PRODUCT INSTRUCTION	E L L A R D

Fire Control Panel FDCP-01	**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 - 01
FDCP - 01	Control Panel	Iss	1
FDCP - Sounder	Extension Repeater Panel	Date	01-09-2020

FDCP 01
(Revised 01/09/2020)
Contents

General

Multi Function Fire Control System for Roller Shutters

Features

- Visual warning 'FIRE SHUTTER CLOSING' and 98 dB sounder
- Easy to program using internal DIP Switches
- Selectable fire signal using - Normally Open (N/O) or Normally Closed (N/C) volt free contact
- Connection for Low Voltage external controls by key-switch or push button operation
- Door Closing method by - Mains Power only
- Programmable Auxiliary relay
- LED Fault diagnostics
- Audio / Visual Delay Timer from 0 - 5mins
- Extended door close timer using a Cyclic Pulse and Pause operation from 0 - 15 sec's
- Repeater extension panel available for remote indication
- Motor stop and reverse safety feature by use of additional photocell (not supplied)
- Front panel multi-functional RED indicator
- Auto close function

General Application

- The FCP01 is designed to operate roller doors fitted with a 230v tubular motor type drives
- While maintaining the function of every day normal use, the FCP 01 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, to automatically close the door upon receiving a fire signal
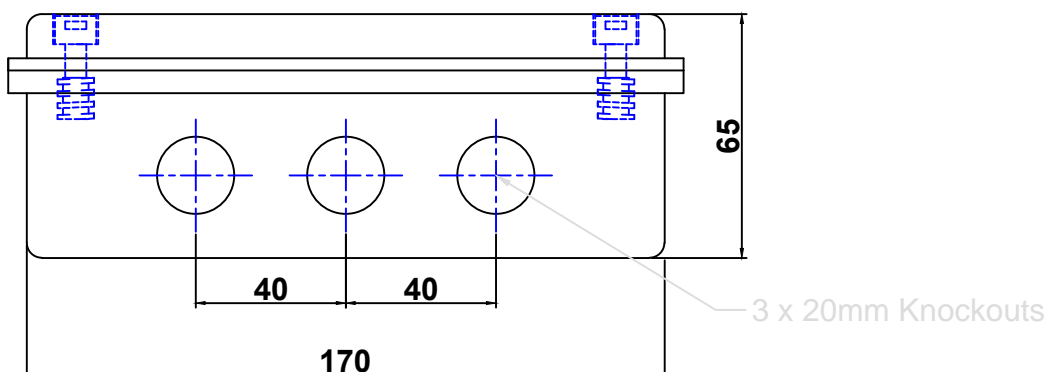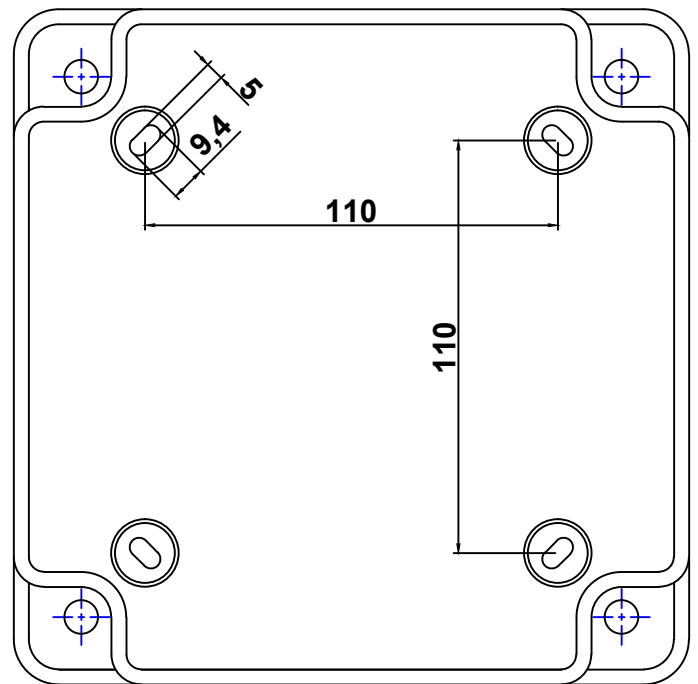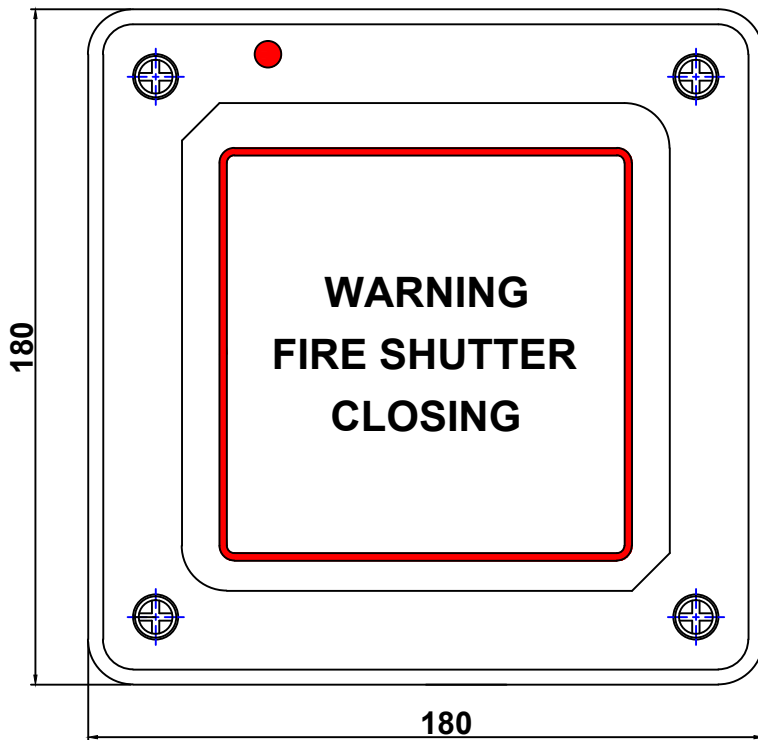
Installation

- 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
- Consideration must be given to the incoming cables and the panel rotated accordingly to give top or bottom cable entry
- 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 Dimensions and Installation

General	
Power Supply	230v - 50Hz
Max Motor Load	2.4A @ 230v or 500Watts
Max Accessories Load	150mA @ 24v d.c
Working Temp	-15 to +55°C
Protection Fuses	Mains: F1 = T6.3A, Delayed Ext 24v d.c: F2 = T250mA, Delayed
Sounder	98 dB (Decibels)
Enclosure Rating	IP 44
Dimensions (mm)	180 (w) x 180 (h) x 65 (h)
Weight (g)	300

Mounting
Mount the unit using the fixing holes provided

WARNING
FIRE SHUTTER
CLOSING

180

180

5

9,4

110

110

65

40

40

170

3 x 20mm Knockouts

2) Board Layout

Repeater Panel Connection

Aux Relay
N.C N.O Com

Sounder Connection

Lid Connection

On board button to operate door
Door Run Button

Motor Run Timer
Run Timer

Status Indication
OPEN
CLOSE
STATUS

Table 1
Setup
ON
1 2 3 4 5

Table 2
Sec's Pulse
ON
1 2 3 4

Table 3
Sec Pause
ON
1 2 3 4

Mains Power Connection
L
N

F1

F2

Table 4
Fire Options
ON
1 2 3 4

Table 5
Delay Timer
ON
1 2 3 4

Motor Connection
L1 L2 N3

Ancillary Connections
FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

3) Programming The Fire Shutter Control Settings

To suit most site requirements the FCP-01 control panel can
be programmed to close or open a door in the event of fire
using a selection of various DIP Switch settings

DIP	Table 1 - Setup		Notes
1 *(see note)*	Off	No Function	
	On	Aux relay pulses 3 times before door movement	**Needs DIP 3 - on (FIRE OPTIONS)*
2	Off	Door retracts fully after safety device activated	
	On	Door partial retracts 200mm after safety device activated	
3	Off	Motor power is applied for the full duration of run timer	
	On	No Function	
4	Off	Auto Close feature turned off	
	On	Auto Close feature turned on (requires safety device)	
5	Off	Motor current sensing turned on	
	On	Motor current sensing turned off	

Setting a pulse and pause Motor drive on closure

It is possible to extend the overall closure time by setting the "pulse" and "pause" drive option
Set the DIP Switches in accordance with the tables opposite
Upon activation from a fire signal the door will begin closing then pausing, this will repeat until the door is fully closed
Using the control system in this way could for instance, provide extra time for people to exit the building in a fire situation

Table 2 - Pulse				
DIP Switch				
1	2	3	4	
Off	Off	Off	Off	Not Active
On	Off	Off	Off	1 sec
Off	On	Off	Off	2 sec
On	On	Off	Off	3 sec
Off	Off	On	Off	4 sec
On	Off	On	Off	5 sec
Off	On	On	Off	6 sec
On	On	On	Off	7 sec
Off	Off	Off	On	8 sec
On	Off	Off	On	9 sec
Off	On	Off	On	10 sec
On	On	Off	On	11 sec
Off	Off	On	On	12 sec
On	Off	On	On	13 sec
Off	On	On	On	14 sec
On	On	On	On	15 sec

Table 3 - Pause				
DIP Switch				
1	2	3	4	
Off	Off	Off	Off	Not Active
On	Off	Off	Off	1 sec
Off	On	Off	Off	2 sec
On	On	Off	Off	3 sec
Off	Off	On	Off	4 sec
On	Off	On	Off	5 sec
Off	On	On	Off	6 sec
On	On	On	Off	7 sec
Off	Off	Off	On	8 sec
On	Off	Off	On	9 sec
Off	On	Off	On	10 sec
On	On	Off	On	11 sec
Off	Off	On	On	12 sec
On	Off	On	On	13 sec
Off	On	On	On	14 sec
On	On	On	On	15 sec

.......(continued)

DIP		Table 4 - Fire Options		Notes
1	Off	Door **CLOSES** on fire alarm		
	On	Door **OPENS** on fire Alarm		
2	Off	Panel requires a **N.O** Fire alarm signal to activate		
	On	Panel requires a **N.C** Fire alarm signal to activate		
3 *(see note)*	Off	Aux relay operates for the same time as the alarm signal		***Function Only active in fire*
	On	Aux relay latches for 3.5 min's in normal operation		***Function only active in normal operation, DIP 3 = **off** (FIRE OPTIONS)*
4	Off	Not used		
	On	Not used		

Setting a Delay Time before closure on receipt of fire signal

A signal from the fire alarm will immediately activate the FCP - 01 visual and audible warnings

By setting a combination of DIP Switches from the table opposite, a delay time will be entered
to give audio / visual warning before closure of the shutter begins

Table 5 - Delay Timer				
DIP Switch				Delay Time
1	2	3	4	
Off	Off	Off	Off	Immediate Close
On	Off	Off	Off	20 sec
Off	On	Off	Off	40 sec
On	On	Off	Off	1 min
Off	Off	On	Off	1 min 20 sec's
On	Off	On	Off	1 min 40 sec's
Off	On	On	Off	2 min's
On	On	On	Off	2 min's 20 sec
Off	Off	Off	On	2 min's 40 sec
On	Off	Off	On	3 min's
Off	On	Off	On	3 min's 20 sec's
On	On	Off	On	3 min's 40 sec's
Off	Off	On	On	4 min's
On	Off	On	On	4 min's 20 sec's
Off	On	On	On	4 min's 40 sec's
On	On	On	On	5 min's

Setting an Auto Delay Time
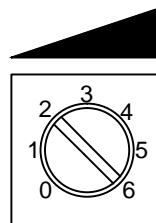
By setting the dial in the chosen
position,the FCP-01 will pre load both
the motor run timer and the optimum
auto close delay time (requires
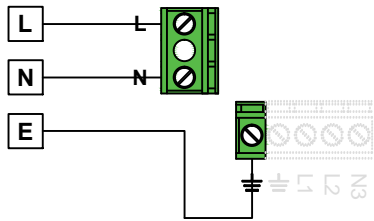photocell connected and DIP 4 = **ON**,
Table - SETUP)

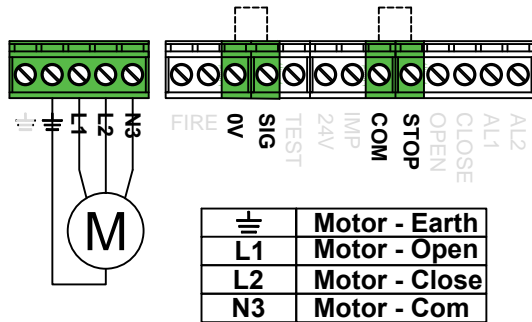| Dial Position	Motor run Time (Sec's)	Auto Close Delay Time (Sec's)
0	2	10
1	8	18
2	16	34
3	26	46
4	35	60
5	44	70
6	52	90

Important
*When using auto-close function, set run
time slightly longer than door travel time
The motor must reach its top limit for the
 auto-close to activate*

4.1) Power Supply Connection

**Connection from fused spur 230v, 50Hz, 13A or UPS/Battery Back Up**

L — L
N — N
E

4.2) Motor Connection

FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

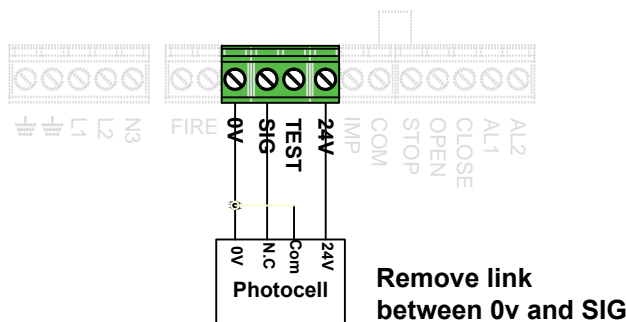| ⏚	Motor - Earth
L1	Motor - Open
L2	Motor - Close
N3	Motor - Com

When operating check the motor direction matches the corresponding LED indication on the panel. Reverse the connections L1 + L2 to correct motor direction if necessary
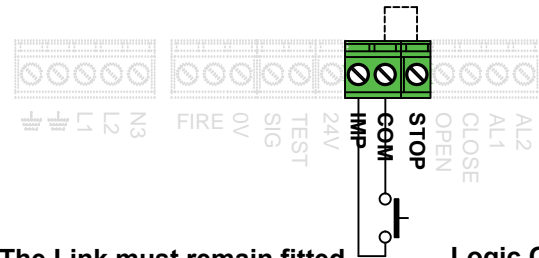
4.3) Fire Signal Connection

FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2
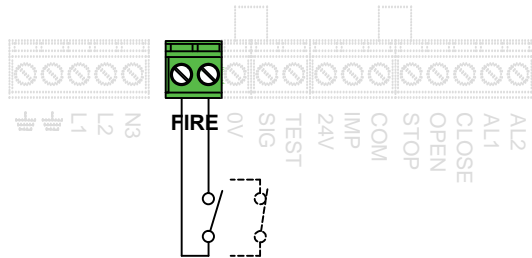
To activate the panel connect a N.O or N.C fire signal (see Table 4, DIP SW 2 for options)

4.4) Photocell Connection

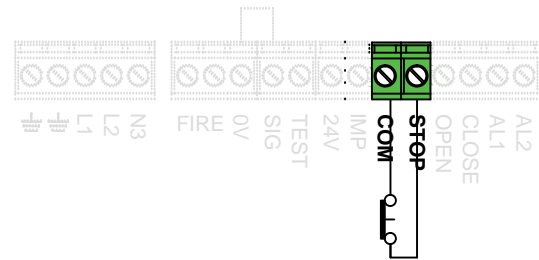0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

0V N.C Com 24V
Photocell

Remove link between 0v and SIG

4.5) Single Impulse Button Connection

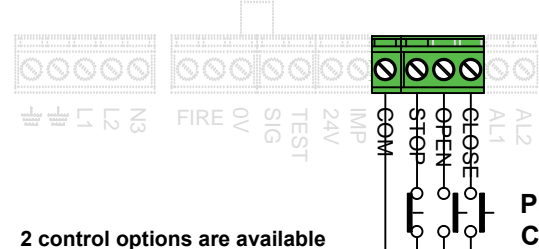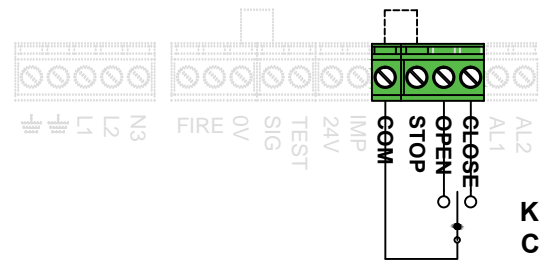FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

The Link must remain fitted between STOP and COM

**Logic Operation
OPEN-STOP-CLOSE -STOP**

4.6) Stop Button or Safety Brake Connection
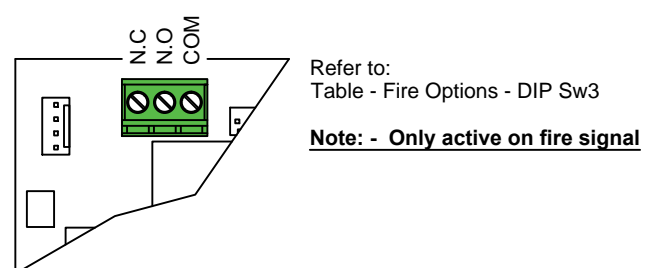
FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

4.7) Key-switch / Push Button Connection

FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

Key-switch Connection

FIRE 0V SIG TEST 24V IMP COM STOP OPEN CLOSE AL1 AL2

Push Button Connection
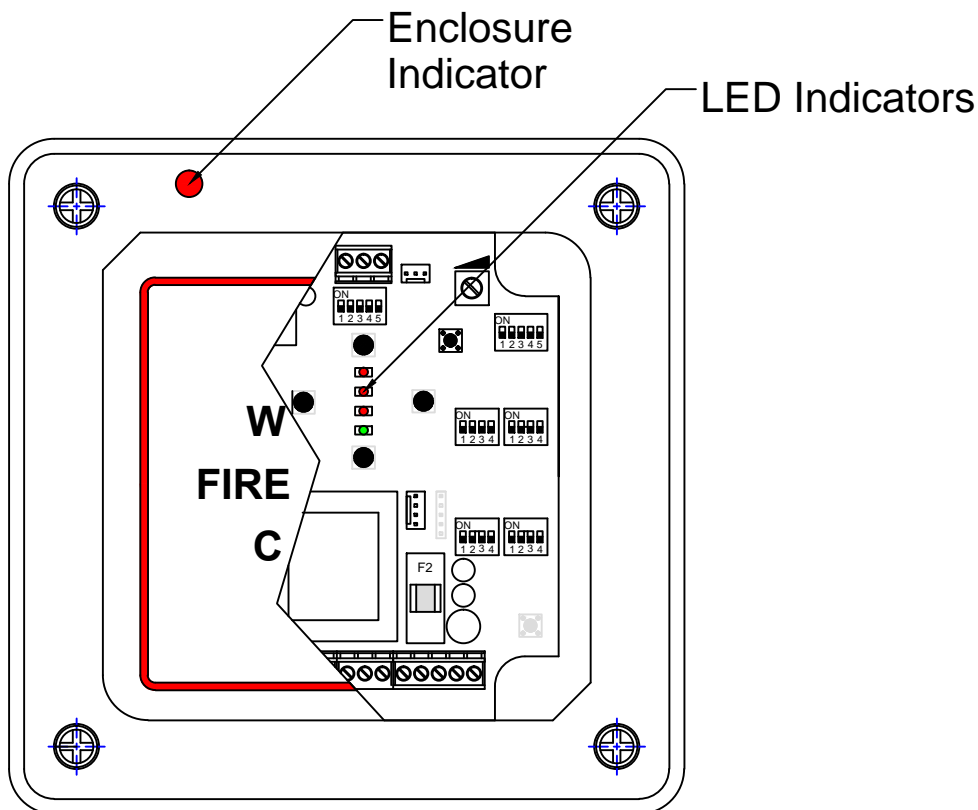
2 control options are available

- **Continuous run OPEN / CLOSE**
  This requires both safety links to be fitted, momentary activation of the key switch will cause the door to open or close

- **Continuous run - OPEN / Hold to Run (Dead-man) - CLOSE**
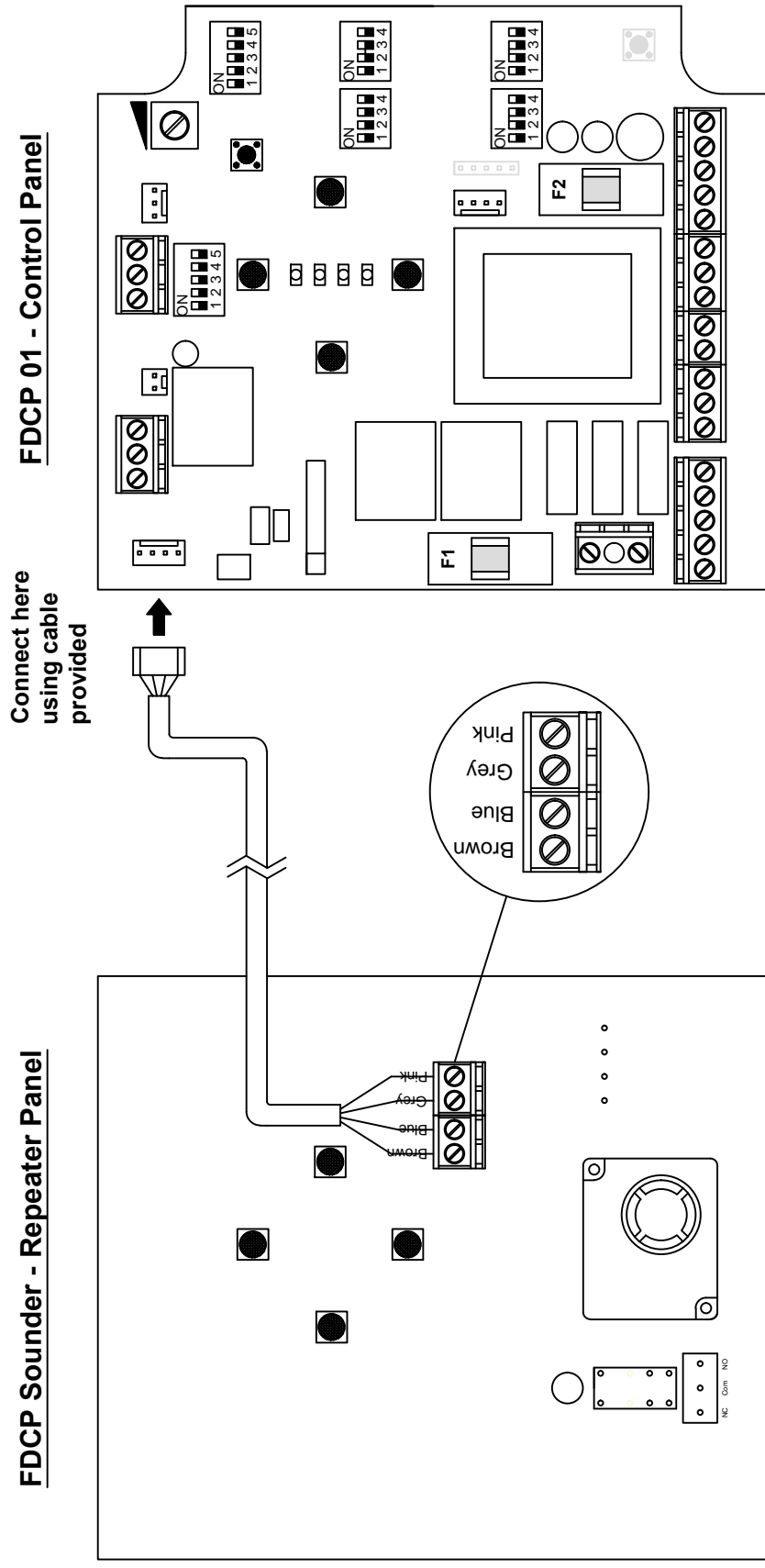 Remove Safety Link from (0v and SIG)

4.8) Aux Relay

N.C N.O COM

Refer to:
Table - Fire Options - DIP Sw3

Note: - Only active on fire signal

5.0) Status Indication and trouble shooting

	LED		Table 4 - Fire Options
OPEN ☐ CLOSE ☐ STATUS ☐ ☐	Open	Off	No Motor Action
		RED	Motor operating - Open Direction
		<u>RED</u> then drops out after 1 sec	Check motor connection - Open Direction or Motor faulty
	Close	Off	No Motor Action
		RED	Motor operating - Close Direction
		<u>RED</u> then drops out after 1 sec	Check motor connection - Close Direction Motor direction faulty
	Status	GREEN	Power Available
		GREEN = off RED = on	Stop fault - check link (Com / Stop) or stop button
Enclosure Lid LED		Off	No Power supply or in fire alarm contition
		Solid RED	Power Available
		Flashing RED	Photocell fault - check link (0v / Sig) or device

Enclosure Indicator

LED Indicators

6.0) Connection of FDCP- 01 to FDCP Sounder (Repeater Panel)

FDCP 01 - Control Panel

Connect here using cable provided

Brown
Blue
Grey
Pink

FDCP Sounder - Repeater Panel

F1

F2

NC   Com   NO

7.0) Commissioning

- **Connect all required devices e.g motor, key-switch (photocell optional)**

- **If no photocell is used ensure link is fitted between 0v and SIG**

- **If a key swiitch is used ensure link is fitted between COM and STOP**

- **Turn Run Time Dial fully clockwise to give max run time (52 sec's)**

- **Apply Power**

- **Before setting the travel limits, turn the motor current sensing OFF by Moving DIP SW 5 (Table 1 - SETUP) to ON position**

- **Operate the door and set travel limits at desired positions**

- **Check by running the door to full open position, then full closed position, adjust if necessary**

- **Move DIP SW 5 (Table 1 - SETUP) back to OFF position**

- **If auto close is required move DIP SW 4 (Table 1 - SETUP) to ON position**

- **Operate door again and check photocell in the closing direction for stop and retract (options set by DIP2, Table 1 - SETUP)**

- **If no photocell is fitted, remove the link between (0v and SIG) to give Hold-to-run control (Dead man) in the close direction**

  Please note: In Hold-to-Run (Dead man) mode there is a slight delay when operating in the close direction

Fire Signal

- **Select the fire signal type to be used using DIP SW 2 (Table 4 - FIRE OPTIONS) and connect a volt free signal to the terminals marked "FIRE"**

- **Set the delay time required using the DIP Switches as in "Table 5 - DELAY TIMER"**

- **Open the door fully and using a simulated fire signal, activate the panel The panel with give an audio/visual warning for the delay time set, then begin to close the door**

  The door will continue to close run for as long as the simulated signal remains on