MAN 2109

Doc FCP03 CM
28th July 2022
For Standard
60Y00C51 Software

# FCP03

# FIRE CONTROL PANEL

## COMBINED ENGINEERING AND INSTRUCTION MANUAL

# Entering Engineering Set-Up

Prior to entering the engineering set-up you must ensure that the MAINS LED is on and both batteries are connected. On initialization the FCP03 scrolls through a start-up message.
When the FCP03 is ready a DASH scrolls backwards and forwards across the display.
On the front of the panel you will see 3 buttons, marked: - Select, Up & Down.

To enter Engineering Set-Up you must hold down all three buttons until the internal lamp flashes, this takes about 10 seconds. Once the buttons are released the FCP03 will scroll: Engineering Set-Up followed by Fast Set 1 followed by a single **-** that remains in the centre of the display.

You are now in the Engineering Mode.
Pressing the **Select** button will select the Fast-set
Pressing the **Up** button will go to Fast-set 2 pressing it again will go to the next, there are 5 in total
Pressing the **Down** button will go to **Edit Delays**
Pressing the **Down** button again will go to **Edit All**
When you are on the required setting press **Select** to select it

# Section A: Fast-Sets

Using a Fast-set is similar to selecting a particular programme on a washing machine. If you know what clothes you are going to wash you select the appropriate preset programme. It is exactly the same principle with the FCP03 Fast-sets. Each Fast-set is different but all the Fast-sets are designed to carry out a specific function as outlined in the table below.
Fast-set 1 & 2 when selected will pre-programme the panel for a Solenoid Drop.
Fast-set 3 & 4 when selected will pre-programme the panel for a powered close.
Fast-set 5 when selected will pre-programme the panel for a two stage powered close

| | | Fast-set | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Door Type | Solenoid | X | X | | | |
| | Full Control Powered/Solenoid | | | X | X | X |
| Closing Style | Full Drop | X | X | X | X | |
| | 2 Stage Drop | | | | | X |
| Indication once door is closed | Sign and Sounder OFF | | X | | X | X |
| | Sign and Sounder ON | X | | X | | |
| Auxiliary 2 function | None | X | X | X | | X |
| | Imitate Open Relay | | | | X | |

# Section B: Edit Delays

The FCP03 is based around timers.

Once the FCP03 has been programmed via a Fast-set or by using the 'Edit All' function, you may wish to change some of the timings without altering the programme content.
This is done in 'Edit Delays', all the timings for your programme can be edited here. By pressing SELECT you can step through the timings, if you need to change one, use the **up** and **down** buttons then press **Select** to confirm and move on to the next. Once all the timings have been displayed the FCP03 will reset. On resetting all the new timings will be applied.

# Section C: Edit All

'Edit All' allows the user to scroll through all the options; each option is broken down into sub menus.
To get the 'Edit All' menu you must first enter Engineers Set-up as detailed above. Each sub menu will be displayed in turn. Pressing the **Up** and **Down** buttons will scroll through the sub menu options. Press the **select** button to confirm a selection and move to the next, the following are the selectable options in Edit All.

## 1. Door Type

Choices: Solenoid Drop or Full Control
Solenoid Drop activates the DC Solenoid via the Solenoid Relay once the full close delay timer elapses.
Full Control drives the door down electrically via the motor control close relay once the full close delay timer elapses. If the mains power fails and Full Control has been selected in the Door Type menu the Solenoid Relay will activate once the full close delay timer elapses.

## 2. Closing Style

This option is not displayed if Solenoid Drop has been selected from the Door Type menu.
Choices: Two Stage Closing or Full Drop.
Two stage closing allows the fire shutter to close to a set height on activation of Zone 1, closing completely on activation of Zone 2.
If Zone 2 is activated before Zone 1 the instructions for Zone 1 are carried out before actioning the instructions for Zone 2.
Full Drop, closes the door after the full close delay timer has elapsed.

## 3. Double-Knock

This option is not displayed if Two Stage was selected from the Closing Style menu.
Choices: Off or On
Off, ignores the Double Knock Option.
On, both Zone 1 & 2 need to be triggered before the FCP03 will activate, if only one of the Zones triggers the AUX 1 relay activates.

## 4. Safety Circuit-Hunting

Used in Conjunction with a Photo-Electric Cell and mains power on all the time.
Choices: Ignore or Stop
Ignore, Ignores the Safety Circuit Hunting Option
Stop, if the roller shutter is used for security and also as a fire shutter, then obstructing the photo electric cell will stop the shutter from closing via the push button inputs T3, T4, T5 and T6.

## 5. Safety Circuit

Used in conjunction with a Photo-Electric Cell (PEC) and mains power on all time.
Choices: Both, Full, Part or Off.
Both, the PEC is active during both a part close and a full close sequence.
Full, the PEC is only active during the full close sequence.
Part, the PEC is only active during the part close sequence.
Off, ignores the PEC input.

### Sub Menu Options

Number of retries, if the PEC is blocked the FCP03 can be programmed to ignore the PEC after checking 'x' number of times to see if the blockage has been removed. For unlimited retries set the number of retries counter to 000.

Pause Length – If the FCP03 has been activated and the door is closing, breaking the PEC beam will cause the door to stop. At this point a pause time can be set before the next command is carried out. The pause length is set in minutes and seconds.

Re-Open, Re-Open is set to OFF then the Pause Length timer elapses and if the PEC beam is re-made the shutter will start to close again.

Re-Open, If the Re-Open is set to ON you set the Re-Open time in minutes and seconds, after the Pause Length timer elapses the Re-Open timer is loaded and the door opens. The door starts to close again after the RE-Open timer elapses if the PEC beam is re-made or the number of retries expires.

## 6. Door Delays

The part Close Delay and Part Close Drop are only displayed if Two Stage is selected form the Closing Style menu.
Part Close Delay – On activation of Zone 1 the Part Close delay timer starts to count down. The shutter will not move until the Part Close Delay timer elapses.
Part Close Drop – The Part Close Drop timer starts to count down once the Part Close Delay timer has elapsed. The motor control close relay is activated for the duration of the Part Close Drop Timer. The motor control close relay switches off after the Part Close Drop timer elapses.
**Zone 2** triggers the Full Close Delay and Full Close Drop timers if Two Stage was selected from Closing Style menu.
**Zone 1** triggers the Full Close Delay and Full Close Drop timers if Full Drop was selected from Closing Style menu.
**Full Close Delay** – On activation of Zone 2 (Two Stage) or Zone 1 (Full Drop) the Full Close Delay timer starts to count down. The shutter will not move until the Full Close Delay timer elapses.

**Full Close Drop** – The Full Close Drop timer starts to count down once the Full Close Delay timer has elapsed. The motor control close relay is activated for the duration of the Full Close Drop timer. The motor control close relay switches off when the Full Close Drop timer elapses.

**Controlling The Sign, Sounder And Trigger Relay**
The Sign, Sounder and Trigger Relay can be programmed to activate at various stages. At the start and end of each stage you can turn ON or OFF the Sign, Sounder and Trigger Relay. The Part Close Set Up and Part Close End Set Up are only displayed if Two Stage was selected from the Closing Style menu.

## 7. Part Close Set Up

THIS IS THE START OF THE PART CLOSE DELAY TIMER

Sign On – On triggering Zone 1 the internal lamp and external lamp connection will be activated.
Off – On triggering Zone 1 the internal lamp and external lamp connection will not activate.

If the sign option is set to OFF the flash option will not be displayed
Flash On – This will cause the light to flash.
Off – The light will be on continuously.

Sounder On – On triggering Zone 1 the sounder and external sounder connection will be activated.
Off – On triggering Zone 1 the sounder and external sounder will not activate.

AUX 1 On – On triggering Zone 1 the AUX 1 relay will activate.
Off – On triggering Zone 1 the AUX 1 relay will not activate.

## 8. Part Close End Set Up

THIS IS THE END OF THE PART CLOSE DROP TIMER

Sign On – The sign will stay activated at the end of the Part Close Drop timer.
Off – The sign will switch off at the end of the Part Close Drop timer.

If the sign option is set to OFF the flash option will not be displayed
Flash On – This will cause the light to flash.
Off – The light will be on continuously.

Sounder On – The sounder will stay on at the end of the Part Close Drop timer.
Off – The sounder will switch off at the end of the Part Close Drop timer.

AUX 1 On – The AUX 1 relay will stay on at the end of the Part Close Drop timer.
Off – The AUX 1 relay will switch off at the end of the Part Close Drop timer.

## 9. Full Close Set Up

THIS IS THE START OF THE FULL CLOSE DELAY TIMER

Sign On - On activation of the Full Close Delay timer the internal and external lamp connection will be activated.
Off – On activation of the Full Close Delay Timer the internal and external lamp connection will not activate.

If the sign option is set to OFF the flash option will not be displayed
Flash On – This will cause the light to flash.
Off – The light will be on continuously.

Sounder On – On activation of the Full Close Delay timer the sounder and external sounder connection will be activated.
Off – On activation of the Full Close Delay timer the sounder and external sounder connection will not activate.

AUX 1 On – On activation of the Full Close Delay timer the AUX 1 relay will activate.
Off – On activation of the Full Close Delay timer the Aux 1 relay will not activate.

## 10. Full Close End Set Up

THIS IS AT THE END OF THE FULL CLOSE DROP TIMER

Sign On – The sign will stay activated at the end of the Full Close Drop timer.
Off – The sign will switch off at the end of the Full Close Drop timer.
If the sign option is set to OFF the flash option will not be displayed
Flash On – This will cause the light to flash.
Off – The light will be on continuously.

Sounder On – The sounder will stay on at the end of the Full Close Drop timer.
Off – The sounder will switch off at the end of the Full Close Drop timer.

AUX 1 On – The AUX 1 relay will stay on at the end of the Full Close Drop timer.
Off – The AUX 1 relay will switch off at the end of the Full Close Drop timer.

## 11. Sounder

You can select from 16 different tones to enable you to differentiate between panels in the same area.

## 12. Reset Set Up

ONCE THE FCP03 HAS REACHED THE END OF THE PROGRAMME IT WILL WAIT TO BE RESET

Choices: Button press or Auto reset.

Button Press: Allows the FCP03 to be reset via and external reset button wired into T1 and T2 or by pressing any one of the three buttons on the front of the panel.

Auto Reset: When the fire alarm signal has been removed and mains power is on, the FCP03 will automatically reset.

Part of the Auto Reset function is the secondary option to automatically re-open the shutter.
Re-Open Timer – If you set the Re-Open Timer to 000 minutes 000 seconds then the FCP03 will automatically reset without re-opening the shutter. Any other time setting automatically re-opens the door.

## 13. Power Failure

THIS IS THE ONLY WAY TO TRIGGER THE FCP03 OTHER THAN USING THE ZONES

Choices: OFF, Both, Low Battery and Mains

Off: Option not selected
Both: If the mains fail or the low battery monitoring circuit activates the FCP03 activates.
Low Battery: If the low battery monitoring circuit activates the FCP03 activates.
Mains: If mains to the panel are removed the FCP03 activates.

## 14. AUX 2

THE AUX 2 RELAY CAN BE SET TO IMITATE THE FOLLOWING RELAY FUNCTIONS

Choices: Stop relay, Close relay, Open relay or Trigger relay

As well as imitating relays the AUX 2 relay can be set to activate when the mains power fails or the batteries are low.
Choices: Mains or Low battery.

## 15. PEC Alarm

USED IN CONJUNCTION WITH A PHOTO-ELECTRIC CELL.

Choices: On or Off

ON: when the FCP03 is reset and waiting to be activated the PEC can be set to activate the Sounder inside the FCP03 panel if the beam is continuously broken for ‘x’ minutes.
Off: This option is not selected.

## 16. Trigger Delay

Choices: On or Off

On: Holds off the signal to the FCP03 after the Zone has been triggered for 10 seconds. If the activation signal to the zone is removed within 10 seconds the FCP03 will not activate. If the signal is held on the zone for longer than 10 seconds the FCP03 will activate.
Off: This option is not selected.

## 17. Zones

YOU CAN TRIGGER THE ZONES USING A NORMALLY OPEN CONTACT HELD CLOSED ON ACTIVATION OR A NORMALLY CLOSED HELD OPEN ON ACTIVATION

Choices: N/O or N/C

N/O: Is the default setting, the zones are triggered by a N/O contact held closed on activation connected between Zone 1 (T26 and T27) and for Zone 2 (T20 and T21)
N/C: The zones are triggered by N/C contact held open on activation connected between Zone 1 (T26 and T27) and for Zone 2 (T20 and T21)

Important: - If you select a N/C contact held open on activation to trigger ZONE 1 and you are not using ZONE 2 you must link out T20 and T21 using a short length wire.
AFTER THIS MENU THE FCP03 WILL RESET.

## Test the operation of the shutter

Initially the panel and shutter can be tested by linking out the Zone 1 inputs (and Zone 2 if 2 stage (Fastset 5) option has been selected). Once the operation is correct, the complete system should be tested by either activating the main building fire alarm system and/or triggering any detectors wired into the FCP03.

## Section D: Diagnostics and Technical Information

There are three LEDs mounted in the lid of the FCP03

**Mains LED**

| | | |
|---|---|---|
| Status: | ON - | Mains (240 VAC) is present |
| | OFF- | No Mains present or fuse blown (F3) |

**Fault LED**

| | | |
|---|---|---|
| Status: | ON - | No mains voltage but batteries are connected. The sounder bleeps every 10 seconds. |
| | Flashing - | The battery voltage is low. The sounder bleeps every 10 seconds and the LED flashes 4 seconds on and 4 seconds off. |

In the event of both faults occurring at once, low battery voltage takes precedence

**Set LED**

| | | |
|---|---|---|
| Status: | ON - | This is illuminated when the panel is in normal mode awaiting a fire signal. |
| | Flashing - | The LED will flash at the rate of ‘one’ second on and ‘one’ second off when an activation has been completed and the panel is waiting to be reset. |

## Three Digit Display on Lid

This is used for programming and displaying timings while counting down following a fire activation

**Display Outputs**

**Scrolling the bar backwards and forwards**: The FCP03 is set and waiting to be triggered.

**Stationary bar in the centre of three digit display:** Waiting for the select, Up or Down button to be pressed during programming.

**Counting down**: The FCP03 has been activated.

**All segments blank:** Either the cover is not connected or the FCP03 is waiting to be reset.

**E2:** Internal fault on board.

**1:** On far right of the three digits: Ribbon cable inserted into socket the wrong way round

**Board Mounted LED information**

| LED | Description |
|---|---|
| 4 | Stop Relay Activated |
| 4&5 | Door Closing |
| 4,5&6 | Door Opening |
| 7 | AUX 1 Relay Activated |
| 8 | AUX 2 Relay Activated |
| 9 | Solenoid Relay Activated |

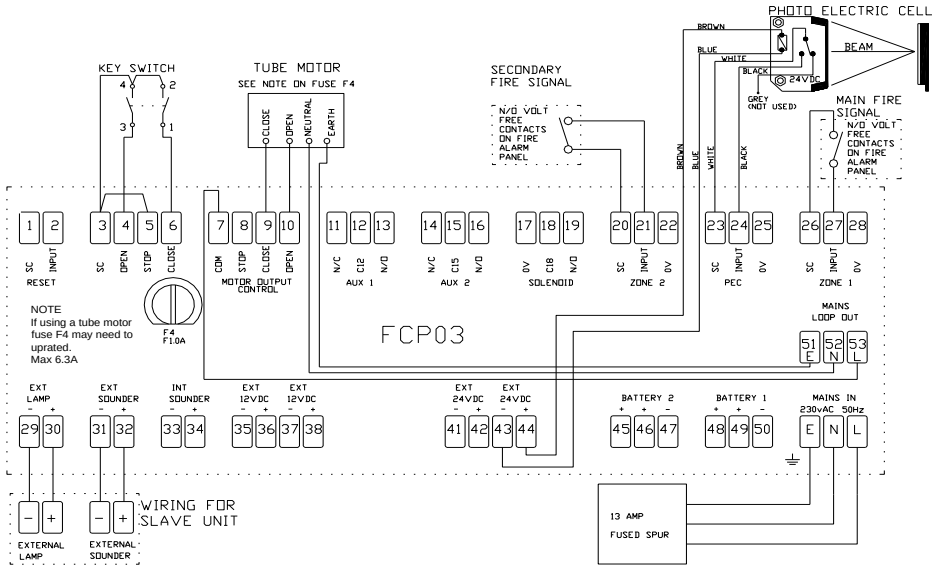
**Fuse Rating and Function**

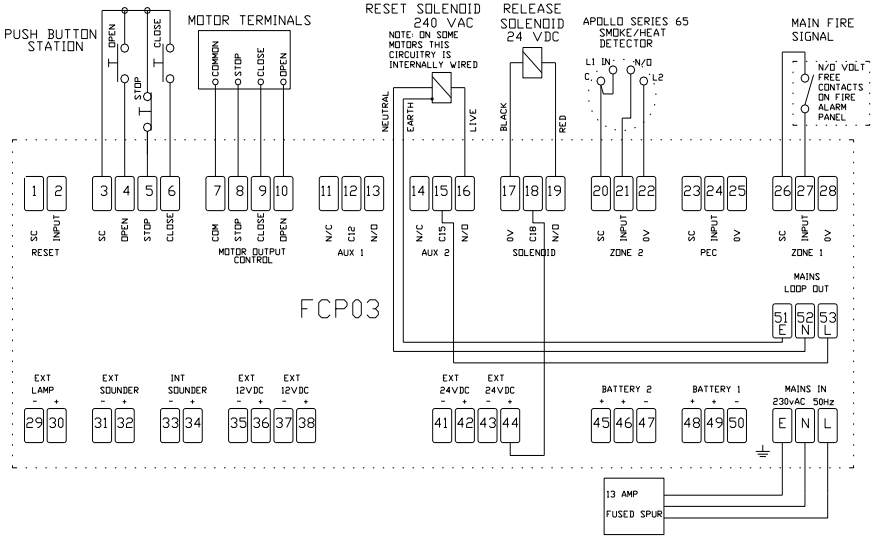
| Fuse | Rating | Description of Circuit |
|---|---|---|
| F1 | 2.5A | 12 Volt Aux Output |
| F2 | 5A | 24 Volt Aux Output |
| F3 | 250mA | PCB Power |
| F4 | 5A | Motor Relay (1A up to 5A To suit application) |
| F5 | 1A | Aux 1 Relay |
| F6 | 1A | Aux 2 Relay |
| F7 | 5A | Solenoid Relay |
| F8 | 250mA | Zone and PEC circuits |

**Technical Specification**

| **Supply Voltage** | **230VAC 50Hz** |
|---|---|
| Transformer Rating | 6VA |
| Operating Temperature | -15/+70 |
| Relays | 10Amp @ 28VDC /240VAC |
| Switch Circuit | Extra Low Voltage |
| Lamp | 12V LED Cluster |
| Sounder | 12VDC, 85mA, 103dB, 1500-2000Hz |
| Batteries | 2 x 12v 1.2Ah Lead Acid |
| 12VDC Aux Output | 2.5Amp (Momentary) |
| 24VDC Aux Output | 2.5Amp (Momentary) |
| Dimensions | 255 x 240 x 115mm (HxWxD) |
| Weight | 2Kg |
| Connectors T1 to T28 and B29 to B53 | Removable |
| Fuse Size | 20 x 5mm ceramic |

## Connections for a standard 4 wire tube motor and photo electric cell




## Connections for an external drive motor and solenoid release and reset unit