

GE-9030 PLC Fault Logging

The "Fault Logging" feature records the last 50 "faults", the elevator status and time code, in two consecutive registers in the fault table. To access the data, a GE 9030 Hand-held Programmer (or computer with GE Logicmaster software) is required.

- To check the Fault Logging Data, plug the Hand-held programmer into the port on the 9030 Power Supply. It is best to do this with the POWER OFF. It will perform a self-test when power is applied, then show the Main Menu.
- Press "2", "Enter", to go to the Data Sub-menu.
- Press "R","4","0","0", to show the status of Register R400 (Time Stamp Register), which shows the current time. The value increments every 6 minutes. Every 24 hours, the value will "roll over", resetting back to zero. Compare this value with the Fault/Time codes to determine when the fault occurred.
- Display the value in HEXADECIMAL, by pressing the "Dec/Hex" key until the display shows the Register number on the left, and the value on the right as 4 digits with an "H" after the number. For example: " R400 0015H "
- The Fault Table is Registers 401 to 500. The most recent Fault/Time Code is in Register R401, with the elevator Status Code in Register 402. The next most recent Fault/Time Code is in Register R403, with its Status Code in Register R404, etc. Each fault entry is stored in two registers, with the Fault/Time code in the odd numbered register, and the Status Code in the next even numbered register. Press the Up or Down Arrow keys to scroll through the table.
- The Fault is the Left 2 digits of the Fault/Time Code and the Time Stamp is the Right 2 digits of the Fault/Time Code, when viewed in Hexadecimal. For example, if the Fault/Time Code was "0312H" then the Fault is "03" and the Time Code is "12". Compare the Fault with the chart below to determine the fault. The Faults and Time Stamp are in Hexadecimal. Note: Not all Faults are used with all jobs.
- The Time Stamp is a copy of Register R400 when the fault occurred. Compare the Time Stamp with the current value of Register R400, to determine how long ago the fault occurred. (For example, if the Time Stamp is "0015H", and the Fault/Time Code is "0312H", this means the Fault occurred about 18 minutes ago.)
- To translate Hexadecimal to Decimal: A(hex)=10(dec); B(hex)=11(dec); C(hex)=12(dec); D(hex)=13(dec); E(hex)=14(dec); F(hex)=15(dec).
- The Status Code shows the elevator status at the time of the fault. Each bit shows a different function. Press the DEC/HEX key to change the register display mode from Decimal to Hexadecimal to Binary. Compare the bits in the bottom line of the display to determine the elevator status. (The "?" indicates the bit(s) assigned to each function)

[xxxxxxxxxxxx????] Bits 1-5 = Floor Position as Binary Number
 [xxxxxxxxxx?xxxxx] Bit 6 = Last Run was Up (0=Down)
 [xxxxxxxxxx?xxxxxx] Bit 7 = Last Direction Indicator was Up (0=Down)
 [xxxxxxxx?xxxxxxx] Bit 8 = Car was Running
 [xxxxxxxx?xxxxxxx] Bit 9 = Car was Running Fast Speed
 [xxxxxx?xxxxxxx] Bit 10 = Car was on a Floor-to-Floor Run
 [xxxxx?xxxxxxx] Bit 11 = Door Contacts Input was ON
 [xxxx?xxxxxxx] Bit 12 = Door Close Limit Input was ON **
 [xxx?xxxxxxx] Bit 13 = Door Open Limit Input was ON
 [xx?xxxxxxx] Bit 14 = Up Level Switch Input was ON
 [x?xxxxxxx] Bit 15 = Down Level Switch Input was ON
 [?xxxxxxx] Bit 16 = Door Zone Switch Input was ON
 (** Bit 12 monitors Door Locks with Freight or Manual Doors)

Fault	Fault Description (Fault/Time Code is in the ODD Registers, Status is in the next EVEN Registers)
00	Fault "0000H" is inserted every 24 hours, to show the faults before this code were from the previous 24 hour period.
01	Run Timer Fault. The car ran for a preset adjustable time (normally 25 seconds) without passing a floor. On Hydraulic elevators, this is the Low Oil Timer, and operates in the up direction only, and will return the car to the lowest landing. On Traction elevators, the timer operates in both directions and shuts the car down wherever it is.
02	Brake Timer Fault (if used). Traction only. The Brake Micro Switch Input, Safe Input and other run inputs (such as BK1, BK2, P, PZ, or PX contacts) failed to change state properly within 3 seconds of the start or end of a run.
03	Drive Reset Fault (if used). The drive has attempted to reset more than the preset number of times (default=4).
04	Leveling Fault. (Traction only.) Initiated when the car has been leveling for more than 15 seconds, or if the car is oscillating at the floor, bouncing from up level to down level to up level, etc. The car is not shut down, but will not be able to relevel until the car has run to another landing.
05	Emergency Power or Battery Lowering was initiated (if used).
06	Door Open Fault. The Door Open Limit Switch failed to open properly when the car was attempting to open the doors.
07	Door Close Fault. The doors failed to close properly. The Door Contacts did not make up properly when the car was attempting to run, or the Door Close Limit Switch did not open when the doors were parking closed.
08	Door Contact Fault. The car tripped the Door Contacts (or Door Locks) while it was running.
09	Door Zone Fault. The car stopped outside the Door Zone.
0A	Car Stuck Fault. The car was held at a floor for more than 30 seconds, with calls registered. This fault does not shut the car down, but will prevent calls from initiating a re-open.
0B	High Speed Counter Fault (if used). An overspeed condition was detected. Possible faults include exceeding 110% of contract speed; exceeding 150fpm on Inspection; exceeding 50fpm with the doors open; loss of Tachometer signal; tachometer showed the car running the wrong direction. The specific fault will be shown on a fault output indicator.
0C	Emergency Terminal Slowdown Detection Overspeed Fault (if used). An overspeed was detected at a terminal landing, or the ETSD Sws did not operate properly. See ETSD sheet.
0D	Door Check Fault (if used). Door Contacts were closed when the Door Open Limit was broken.
0E	Rope Brake Fault (if used). The car moved out of the Door Zone with the doors open.
0F	Drive Ready Fault (if used). The Drive Ready Input went off.
10	Communication with the other controller(s) failed.
11	The Drive On Input went off while the car was running.
12	Up and Down Level Switches were both on at the same time.

Fault	Fault Description (Fault/Time Code is in the ODD Registers, Status is in the next EVEN Registers)
13	Earthquake Operation was initiated.
14	The HSC OK signal to the CPU went off. Cycle power, or replace the HSC card.
15	Fire Service was initiated from a Fire Sensor or the Fire Sw.
16	Machine Room Fire Sensor tripped.
17	Runaway. Fault (Traction) Car exceeded 50fpm when it should not be running. This fault trips the Rope Brake.
18	Hydraulic = Phase Loss or Phase Reversal. Traction = Brake Fault. The Brake Micros Sw indicated the Brake failed to drop. This fault trips the Rope Brake. Reset by turning on the Shutdown Defeat Input momentarily.
19	Oil Viscosity was initiated. (Hydraulic only)
1A	ECTS Learn Mode was initiated. See ECTS Setup Sheet.
1B	Door Zone input stuck on.
1C	Redundancy Fault. A non-running relay stuck or failed.
1D	Redundancy Fault. A run relay stuck or failed.
1E	FS Fault. The car tried to run Fast Speed, but did not pass a floor. After 20 attempts, the car will shut down. This can be caused by the FS relays failing to cut out Leveling, or by the car tripping the Door Contacts as the car starts.

Unless otherwise indicated, faults are cleared by cycling the Inspection Sw or the Main Line Disconnect Sw.