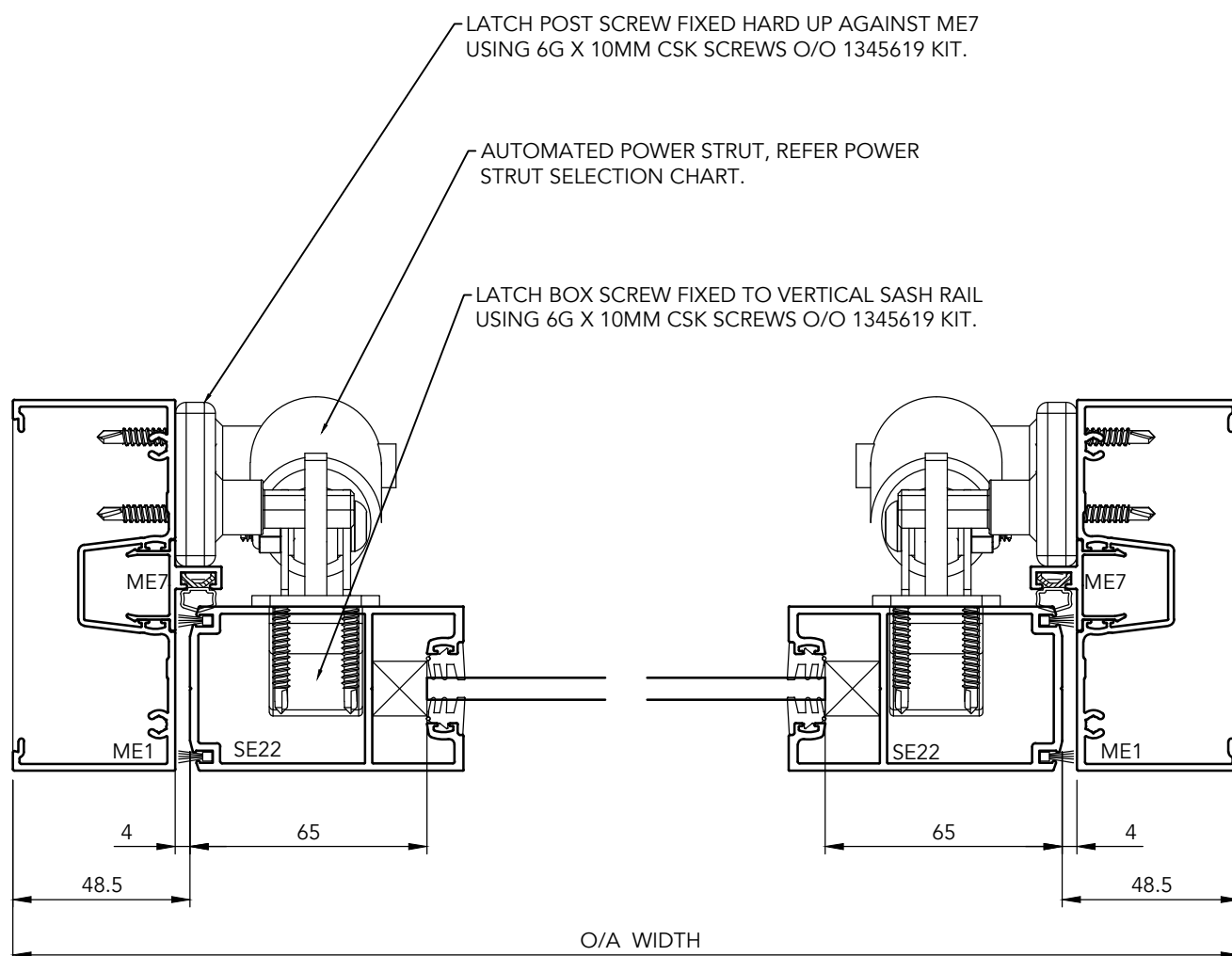
VERTICAL

HEAD AND SILL DETAILS



HORIZONTAL

JAMB DETAILS



NOTE:

THIS DRAWING ONLY COVERS INSTALLATION DETAIL FOR AUTOMATED POWER STRUT.
PLEASE REFER TO GAS STRUT SERVRY WINDOW TECHINCAL MANUAL FOR FABRICATION DETAILS.

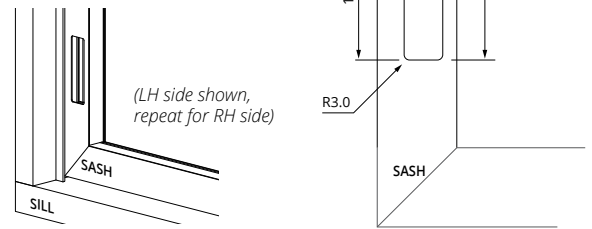


1.

WINDOW SASH CUTOUT DETAIL

Machine the Latch Box Cutouts on the inside face of the LH and RH Sash Stiles to the dimensions shown.

Ensure the machine cutout is at least 33mm deep.

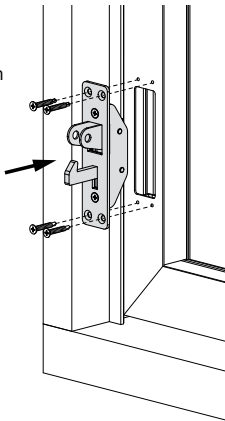


For the value of Xmm, refer to the Calculator Sheet

2.

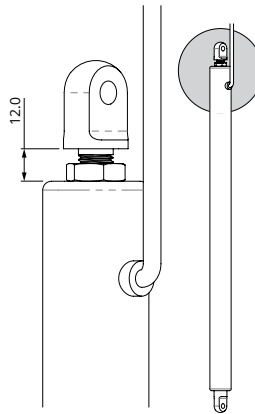
Install the Latch Boxes into the LH and RH Sash Cutouts using four 10Gx25mm screws.

(LH side shown, repeat for RH side)



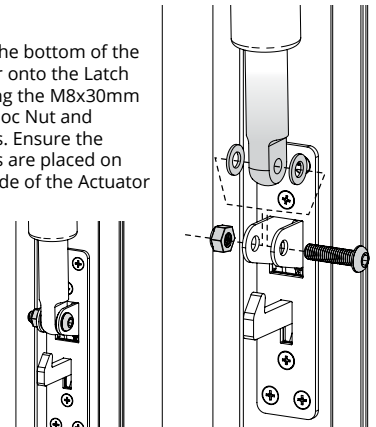
3.

Adjusted the Actuator to a 12mm gap between the Eyelet and the Main Body, then lock off with Locking Nut.



4.

Mount the bottom of the Actuator onto the Latch Box using the M8x30mm Bolt, Nyloc Nut and Washers. Ensure the Washers are placed on either side of the Actuator Eyelet.

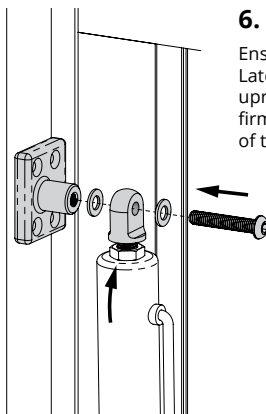


5.

Mount the top of the Actuator to the Top Bracket with the supplied M8x45mm Bolt and Washers. Do not over tighten.

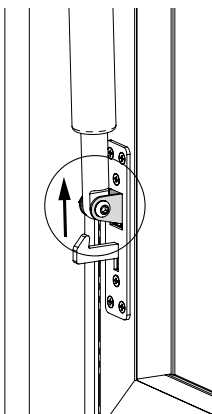
Ensure the Washers are placed on either side of the Actuator Eyelet.

Ensure M8x45mm Bolt has thread lock applied.



6.

Ensure the arm of the Latch Box is in the upright position, held firmly towards the top of the window.



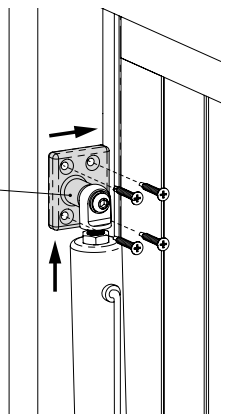
7.

At the top of the window, hold the Top Bracket firmly against the frame while applying pressure towards the top of the window and the glass.

Ensure the Bracket is rotated so the threaded post sits away from the glass.

Install the LH and RH side Top Brackets using four 10Gx25mm screws each.

If required, remove the Actuator to install any inaccessible screw mounts.

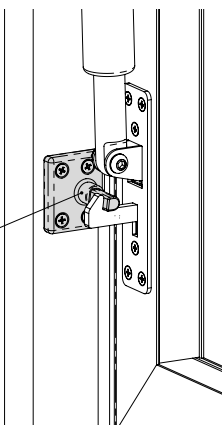


8.

Position the Latch Post so that the flat side is firmly seated against the Latch Tongue.

Ensure that the Latch Post is rotated so it is in the position closest to the glass.

Install the LH and RH Latch Posts in position with four 10Gx25mm screws each.



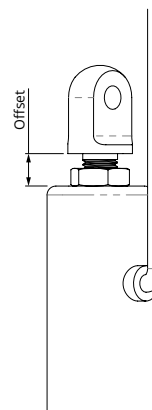
9.

Operate the window open and closed while observing the latching function.

If required, adjust the offset of the top eyelet of the Actuator to provide the appropriate compression of the seals.

Decrease the offset to increase the seal compression and latching strength. To do this:

- Loosen the Lock Nut and remove the top M8x45mm bolt
- Rotate the eyelet in increments of 180° until the correct offset is found, and refit the top M8x45mm bolt
- Re-tighten the Lock Nut to prevent rotation of the eyelet once adjusted
- Re-apply thread lock to the M8x45mm Bolt if required

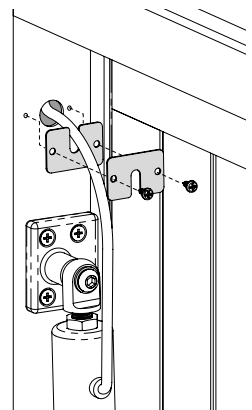


10.

OPTIONAL CABLE COVER:

Drill a 22mm hole into each side of the frame above the Actuator and plug the Power Strut in.

Mount the two Stainless steel Faceplates with two 6G Pan Head screws to cover the 22mm hole.

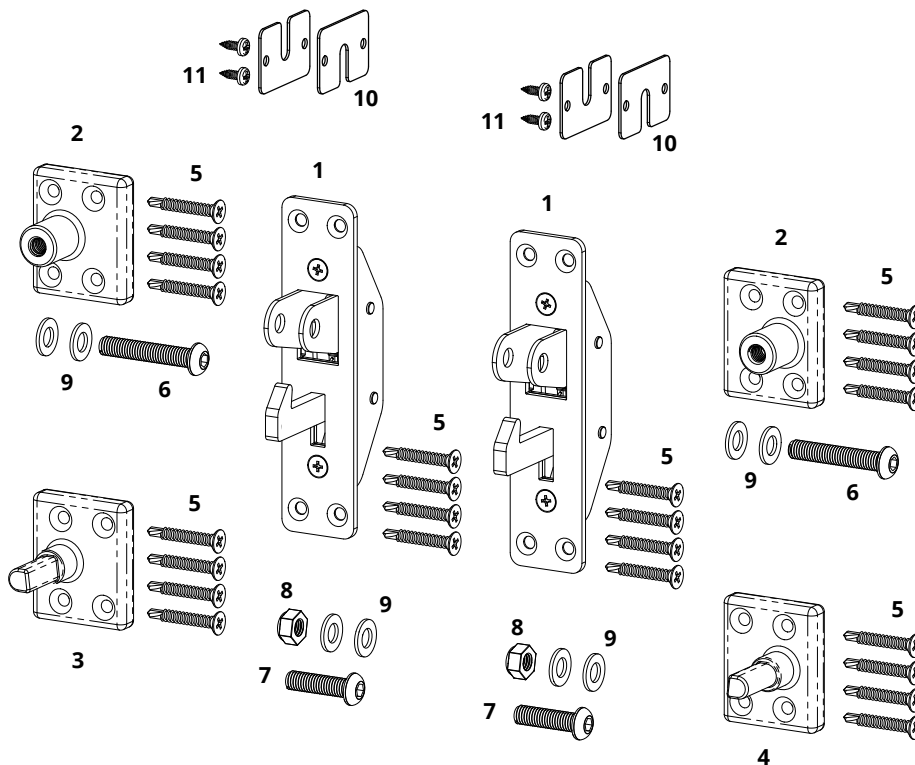


Alspec

AUTOMATED HARDWARE
POWER STRUTS

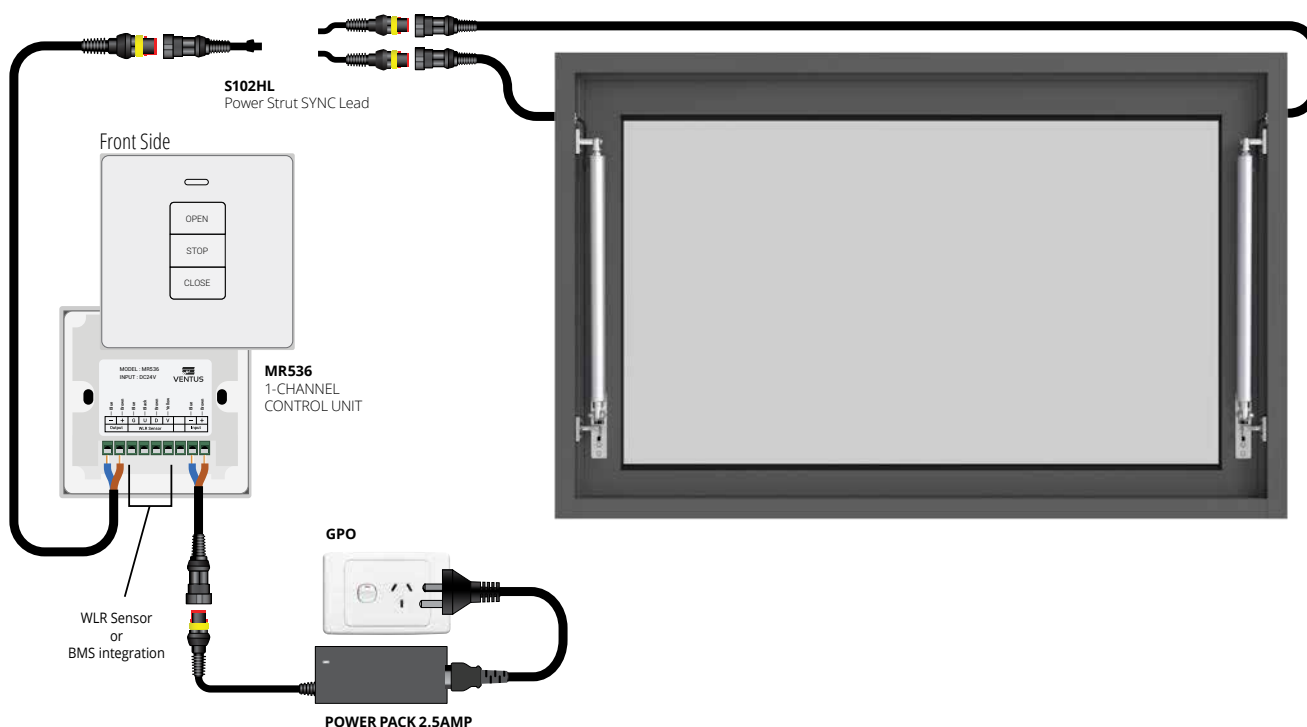
BILL OF MATERIALS

Item No.	Name	Qty
1	Latch Box	2
2	Top Bracket	2
3	LH Latch Post	1
4	RH Latch Post	1
5	10G x 25mm Screw	24
6	M8 x 45mm Bolt	2
7	M8 x 30mm Bolt	2
8	M8 Nyloc Nut	2
9	M8 Washer	8
10	Cable Cover Plate	4
11	6G x 10mm Screw	4



WIRING EXAMPLE

Illustrative Purposes Only. Not to scale



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