**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:
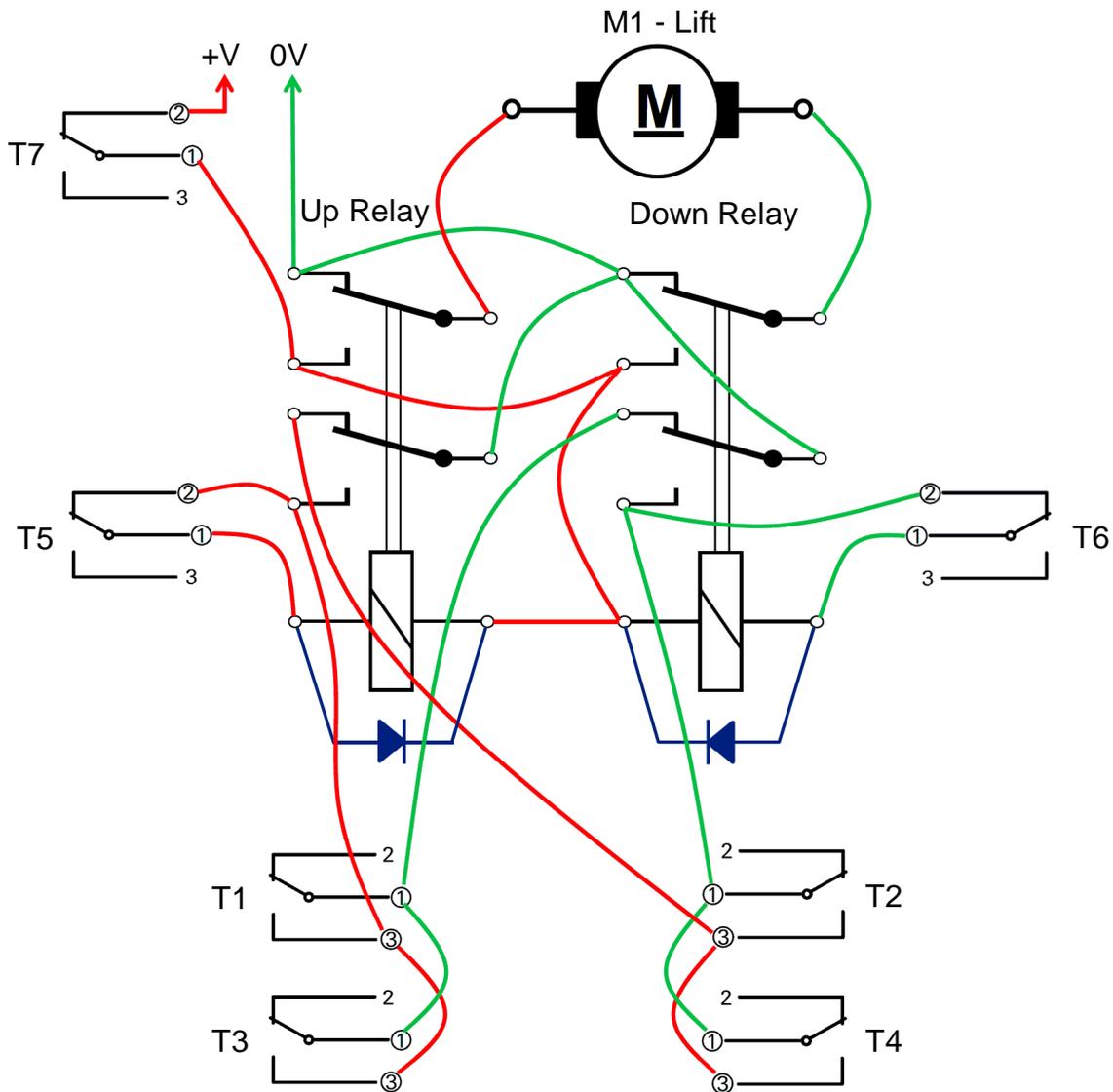www.procontechnology.com.au/newindex.htm

Simply scroll down this webpage to access English Translations for many fischertechnik products including the 108227 module mentioned above and the 30075 relay module. The 30075 relay module and the schematic are shown below:
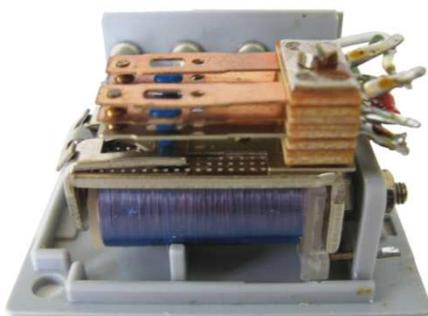
30075 Relay Module without cover
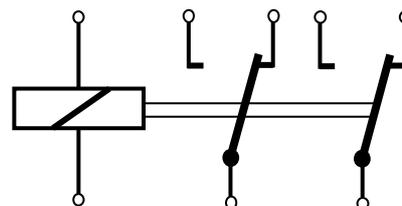
Schematic or Circuit Diagram

Shown above is the control circuit for the model. Two 30075 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.

Whilst one relay contact is used to drive the motor, the other relay contact is used to latch each relay. Each relay is toggled on by the Up/Call Up (T1/T3) or the Down/Call Down (T2/T4) push-buttons and toggled off by the Up Position (T5) or Down Position (T6) switches respectively. To prevent the other relay from operating when the lift is already moving, a connection from each normally closed output connects to the opposite relay's switches T1/T3 and T2/T4.

Note the use of diodes across each relay's coil to suppress inductive kickback. We recommend a 1N4004 or similar diode be used as a "flyback diode" or "freewheeling diode".

The emergency stop (T7) functions by interrupting power to the circuit, resetting the relay latches and turning off the 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.

TIP: The 30075 relay module can also be used on the output of any fischertechnik electronic unit… for example, up to eight may be connected to O1 through to O8 on a computer interface. The relay module can also be connected to the outputs of the 308xx logic modules. However, the use of a "flyback diode", as shown here, is recommended!