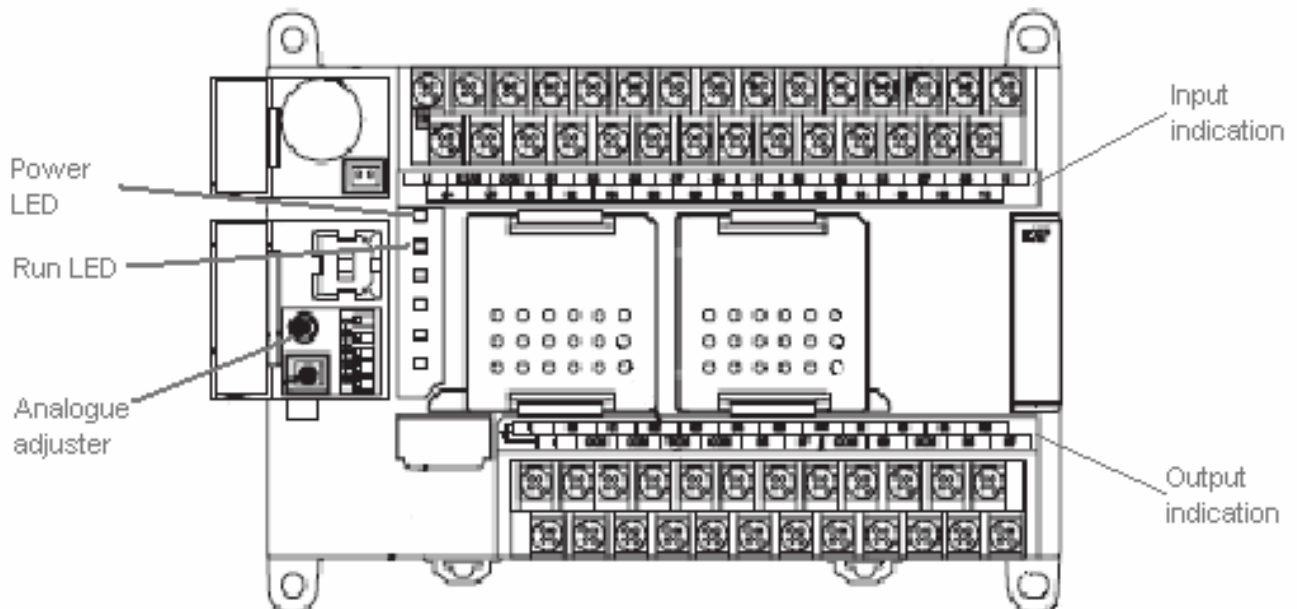


PLC Layout**Analogue adjustment**

The analogue adjuster can be located underneath the peripheral cover.

- **Door close timer** – The door open dwell time is adjustable from 1 to 26 seconds.

Operation

The PLC program contains a number of fault condition circuits and continually monitors operation of the lift components to check for correct operation. Should a component fail to operate or operate in a faulty manner, the controller will prevent a hazardous condition and a fault is indicated by flashing a call accept output with the relevant number of flashes for that fault condition with a 3 second pause between. This is to indicate that there is a fault to anyone trying to use the lift

Fault monitoring and lift statuses can also be observed via a display unit fitted to the controller. This enables the engineer to easily access what condition the lift is for maintenance and gives a more in depth description of the fault that has occurred.

Fault conditions

- Lock failed when stationary

The car gate or landing locks did not energise when the doors fully closed. The controller will re-open and close the doors until the car gate circuit energises, this will be attempted a further 10 times before parking the doors open. This is not a severe fault but is indicated with a call accept output flashing twice followed by a three second pause, a car call must be registered and the doors must close correctly to reset this fault.

- Lock failed when travelling

The car gate or landing locks were interrupted when the lift was travelling causing a crash stop. If the car gate circuit becomes energised within 60 seconds the controller will attempt to complete the journey.

- Car overloaded

The car overloaded switch was operated. This is only logged once at each floor.

- Communications failure – *duplex only*

The data communication link with the other controller was lost; this fault is also logged if the other controller is switched off.

- Door close protection

The doors failed to fully close within 10 seconds. The controller will re-open and attempt to close the doors a further 10 times before parking the doors open. This is not a severe fault but is indicated with a call accept output flashing twice followed by a three second pause, a car call must be registered and the doors must close correctly to reset this fault.

- Door open protection

The doors failed to fully open within 10 seconds. The controller will park the doors closed until the lift has moved to a different floor where another attempt is made to open the doors. This is not a severe fault but is indicated with a call accept output flashing twice followed by a three second pause, the lift must travel to reset this fault.

- Down drive failure

While travelling down the controller failed to receive a stepping signal before the journey timer elapsed. The journey timer can be adjusted using POT 1 located on the front of the processor. This is a severe fault indicated with a call accept output flashing five times followed by a three second pause, the lift will stop and will not accept calls until the processor has been reset by re-initiation of supply.

- Floor zone proximity fail

While travelling the controller has not received a proximity monitor signal; thus indicating that all floor zone proximities are de-energised when the lift is away from floor level. This is a severe fault indicated with a call accept output flashing three times followed by a three second pause, the lift will stop at the next registered call and will not accept further calls until the processor has been reset by re-initiation of supply.

- Incorrect direction – *traction only*

The lift did not travel in the expected direction or the level up and level down proximities are reversed. This is a severe fault indicated with a call accept output flashing four times followed by a three second pause, the lift will stop and will not accept calls until the processor has been reset by re-initiation of supply.

- Internal battery voltage low

The processors internal memory backup battery voltage is too low and should be replaced immediately to retain setup data. The battery is located under the front cover of the processor. Note that the power must first be switched off and the new battery connected within 5 minutes of disconnecting the old battery.

- Level down proximity failed

The controller did not receive a level down proximity signal at floor level.

- Level up proximity failed

The controller did not receive a level up proximity signal at floor level.

- Low speed protection trip

After slowing the lift failed to reach floor level within 15 seconds. The call at that floor is cancelled and the controller will answer any other calls present.

- Re-level protection trip – *hydraulic only*

After initiating a re-level the lift failed to reach floor level within 12 seconds. This is a severe fault indicated with a call accept output flashing four times followed by a three second pause, the lift will return to the lowest level and will not accept calls until the processor has been reset by re-initiation of supply.

- Re-level zone failure – *hydraulic only*

The re-level zone was not energised when the controller attempted to re-level. This is a severe fault indicated with a call accept output flashing four times followed by a three second pause, the lift will return to the lowest level and will not accept calls until the processor has been reset by re-initiation of supply.

- Continuously Re-leveling – *hydraulic only*

The controller has re-leveled 5 times within 5 minutes. This is a severe fault indicated with a call accept output flashing four times followed by a three second pause, the lift will return to the lowest level and will not accept calls until the processor has been reset by re-initiation of supply.

- Repetitive safe edge use

The safety edge has been operated whilst the doors are closing, forcing a re-open, in excess of 10 times at the same floor. The doors will park open until a car call is registered and the lift travels to a different floor. This is not a severe fault but is indicated with a call accept output flashing twice followed by a three second pause.

- Safety circuit failure

The safety circuit has been interrupted; note that the hand winding switch is also monitored as part of the safety circuit. If the safety circuit is re-energised the controller will initiate a reset run when a call is registered and return to normal operation.

- Selector out of step

The processor received a terminal floor reset signal that did not correspond to the selector position. It is important that the stepping signals occur slightly before the reset signals. Note that the floor position stored for this fault will be either the top or bottom floor and will not necessarily indicate where the stepping proximity has failed.

- Starting failure

After energising a direction output the processor has failed to receive feedback via the pump / drive contactors to the travelling input.

- Step proximity failure

The lift has completed a journey between terminal floors without receiving a stepping signal. Note that the floor position stored for this fault will be the bottom floor and does not necessarily indicate where the failure occurred. This is a severe fault indicated with a call accept output flashing three times followed by a three second pause, the lift will stop at a terminal floor and will not accept further calls until the processor has been reset by re-initiation of supply.

- Simultaneous level and step

While travelling the controller has received a stepping signal and a levelling signal simultaneously. This is a severe fault indicated with a call accept output flashing three times followed by a three second pause, the lift will stop at the next registered call and will not accept further calls until the processor has been reset by re-initiation of supply.

- Thermistors tripped

The thermistors have tripped indicating possible motor overheating. The lift will stop at the next registered call and will not accept further calls until the motor has cooled sufficiently, hydraulic controllers will return to the lowest level during this cooling period. This is not a severe fault but is indicated with a call accept output flashing once every three seconds.

- Top OR bottom reset failure

Both terminal floor resets have energised simultaneously, the controller will accept calls but not attempt to travel when in this state. Note that the floor position stored for this fault will be the bottom floor and does not necessarily indicate which reset is faulty.

- Up drive failure

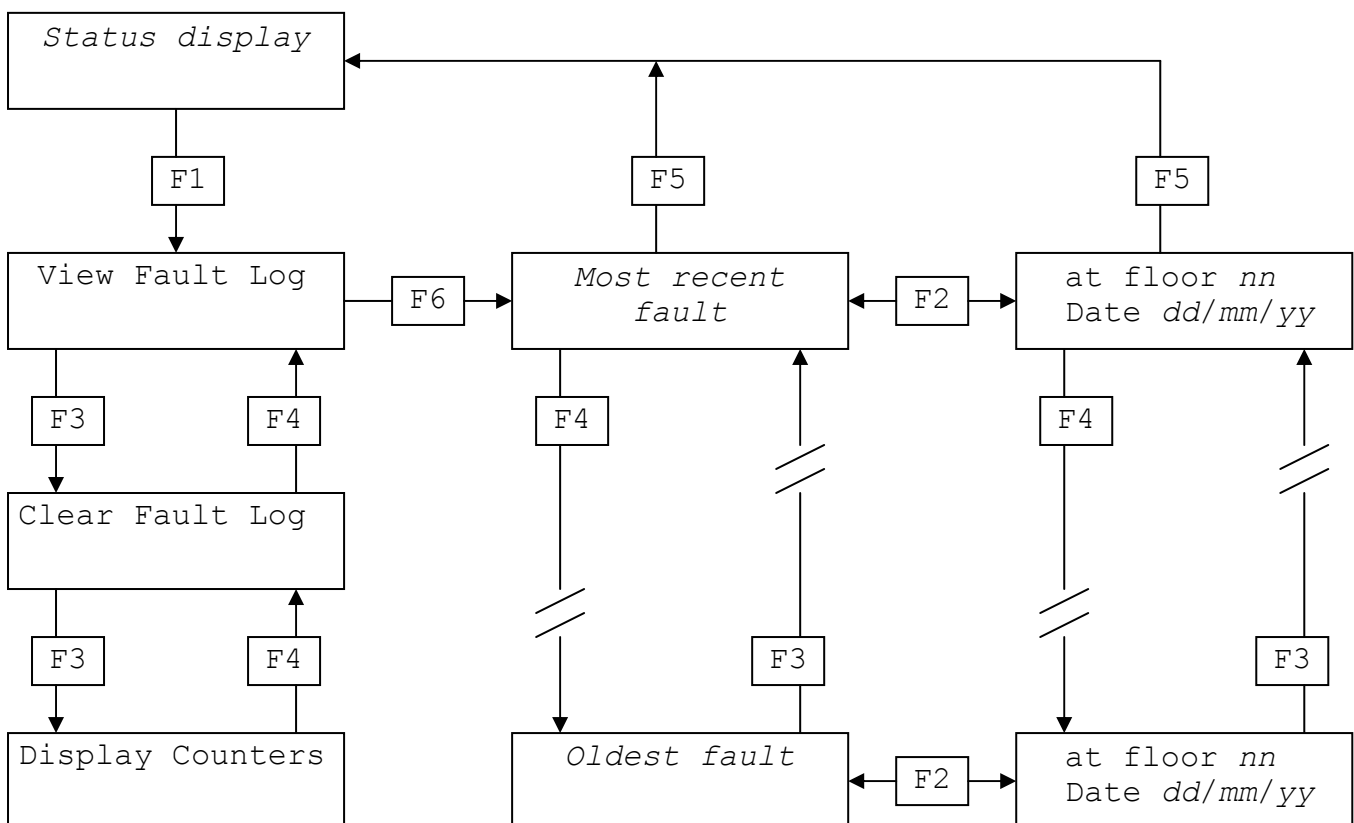
While travelling up the controller failed to receive a stepping signal before the journey timer elapsed. The journey timer can be adjusted using POT 1 located on the front of the processor. This is a severe fault indicated with a call accept output flashing five times followed by a three second pause, the lift will stop and will not accept calls until the processor has been reset by re-initiation of supply. Hydraulic controllers will also return to the lowest level.

- Up Final Limit Broken – *hydraulic only*

The lift has broken the up final limit in the shaft. This is a severe fault indicated with a call accept output flashing six times followed by a three second pause, the lift will stop and will not accept calls until the processor has been reset by re-initiation of supply. Hydraulic controllers will also return to the lowest level if the up final limit switch re-made.

Viewing the fault log

- From the status display press key F1 to enter the menu.
- Use keys F3 and F4 to scroll to View Fault Log.
- Press key F6 to select View Fault Log.
- The most recent fault is displayed.
- Use key F2 to toggle between the fault description and the fault floor with date.
- Pressing key F5 at any time will revert back to the status display.



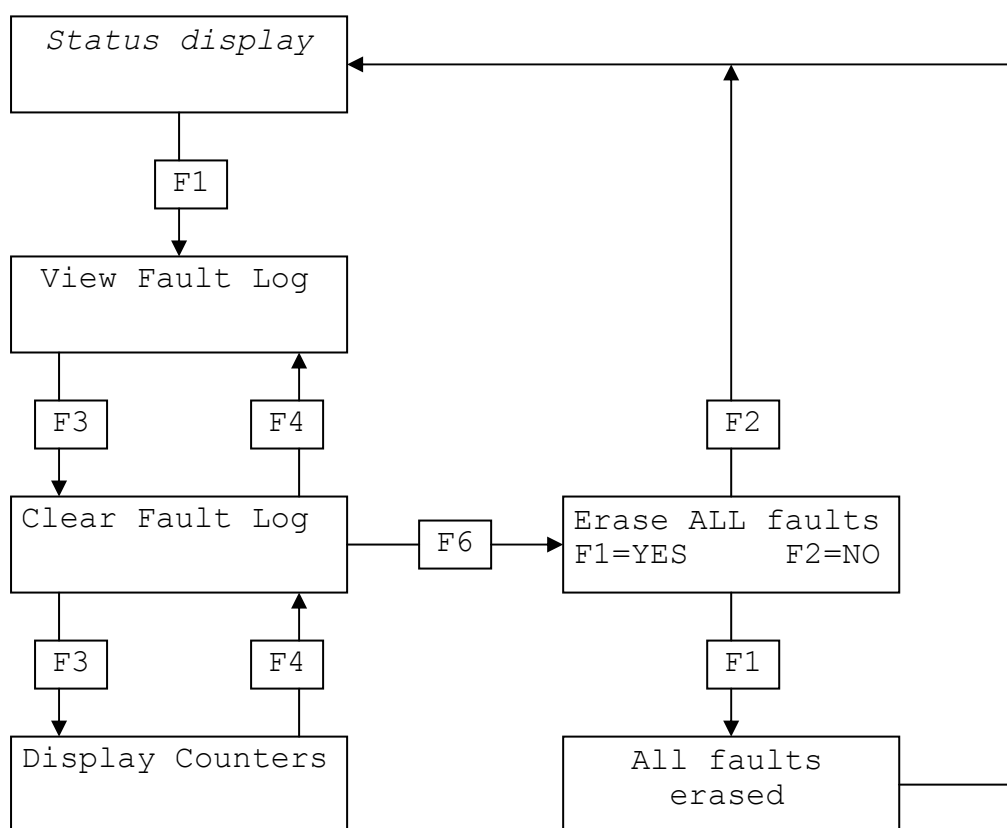
Notes:

- The fault log will store a maximum of 50 faults.
- When a fault occurs it is automatically displayed and the red LED is illuminated, after a short time the status display is resumed but the red LED will remain illuminated until the fault log is manually viewed.
- In the case of a severe fault the red LED will flash and the fault will remain displayed until the processor is reset by re-initiation of the supply by a qualified engineer.

Clearing the fault log

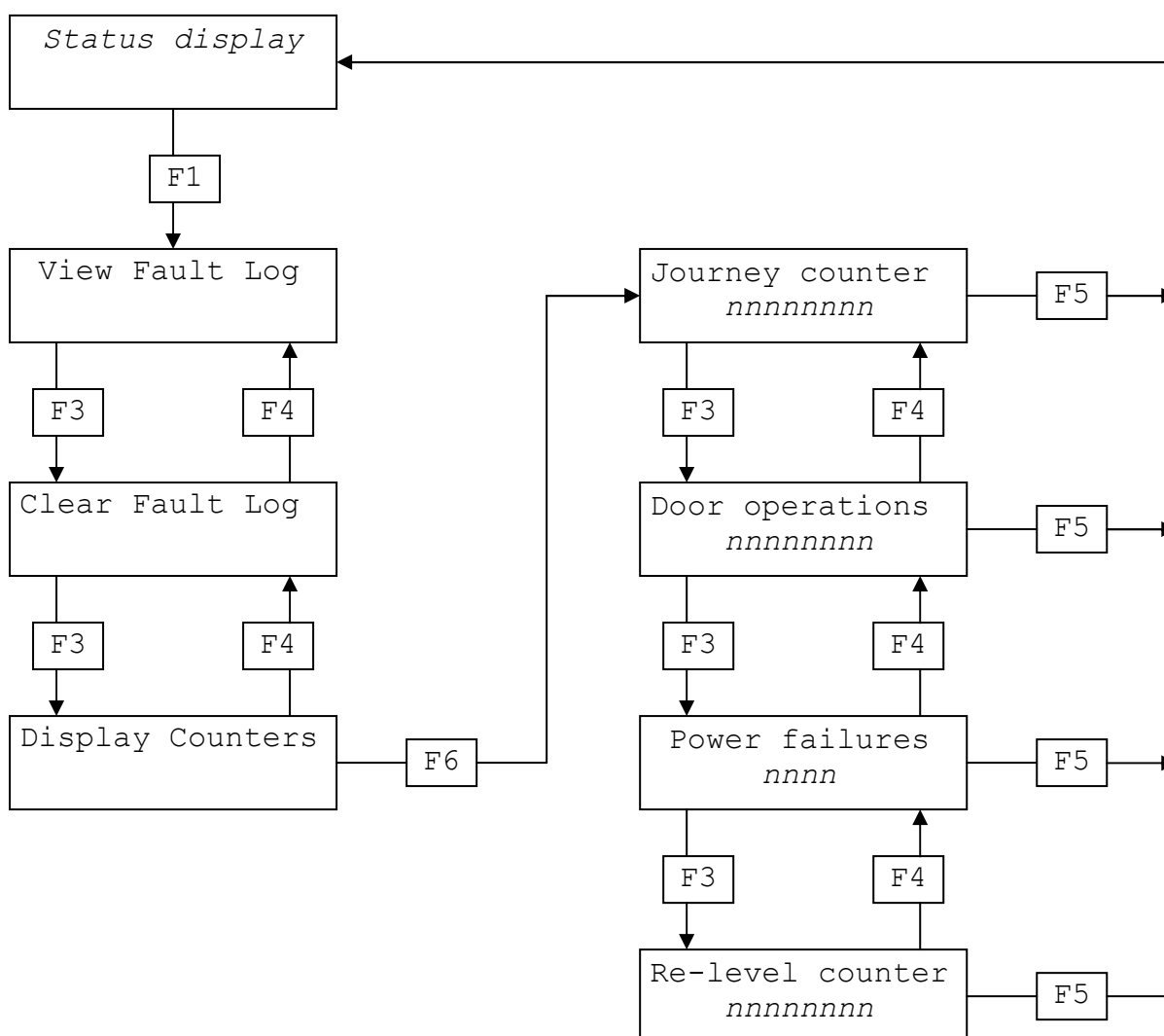
Warning: The following procedure describes how to erase all the faults stored in the log, this action is irreversible.

- From the status display press key F1 to enter the menu.
- Use keys F3 and F4 to scroll to Clear Fault Log.
- Press key F6 to select Clear Fault Log.
- Pressing key F1 will erase the fault log and a confirmation message will appear for a short time.
- Pressing key F2 will abort the procedure.
- The status display will be automatically resumed.



Viewing the event counters

- From the status display press key F1 to enter the menu.
- Use keys F3 and F4 to scroll to Display Counters.
- Press key F6 to select Display Counters.
- Use keys F3 and F4 to scroll through the counters.
- Press key F5 to return to the status display.



Notes:

- The re-level counter is only applicable to hydraulic controllers.
- The event counters cannot be reset.