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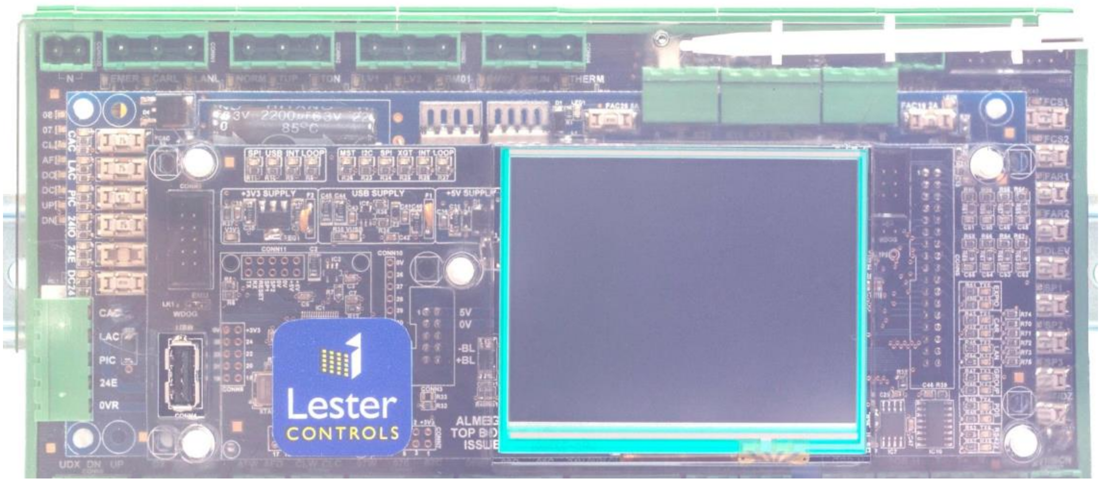

TECHNICAL MANUAL
FOR THE ALMEGA II
MICROPROCESSOR SYSTEM
"UNCONTROLLED MOVEMENT DETECTION SUPPLEMENT"

ISSUE: 1

Date: 27/08/2021

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1. Uncontrolled Movement General

Unintended Car movement was introduced into the EN81 standards in 2009 (EN81-1-1998+A3) and became mandatory from 1st January 2012.

Lester Control systems are able to offer solutions for **Brake Monitoring, Overspeed Governor Solenoid Monitoring**, and selected **Hydraulic Valve Monitoring** which are approved by a notified body. Such solutions can be retrofitted to Almega and Almega II controllers but only by LCSL personnel. For a **3rd party device** a fault detection input is provided for error detection/ fault reporting. Approvals (from a notified body) are the responsibility of the 3rd party supplier.

The main principle for all devices in conjunction with the control system is to:

a) Detect unintended car movement.
b) Prevent further movement.
c) Latch the fault (even in the event of power failure) until a manual reset is carried out.

9.11.1 Lifts shall be provided with a means to stop unintended car movement away from the landing with the **landing door not in the locked position** and the **car door not in the closed position**, as a result of failure in any single component of the **lift machine** or **drive control system** upon which the safe movement of the car depends, except failure of the suspension ropes or chains and the traction sheave or drum or sprockets of the machine.

The maximum distances for each direction are shown below:

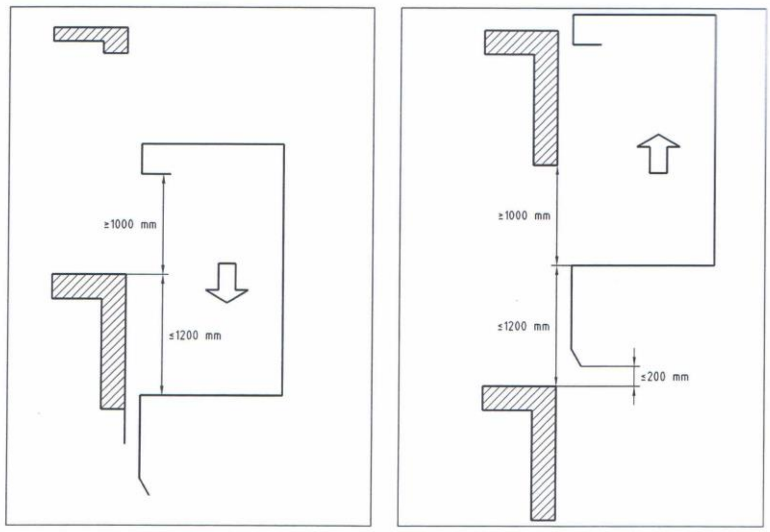


Figure 4 — Unintended car movement

9.11.5 The means shall stop the car in a distance:

--- not exceeding 1,20 m from the landing where the unintended movement has been detected.

--- the vertical distance between the landing sill and the lowest part of the car apron shall not exceed 200 mm, and

--- the free distance from car sill to landing door lintel, or from landing sill to car door lintel shall not be less than 1,00 m (see Figure 4).

These values shall be obtained with any load in the car, up to 100% of rated load.

2. Brake Monitoring

PARAMETER SETUP

TRAVEL CONTROLS

UMD BRAKE MONITORING	= YES
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

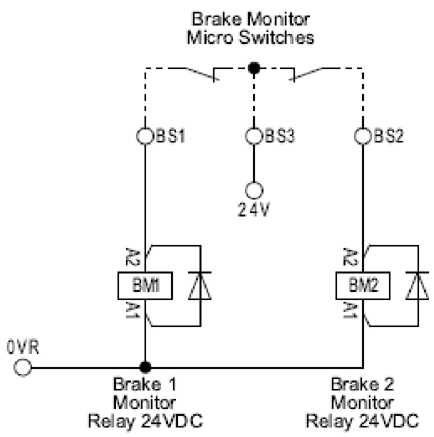


Fig 2.1 (Brake Switches)

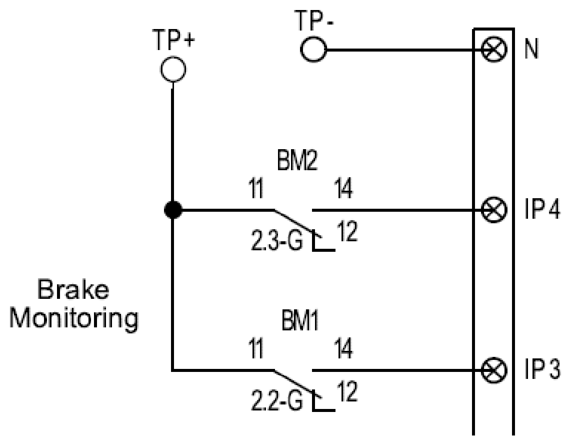


Fig 2.2 (Monitoring Contacts)

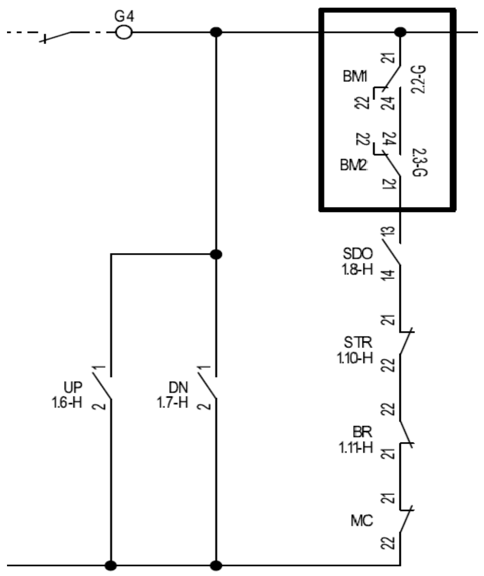


Fig 2.3 (Starting / Proving Circuit)

BRAKE & SWITCH TYPE

The motor / gear must have at least 2 brakes, and each brake shall have a normally closed electrical contact (as in Fig 2.1) which breaks when the brake energises, and the contacts re-make when the brake de-energises.

OPERATION

With the lift car stationary, all primary safety circuits made, and both brakes de energised, the normally closed brake switches will feed two 24VDC relays BM1 and BM2 which in turn provide two inputs to the microprocessor (as in Fig 2.2). The corresponding LED's will illuminate to indicate the status of the switches and both LED's must be on when the lift is stationary. On the start of travel power is applied to the brake solenoids simultaneously and if both brakes operate successfully both brake switches will break and both inputs BM1 and BM2 to the microprocessor will be off. If one or both inputs BM1 and BM2 fail to go off then a brake fault is deemed to have occurred and the microprocessor will log a "UMD FAULT". In order to prevent nuisance tripping this start fault can occur up to a maximum of 4 consecutive attempts before the microprocessor will stop any further lift operations, park with doors open, and require a competent person to reset the fault using the microprocessor menu.

If the brake switch inputs BM1 or BM2 fail to turn on after the lift has stopped (time delay to see inputs at stop programmable) then a "UMD FAULT" will be logged and no further operations are allowed. In addition to the microprocessor monitoring of the inputs, two relays BM1 and BM2 are included in the electrical starting circuit (as in Fig 2.3) to prevent the next start of the lift if the brake switches fail to make when the lift has stopped with power disconnected from the brake solenoid.

TESTING

Remove each of the wires BS1 and BS2 from the terminal rail, one at a time, and try and run the lift. For each operation the lift will not run and "UMD FAULT" will be recorded in the event logger. Resetting of the UMD fault is described in the section Uncontrolled Movement (UMD) Fault Codes and Fault Reset.

3. Overspeed Governor Solenoid Monitoring

3.1. Overspeed Governor Solenoid Monitoring without ADO (Advance Door Opening)

PARAMETER SETUP

TRAVEL CONTROLS

UMD OSG SOL MONITORING	= YES
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

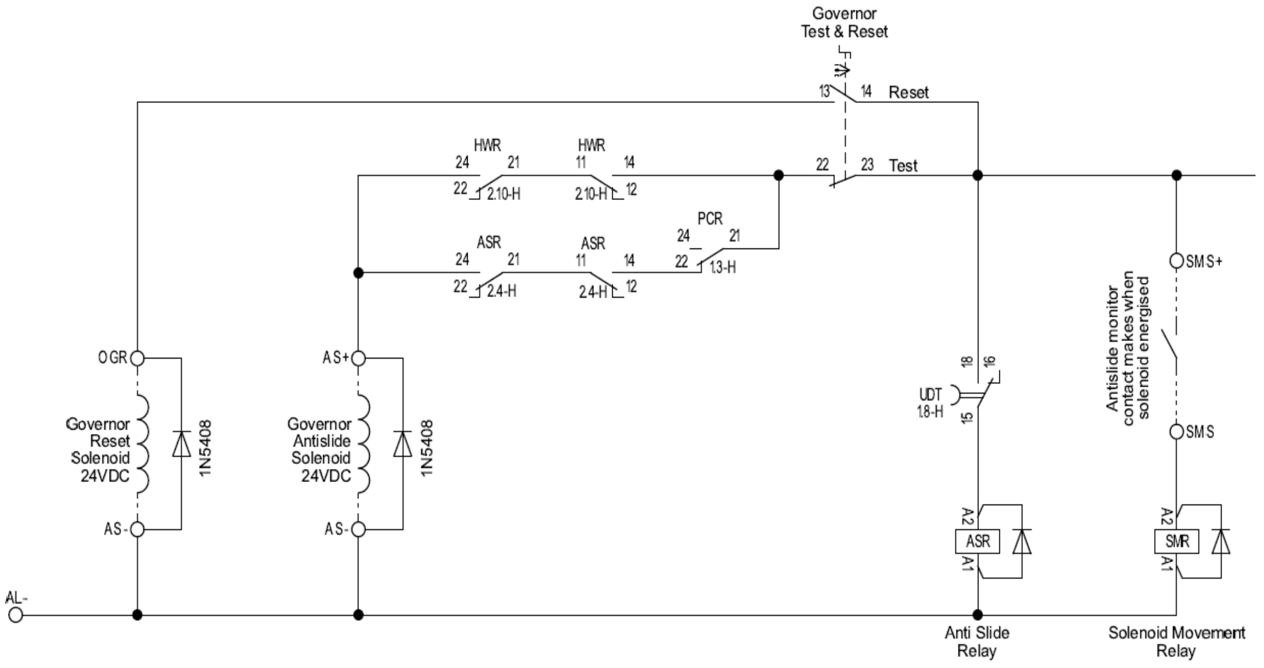


Fig 3.1.1 (Anti-Slide and Solenoid Movement Relays)

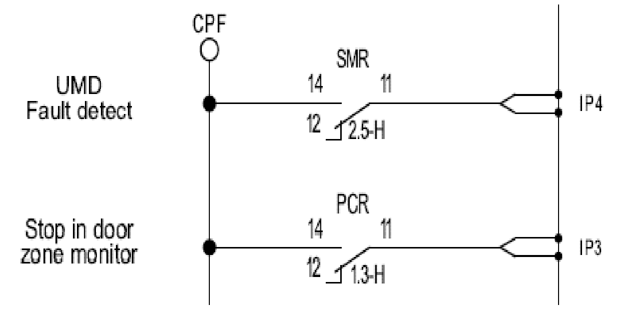


Fig 3.1.2 (Monitoring Contacts)

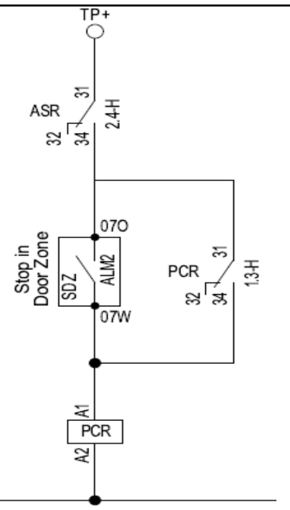


Fig 3.1.3 (Delay at stop cancel circuit)

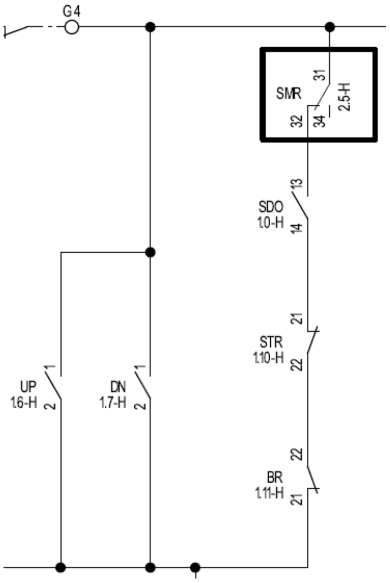


Fig 3.1.4 (Starting / Proving Circuit)

3.2. Overspeed Governor Solenoid Monitoring with ADO (Advance Door Opening)

PARAMETER SETUP

TRAVEL CONTROLS

UMD OSG SOL MONITORING	= YES
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

DOOR SETUP

ADVANCE DOOR OPEN	= YES

ELECTRICAL DRAWING INFO

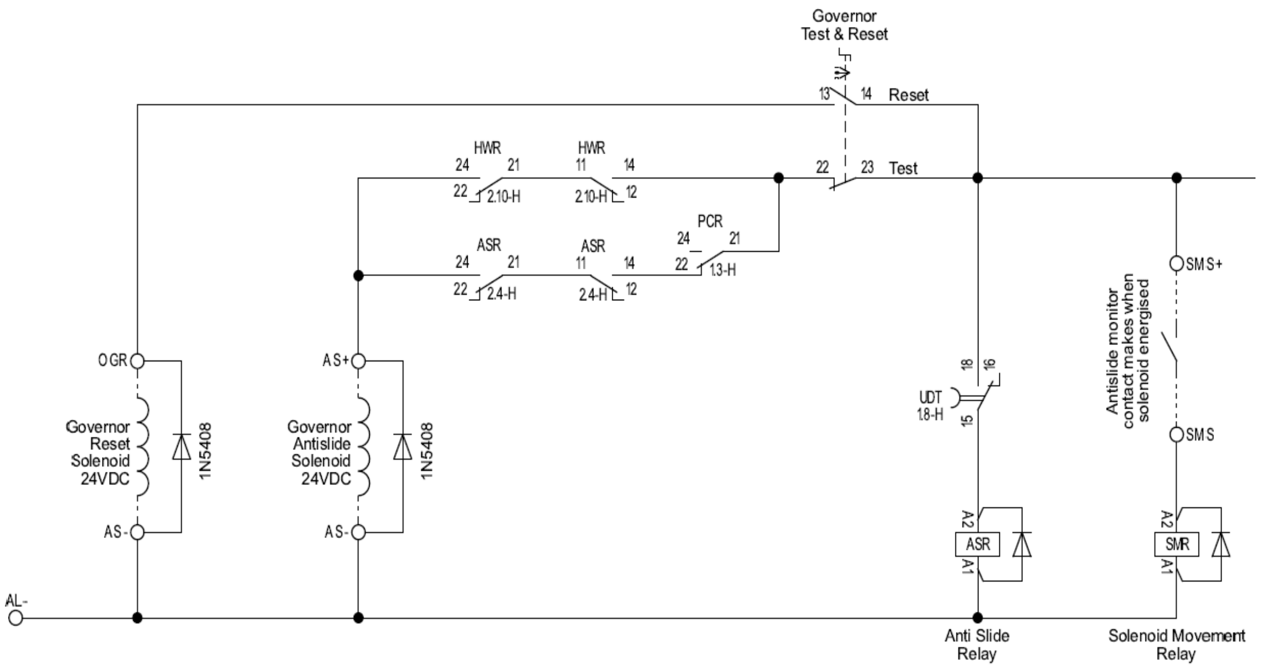


Fig 3.2.1 (Anti-Slide and Solenoid Movement Relays)

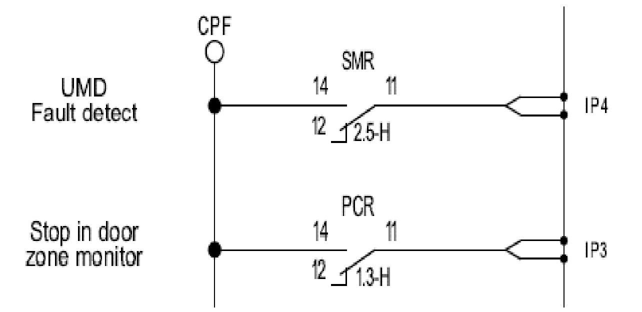


Fig 3.2.2 (Monitoring Contacts)

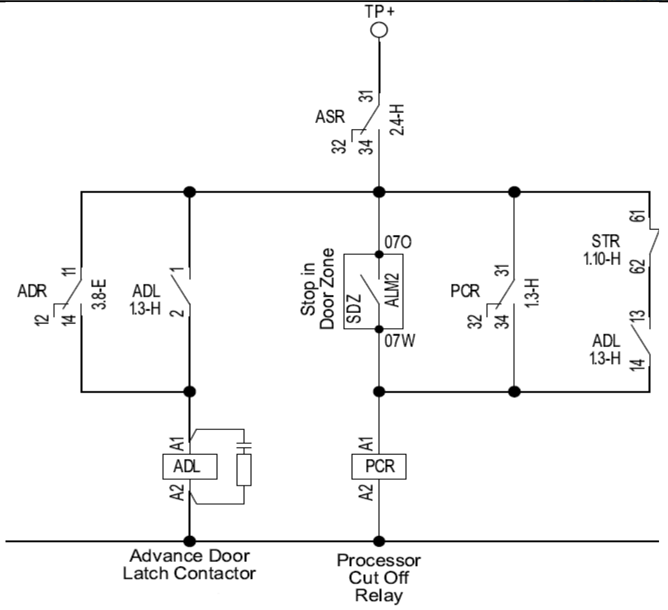


Fig 3.2.3 (Delay at stop cancel circuit)

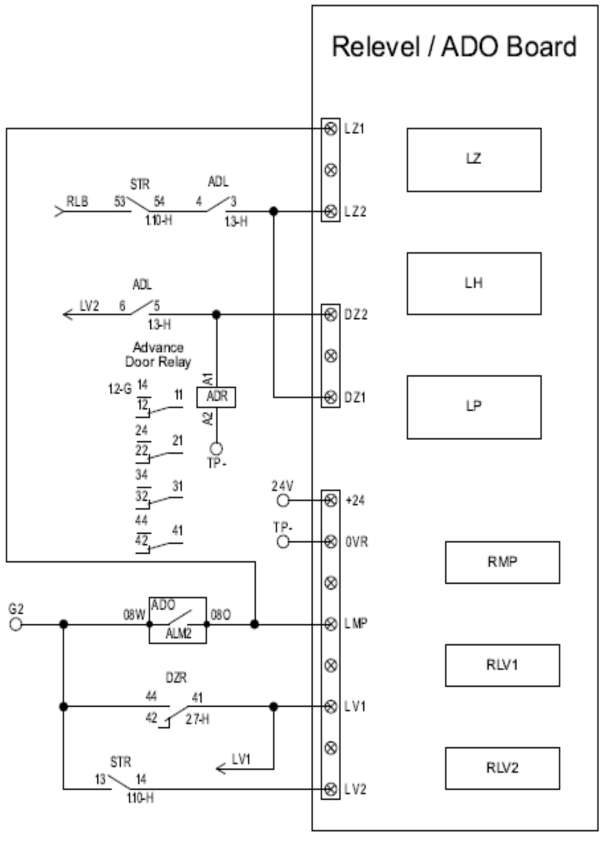


Fig 3.2.4 (Advance Door Opening Circuit)

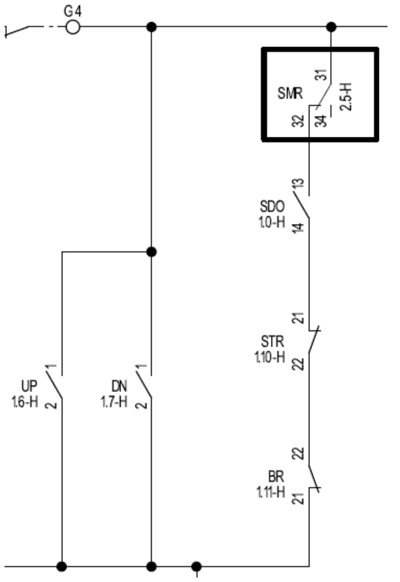


Fig 3.2.5 (Starting / Proving Circuit)

ANTISLIDE OVER-SPEED GOVERNOR TYPE

The over-speed governor can be any type which incorporates an electro-magnetic solenoid which is coupled to a mechanical pin which rests on the safety gear operating rope. The electro-magnetic solenoids' function is to activate the pin clear of the safety gear rope during normal lift movement. If the pin is left in the resting position and lift movement occurs, the safety gear will engage and prevent further movement. For monitoring purposes, the solenoid must have a contact which makes when the solenoid is in the lifted or energised position.

OPERATION

With the lift car stationary, the governor solenoid will be de-energised and in position to engage the lift safety gear. On the start of travel, power is applied to the anti-slide governor solenoid which in turn activates the mechanical pin clear of the safety gear operating rope. The associated solenoid normally open contact will make contact and thus lift movement can occur.

During normal high speed movement, the anti-slide solenoid is time delayed (true off delay timer UDT) in order to overcome any emergency stop operation or loss of mains power supply from de-energising the anti-slide solenoid and engaging the lift safety gear. The time delay is removed when the lift is in the target door zone to reduce the amount of lift movement should uncontrolled movement occur.

In order to identify the target door zone an output SDZ (stop in door zone) is asserted from the microprocessor (as in Fig 3.2.3). This output will energise when the lift has stopped correctly at the target floor and will turn power off to the anti-slide solenoid instantaneously using relay PCR. Relay PCR status is monitored using a microprocessor input to ensure that the relay is operating correctly (as in Fig 3.2.2). The normally open monitoring contact of the anti-slide solenoid will also be monitored by the microprocessor via the relay SMR (as in Fig 3.2.2). In addition to the microprocessor monitoring of the inputs, a contact of relay SMR is included in the electrical starting circuit (as in Fig 3.2.5) to prevent the next start of the lift if the OSG solenoid contact switch fails to release when the lift has stopped with power disconnected from the OSG solenoid.

In order to prevent nuisance tripping when starting a lift journey, a maximum of 4 consecutive attempts (programmable / default = 3) are made before the microprocessor will stop operating and will display / record "UMD FAULT". Also, the monitoring of the SMR input checks for energisation when the lift is running and de-energisation when the lift is stationary (as in Fig 3.2.2). If these conditions are not correct the microprocessor will cease to allow normal lift operation and will display / record "UMD FAULT". When a UMD fault occurs, the lift is out of service and will need resetting by a competent person. In addition, the operating status of relay SMR is monitored using a normally closed contact in the electrical safety starting circuit. Thus, a failure of this relay to de-energise when the lift has stopped will prevent any further operations.

TESTING

In order to test the system for correct operation, disconnect the normally open anti-slide monitoring contact (connected to SMR) from the controller simulating that the anti-slide solenoid has failed to move to the released position. After the pre-set number of start attempts the lift will stop operating due to a "UMD FAULT".

ADVANCE DOOR OPENING (ADO) CIRCUIT SEQUENCE CHECKING (see Fig 3.2.3)

1) The lift slows into floor level.
2) DZ (door zone) vane is detected hence the doors start to advance open
3) In the instance the lift doesn't stop at floor level for any reason, the microprocessor MAY NOT energise the stop in door zone output and hence PCR.
4) The lift will then travel with the doors open until it comes off the DZ.
5) The ADO lock bridge is then released.
6) Relay STR de-energizes but relay ADL will stay energised.
7) PCR will remain energized through a normally closed contact of STR and a normally open contact of ADL.
8) Relay PCR ensures the OSG solenoid delay is cancelled (i.e. UDT / ASR is inhibited).
9) The lift stops without any delay or "roll on" since the OSG solenoid releases.

4. Hydraulic Valve Monitoring
4.1. Bucher iValve

PARAMETER SETUP

TRAVEL CONTROLS	
UMD HYD VALVE MON	= BUCHER I-VALVE
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING
TRAVEL TIMES	
START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

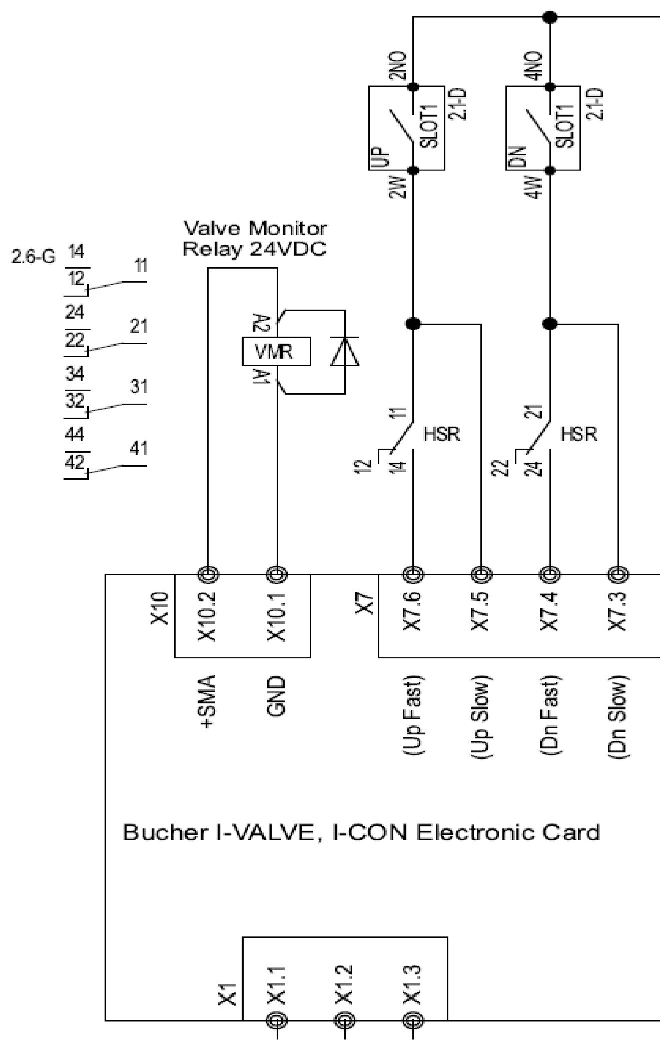


Fig 4.1.1 (Bucher iValve Valve Monitor)

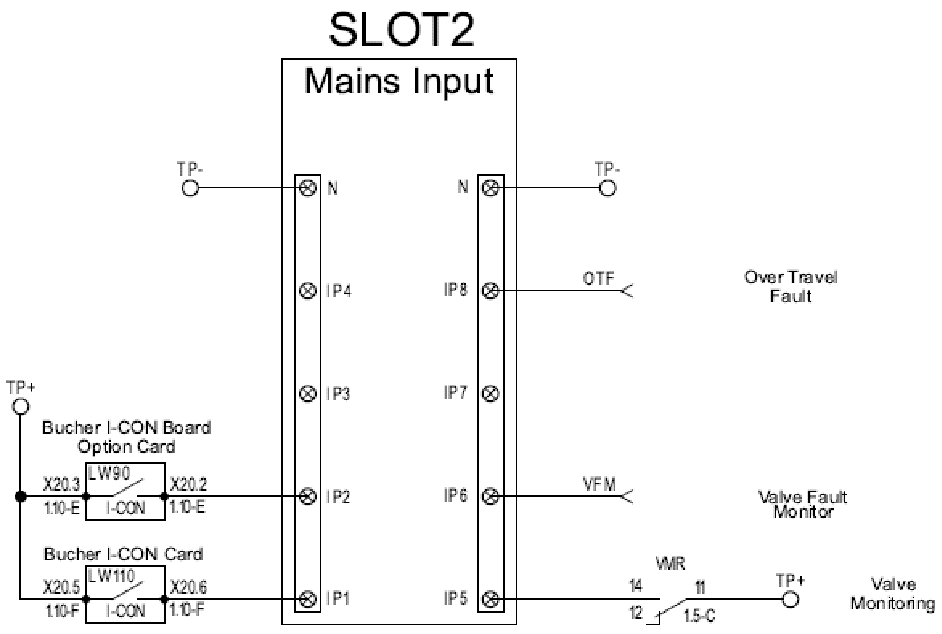


Fig 4.1.2 (VMR Monitoring Contact)

OPERATION

The output from the Bucher ivalve (+SMA) energises after stop, anytime between 0.1 and 1s, for a max period of 6s.

← 0.1 to 1s →| ← 6s max → |

The output is energised to signify the valve is working ok.

Check after each Journey:

- The microprocessor reads the pulse (+SMA) after each journey via relay VMR (as in Fig 4.1.2)
    - If the signal is not present the processor timer will timeout after the “UMD Stop fail time” (typically set at 4S).
    - A UMD fault is initiated, and further movement of the lift is inhibited.

Check before each Journey:

- The microprocessor reads the pulse (+SMA) before each journey via relay VMR (as in Fig 4.1.2)
    - If the signal is not released the processor will not start, but will try for several attempts according to the parameter “UMD_start_fail_count” (typically set at 4 attempts).
    - A UMD fault is initiated, and further movement of the lift is inhibited.

Note: If a new travel command is detected by the Bucher ivalve, it will release the +SMA output if not already released. Therefore, the Lift controller doesn’t have to wait 6s before its next travel command.

TESTING

In order to test the system for correct operation at the **end** of a journey, disconnect the normally open VMR monitoring contact (connected to the microprocessor input) simulating that the Bucher iValve hasn’t indicated correct valve operation. After the pre-set period “UMD Stop fail time” (typically set at 4S) the lift will stop operating due to a “UMD FAULT”.

In order to test the system for correct operation at the **start** of a journey, temporarily bridge the normally open VMR monitoring contact (connected to the microprocessor input) simulating that the Bucher iValve hasn’t released correct valve operation. After the pre-set number of attempts “UMD_start_fail_count” (typically set at 4) the lift will stop operating due to a “UMD FAULT”.

4.2.Algi Dual Valve

PARAMETER SETUP

TRAVEL CONTROLS

UMD HYD VALVE MON	= ALGI DUAL VALVE
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

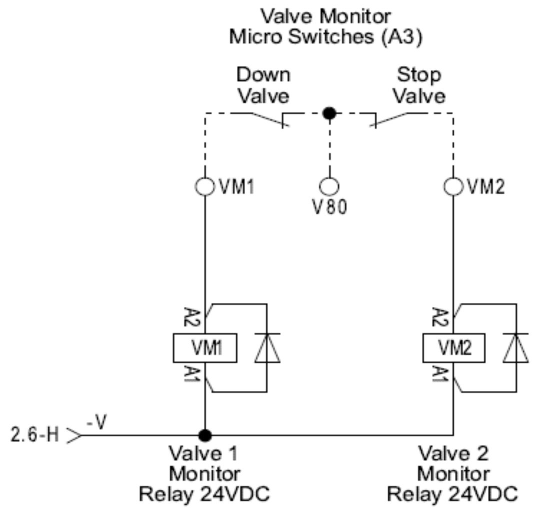


Fig 4.2.1 (Valve Monitor Switches)

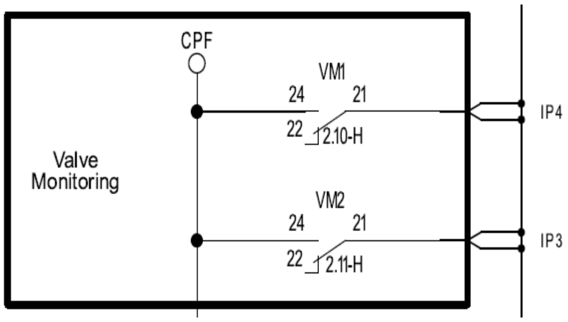


Fig 4.2.2 (Monitoring Contacts)

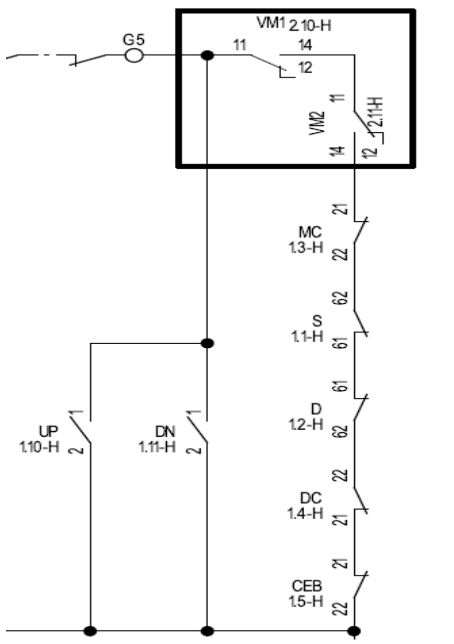


Fig 4.2.3 (Starting / Proving Circuit)

VALVE & SWITCH TYPE

The hydraulic unit must have at least 2 valves, and each valve shall have a normally closed electrical contact (as in Fig 4.2.1) which breaks when the valve energises, and the contacts re-make when the valve de-energises. The valves operate in the **downwards direction only**, thus valve monitoring is only considered in the **down direction**.

OPERATION

With the lift car stationary, all primary safety circuits made, and both valves de energised, the normally closed valve switches will feed two 24VDC relays VM1 and VM2 which in turn provide two inputs to the microprocessor (as in Fig 4.2.2). The corresponding LED’s will illuminate to indicate the status of the switches and both LED’s must be on when the lift is stationary. On the start of travel power is applied to the valve solenoids simultaneously and if both solenoids operate successfully both valve switches will break and both inputs VM1 and VM2 to the microprocessor will be off. If one or both inputs VM1 and VM2 fail to go off then a brake fault is deemed to have occurred and the microprocessor will log a “UMD FAULT”. In order to prevent nuisance tripping this start fault can occur up to a maximum of 4 consecutive attempts before the microprocessor will stop any further lift operations, park with doors open, and require a competent person to reset the fault using the microprocessor menu.

If the brake switch inputs VM1 or VM2 fail to turn on after the lift has stopped (time delay to see inputs at stop programmable) then a “UMD FAULT” will be logged and no further operations are allowed. In addition to the microprocessor monitoring of the inputs, two relays VM1 and VM2 are included in the electrical starting circuit (as in Fig 4.2.3) to prevent the next start of the lift if the valve switches fail to make when the lift has stopped with power disconnected from the valve solenoid.

TESTING

Remove each of the wires VM1 and VM2 from the terminal rail, one at a time, and try and run the lift. For each operation the lift will not run and "UMD FAULT" will be recorded in the event logger. Resetting of the UMD fault is described in the section Uncontrolled Movement (UMD) Fault Codes and Fault Reset.

4.3.GMV NGV

PARAMETER SETUP

TRAVEL CONTROLS

UMD HYD VALVE MON	= GMV NGV
UMD START FAIL COUNT	= 3
UMD DETECTION	= YES (see section 7, Out of level Detection)
UMD MOTION FAIL CONTROL	= WARNING

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

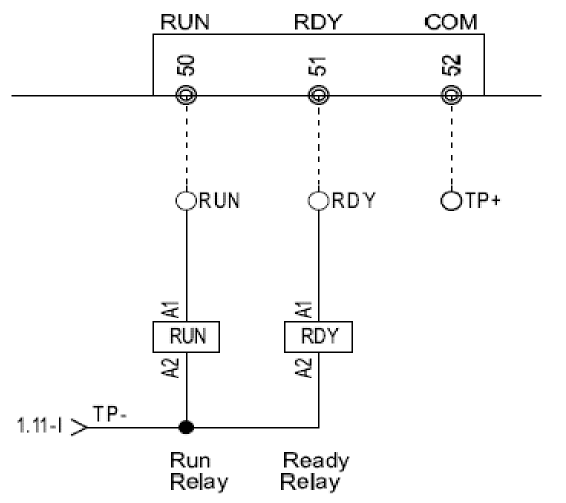


Fig 4.3.1 (Valve Monitor Signals)

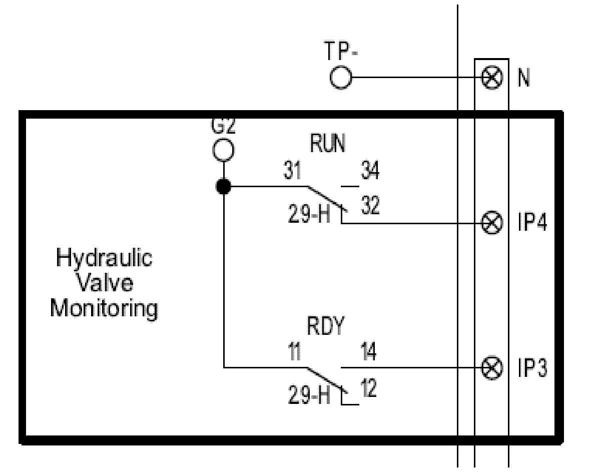


Fig 4.3.2 (Monitoring Contacts)

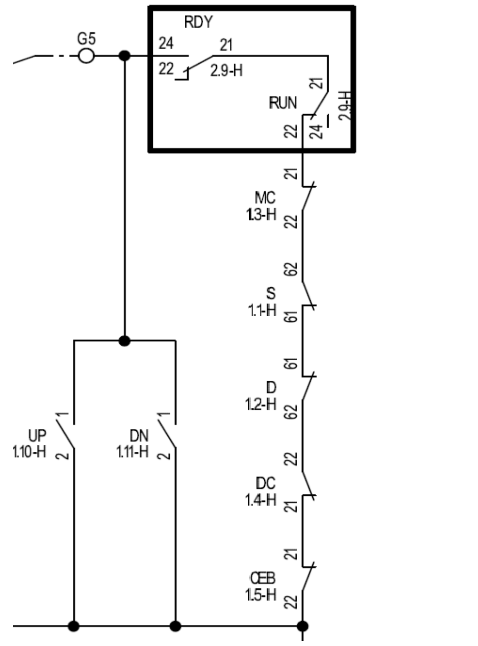


Fig 4.3.3 (Starting / Proving Circuit)

VALVE SIGNAL TYPE

The hydraulic unit has 2 signals RUN and READY which are connected to 2 relays RUN and READY. These two signals ensure the Hydraulic unit operates correctly in controlling the hydraulic safety valves.

OPERATION

With the lift car stationary, all primary safety circuits made, the RUN relay will be de-energised, and the READY relay will be energised. These relays provide two inputs to the microprocessor (as in Fig 4.3.2). The READY relay contact is normally closed, and the RUN relay contact is normally open. The corresponding LED's will illuminate to indicate the status of the signals and both LED's must be on when the lift is stationary. On the start of travel power is applied to the hydraulic interface and if the valve solenoids operate successfully both relays (RUN / READY) will change state, and therefore both inputs RUN and READY to the microprocessor will be off. If one or both inputs fail to go off, then a valve fault is deemed to have occurred and the microprocessor will log a "UMD FAULT". In order to prevent nuisance tripping this start fault can occur up to a maximum of 4 consecutive attempts before the microprocessor will stop any further lift operations, park with doors open, and require a competent person to reset the fault using the microprocessor menu.

If both the valve monitoring inputs RUN or READY fail to turn on after the lift has stopped (time delay to see inputs at stop programmable) then a "UMD FAULT" will be logged and no further operations are allowed. In addition to the microprocessor monitoring of the inputs, two contacts of relays RUN and READY are included in the electrical starting circuit (as in Fig 4.3.3) to prevent the next start of the lift, if the signals are in the incorrect state.

TESTING

Remove each of the wires RUN and READY from the terminal rail, one at a time, and try and run the lift. For each operation the lift will not run and "UMD FAULT" will be recorded in the event logger. Resetting of the UMD fault is described in the section Uncontrolled Movement (UMD) Fault Codes and Fault Reset.

5. HYDRAULIC SAFETY VALVES
5.1.Blain L10, EV100, GMV_DSO, ALGI_L10

PARAMETER SETUP

TRAVEL CONTROLS

UMD HYD VALVE MON	= NOT ENABLED,
UMD DETECTION	= YES (see section 7, Out of level Detection)

TRAVEL TIMES

START FAIL TIME	= 4 Seconds
UMD STOP FAIL TIME	= 4 Seconds
UMD DETECTION TIME	= 100 Milliseconds

ELECTRICAL DRAWING INFO

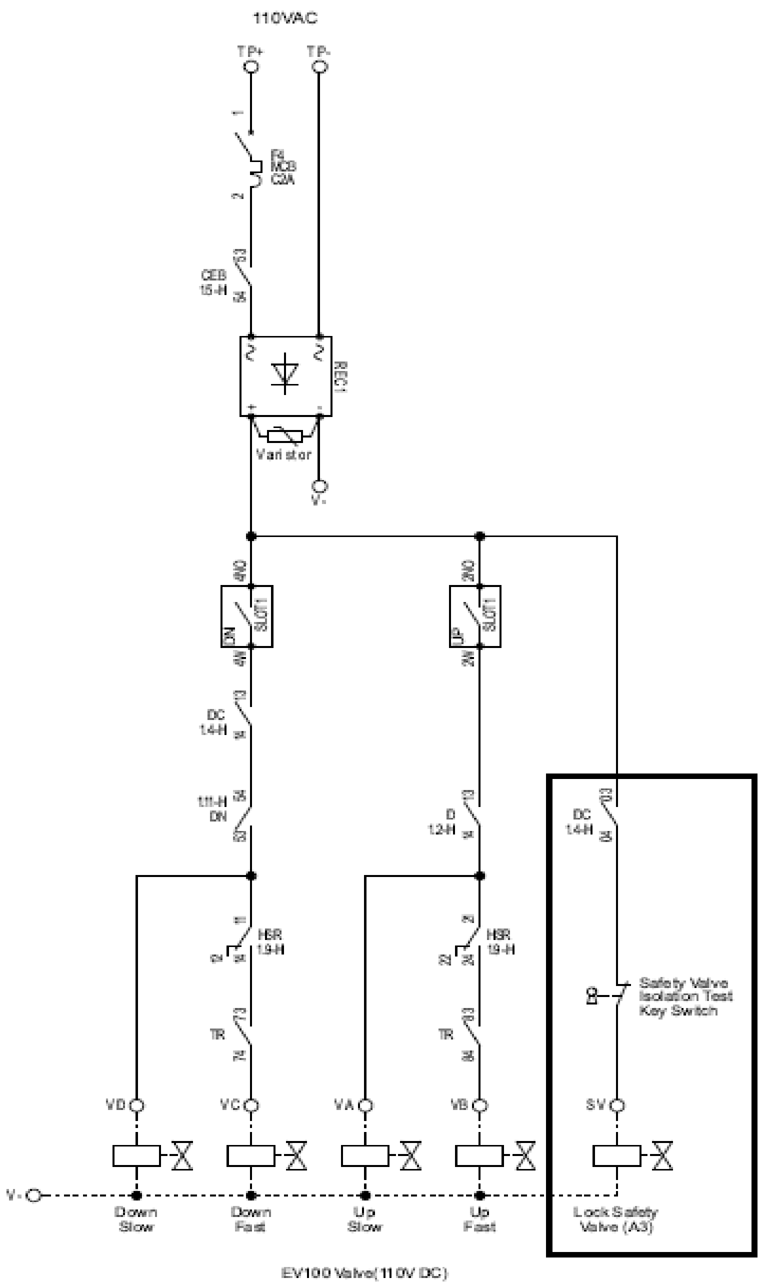


Fig 5.1.1 (Blain L10, EV100, GMV_DSO, ALGI_L10)

5.2.Bucher ELRV DSV A3

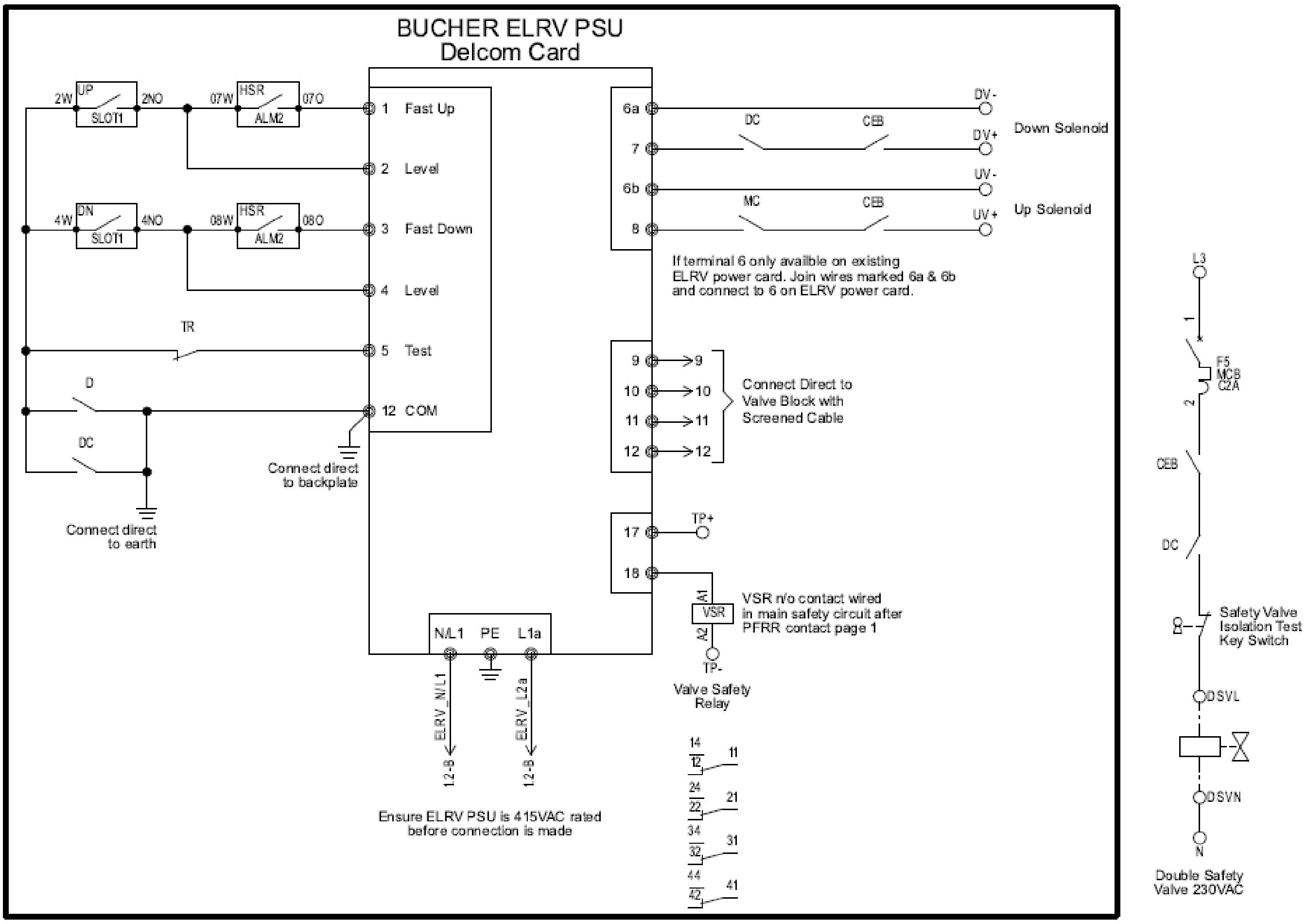


Fig 5.1.2 (Bucher ELRV DSV A3)

<u>HYDRAULIC SAFETY VALVE TYPE</u>

A **secondary down valve** is provided by the hydraulic manufacturer which should be switched independently of the **primary down valve** to allow down movement of the lift. System safety is achieved through redundancy of operating two separate down valves.

<u>OPERATION</u>

The microprocessor does not monitor the hydraulic system valves, instead switching of the valves is achieved through relays and contactors with electrical circuit switching redundancy.

<u>TESTING</u>

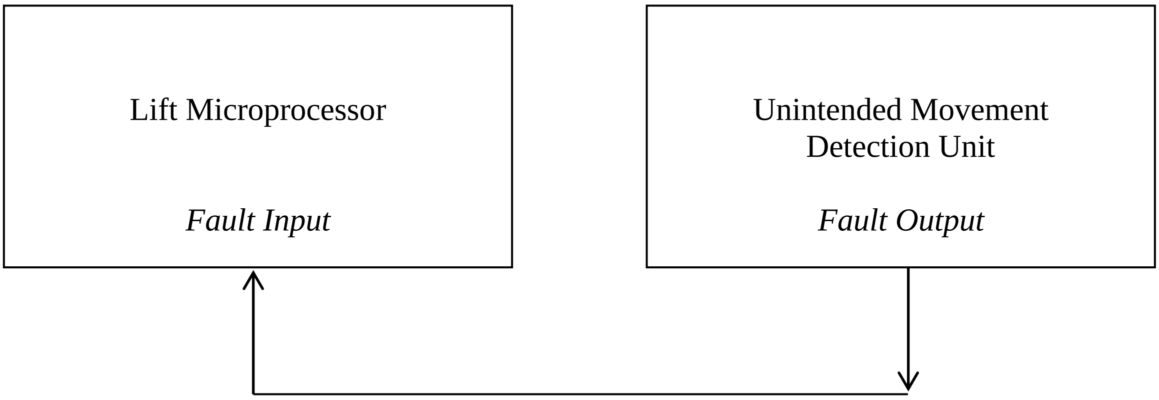
Attempt a downwards run of the lift by energising only one down valve at a time.
The lift should only move if both “down” valves are energised.

6. Fault Input Monitoring (3rd party device)

PARAMETER SETUP

TRAVEL CONTROLS
UMD FAULT INPUT MONITORING = YES
UMD DETECTION = YES (see section 7, Out of level Detection)

TRAVEL TIMES
START FAIL TIME = 4 Seconds
UMD STOP FAIL TIME = 4 Seconds
UMD DETECTION TIME = 100 Milliseconds



UMD DETECTION

A 3rd party safety device is implemented to detect unintended movement and prevent the lift from further movement. This may be a device directly acting upon the lift car (e.g., safety gear, or the lift ropes).

OPERATION

The operation of the device is specific to the type fitted, however; the lift microprocessor has the facility for a UMD fault input. When the UMD fault input is asserted a “UMD FAULT” will be logged / displayed and no further operations are allowed.

TESTING

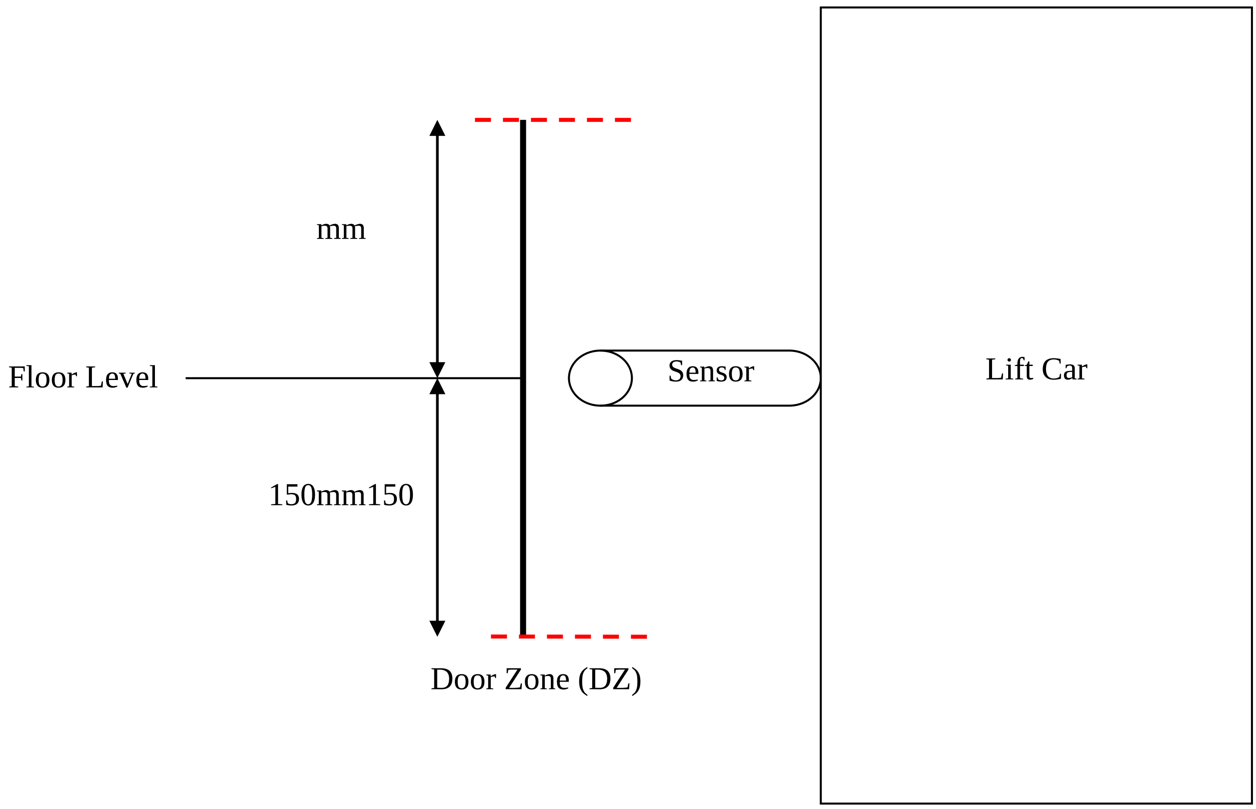
Testing of the 3rd party safety device is specific to the manufacturer’s instructions.
Testing of the lift microprocessor’s detection is achieved by asserting the UMD fault input.

7. UMD DETECTION

PARAMETER SETUP

TRAVEL CONTROLS
UMD DETECTION = YES

TRAVEL TIMES
UMD DETECTION TIME = 100 Milliseconds



UMD DETECTION

A Door Zone sensor is fitted to the lift to detect it is within floor level. This sensor is also used to provide a method of uncontrolled movement detection via the microprocessor. This is not a safety device, but only a monitoring feature.

OPERATION

With the lift stationary at floor level the microprocessor monitors the Door Zone Signal (DZ) via the dedicated input ST/DZ. If the signal DZ is removed with no command to move UP or DOWN, the microprocessor assumes uncontrolled movement has occurred, a "UMD FAULT" will be logged, and no further operations are allowed. The UMD Detection time provides a time delay to prevent false triggering / nuisance tripping if the DZ signal is removed and re-applied (debounce).

TESTING

Move the lift car out of the door zone when stationary to trigger a UMD fault.
Alternatively remove the DZ signal.

8. ALMEGA II UMD Parameter Configuration

TRAVEL CONTROLS

	Units	Min	Max	Default
UMD BRAKE MONITORING	YES/NO	NO	YES	NO
UMD OSG SOL MONITORING	YES/NO	NO	YES	NO
UMD FAULT IP MONITOR	YES/NO	NO	YES	NO
UMD MONITORING FAIL	**YES/NO**	**NO**	**YES**	**NO**
UMD START FAIL COUNT	1-4	1	4	3

UMD HYD VALVE MON	SPEC=
	{
	NOT ENABLED,
	ALGI DUAL VALVE,
	BUCHER I-VALVE,
	GMV NGV
	}			

UMD DETECTION	YES/NO	NO	YES	NO

UMD MOTION FAIL CONTROL	SPEC=
	{
	NONE,
	WARNING,
	FAULT
	}			

TRAVEL TIMES

	Units	Min	Max	Default
START FAIL TIME	Seconds	0	10	4
UMD STOP FAIL TIME	Seconds	0	10	4
UMD DETECTION TIME	Milliseconds	0	3000	100

9. Uncontrolled Movement (UMD) Fault Codes and Fault Reset

To Reset a UMD Fault:

1. Press MAIN MENU, then Press ENGINEER'S SELECTION.
2. Move Down to **UMD MONITORING FAIL**, Press SELECT.
3. Press the NO button (square) and press OK.

The EVENT "UMD MONITORING ERCODE" will be generated in the event logger when a UMD fault occurs. This event has a Sub Event Code associated with it which is the cause of the UMD fault. The sub event code can be viewed by locating the event in the Event History and pressing it to see the detailed information. The codes are as below.

Brake Monitoring / Algi Dual Valve Monitoring:	
UMD_BRAKE_MON_INPUTS_NOT_CONFIGURED	= 1
UMD_BRAKE_MON_INPUT_1_START_FAILURE	= 2
UMD_BRAKE_MON_INPUT_2_START_FAILURE	= 3
UMD_BRAKE_MON_INPUTS_BOTH_START_FAILURE	= 4
UMD_BRAKE_MON_INPUT_1_STUCK	= 5
UMD_BRAKE_MON_INPUT_2_STUCK	= 6
UMD_BRAKE_MON_INPUT_1_MOTION_WARNING	= 19
UMD_BRAKE_MON_INPUT_2_MOTION_WARNING	= 20
UMD_BRAKE_MON_INPUTS_BOTH_MOTION_WARNING	= 21
UMD_BRAKE_MON_INPUT_1_MOTION_FAILURE	= 23
UMD_BRAKE_MON_INPUT_2_MOTION_FAILURE	= 24
UMD_BRAKE_MON_INPUTS_BOTH_MOTION_FAILURE	= 25
Overspeed Governor Solenoid Monitoring:	
UMD_SOL_MON_IP_NOT_CONFIGURED	= 7
UMD_CANCEL_SOL_DLY_FBACK_IP_NOT_CONFIG	= 8
UMD_SOL_MON_INPUT_START_FAILURE	= 9
UMD_SOL_MON_INPUT_STUCK	= 10
UMD_SOL_CANCEL_DLY_OP_ENERGISE_FAIL	= 11
UMD_SOL_CANCEL_DLY_OP_RELEASE_FAIL	= 12
UMD_SOL_MON_INPUT_MOTION_WARNING	= 22
UMD_SOL_MON_INPUT_MOTION_FAILURE	= 26
External Device Fault Input:	
UMD_FAULT_INPUT_NOT_CONFIGURED	= 13
UMD_FAULT_INPUT_ERROR	= 14
Bucher i-valve:	
UMD_BUCHER_iVALVE_INPUT_NOT_CONFIGURED	= 15
UMD_BUCHER_iVALVE_INPUT_START_FAILURE	= 16
UMD_BUCHER_iVALVE_INPUT_NOT_ASSERTED_AT_STOP	= 17
Misc:	
UMD_DETECTED_OUT_OF_DZ_NO_LOCKS	= 18
Parameter Corruption Check:	
UMD_START_FAIL_COUNT_PARAM_CORRUPT	= 91
UMD_STOP_FAIL_TIME_PARAM_CORRUPT	= 92