fischertechnik ®

**Switch inputs:**

T1 = Elevator Up, T2 = Elevator Down, T3 = Call Upper Floor, T4 = Call Lower Floor,
T5 = Position Upper Floor, T6 = Position Lower Floor, T7 = Emergency Stop.

To construct this 2-story Lift or Freight Elevator please refer to the construction details on page 14 of the Electrical Technology kit, part no. 91083. The assembly manual may be downloaded from the fischertechnik databank (FTDB): https://ft-datenbank.de/binary/7179

You should immediately notice that the switches T1…T7 have been added to this model in the same locations as shown in the E-Tec Module Part No. 108227 additional functions instruction sheet which may be downloaded, in English, from our website:
www.procontechnology.com.au/newindex.htm

Simply scroll down this webpage to access English Translations for many fischertechnik products including the 108227 module mentioned above and the 308xx logic modules. The two logic modules used in this project are shown below:
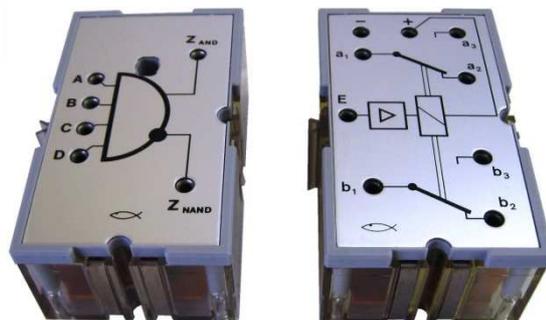
From left to right they are the 30817 AND-NAND Module and the 30812 Relay Module (Relais).
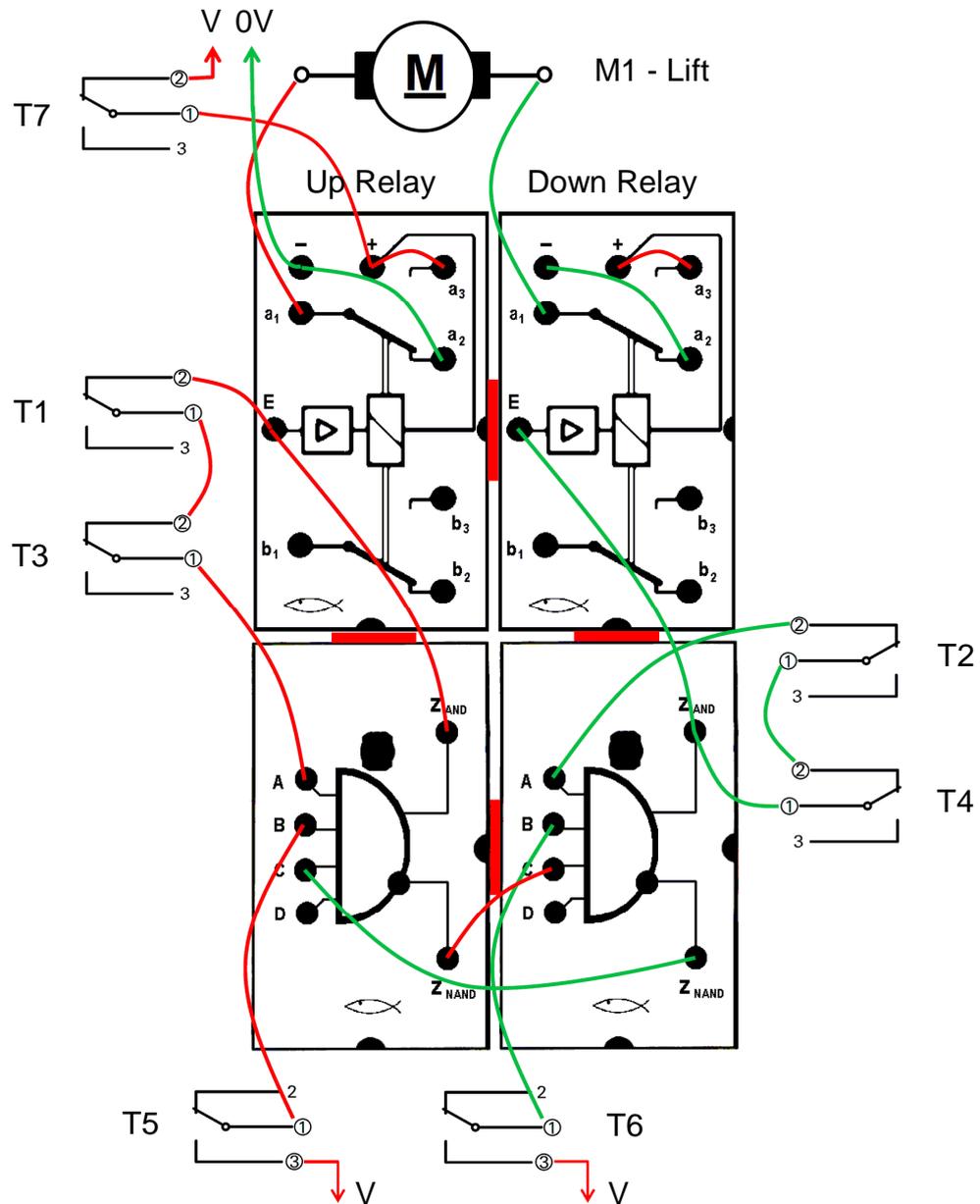
Shown above is the control circuit for the model. Two 30812 Relay Modules are used, one to drive the lift motor up and the other driving it down. Note, how the motor is short-circuited when in the off state, this provides dynamic braking of the motor.

Two 30817 AND-NAND Modules are used as logic latches. These are latched by feeding back each Z_{AND} output to their A inputs. Each latch is toggled on by the Up/Call Up (T1/T3) or the Down/Call Down (T2/T4) push-buttons (each set of switches are Normally Closed and connected in series) and toggled off by the Up Position (T5) or Down Position (T6) switches connected to input B respectively. To prevent the other latch from operating when the lift is already moving, a connection from each Z_{NAND} output connects to input C of the other latch.

The emergency stop (T7) functions by interrupting power to the circuit, resetting the latches and turning off the relays and motor. The power supply voltage V should be around 9V DC. A 9V regulated DC power supply is recommended, although the fischertechnik 8.4V rechargeable battery can also be used. A 1 to 2 Amp current limited power supply is recommended, if necessary use an external fuse (or polyswitch) to protect your modules from a short-circuit damaging them!