Thames Valley Controls

EMU 3

(Ver 1.04)

Event code descriptions

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Event **Line :** 74

Event Code : 1

Event Description "EMU Reset Sequence"

The EMU has received a hardware reset and has started up with primary initialisation. No settings are lost, and the unit will retain the time etc.

Other input and logic interlocks

None.

Possible cause of event generation

The EMU was in mains power lost condition for longer than the battery could support the unit, or the manual reset button on the CPU card was pressed.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 5

Event Code : 2

Event Description "Lost Gate Feed or Primary Safety Circuit"

Interruption of the gate feed / primary safety circuit to the controller.

Other input and logic interlocks

If the main controller supply has been lost, then the loss of the primary safety circuit is ignored.

In a Lift application the monitoring unit will attempt to place a test call to determine whether the circuit is truly lost, or if the signal is faulty (see #97). The event is only reported if a test call fails or cannot be placed.

Once the gate feed / primary safety circuit has been restored, then this event will be reported clear.

Possible cause of event generation

The primary safety circuit is monitored as being a series circuit preceding the gate feed signal. Any one of these switches, limits or contactors being broken while the main supply is present is reported. Circuitry, which may be contained in this circuit, and cause the event generation are phase failure, motor overload, top and bottom final limits, door overloads, pit stop push and buffers.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 2

Event Code : 3

Event Description "Event Over Reporting"

An event is repeatedly being asserted and restored, such that the incrementing count exceeds a limit. If this occurs reporting of that event is suspended until the count falls below the limit, and to report that fact this event is generated as a warning.

Other input and logic interlocks

Each event can have two factors set aginst it, the Incrementor and the Decrimentor. When an event is asserted a running count is incremented by the Incrementing factor, and after a period of time the count is reduced by the Decrimenting factor. With these factors are set for a particular nusance event it can be prevented from filling the units database with asserts and restores.

Possible cause of event generation

A loose contact or intermittent fault which keeps repeating .

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 30-45

Event Code : 4

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 8

Event Code : 5

Event Description "Door Open Protection Timer Overrun"

This event is reported as a result of the monitoring of the door open contactor (OC). If the signal is active for longer than the expected maximum time, then this event is reported.

Other input and logic interlocks

The maximum expected time is configurable (Liftwatch / Open Prot Time; LIFTW / DOPT) in seconds, in the range 1 second to 10 minutes, and defaults to 30 sec

Possible cause of event generation

The door open limit signal is faulty, or the doors have been physically jammed and cannot open fully.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 25

Event Code : 6

Event Description "Alarm Supply Low"

The EMU has performed an alarm supply test, and has determined that the supply voltage is below the minimum acceptable threshold.

Other input and logic interlocks

Alarm Supply tests are performed automaticly every 7 days, However alarm supply tests may be initiated manually through the front panel "Setup / Test Alarm Supply" menu item, or by the remote user with the SETUP ALARMSUPPLY TEST command.

The event will be reported clear once an alarm supply test has detected that the voltage has risen to the required threshold (set in hardware).

Possible cause of event generation

The batteries providing the alarm supply have run down, or the supply has failed.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 24

Event Code : 7

Event Description "EMU Battery Bad"

The EMU has performed a battery test, and has detected that the unit cannot run on battery for the required 30 minutes.

Other input and logic interlocks

Battery tests are performed every 7 days, but not within 24 hours of a unit reset/power on (to ensure that the battery is fully charged). A battery test may be initiated manually through the front panel "Setup / Battery Status" screen, or by the remote user with the SETUP BATTERY TEST command.

The event will be reported clear once a successful battery test has been completed.

Possible cause of event generation

The battery condition has deteriorated to the point where it cannot maintain its output for the required period.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 21

Event Code : 8

Event Description "BST – GMT Changeover"

This event records the point where daylight savings time starts and ends.

Other input and logic interlocks

The month, week of the month, day of the week and hour of the day at which the transitions occur are configurable (Features / Daylight Svngs / Start Params … ; FEATR / DST / START …), and default to 0200 on the last Sunday in March to start daylight savings time, and 0300 on the last Sunday in October to end daylight savings time.

The feature as a whole is also configurable as to whether it applies at all (Features / Daylight Svngs / Enabled ; FEATR / DST / ENA).

The event is reported for each time change.

Possible cause of event generation

The feature is enabled, and the appropriate time arrives.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 7

Event Code : 9

Event Description "Door Close Protection Timer Overrun"

The doors have been commanded to close by the close contactor (CC) being energised, and the operation has not been completed within the expected maximum time.

Other input and logic interlocks

The maximum expected time is configurable (Liftwatch / Cls Prot Time; LIFTW / DCPT) in seconds, in the range 1 second to 10 minutes, and defaults to 2 minutes.

Possible cause of event generation

An obstruction in the door closing path is preventing the doors closing fully.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 26

Event Code : 10

Event Description "Cabinet Tamper Active"

The cabinet tamper signal has become active while a TVC engineer is not logged on at the front panel.

Other input and logic interlocks

Once the cabinet tamper signal becomes active, a reset timer is started, and the feature is not re-armed until the timer has expired and the signal becomes inactive.

The feature may be enabled or disabled in the configuration (Features / Cabinet Tamper / Enabled ; FEATR / TAMP / ENA), and the reset timer can also be configured (Features / Cabinet Tamper / Reset Time ; FEATR / TAMP / RESTM) in seconds, in the range 0 seconds to 24 hours, defaulting to 2 minutes.

This event will be reported clear once a TVC engineer has logged on through the keypad.

Possible cause of event generation

See description

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 13

Event Code : 11

Event Description "Equipment Not In Service"

This event is reported as a result of the lift or other equipment being removed from normal service. It may still be functional, but not available for general use.

Other input and logic interlocks

Once the equipment is operational, and not on special service, then this event will be reported clear.

Possible cause of event generation

Being put on special service or a stop button activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 15

Event Code : 12

Event Description "On Fire Service Control"

This event is reported when the fire service keyswitch is activated.

Other input and logic interlocks

When the fire service keyswitch is turned off, then this event will be reported clear.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 30-45

Event Code : 13

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 107

Event Code : 14

Event Description "Auxiliary (Wetting) Supply Lost"

This event indicates that the auxiliary wetting supply provided by the EMU on terminals WET + and WET - has been lost.

Other input and logic interlocks

The auxiliary supply is wired internally to supply the Cabinet Tamper circuit, which is dependent on it.

If lost due to a short circuit the supply can be restored by disconneciting the suspect wiring, and then removing the power connector from the EMU mother board. When power is reconnected the Auxiliary supply should return, and the event will clear.

Possible cause of event generation

The circuit connected to these terminals is drawing more current than the rated output (400mA). This could be due to a wiring short or too heavy a load.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 4

Event Code : 15

Event Description "Main Supply Signal Is Faulty"

This event indicates that the main supply signal has been lost, but the lift has successfully completed a test call.

Other input and logic interlocks

Once the main supply signal is active again, this event will be reported clear.

Possible cause of event generation

There is a fault in the wiring to the lift. The connection may have dropped off, or may only be making an intermittent connection, or may be wired to the wrong point.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 106

Event Code : 16

Event Description "Door Locked Fault Occurred"

One or more of the gate locks failed to make during the LMDO lift test cycle.

Other input and logic interlocks

Inputs GL or CG did not indicate a locked condition during a lift test, after the doors attempted to close.

Possible cause of event generation

Faulty Lock, Door obstruction or faulty wiring.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 95

Event Code : 17

Event Description "Failed to Move"

A lift cycle has been initiated, and the gate signals (CG & GL) have been made, but neither UP nor DOWN contactor has been energised for the period of the cycle timer.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty contactor signals to the EMU.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 96

Event Code : 18

Event Description "Door Lock Fault"

The Gates have locked and a lift movement has been seen, initiating the lift monitoring. However the locks are no longer made and the LMDO cycle timer has expired.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty gate signals to the EMU.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 105

Event Code : 19

Event Description "Pre-Lock Fault Occurred Error! Bookmark not defined.**"**

Gates not locked after doors closing

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty signals to the EMU; doors failed to close.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 97

Event Code : 20

Event Description "Dest. Floor Fault Occurred (for V1.xx)"

Event Description "DOOR ZONE Fault (for V0.xx)"

A lift movement has been seen, and either the lift is not in door zone or either gate lock signal (CG or GL) is still made, at the end of the lift cycle time.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty signals to the EMU; doors failed to open; lift stopped between floors.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 98

Event Code : 21

Event Description "DOOR OPEN Fault"

After moving, the lift has started opening its doors (both CG and GL signals lost) within a door zone, but the doors have failed to open completely by the end of the lift cycle time.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty signals to the EMU; doors jammed; door motor failed.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 99

Event Code : 22

Event Description "FINAL CHECKS Fault"

After seeing a lift movement and an open door cycle, then either the lift was still seen as moving or the doors were no longer open, for the remainder of the lift cycle time.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty signals to the EMU.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 100

Event Code : 23

Event Description "LMDO Cycle Fault"

A test call has failed to complete within the expected time, and no specific fault has been detected.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Failure of the EMU monitoring logic.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 30-45

Event Code : 24

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 30-45

Event Code : 25

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 12

Event Code : 26

Event Description "Lift Not Operational"

This event is reported as a result of the failure of an active test call involving both top and bottom floor calls.

Other input and logic interlocks

This event may be generated in addition to another event which gives the reason for the test call eg. "Alarm Push", "Lost Primary Safety Circuit" etc, and another which gives the type of failure eg. "MOVEMENT Fault".

The maximum expected time for each normal lift cycle is configurable (Liftwatch / LMDO Cmpl Time; LIFTW / LCT) in seconds, in the range 1 second to 10 minutes, and defaults to 2 minutes. The maximum expected time for each alarm trapping lift cycle is also configurable (Liftwatch / Alarm LCT; LIFTW / ALCT) in seconds, in the range 1 second to 10 minutes, and defaults to 1 minute.

Once the lift has successfully completed a full LMDO cycle, then this event will be reported clear.

Possible cause of event generation

See event lines 94-99.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 30-45

Event Code : 27

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 46

Event Code : 28

Event Description "Lost Landing Push Feed"

This event is reported when the landing push feed input is lost.

Other input and logic interlocks

The input must be inactive for at least 2 seconds before being deemed lost.

The event is not generated if the landing push feed inhibit input, if configured, is active, or if there is an engineer on site, or if the main supply has been lost.

The event is reported clear once the input becomes active again.

Possible cause of event generation

This event indicates that no landing calls can be placed on the lift controller. This may be due to a blown fuse or tripped circuit breaker.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 18

Event Code : 29

Event Description "Alarm Push Pressed"

This event is reported when the alarm push input has been active for a defined period (the alarm push time).

Other input and logic interlocks

This event will not be generated if the lift is operational, and is shown as in door zone with the doors open.

The alarm trapping feature must be enabled (Features / Alarm Trapping / Enabled; FEATR / TRAP / ENA). The alarm push time (Alarm Psh Time; PSHTM) is configurable, in the range 1 second to 10 seconds, and defaults to 3 seconds.

Possible cause of event generation

This event being reported indicates that there is a possible trapping in the lift car, but does not necessarily mean that the lift is not operational with a person trapped. The EMU will initiate a test call to verify whether the lift is still operational.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 30-45

Event Code : 30

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 71

Event Code : 31

Event Description "10,000 Journeys Done"

This event is reported when the lift has been seen to have done 10,000 starts.

Other input and logic interlocks

This event has no interlocks, but classes a start as being the up or down contactors being energised for at least the movement delay time.

The movement delay time is configurable (Liftwatch / Move Dly Time; LIFTW / MDT) in seconds, in the range 1 second to 1 minute, and defaults to 3 seconds.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 72

Event Code : 32

Event Description "10,000 Door Operations"

This event is recorded when the car doors of the lift have been seen to open 10,000 times.

Other input and logic interlocks

None.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 30-45

Event Code : 33

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 30-45

Event Code : 34

Event Description "Monitored Input nn Active"

Up to 16 independent inputs can be monitored. These events are reported when the relevant input goes active.

Other input and logic interlocks

The relevant input must be allocated to a physical input point in the configuration.

The event is suppressed if there is an engineer on site, signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The event is reported clear when the relevant input goes inactive.

Possible cause of event generation

A monitored input such as pit water level high has been activated.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 14

Event Code : 35

Event Description "On Test Control "

This event is reported when the car is put on Test Control as determined by the TTR input.

Other input and logic interlocks

When Test Control is turned off, then this event will be reported clear.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 16

Event Code : 36

Event Description "On Car Preference Control"

This event is reported when the car preference keyswitch is activated, as determined by the LIN input.(Lift on INdependent service)

Other input and logic interlocks

When the independent service keyswitch is turned off, then this event will be reported clear.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 3

Event Code : 37

Event Description "Lost Main Supply"

The event is reported when the lift is observed to have lost the main controller supply.

Other input and logic interlocks

This event is not reported if the EMU supply is also lost (Power Cut).

The monitoring unit will attempt to place a test call to determine whether the supply is truly lost, or if the supply signal is faulty (see #15). The event is only reported if a test call fails or cannot be placed.

Once the main supply has been restored, this event will be reported clear.

Possible cause of event generation

This can be as a result of a circuit breaker tripping or a fuse blowing.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 102

Event Code : 38

Event Description "Monitoring Suspended"

The EMU supply voltage has dropped below 9V, the level at which the relays can reliably switch the outputs, so that correct operation of the EMU cannot be guaranteed.

Other input and logic interlocks

The event is reported clear once the EMU supply voltage rises above 11V, the restore level above which it is assumed the relays will operate reliably.

Possible cause of event generation

The EMU supply has been lost, and the backup battery has run down.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event Line : 0

Event Code : 39

Event Description "Moving Overrun"

The event is reported when the lift is seen to have been moving in the same direction without stopping for the maximum expected time.

Other input and logic interlocks

The maximum expected time is configurable (Liftwatch / Max Move Time; LIFTW / MMT) in seconds, in the range 10 seconds to 10 minutes, and defaults to 2 minutes.

Possible cause of event generation

A two-speed controller failing to initiate high speed and therefore making a full travel in slow speed exceed the time limit.

A brake failure whereby the brake does not release and the motor is still being commanded to drive.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 61-70

Event Code : 40-49 respectively

Event Description **"Miscellaneous"**
"Clean Gate Tracks"
"Gatelock Adjust"
"Door Operator Adjust"
"Floor Level Adjust"
"Controller Adjust"
"Shaft Equip. Adjust"
"Working on Arrival"
"No Fault Found"
"Maintenance Visit"

These events are reported as a result of the on-site user manually requesting they be recorded via the "Reasons for Visit" function on the front panel display.

NOTE: Specific customers may require different reasons for visits to suit their equipment, so the wording for these events may vary.

Other input and logic interlocks

None.

Possible cause of event generation

On-site user recording one or more reasons for visit.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 79

Event Code : 50

Event Description "Call Failed"

The monitoring unit has attempted to make a call to the central system, and has failed to get any event records accepted.

Other input and logic interlocks

None.

Possible cause of event generation

The central system was busy, the BT line was faulty, or the call was dropped during the initial data exchange.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 19

Event Code : 51

Event Description "Alarm Trapping On"

The EMU has seen an alarm push, and the lift is not operational or has failed the subsequent test call sequence, or the alarm button has been pressed for longer than 10 seconds.

Other input and logic interlocks

If the lift is stopped at a floor with the doors open, then the alarm push will be ignored.

If the lift is operational at the time of the alarm push, then a test call sequence is performed to determine whether this is a true trapping or not.

This event will be reported clear once a successful LMDO cycle has been performed, or if a full door open cycle is seen with the lift at a floor (in door zone).

Possible cause of event generation

The lift has malfunctioned, and a person in the lift car has pressed the alarm button.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 47-54

Event Code : 52 - 59 respectively

Event Description "Safety Chain n Input Active"

The highest safety chain input in an exception state.

Other input and logic interlocks

The safety chain input feature must have been enabled at commissioning time.

The event codes are shared with the monitored inputs, so if this feature has been configured, then the corresponding monitored inputs should not be configured (allocated to physical inputs).

The event will only be generated if the main supply is present, and the primary safety circuit has been lost.

Possible cause of event generation

This event is only generated when the primary safety circuit has been lost, and gives more information about the specific point in the safety chain that is at fault.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 29

Event Code : 60

Event Description "Engineer Safety Alert Active"

An engineer has failed to confirm his presence (by re-entering his password) within the required interval.

Other input and logic interlocks

The feature must be enabled (Features / Eng Sfty Alert / Enabled ; FEATR / ENGSF / ENA). The confirm interval can be configured (Features / Eng Sfty Alert / Confirm Time ; FEATR / ENGSF / CNFTM) in seconds, in the range 0 seconds to 6 hours, and the default time is 2 hours. The warning interval is also configurable (Features / Eng Sfty Alert / Warning Time ; FEATR / ENGSF / WRNTM) in seconds, in the range 0 seconds to 3 hours, defaulting to 15 minutes.

This event is reported clear if the user subsequently logs off, or if he confirms his presence by entering the correct password.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 9

Event Code : 61

Event Description "Spare Event 61"

A Spare event code

Other input and logic interlocks

Possible cause of event generation

Recorded	Initiates a call to the central system	Double- or single-sided event
No	NO	Double

Event **Line :** 76

Event Code : 62

Event Description "Database Reset"

The EMU's Events database has been reset. This clears the old event history and reset the record numbers back to 0.

Other input and logic interlocks

Possible cause of event generation

Enginee requiring a clean databseusing the menu options SETUP / CLEAR EVENTS.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 77

Event Code : 63

Event Description "Recording Off"

This event indicates that the monitoring unit has been commanded to stop recording lift controller faults by the user.

Other input and logic interlocks

The event is reported clear once the user commands the unit to start recording lift controller faults.

Possible cause of event generation

This may be in response to an engineer arriving on site, or the user requesting this function.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 91

Event Code : 64

Event Description "Outcalls Off"

This event is reported when the user has commanded the monitoring unit to stop outgoing telephone calls.

Other input and logic interlocks

The event is reported clear when the user has commanded the monitoring unit to allow outgoing telephone calls.

Possible cause of event generation

This is in response to the user requesting this operation.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 60

Event Code : 65

Event Description "Encoded configuration too big"

An attempt was made to write a configuration that was too big to fit in the EEPROM area.

Other input and logic interlocks

None.

Possible cause of event generation

The configuration contains a large number of long strings.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 28

Event Code : 66

Event Description "Motor Room Intruder Active"

The motor room intruder signal becomes active while there is no engineer on site, and an engineer does not logon to the unit within the logon grace period.

Other input and logic interlocks

Once the motor room intruder event has been reported, a reset timer is started, and the feature is not re-armed until the timer has expired and the signal becomes inactive.

When an engineer logs off, an exit timer is started (same as the logon grace period), and the features is not re-armed until the timer has expired, to give the engineer time to exit the motor room.

The motor room intruder signal must be allocated to a physical input, and the motor room intruder feature must be enabled (Features / Motor Rm Intrude / Enabled ; FEATR / MRINT / ENA). The reset timer can be configured (Features / Motor Rm Intrd / Reset Time ; FEATR / MRINT / RESTM) in seconds, in the range 0 seconds to 24 hours, and the default time is 2 minutes. The logon grace period (and exit time) is also configurable (Features / Motor Rm Intrd / Login Time ; FEATR / MRINT / LOGTM) in seconds, in the range 0 seconds to 30 minutes, defaulting to 3 minutes.

This event will be reported clear if a valid user logon is seen at the front panel, or once both the reset timer has expired and the intruder signal becomes inactive.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 59

Event Code : 67

Event Description "EEPROM Fail"

The monitoring unit contains an EEPROM (Electrically Erasable Programmable Read Only Memory). This component stores the configuration of the unit. If an access to the EEPROM fails, this event is generated.

Other input and logic interlocks

What was written to the EEPROM was not read back successfully, or the read or write operation timed out.

Possible cause of event generation

This may be due to a faulty component. The EEPROM has a limited lifetime in terms of number of write operations, and may therefore fail after a time.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 75

Event Code : 68

Event Description "Database Error"

The unit contains an area of battery-backed NVRAM (Non-Volatile Random Access Memory) containing, among other items, the event database. If the events database is seen to be internally inconsistent (corrupt) after a reset, then the database is cleared, and this event is stored as the only event.

Other input and logic interlocks

None.

Possible cause of event generation

This may be due to a faulty component, or to the EMU being in a mains lost condition for longer than the battery could maintain the NVRAM.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 27

Event Code : 69

Event Description "Shaft Intruder Active"

The shaft intruder signal becomes active while there is no engineer on site.

Other input and logic interlocks

Once the shaft intruder signal becomes active, a reset timer is started, and the feature is not re-armed until the timer has expired and the signal becomes inactive.

An engineer on site is signified by an engineer having logged on at the front panel, or having activated the engineer keyswitch.

The shaft intruder signal must be allocated to a physical input, and the shaft intruder feature must be enabled (Features / Shaft Intrude / Enabled ; FEATR / SHINT / ENA). The reset timer can also be configured (Features / Shaft Intrude / Reset Time ; FEATR / SHINT / RESTM) in seconds, in the range 0 seconds to 24 hours, and the default time is 2 minutes.

This event will be reported clear once both the reset timer has expired, and the intruder signal has gone inactive.

Possible cause of event generation

See description.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 20

Event Code : 70

Event Description "Time Clock Changed"

The monitoring unit contains a RTC (Real Time Clock). If a user changes the unit's time or date, then this event is generated.

Other input and logic interlocks

None.

Possible cause of event generation

The remote or on-site user has requested this function.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 73

Event Code : 71

Event Description "Modem Fail"

The modem has failed to respond correctly to the initialisation strings sent to it, or has failed to respond correctly to the regular poll.

Other input and logic interlocks

If this situation occurs, the master EMU will try to re-initialise the modem at regular intervals.

The event is reported clear once the modem has been successfully re-initialised.

Possible cause of event generation

This may be due to a faulty modem, the modem becoming loose or to the monitoring unit being configured with incorrect initialisation strings for the modem type

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 23

Event Code : 72

Event Description "EMU Supply Lost"

The monitored mains supply of 240V AC to the monitoring unit has failed, and the unit is now running on battery support.

Other input and logic interlocks

This event will be reported clear once the EMU supply is restored.

Possible cause of event generation

This may be recorded as a result of a circuit breaker tripping, or a fuse blowing, or a power cut to the installation (see #76).

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 103

Event Code : 73

Event Description "Stuck Alarm Button"

This event is generated if the alarm button is seen to be pressed for a period of 5 minutes or more.

Other input and logic interlocks

The event is reported clear when the alarm push input is no longer seen as active.

Possible cause of event generation

Broken or jammed alarm button.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 92

Event Code : 74

Event Description "Logon Abandonment"

This event informs the central system that a logon procedure to the monitoring unit was abandoned.

Other input and logic interlocks

None.

Possible cause of event generation

This may indicate that an unauthorised attempt is being made to access the monitoring unit, or just that the user has entered an incorrect password or engineer identity.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 55

Event Code : 75

Event Description "Callback Test"

This event is reported when the remote user has requested the monitoring unit to call back after releasing the telephone line. This is to ensure that the monitoring unit has been configured with the correct telephone number.

Other input and logic interlocks

None.

Possible cause of event generation

This is in response to the remote user requesting the function.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

Event **Line :** 22

Event Code : 76

Event Description "Power Cut"

The main controller supply and the monitoring unit's supply have both failed, and therefore it is assumed that the site has lost its power.

Other input and logic interlocks

MS (Main Supply) and the monitoring unit's supply are both lost. If both signals are lost within a second of each other, then this is the only event that is recorded. If the main supply is lost first, then the unit will place test calls to determine whether to report a main supply loss or signal fault. If the EMU supply is lost first, then this will be recorded before the power cut event.

This event is reported clear once one or other of the main controller supply or EMU supply has been restored.

Possible cause of event generation

This may be due to a power cut to the building. This may not be all power, but just the phase(s) used by the MS and monitoring unit supply.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 125

Event Code : 77

Event Description "Equipment Isolated"

When an engineer logs off and the Equipment's Supply is missing then it indicateds thea the Equipment has been Isolated for the Time Being

Other input and logic interlocks

MS (Main Supply) and the engineer On site Status are monitored to establish this condition. It Restores when MS returns.

This event is reported clear once one or other of the main controller supply or EMU supply has been restored.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 101

Event Code : 78

Event Description "Lock Tip"

The GL signal (Gate Lock) circuit was interrupted unexpectedly while the lift was in travel. This is seen by the up or down contactor being energised, and the GL signal being momentarily interrupted.

Other input and logic interlocks

Only reported if the doors are not being commanded to open ie. advanced door opening where the lift is in travel and the GL signal is interrupted.

Possible cause of event generation

This may be due to a damaged or badly adjusted gate lock.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 56

Event Code : 79

Event Description "Test Phone Call"

This event is recorded when the on-site user has used the front panel to request the monitoring unit to make a test telephone call. This is to ensure that the monitoring unit has been configured with the correct telephone number.

Other input and logic interlocks

None.

Possible cause of event generation

This is in response to the remote user requesting the function.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

Event **Line :** 93

Event Code : 80

Event Description "LSA Test Disabled"

This event indicates that, while LSA testing was enabled, the user has commanded the unit to disable LSA testing.

Other input and logic interlocks

This event will be reported clear when the user re-enables LSA testing.

Possible cause of event generation

The user has commanded the unit to disable LSA testing.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 80

Event Code : 81

Event Description "Update Central's Database"

The monitoring unit has made a call to the central system, but has failed to get the complete set of event records accepted due to an unrecoverable communications error.

Other input and logic interlocks

None.

Possible cause of event generation

This may be due to a faulty modem, or a bad telephone line connection.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Single

Event **Line :** 78

Event Code : 82

Event Description "EMU Database Nearly Full"

The monitoring unit's database of events is nearly full (75%). This means that the oldest unreported events in the database may start to be overwritten soon.

Other input and logic interlocks

None.

Possible cause of event generation

The EMU has been unable to make or complete a call to the central system to upload its stored events, or the database contains only events that do not initiate a call.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

Event **Line :** 1

Event Code : 83

Event Description "Database Overrun"

This signifies that the oldest records contained in the 800-event database are now being overwritten.

Other input and logic interlocks

None.

Possible cause of event generation

The EMU has been unable to establish a connection to the central system to upload its events.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

Event **Line :** 81

Event Code : 84

Event Description "Site Access Commencing"

When site personnel arrive on site and login via the keypad, this is recorded in the database as being a site access.

Other input and logic interlocks

The event is reported clear when the user logs off.

Possible cause of event generation

The user entering the correct code for the selected engineer identity.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 17

Event Code : 85

Event Description "On Night Service"

This event is reported when the timed night service (inhibit idle tests) starts and ends.

As of V1.04 this event is defaulted off as it tends to fill the events database if no faults are occurring.

Other input and logic interlocks

The LSA testing feature must be enabled (Features / Lift Test / Enabled; FEATR / LSA / ENA). The start (Start Time; START) and end times (End Time; END) are configurable, and default to 1800 and 0900 respectively. The maximum number of consecutive idle test calls (Max Test Calls) in the range 0 to 10, default 4, and the interval between tests (Idle Time ; IDLE) in seconds, in the range 0 seconds to 18 hours, default 10 minutes, are also configurable.

This event will be reported clear when night service ends.

Possible cause of event generation

This event is generated at the start and end times of the LSA test feature.

Recorded	Initiates a call to the central system	Double- or single-sided event
NO	NO	Double

Event **Line :** 82-90

Event Code : 86-94 respectively

Event Description **"TVC Engineer Login"**
"Central System Login"
"User Ident 'C'"
"User Ident 'D'"
"User Ident 'E'"
"Repair Engineer Arrival"
"Callout Engineer Arrival"
"Maintenance Engineer Arrival"
"Inspection Engineer Arrival"

When personnel arrive on site, they select an engineer identity, and enter the password (verification code). If the code is recognised as valid for that identity, then the user is allowed access to the unit via the front panel, and this is recorded in the database along with a "Site Access" event.

Other input and logic interlocks

The level of access allowed the user is determined by the capabilities assigned to the selected engineer identity.

A user identity can be configured as a "site engineer", implying that they may be working on the lift for maintenance or other reasons. When such a user logs on, the unit will disable the recording of lift controller events, and will refrain from placing test car calls on the lift.

Possible cause of event generation

The user entering a valid verification code for a selected engineer identity.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 57

Event Code : 95

Event Description "AUTO CALL"

This is a telephone line integrity test, and is sent at regular intervals if no other calls are made. This assists in keeping track of whether or not the unit is operational. Basically, if the central system does not receive a call from the unit for longer than the reporting interval, then there may be a problem.

Other input and logic interlocks

Only sent if no other telephone call has been made from the unit. The reporting interval is configurable (Reporting / Call Interval; REP / CALLI) in hours, in the range 1 to 2160 hours (90 days), defaulting to 168 hours (1 week).

Possible cause of event generation

This may be due to a modem fault, or to the telephone line being faulty.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

Event **Line :** 104

Event Code : 96

Event Description "Engineer Key Login"

The engineer login keyswitch has been activated.

Other input and logic interlocks

The event is reported clear when the keyswitch has been turned off.

Possible cause of event generation

An engineer has turned the keyswitch on arrival at the site.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 6

Event Code : 97

Event Description "Primary Safety Circuit Is Faulty"

This event indicates that the primary safety signal has been lost, but the lift has successfully completed a test call.

Other input and logic interlocks

Once the primary safety circuit signal is active again, then this event will be reported clear.

Possible cause of event generation

There is a fault in the wiring to the lift. The connection may have dropped off, or may only be making an intermittent connection, or may be wired to the wrong point.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Double

Event **Line :** 94

Event Code : 98

Event Description "Door Close Fault Occurred"

A lift cycle has been initiated, but the gate signals (CG & GL) have not been made for the period of the cycle timer.

Other input and logic interlocks

The event is cleared when a successful lift cycle has been performed.

Possible cause of event generation

Faulty demand signal to the controller; doors wedged or jammed open; faulty gate signals to the EMU.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	NO	Double

Event **Line :** 58

Event Code : 99

Event Description "Call Limit Reached"

The EMU has reached the daily limit for making calls to the central system.

Other input and logic interlocks

The number of calls allowed is configurable (Reporting / Max Rprt Calls; REP / MRPTC) in the range 0 to 50, defaulting to 12.

This event is sent with the other events for the last allowed call in the day, and indicates that no further calls will be made that day.

Possible cause of event generation

One or more events that initiate a call to the central system are being generated at a high rate.

Recorded	Initiates a call to the central system	Double- or single-sided event
YES	YES	Single

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