PLC LOGO SIEMENS –Instructions for Inputs and Outputs checking

Check of input state:

When you turn on the electrical panel, the LOGO screen will display what follows :

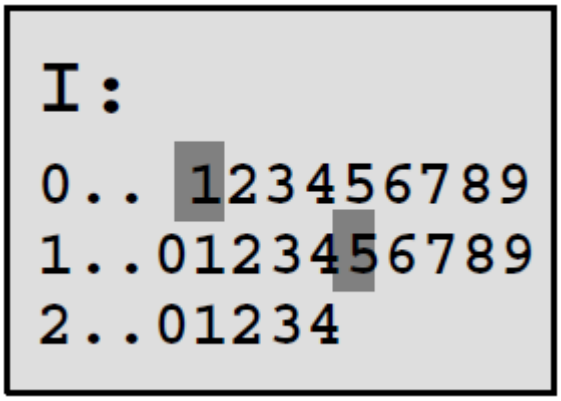


Fig. 01

Inputs from I1 to I9 ⟵

Inputs from I10 to I19 ⟵

Unused Inputs ⟵

Inputs of the first line (line 0) are all used while the inputs used in the second line (line 1) are the ones from 10 to 12 only.

All remaining inputs are not used for this system!

When an input is active it means the voltage is of 110Vac (level 1) and the display will be highlighted **by the number in bold** (see Fig. 01 Input No. 1 - first line and No. 5 - second one).

Use of the inputs in the program:

Line 0:

I1 AUXILIARIES "ON" : If no particular MALFUNCTIONS are present **[** such as : activated emergency buttons, emergency limit switches not activated, no-intervention of the motor thermal protection, disactivated magneto-thermic breaker 02QF1- for protection of magnetic motor brake -, no-intervention of brake parachute, 16 poles connector (no cable connected) properly seated in its connector on the left side of control panel**]**, after pressing the START button, the system must be OPERATING.

I2 ASSEMBLY METHOD: This input should normally be **Inactive**. It will become active only if you use the manual push-button located in the control panel (connector on the left side of the panel). When this input is ON, the system will move only "at man-present" and precisely: during the rising **>** up to the Ascent limit switch AND during the descent**>** up to the Down limit switch.
The procedure related to the stop at the floor will not be taken into consideration.

I3: "CLOSED DOORS" INPUT: If the doors of the hoist and the gates at floor (if any) are closed, this input must be ACTIVE. If this input is not active NO movement will be possible.

I4: PARACHUTE RESET : As a rule this input must **NOT** be active. It will be active only by using the RESET PARACHUTE key that will enable the procedure of the PARACHUTE RESET.

I5: DROP-TEST SUITABILITY : This input must **NOT** be active. It will be active only by using the selector on the manual push-button panel for DROP TEST. This will enable the DROP TEST procedure.

I6: "UPRISING" CONTROL: As a rule this input must **NOT** be active. It will become active only by using the push-button panel. The pressing of the button UP will enable the uprising movement of the hoist. If you release the button, the input will go back to the inactive state.
This control is with self-holding device

I7: "DESCENT" CONTROL: As a rule this input must **NOT** be active .
It will become active only by using the push-button panel and pushing the DOWN button.
If you release the button, the input will go back to the inactive state.
This control is with self-holding device

I8: "STOP AT FLOOR" CONTROL : As a rule this input must **NOT** be active .
It will turn active only by using the push-button panel and pushing the STOP AT FLOOR button.
If you release the button, the input will go back to the inactive state.
If you want to set the stop at the next floor, it is enough to keep on pushing the button and then release it.

I9: "UP" LIMIT SWITCH: As a rule this input must be **ACTIVE**.
The type of limit switch connected to this input is a NC type (Normally Closed) . When the limit switch touches the related slide, it opens the circuit and modifies the input state from active into inactive.
This input has got two limit switches : **UP** limit switch and **OVERRUN** limit switch.

Line 1:

I10: "STOP AT FLOOR" LIMIT SWITCH: As a rule this input must be **ACTIVE**.
The type of limit switch connected to this input is a NC type (normally closed) . When the limit switch touches the related slide, it opens the circuit and modifies the input state from active into inactive.
This input has got one limit switch only.

I11: " DOWN" LIMIT SWITCH: Normally this input must be **ACTIVE**.
The type of limit switch connected to this input is a NC (Normally Closed) type. When the limit switch touches the related slide, it opens the circuit and modifies the input state from active into inactive.
This input has got one limit switch only.

I12: CHECK OF THE RECTIFIER ON THE MOTOR MAGNETIC BRAKE - This input is normally INACTIVE. It must be put into action when you give a movement command to the hoist. If when you give the command the input doesn't get in, the command will be reset after 2 seconds and a red light will display " BROKEN RECTIFIER". Proceed then with the replacement of the rectifier – inside the motor and close to the terminal board – reset the alarm by pushing first the emergency mushroom-shaped button and afterwards the luminous **BLUE** button " **AUXILIARY START**"

CHECK OF OUTPUT STATE:

Push the button "**RIGHT ARROW**" positioned on the front of the Plc Logo. It will display the following:

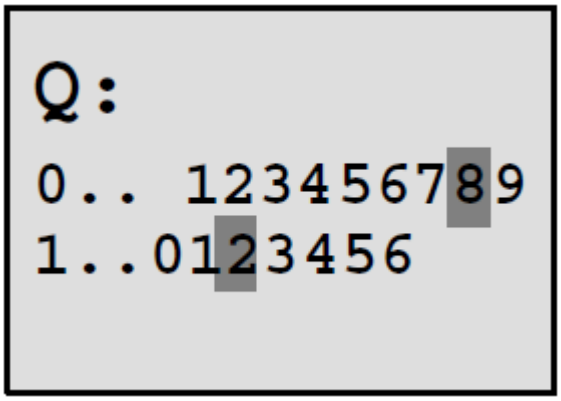


Fig. 02

Outputs from da Q1 to Q9 ⟵

Unused outputs ⟵

Line 1 (line 0) Used outputs: <u>from 0 to 8 ONLY</u>

<u>All remaining outputs are not used for this system!</u>

When output is active (level 1) - through a NO (Normally Open) contactor located inside the Plc- the voltage is 110Vac and the display will be highlighted **by the number in bold** (see fig. 02 input n° 8 – first line and n° 2- second line).

<u>Use of the outputs in the program:</u>

<u>Line 0</u>:

Q1: <u>"UP" CONTROL</u> : Normally **INACTIVE**. Used to operate the contactor 04KM1 for the upclimbing of the hoist

Q2: <u>"DOWN" CONTROL</u> : Normally **INACTIVE**. Used to operate the contactor 04KM2 for the descent of the hoist.

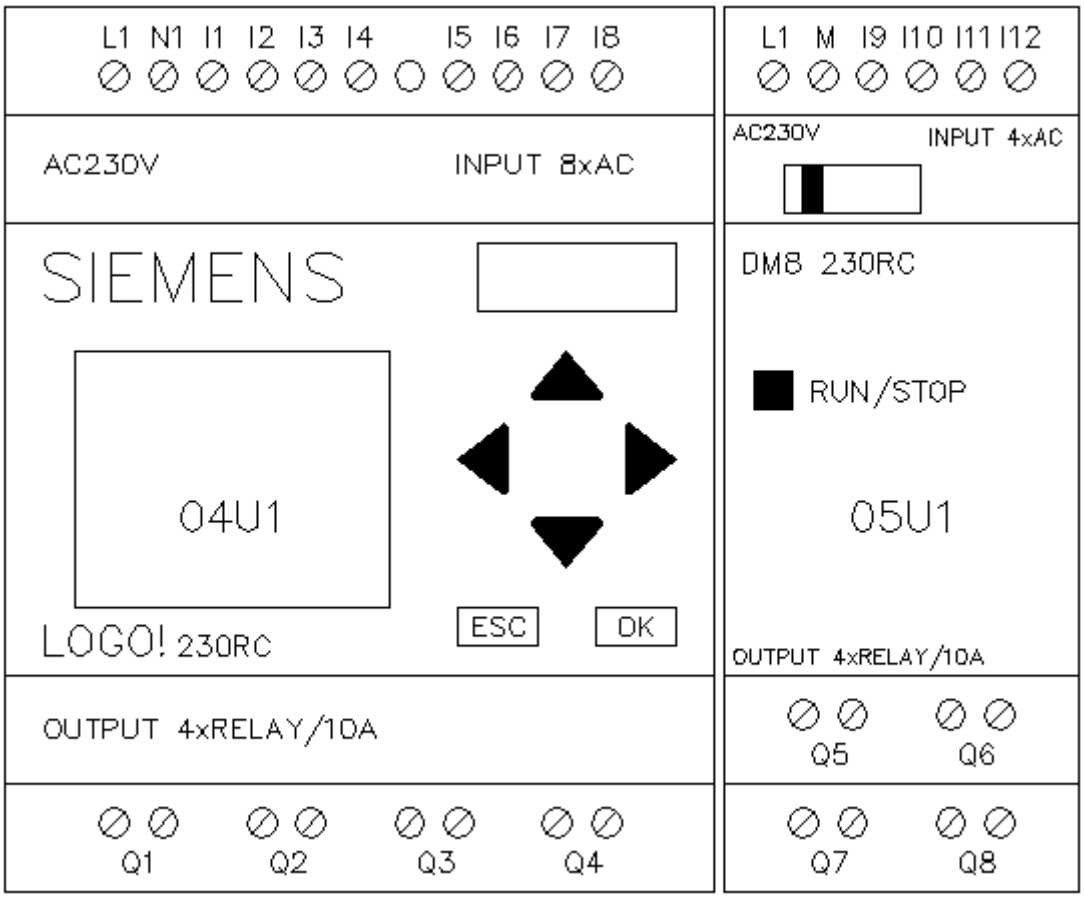
Q3: <u>UNUSED OUTPUT</u>
Q4: <u>UNUSED OUTPUT</u> -

Q5: <u>BRAKE OPENING CONTROL</u> : Normally **INACTIVE.** It is used to operate the contactor 05KM1 for the opening of the motor brake both during the ascent and the descent of the hoist.

Q6: <u>CALL AT FLOOR CONTROL</u> : Normally **INACTIVE.** It gets into action for 20 seconds when the hoist stops and prevents the calls at floor in order to allow the entry or the exit from the cage.

Q7: <u>WARNING LIGHT CONTROL "OPEN DOORS" :</u> Normally **INACTIVE.** It gets into action only when the doors are opened.

Q8: <u>WARNING LIGHT CONTROL " BROKEN RECTIFIER"</u> : Normally **INACTIVE.** It gets into action in case of breakage of the rectifier only.


L1 N1 I1 I2 I3 I4 I5 I6 I7 I8
AC230V
INPUT 8xAC
SIEMENS
04U1
LOGO! 230RC
ESC
OK
OUTPUT 4xRELAY/10A
Q1
Q2
Q3
Q4
L1 M I9 I10 I11 I12
AC230V
INPUT 4xAC
DM8 230RC
RUN/STOP
05U1
OUTPUT 4xRELAY/10A
Q5
Q6
Q7
Q8