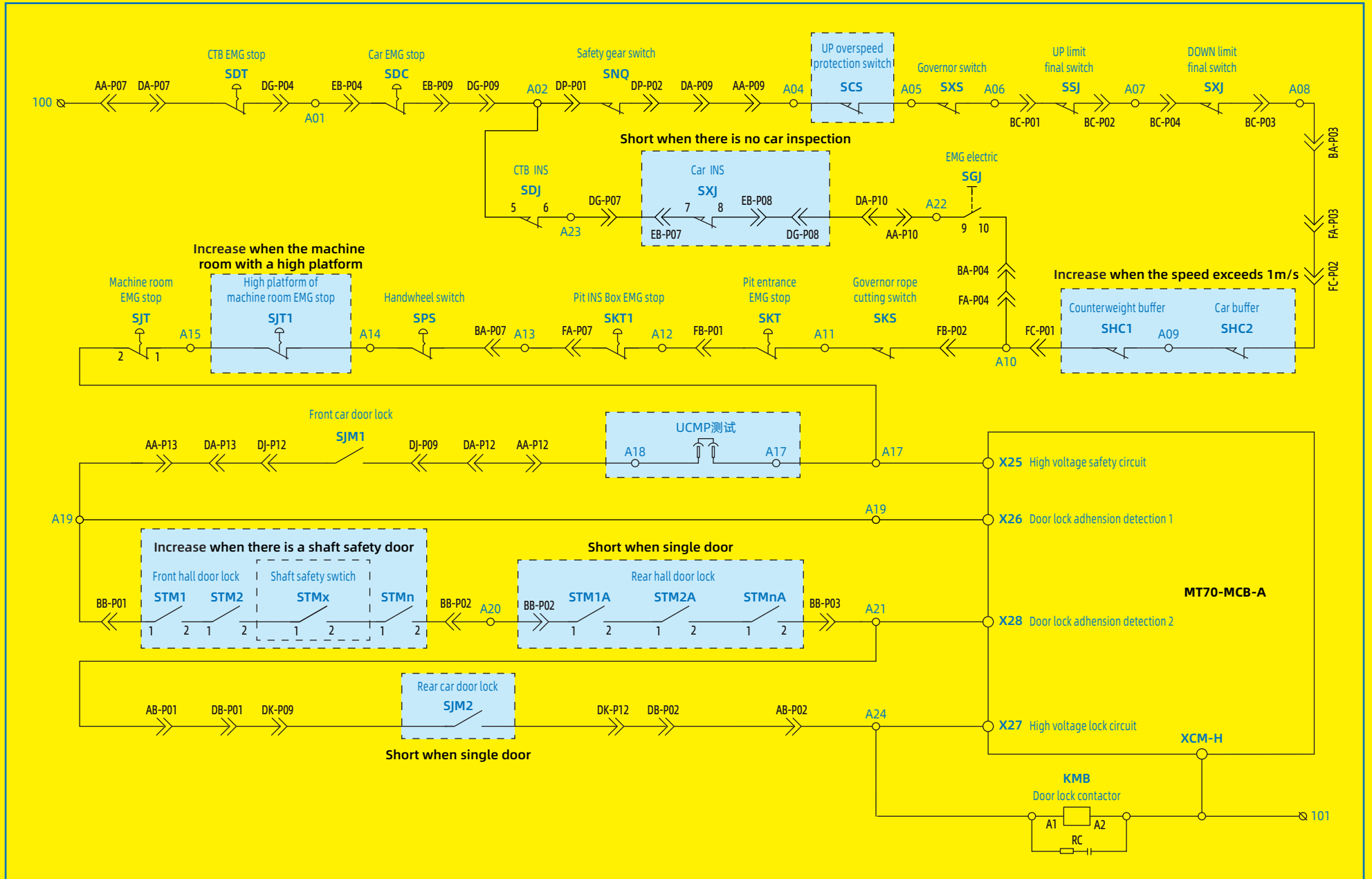


# Safety Circuit Description (MTCC-Y)



# Brake Force Test Description

## Set Parameter

F03.18	Detection method	1 [0 - 2]
F03.20	Detection time point	3:00 [00:00 - 23:59]
F04.14	Detection duration	5 [1 - 10s]
F04.15	Detection torque	100 [60 - 150%]
F04.16	Detection of allowable pulse size	5 [1 - 99]
F04.17	Number of successful detection	0 [0 - 65535]

## Test Step (Automatic or Manual)

1.	Confirm that the elevator is in automatic state, the safety circuit is normal, the door lock circuit is closed, and the system has no running direction.
2.	Start the brake test: Set F25.04 Bit8 = 1 or F14 = 1 (MCB small keypad).
3.	<b>Automatic detection:</b> After setting the parameter (step 2), it will start automatically. <b>Manual detection:</b> The elevator enters the <b>inspection / emergency electric</b> state and gives the inspection command (revocable) to start.
4.	Confirm the value of F04.17 plus 1, which means the test is successful. Set F03.18, Syn. motor is 2 (automatic), Asyn. motor is 0 (invalid).
5.	The control system reports E66 fault, which means the detection failed. Approach: <ul style="list-style-type: none"> <li>Stop any operation of the elevator, and the maintenance personnel should adjust the brake torque to the specified value (at least &gt;110% of the motor torque).</li> <li>Re-test, until the test is successful (the value of F04.17 plus 1), the fault will be reset.</li> </ul>

# UP Running Overspeed Test Instructions

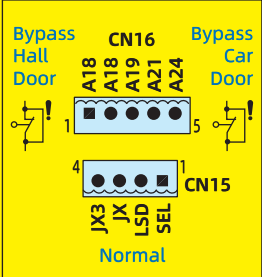
1.	Confirm that the cabin is empty.
2.	Cancel all landing calls and stop door drive operation.
3.	Run lift to the bottom floor.
4.	Run lift from bottom floor at full speed. Considering site safety, lift should not run at up running limit speed.
5.	The speed governor acts and lift stops. If there is a rope clamp device, the rope clamp will act.
6.	Further operations after the test finished: <ul style="list-style-type: none"> <li>For MR, manually restore the speed governor switch. If there is a rope clamp device, restore the rope clamp switch.</li> <li>For MRL, press the restore speed governor switch button.</li> </ul>
7.	Restart all landing calls and door drive operation.
8.	Run the lift and check whether the lift can run normally.

# Door Lock Bypass Function Description

## Set Parameter

F12.04 = 150	X4 is normally close for the bypass signal
F26.16 Bit9 = 0	Do not open the manual door

## Test Step

1.	<b>Normal:</b> <ul style="list-style-type: none"> <li>Plug 4Pin short-circuit terminal to <b>CN15</b>.</li> </ul> <b>Bypass Car Door:</b> <ul style="list-style-type: none"> <li>Plug the 4Pin short-circuit terminal to the right side of <b>CN16</b>.</li> <li>The car door lock is short-circuited, the door lock bypass signal is valid, and the control system reports E73 fault.</li> </ul> <b>Bypass Hall Door:</b> <ul style="list-style-type: none"> <li>Plug the 4Pin short-circuit terminal to the left side of <b>CN16</b>.</li> <li>The hall door lock is short-circuited, the door lock bypass signal is valid, and the control system reports E73 fault.</li> </ul> 
2.	The elevator enters the <b>inspection / emergency electric</b> state, press and hold the <b>Up</b> and <b>Run</b> buttons, or the <b>Down</b> and <b>Run</b> buttons at the same time, the elevator will run at a slow speed, and the car roof will alarm with sound and light.
3.	Plug the 4Pin short-circuit terminal back to <b>CN15</b> , and the elevator returns to normal state.

# UCMP Functional Test Description

## Set Parameter

F12.02 = 3	X2 is NO in door area
F12.08 = 29	X8 is NO for closed door feedback
F12.26 = 4	X26 is high pressure door lock adhesion
F12.27 = 3	X27 is high pressure door lock 2
F12.31 = 3	Y4 is the output of the closed door contactor
F16.05 Bit7 = 0	Do not shield E65 fault

## Test Step

1.	Confirm that the car stops at the door zone, there is no passenger in the car, and the door lock is closed (MCB board indicators X26, X27, X28 are on).
2.	Elevator enters <b>inspection / emergency electric</b> state.
3.	Start UCMP test: Set F25.04 Bit7 = 1 or F15 = 1 (MCB small keypad). <ul style="list-style-type: none"> <li>Note: After running once or power off, the setting parameters are automatically cleared.</li> </ul>
4.	Disconnect the <b>UCMP test switch</b> of the control panel (indicators X26, X27, X28 are off).
5.	Press and hold the <b>Up</b> and <b>Run</b> buttons, or the <b>Down</b> and <b>Run</b> buttons at the same time, the system will output the door lock signal and short-circuit the door lock (MCB board indicators Y5, X8, X26, X27, X28 are on). The elevator runs out of the door zone (the MCB board indicators X1 and X2 are off in turn), and the system stops outputting the door closing signal (indicators Y5, X8, X26, X27, X28 are off).
6.	The control system reports E65 fault, the test is complete. <b>Fault reset method:</b> <ul style="list-style-type: none"> <li>In the INS mode, set the MCB small keypad F02 = 1, and press the <b>SET</b> key.</li> <li>In the INS mode, press the <b>STOP</b> key on the keypad.</li> <li>Note: If the elevator has additional brake, reset the additional brake first.</li> </ul>

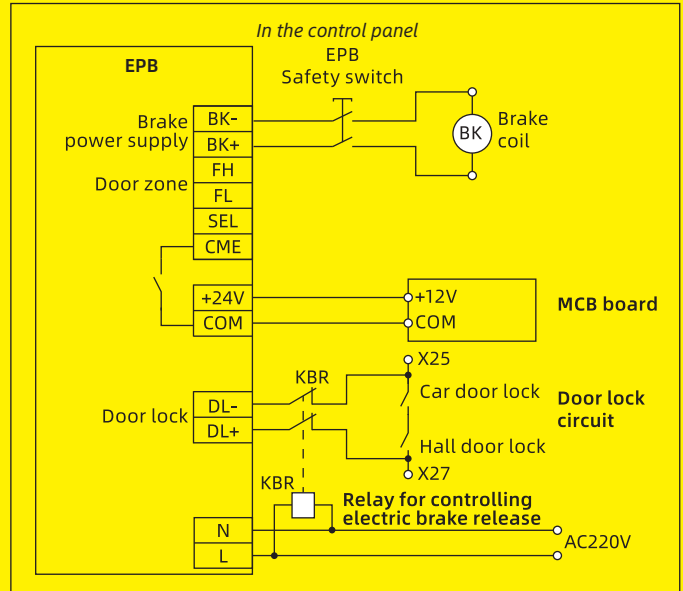
# MRL Electric Brake Release Device (EPB)

## Wiring

Wiring as shown on the right.

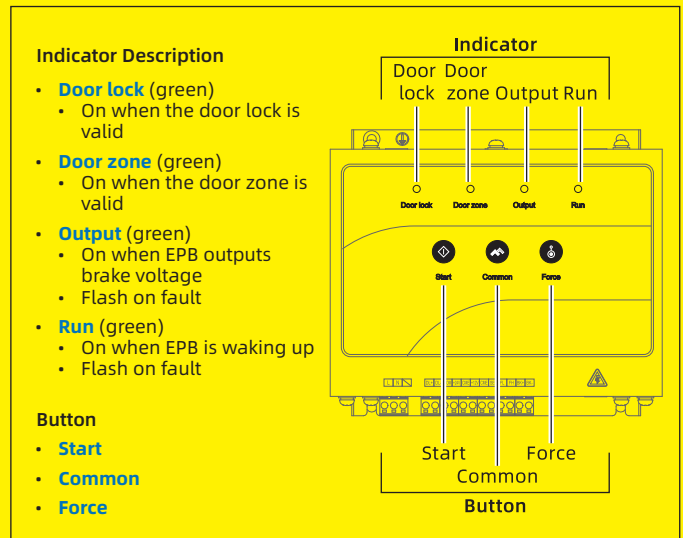
Terminal description is shown as table below.

Terminal		Description	
L, N	AC power supply	Electric supply AC220V input	
+24V, COM	Output power supply of brake release	DC24V, used for emergency power supply of MCB board	
DL+, DL-	Door lock signal	Dry contactor input	
BK+, BK-	Brake power supply output	Brake voltage	Holding voltage
		<b>DC 110V</b>	<b>DC 80V</b>



## Instructions

- When the electric supply goes off, disconnect the power air-switch in control panel, please confirm that the door locks are closed and the elevator is not in the leveling area.
- Start EPB.
  - Press **Common** button, EPB outputs 24V voltage, 4 indicators (**Door zone**, **Door lock**, **Output**, **Run**) flash at the same time.
  - After 5s, press **Common** button, **Run** and **Door lock** indicators will be on, other indicators will be off, EPB will be standby.
  - If there is no follow-up operation, it will turn off automatically after 10s and the indicators will go off.
- Brake release output.
  - Press and hold **Start**, **Common** buttons and **EPB safety switch** at the same time (operate together with both hands), EPB outputs brake voltage and **Output** indicator is on. After 1s, it will switch to output brake holding voltage.
  - Observe that the elevator arrives at the door area through the observation window, release **Start**, **Common** buttons and **EPB safety switch**, **Output** indicator goes off.
  - The output will automatically stop after 60s, **Output** indicator goes off. Press and hold **Start**, **Common** buttons and **EPB safety switch** again at the same time until elevator reaches the door zone.
- Maintenance personnel manually open elevator doors to free trapped passengers.



## Troubleshooting

Output Indicator (Green)	Run Indicator (Green)	Reason	Method	Reset
Slow flashing (lighting 1s, lightless 1s)	Off	Battery low voltage	<ul style="list-style-type: none"> <li>Charge the battery</li> <li>Replace battery</li> </ul>	Auto-reset
Off	Fast flashing (lighting 25ms, lightless 25ms)	DC output overcurrent	<ul style="list-style-type: none"> <li>Check the brake coil to make sure there is no short circuit</li> <li>Confirm the electric brake release specification is correct</li> <li>Call after-sales service</li> </ul>	Restart
Off	Slow flashing (lighting 1s, lightless 1s)	Battery discharge overcurrent	<ul style="list-style-type: none"> <li>Check braking operation current to make sure specifications are not exceeded</li> <li>Call after-sales service</li> </ul>	Press the <b>Start</b> , <b>Common</b> and <b>Force</b> buttons at the same time