PRODUCT INSTRUCTION

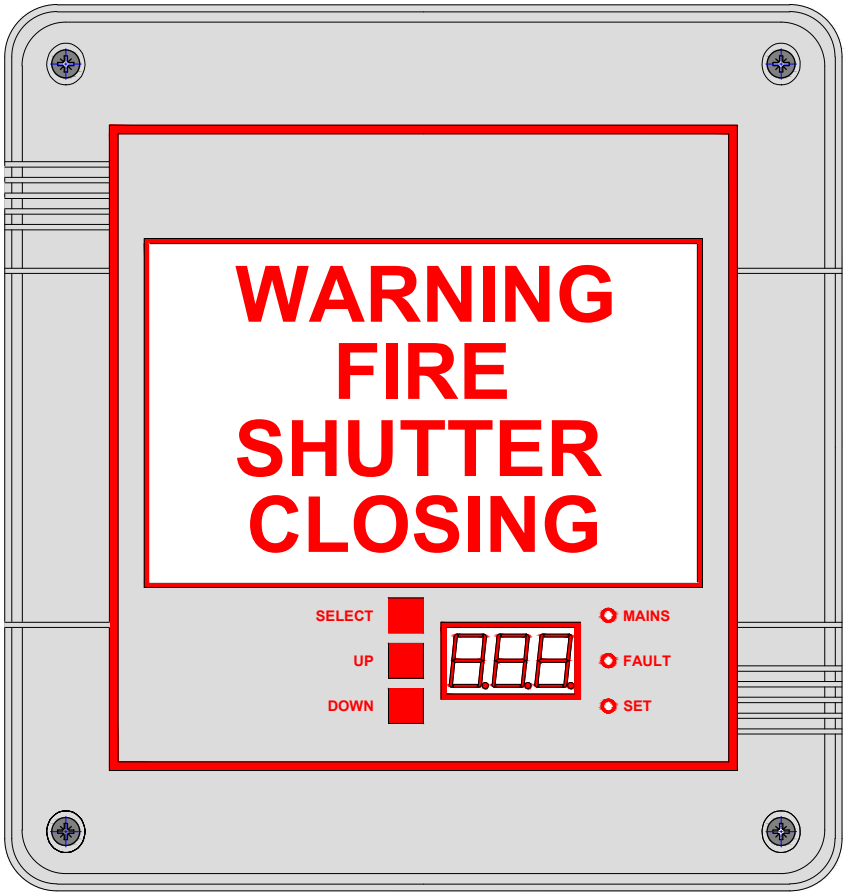
Fire Control Panel FDCP-03 (Basic Set Up Guide)

ELLARD

Roundthorn Industrial Estate
Floats Road, Wythenshawe
Manchester, M23 9WB

Tel: +44 (0)161 - 945 - 4561
sales@ellard .co.uk
technical@ellard.co.uk

Stock Code	Description	Doc No	PI - FDCP - 03
04068	FDCP - 03 Main Control Panel	Iss	1
04059	FDCP - 03 Extension Repeater Panel	Date	01-03-2021



FDCP - 03
Contents

General

Multi Function Fire Control Panel for Roller Shutters

Features

- Large Visual warning 'FIRE SHUTTER CLOSING' and 103 dB sounder
- Easy to program using front panel buttons and display
- Accepts fire signal types - Normally Open (N/O) or Normally Closed (N/C) volt free contact and 24v dc direct
- Removable terminals for ease of connection
- Low Voltage external controls via key-switch or push button operation(not supplied)
- Door Closing methods by - Solenoid Drop, Drive Down or 2 Stage Closing
- Programmable Auxiliary relays
- Programmable Audio / Visual Delay Timer before closing
- Matching repeater extension panel available
- Motor stop and reverse safety feature **in fire condition only** by use of additional photocell (not supplied)
- Front panel multi-functional display and LED indicators for diagnostics
- Panic Button feature as standard to re-open in emergency
- Automatic re-open time after alarm reset (not as standard, requires processor change)
- 2 x 12v (1.3Ahr) internal batteries to maintain panel in event of mains failure
- Advanced menu to customize as required
- Compact size 255 (l) x 240 (w) x 118 (d)

General Application

- The FCP03 is designed to operate roller doors fitted with either 24v DC or 230v AC tubular motor type drives or motors fitted with a brake or solenoid release unit, it also has the capabilities to operate a 3rd party control system
- While maintaining the function of every day normal use, the FDCP 03 gives advanced warning in the event of a fire before closing the door, protecting both personnel and property from the effects of smoke and fire
- The control system and all its features can be programmed to meet most site requirements, allowing the door to automatically close upon receiving a fire signal

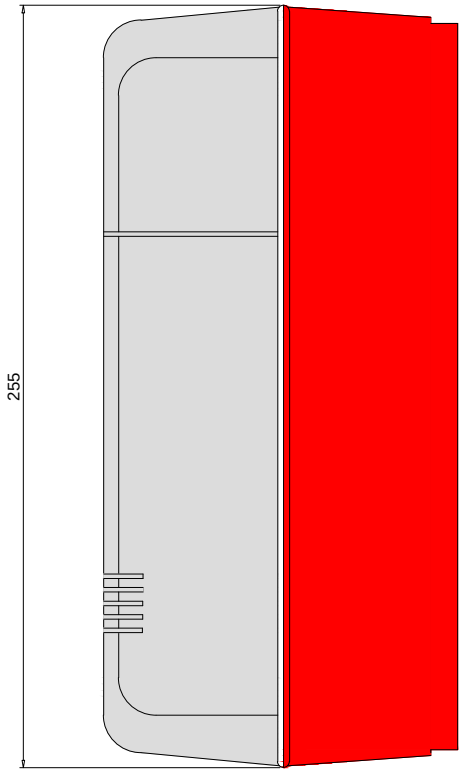
Installation

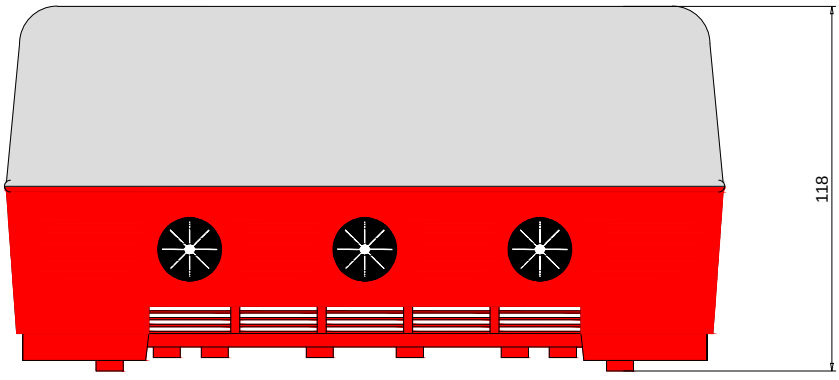
- This product is designed for indoor use only and should be installed in a dry area not exceeding its temperature specification
- The enclosure should be mounted vertically and secured using the provided fixing holes
- It should be mounted in a suitable position, within sight of the door and un-obscured
- Mains Power should be provided from an adjacent 230V 13A fused spur connection
- It is recommended that the panel be fitted at a height of 1.6m or above and be visible from all directions
- This product must be connected to a suitable **EARTH** point, to protect both motor and personnel
- All electrical work should be undertaken by a suitable competent person

1) Specification

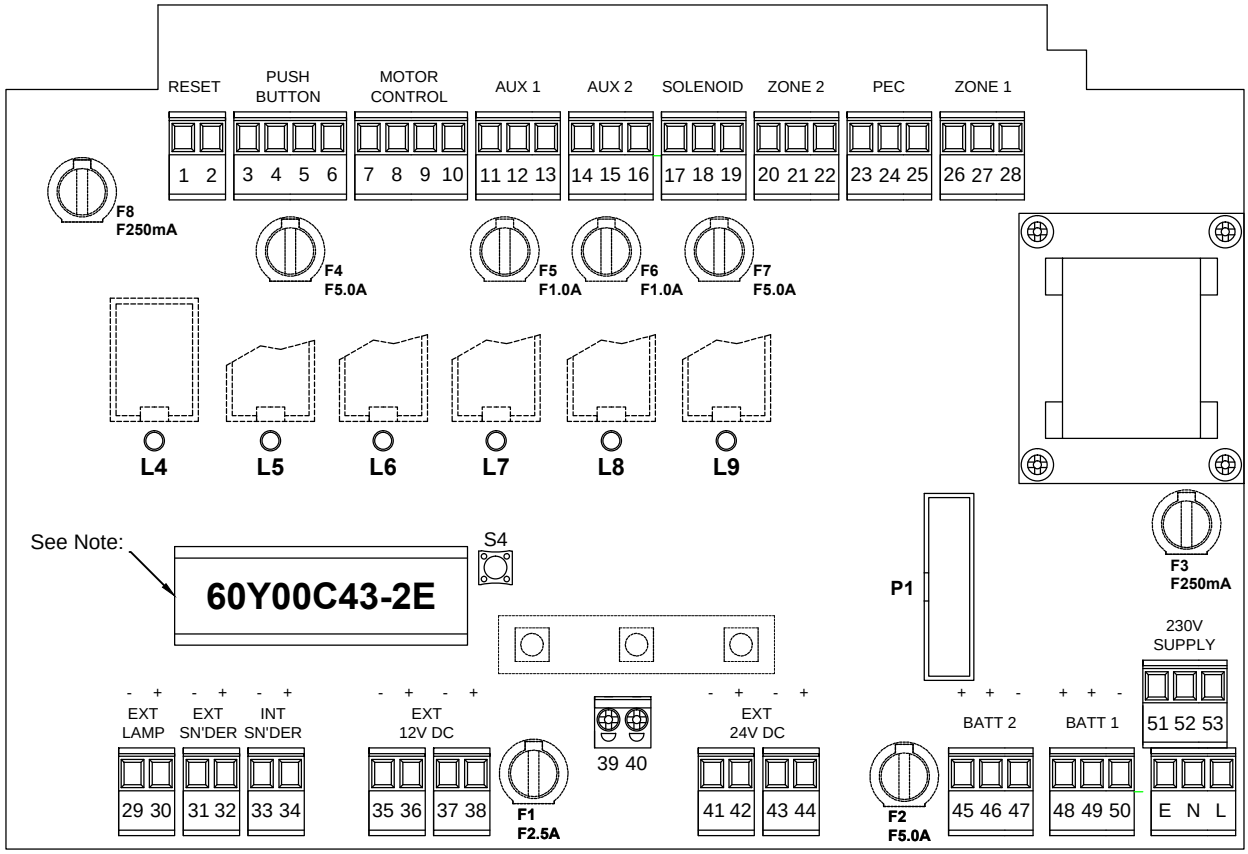
General		
Power Supply	230v - 50Hz	
Operating temp	-15 to +70 deg C	
Relays	10A @ 28v DC / 230v AC	
Switch Circuit	Extra Low Voltage	
Lamp	LED - white	
Sounder	12v DC 85mA, 103 dB (Decibels)	
Batteries	2 x 12v, 1.2Ah Lead Acid	
Auxiliary Power **(See note)	2.5A @ 12v d.c	2.5A @ 24v d.c
Dimensions (mm)	255 (l) x 240 (w) x 118 (d)	
Weight	2kg	
Fuse Size	20 x 5mm	

** Note:
Only during activation - not constant





2) Board Layout



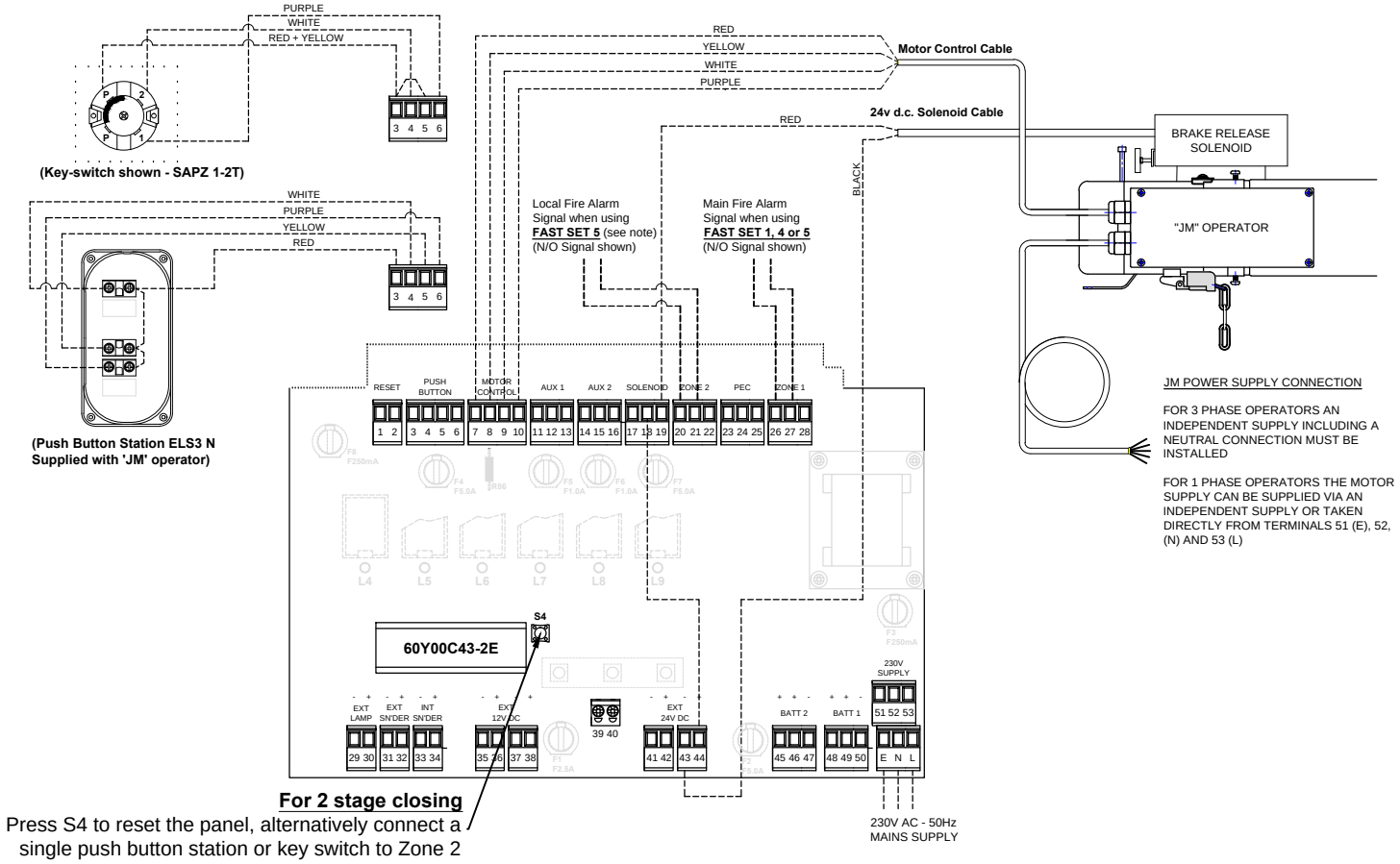
Note:
Processor No 60Y00C43-2E - Fitted as standard this includes Panic Button facility but no auto re-open feature
Processor No 60Y00C51-2E - No Panic Button facility but includes auto re-open feature

Terminal		*Connection*
1	SC	MANUAL RESET BUTTON
2	INPUT	
3	SC	PUSH BUTTON INPUT
4	OPEN	
5	STOP	
6	CLOSE	
7	COM	MOTOR CONTROL
8	STOP	
9	CLOSE	
10	OPEN	
11	N/C	AUX 1 RELAY
12	COM	
13	N/O	
14	N/C	AUX 2 RELAY
15	COM	
16	N/O	
17	0V	SOLENOID RELAY
18	COM	
19	N/O	
20	SC	ZONE 2 FIRE ALARM SIGNAL
21	INPUT	
22	0V	
23	SC	PHOTOCELL
24	INPUT	
25	0V	

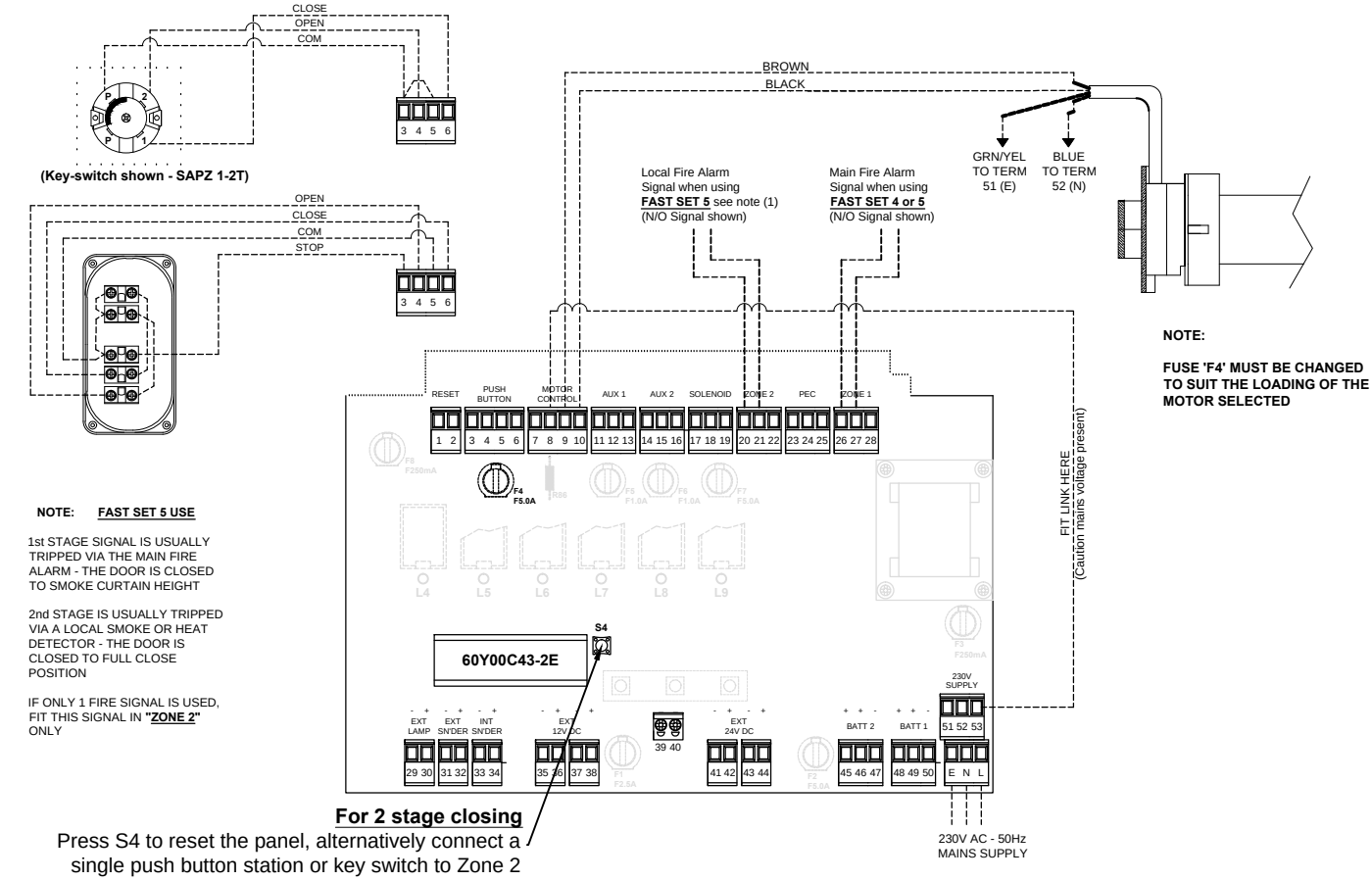
Terminal		*Connection*	
26	SC	ZONE 1 FIRE ALARM SIGNAL	
27	INPUT		
28	0V		
29	-	LAMP (REPEATER PANEL)	
30	+		
31	-	SOUNDER (REPEATER PANEL)	
32	+		
33	-	INTERNAL SOUNDER	
34	+		
35	-	EXTERNAL / AUX 12V DC	
36	+		
37	-	EXTERNAL / AUX 12V DC	
38	+		
39	-	INTERNAL LAMP	
40	+		
41	-	EXTERNAL / AUX 24V DC	
42	+		
43	-	EXTERNAL / AUX 24V DC	
44	+		
45	+	BATT 2	
46	+	BATT 2 (CHRG CIRCUIT)	>13.5V
47	-	BATT 2 (CHRG CIRCUIT)	

Terminal		*Connection*	
48	+	BATT 1	
49	+	BATT 1 (CHRG CIRCUIT)	>13.5V
50	-	BATT 1 (CHRG CIRCUIT)	
51	E	230V AC MAINS SUPPLY - OUT	
52	N		
53	L		
E	E	230V AC MAINS SUPPLY - IN	
N	N		
L	L		
F1		FUSE - F2.5A (EXT 12V)	
F2		FUSE - F5.0A (EXT 24V)	
F3		FUSE - F250mA (MAINS SUPPLY)	
F4		FUSE - F1.0A (MOTOR CONTROL)	
F5		FUSE - F5.0A (AUX 1)	
F6		FUSE - F1.0A (AUX 2)	
F7		FUSE - F5.0A (SOLENOID)	
F8		FUSE - F250mA (ZONES/FIRE SIGNAL)	
LED - L4		ON - STOP CIRCUIT OK	
LED - L5	(L5 only)	ON - DOOR CLOSING	
LED - L6	(L5 + L6)	ON - DOOR OPENING	
LED - L7		ON - AUX 1 RELAY ACTIVATED	
LED - L8		ON - AUX 2 RELAY ACTIVATED	
LED - L9		ON - SOLENOID RELAY ACTIVATED	
CON - P1		CABLE CONNECTION TO LID	
S4		PANEL RESET BUTTON	

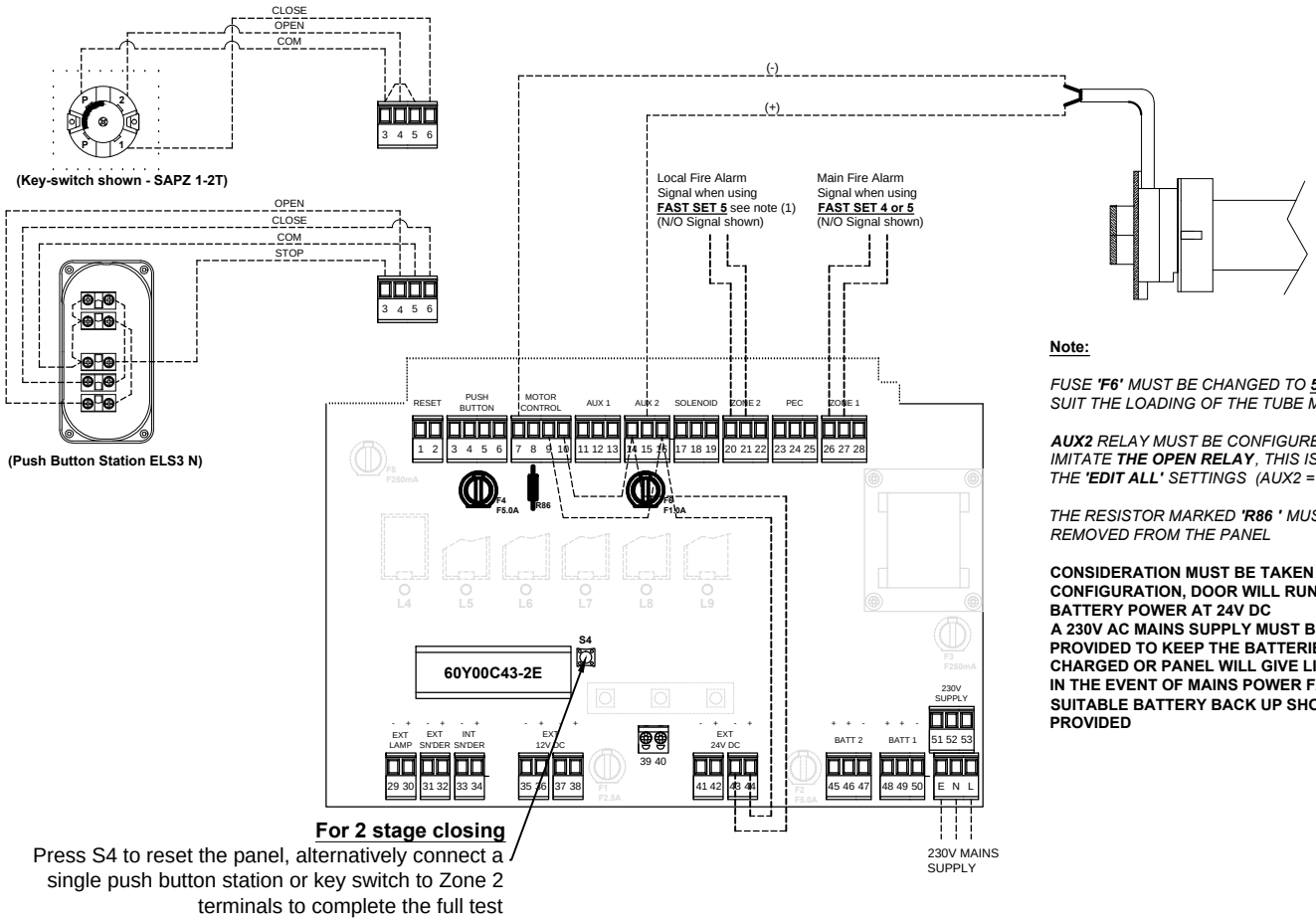
3.1) General connection for **New 'JM' series** fire shutter operators with PCB - LED indication (Use with 'FAST SET 1, 4 or 5)



3.2) General connection for **230v AC Tube Motors** (Use with 'FAST SET 4 or 5)



3.3) General connection for **24v DC Tube Motors** (Use with 'FAST SET 4 or 5)



Note:

*FUSE **'F6'** MUST BE CHANGED TO **5AMP** TO SUIT THE LOADING OF THE TUBE MOTOR*

***AUX2** RELAY MUST BE CONFIGURED TO IMITATE **THE OPEN RELAY**, THIS IS DONE IN THE **'EDIT ALL'** SETTINGS (AUX2 = OPEN)*

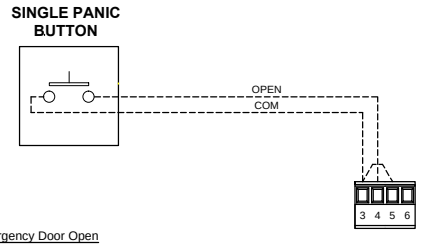
*THE RESISTOR MARKED **'R86 '** MUST BE REMOVED FROM THE PANEL*

CONSIDERATION MUST BE TAKEN FOR THIS CONFIGURATION, DOOR WILL RUN ON BATTERY POWER AT 24V DC
A 230V AC MAINS SUPPLY MUST BE PROVIDED TO KEEP THE BATTERIES FULLY CHARGED OR PANEL WILL GIVE LIMITED USE IN THE EVENT OF MAINS POWER FAILURE A SUITABLE BATTERY BACK UP SHOULD BE PROVIDED

For 2 stage closing

Press S4 to reset the panel, alternatively connect a single push button station or key switch to Zone 2 terminals to complete the full test

3.4) General connection for separate **Panic Button**



Panic Button / Emergency Door Open

Provision is made to connect a separate single open button for use in emergency

Operation
Once the panel has been activated and the door has fully closed and the run timer has expired
Providing the fire alarm signal remains **ON** the door can be re-opened in an emergency

This can be operated by either:

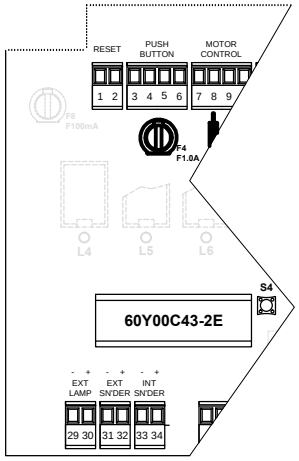
a) Pressing the open button on the control station (if used) - the door will re-open, hold for 12 seconds then re-close

b) If a key switch is fitted and the key available turning the key to the open direction - the door will re-open, hold for 12 seconds then re-close

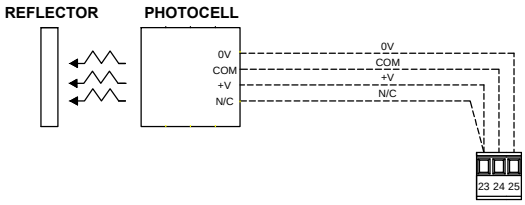
c) Alternatively if a key switch is fitted and the key not available, a separate single push button can be connected - again once pressed the door will re-open, hold for 12 seconds then re-close

Note:
1. This feature is not available on solenoid drop
2. On 2 stage closing, panic button feature is only operational on the Stage 2

Important Note
This button will also open the door in normal use so consideration must be given for safety and security implication



3.5) General connection for **Photocell**

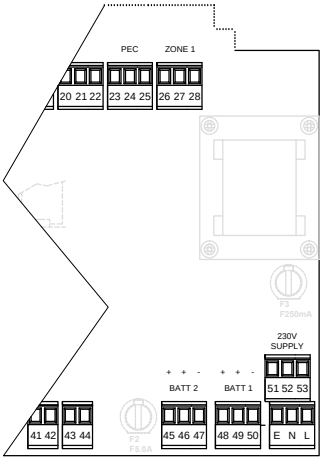


Photocell operation in Fire Condition

Provision is made to connect a Photocell to re-open a closing door once the fire alarm signal has activated the panel

Operation
The Photocell must be programmed in the 'Edit All' menu

- Press and hold all three buttons on the front of the panel until the internal light flashes once
- Panel will now show **'ENGINEERS SET UP' followed by 'FAST SET 1'**
- Continue to press the "down" button until the display shows **'EDIT ALL'** then press **'SELECT'**
- Pressing the '**SELECT**' button until '**SAFETY CIRCUIT - OFF**' is shown,
- Press **'DOWN'** to change to **'ON**' then press **'SELECT'**
- Display will now show **'NO OF RETRIES'** (this is the number of checks the photocell will try to detect that the obstruction has been removed before ignoring the obstruction and closing the door as far as practical) enter amount of tries required then press **'SELECT'**
- Display will now show **'PAUSE LENGTH'** (this is the pause time after the photocell being broken to the door re-opening) display will show **'MINS'** then **'000'** press **'SELECT'**
- Display will now show '**SEC'S**' then '**000**' use the **'UP'** button to enter 1 second (recommended) then press **'SELECT'**
- Display will now show **'RE-OPEN - OFF',** press **'DOWN'** to change to **'ON'** then press **'SELECT'**
- Display will now show **'RE-OPEN TIME',** (set this time the same as "full close drop" time)
- Continue to press 'SELECT' until the panel flashes and resets



4.1 FAST SET 1 - SOLENOID DROP

For JM pre-wired operators with controlled descent closure by solenoid release

- Wire operator, push buttons, panel and solenoid as per drawing
- Connect mains and fit panel battery connector blocks
- Rolling display will flash **'ELLARD FIRE PANEL'**
- Panel is ready to program when **'MAINS'** and **'SET'** light are steady and display is showing a rolling dash
- Test operator, set limits and observe time taken to fully open and close

To program for solenoid drop

- Press and hold all three buttons on the front of the panel until the internal light flashes once
- Panel will now show **'ENGINEERS SET UP' followed 'FAST SET 1'**
- Press **'SELECT'**
- Display will now show **'FULL CLOSE DELAY'** (this is the delay time before the door starts to close once the fire alarm has been activated) display will show **'MINS'** then **'000'** Use the **'UP'** and **'DOWN'** buttons to enter the desired time, then press **'SELECT'**
- Display will now show **'SECS'** then **'000'** use the **'UP'** and **'DOWN'** buttons to enter the desired time, then press **'SELECT'**
- Display will now show **'FULL CLOSE DROP'** (this is the time it takes the door to fully close) enter this time as described above
- Display will now show **'RE-OPEN TIME'** (this is the time it takes the door to fully open should a '**PANIC BUTTON'** be required for emergency escape means, **THIS FUNCTION IS NOT AVAILABLE WITH "FAST SET 1"** Press the **'SELECT'** button twice to skip this option
- The panel will flash once to show the program is completed and the display will return to its set position showing a rolling dash
- To re-open the door after the fire alarm has been reset, will be via pushbutton or key-switch operation, the option of auto re-open is not available

Testing

Once the panel has been programmed, a simulated test can be performed by placing a link across terminals 20 + 21 or 26 + 27
The panel will start its audio/visual warning followed by release of the solenoid unit
The panel will reset once the "Full close run time" has expired and the fire signal removed

4.2 FAST SET 4 - CLOSING UNDER POWER

For Tube Motors or JM pre-wired operators with drive down closure under mains power

- Wire operator, push buttons, panel and solenoid as per drawing
- Connect mains and fit panel battery connector blocks
- Rolling display will flash **'ELLARD FIRE PANEL'**
- Panel is ready to program when **'MAINS'** and **'SET'** light are steady and display is showing a rolling dash
- Test operator, set limits and observe time taken to fully open and close

To program for drive down

- Press and hold all three buttons on the front of the panel until the internal light flashes once
- Panel will now show **'ENGINEERS SET UP' followed by 'FAST SET 1'**
- Press the **'UP'** button until the display shows **'FAST SET 4'** then press **'SELECT'**
- Display will now show **'FULL CLOSE DELAY'** (this is the delay time before the door starts to close once the fire alarm has been activated) display will show **'MINS'** then **'000'** Use the **'UP'** and **'DOWN'** buttons to enter the desired time, then press **'SELECT'**
- Display will now show **'SECS'** then **'000'** use the **'UP'** and **'DOWN'** buttons to enter the desired time, then press **'SELECT"**
- Display will now show **'FULL CLOSE DROP'** (this is the time it takes the door to fully close) enter this time as described above
- Display will now show **'RE-OPEN TIME'** (this is the time it takes the door to fully open should a panic button be required for emergency escape means, this time should be set the same as **'FULL CLOSE DROP'** enter this time as described above
- If no panic button is required, press the **'SELECT'** button twice to skip this option
- At the end of the menu the panel will flash once to show the program is completed and the display will return to its set position showing a rolling dash
- If power is lost during closing a brake release unit or solenoid can be activated (if fitted) and the shutter will drop in a controlled descent manner
- To re-open the door after the fire alarm has been reset will be via pushbutton or key-switch operation, the option of auto re-open is not available

Testing

Once the panel has been programmed, a simulated test can be performed by placing a link across terminals 20 + 21 or 26 + 27
The panel will start its audio/visual warning followed by drive down action of the motor
Should Mains power fail during test the panel will trigger the solenoid (if fitted)
The panel will reset once the "Full close run time" has expired and the fire signal removed

4.3 FAST SET 5 - 2 STAGE CLOSING

For Tube Motors or JM pre-wired operators to close in 2 stages under mains power

- Wire operator, push buttons, panel and solenoid as per drawing
- Connect mains and fit panel battery connector blocks
- Rolling display will flash **'ELLARD FIRE PANEL'**
- Panel is ready to program when **'MAINS'** and **'SET'** light are steady and display is showing a rolling dash
- Test operator, set limits and observe time taken to fully open and close

To program for 2 stage closing

- Press and hold all three buttons on the front of the panel until the internal light flashes once (approx 5 sec's)
  Panel will now show **'ENGINEERS SET UP'** followed by **'FAST SET 1'**
- Press the 'UP' button until the display shows **'FAST SET 5'** then press **'SELECT'**
- Display will now show **'PART CLOSE DELAY'** (this is the delay time before the door starts to part close once the fire alarm has been activated)
- Display will show **'MINS'** then **'000',** use the **'UP'** and **'DOWN'** buttons to enter the required time, then press **'SELECT'**
- Display will now show **'SECS'** then **'000'** use the **'UP'** and **'DOWN'** buttons to enter the desired time, then press **'SELECT'**
- Display will now show **'PART CLOSE DROP'** (this is the time it takes the door to drive down to smoke curtain height) enter this time as described above
- Display will now show **'FULL CLOSE DELAY'** (this is the delay time the door will remain at smoke curtain height before fully closing) enter this time as described above
- Display will now show **'FULL CLOSE DROP'** (this is the time it takes the door to fully close) enter this time as described above
- Display will now show **'RE-OPEN TIME'** (this is the time it takes the door to fully open should a panic button be required for emergency escape means, this time should be set the same as **'FULL CLOSE DROP'** enter any times as described above
- If no panic button is required, press the **'SELECT'** button twice to skip this option
- At the end of the menu the panel will flash once to show the program is completed and the display will return to its set position showing a rolling dash
- If power is lost during closing, a brake release unit or solenoid can be activated (if fitted) and the shutter will drop in a controlled descent manner
- To re-open the door after the fire alarm has been reset, will be via pushbutton or key-switch operation, the option of auto re-open is not available

Testing

Once the panel has been programmed, a simulated 2 stage test can be performed by placing a link across terminals 26 + 27 to activate **Stage 1**
The door will then drive down under electrical power to part close position
To complete a full test place a link across terminals 20 + 21 to activate stage 2
The panel will start its audio/visual warning followed by drive down action of the motor to full close position
Should Mains power fail during test the panel will trigger the solenoid (if fitted)
The panel will reset once the "Full close run time" has expired and the fire signal removed

5.0) Status Indication and trouble shooting

LED			Display	Sounder	
Mains	Fault	Set			
Off	*Off*	*Off*	*Off*	*Off*	*Batteries Disconnected*
					Mains Power Fail
					Check Fuse "F3"
					Lid Disconnected
On	*Off*	*On*	*Rolling dash across the display*	*Off*	*Set and awaiting to be triggered*
On	*Off*	*Flashing*	*No dash in Display*	*Off*	*Fire Alarm Signal still present*
					Panel awaiting a reset
On	*Off*	*Off*	*Display Shows "E2"*	*Off*	*Internal fault on PCB*
On	*On*	*On*	*Rolling dash across the display*	*Beeps every 10 sec's*	*Battery Voltage low*
					Check charging circuit

No 12v dc Supply on either terminals 35 and 36 or 37 and 38	Check Fuse "F1"	F 2.5A
No 24v dc Supply on either terminals 41 and 42 or 43 and 44	Check Fuse "F2"	F 5.0A
Mains Power LED off	Check Fuse "F3"	F 250mA
No motor action on terminals 7,8.9 and 10	Check Fuse "F4"	F 5.0A
No output on Aux 1 terminals 11,12 and 13	Check Fuse "F5"	F 1.0A
No output on Aux 2 terminals 14,15 and 16	Check Fuse "F6"	F 1.0A
No output to activate Solenoid	Check Fuse "F7"	F 5.0A
No panel activation when receiving a fire signal	Check fuse "F8"	F 250mA
No photocell power		
Manual reset button not working on terminals 1 and 2 (if fitted)		

6.0) Connection of FDCP03 to Repeater Panel