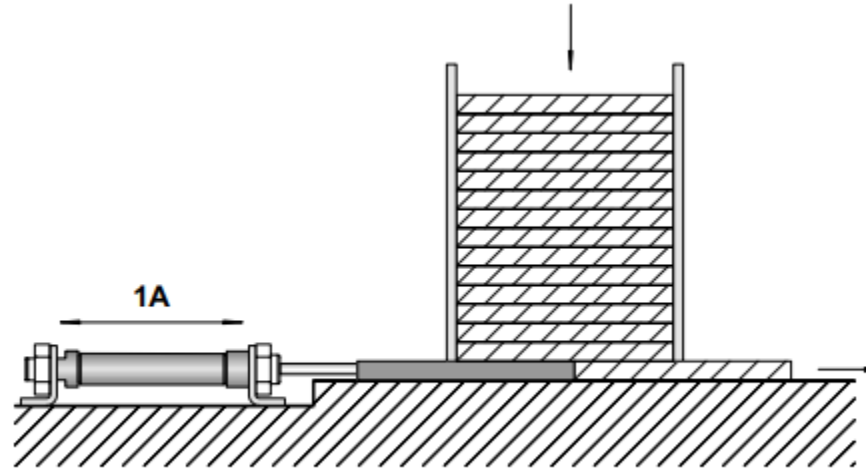
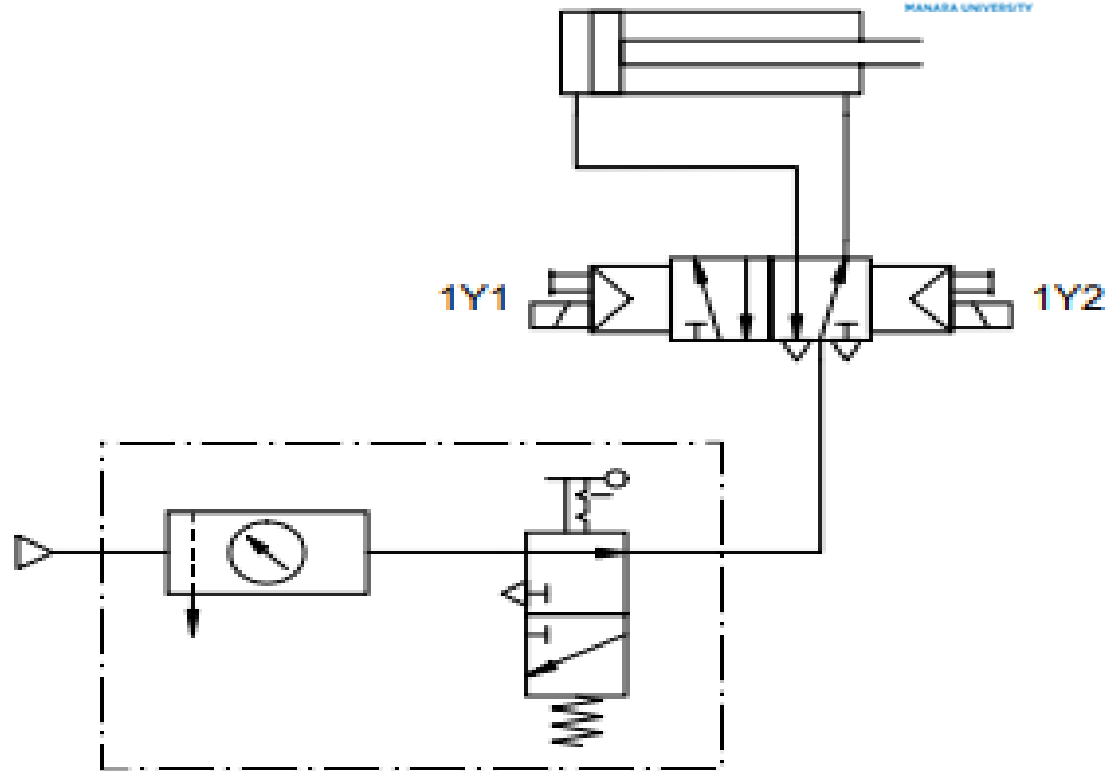


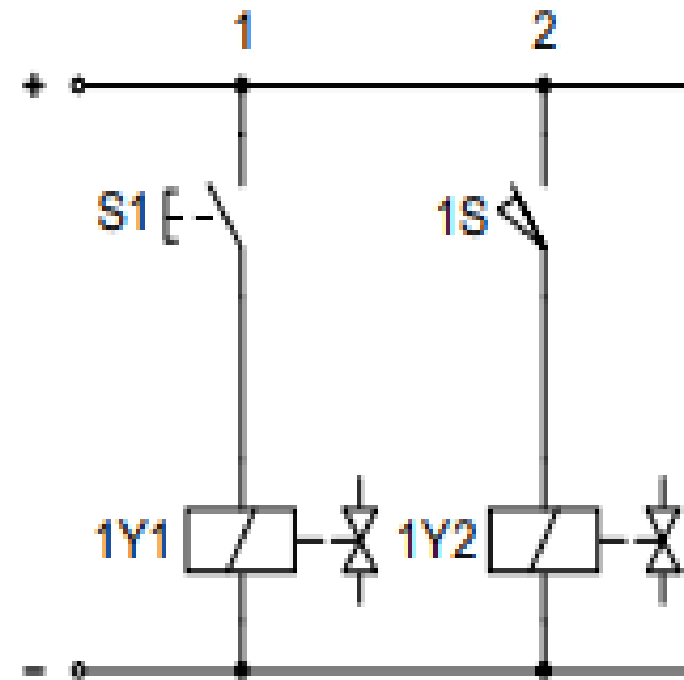
1.Gravity feed magazine

Wooden planks are to be pushed along from a gravity feed magazine to a clamping device. By pressing a pushbutton switch one plank is pushed by the slide out of the gravity feed magazine. After the slide has reached the forward end position it is returned to its start position.





Representation without manifold



Solution description

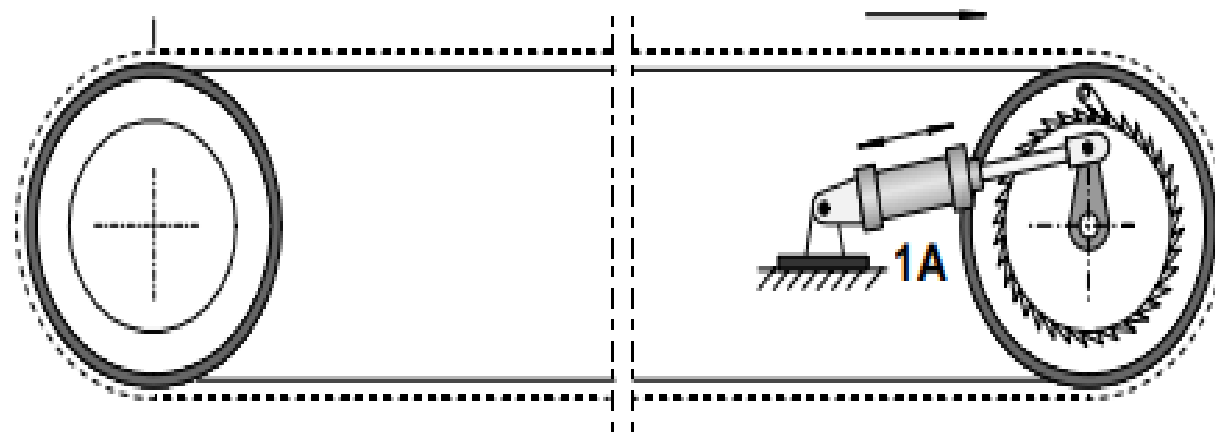
By pressing the pushbutton switch S1 the electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances to the forward end position. When the pushbutton switch S1 is released the electric circuit for the solenoid coil 1Y1 is opened. The piston rod of the double-acting cylinder advances to the forward end position and actuates limit switch 1S. The electric circuit for the solenoid coil 1Y2 is closed and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod of the double-acting cylinder returns to its rear end position. When the limit switch 1S is released the electric circuit for the solenoid coil 1Y2 is opened.

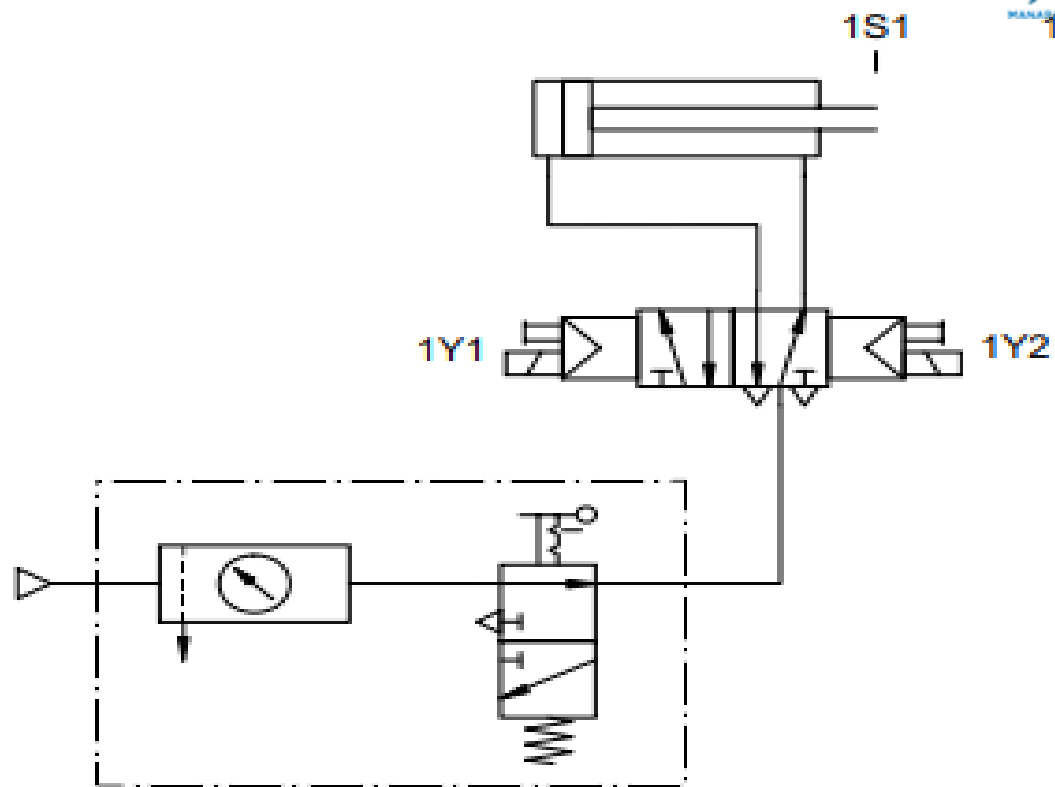
2. Conveyor belt control

g a conveyor belt, parts are to be

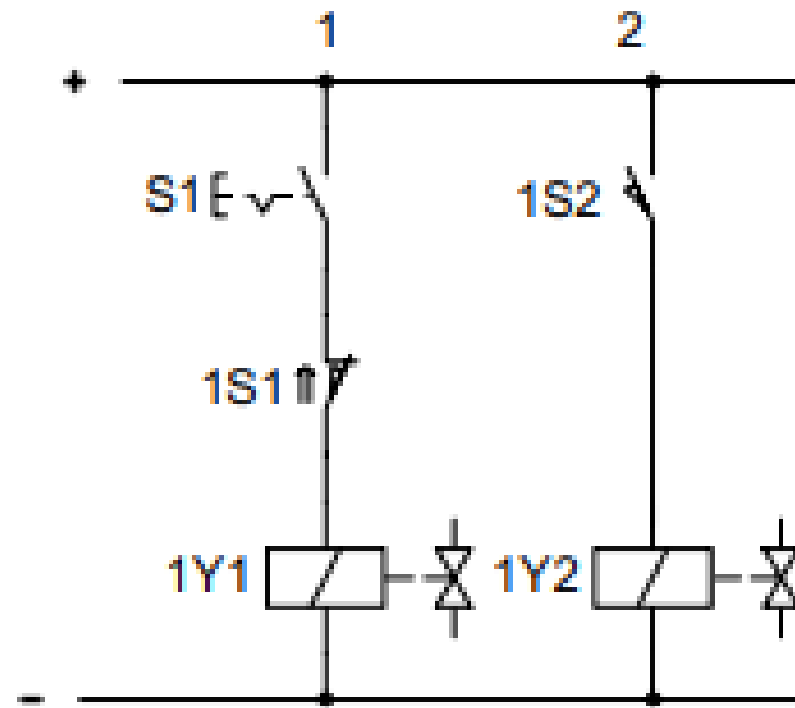
sequence to work stations which are arranged in line after one another.

When the latching pushbutton switch is pressed the main wheel is indexed by the oscillating piston rod of a cylinder via a pawl. When the pushbutton switch is pressed again the drive is switched off



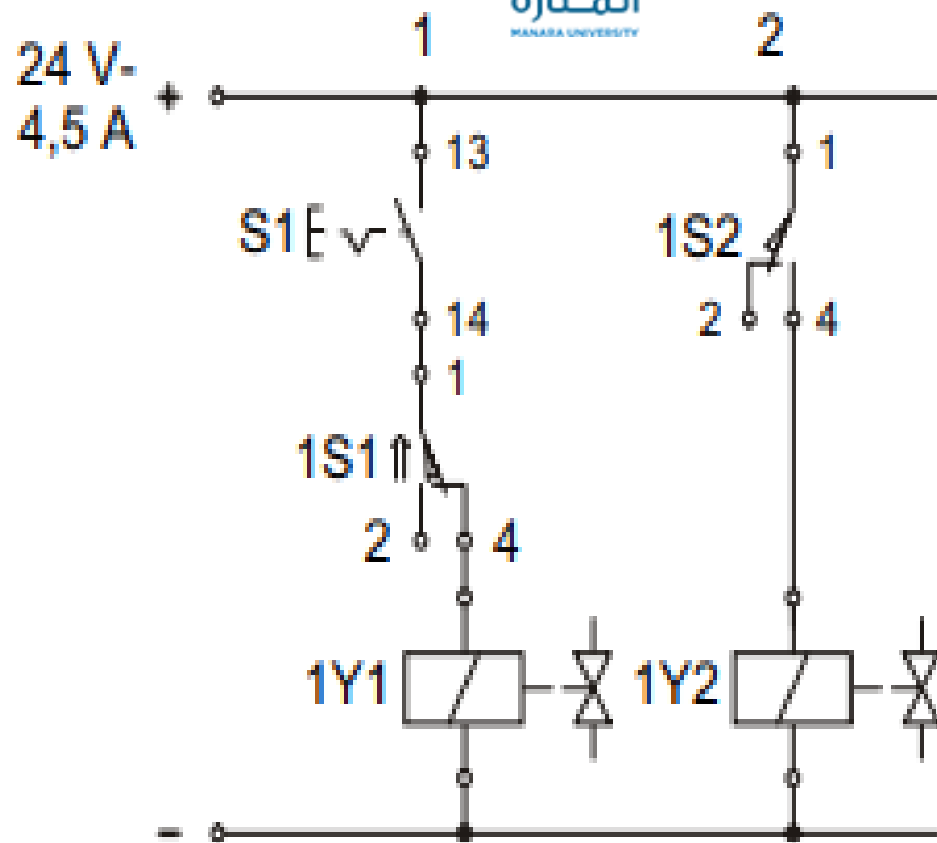


Representation without manifold





جامعة
المنارة
MANARA UNIVERSITY





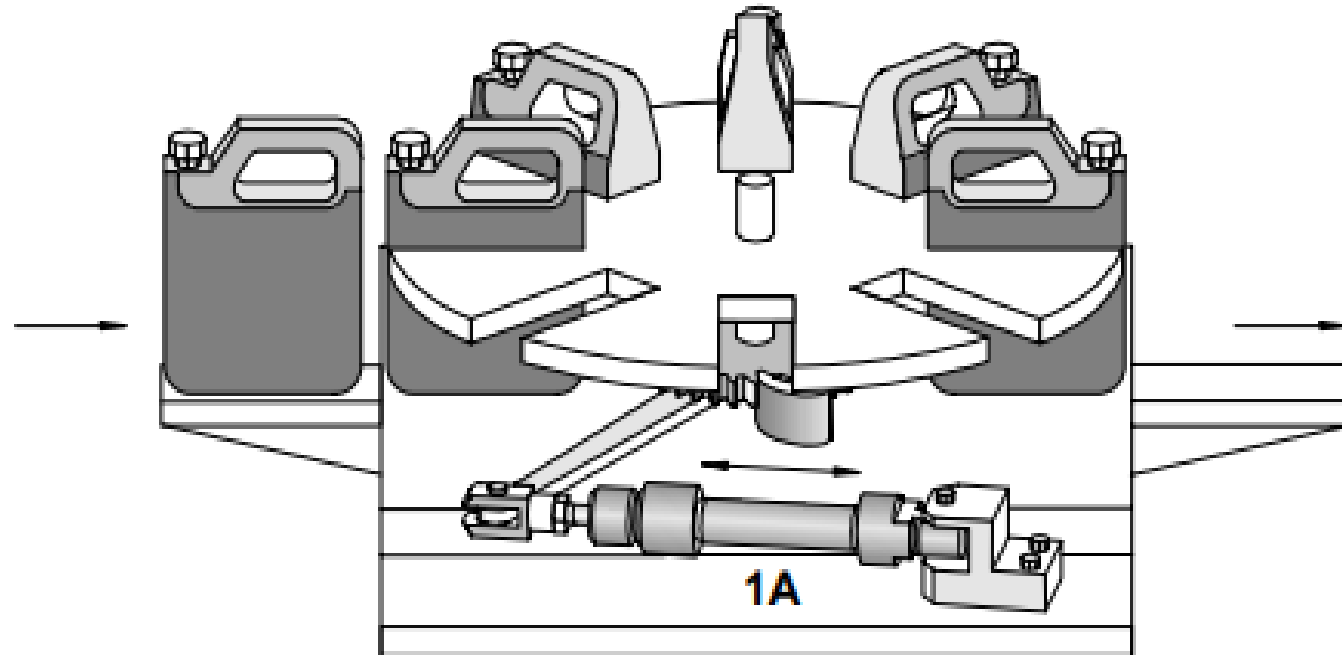
جامعة
المنارة

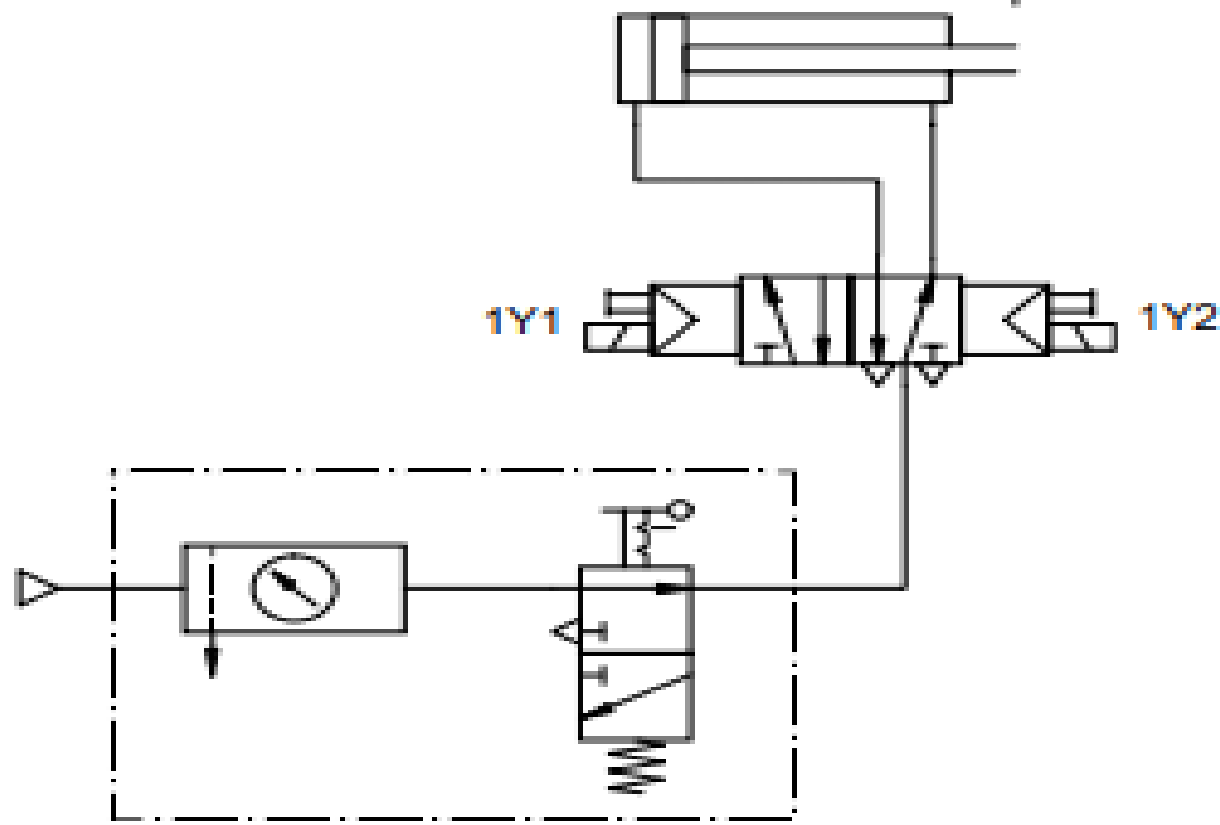
Solution description

When latching pushbutton switch S1 is pressed the electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances to the forward end position and switches limit switch 1S2. After leaving the rear end position, the electric circuit for the solenoid coil 1Y1 is opened via limit switch 1S1. The electric circuit for the solenoid coil 1Y2 is closed via limit switch 1S2 and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod of the double-acting cylinder returns to its retracted end position and switches limit switch 1S1. After leaving the forward end position, the electric circuit for the solenoid coil 1Y1 is closed by means of limit switch 1S1 via the actuated latching pushbutton switch S1. The piston rod of the double-acting cylinder advances again to the forward end position.

3. Rotary indexing table

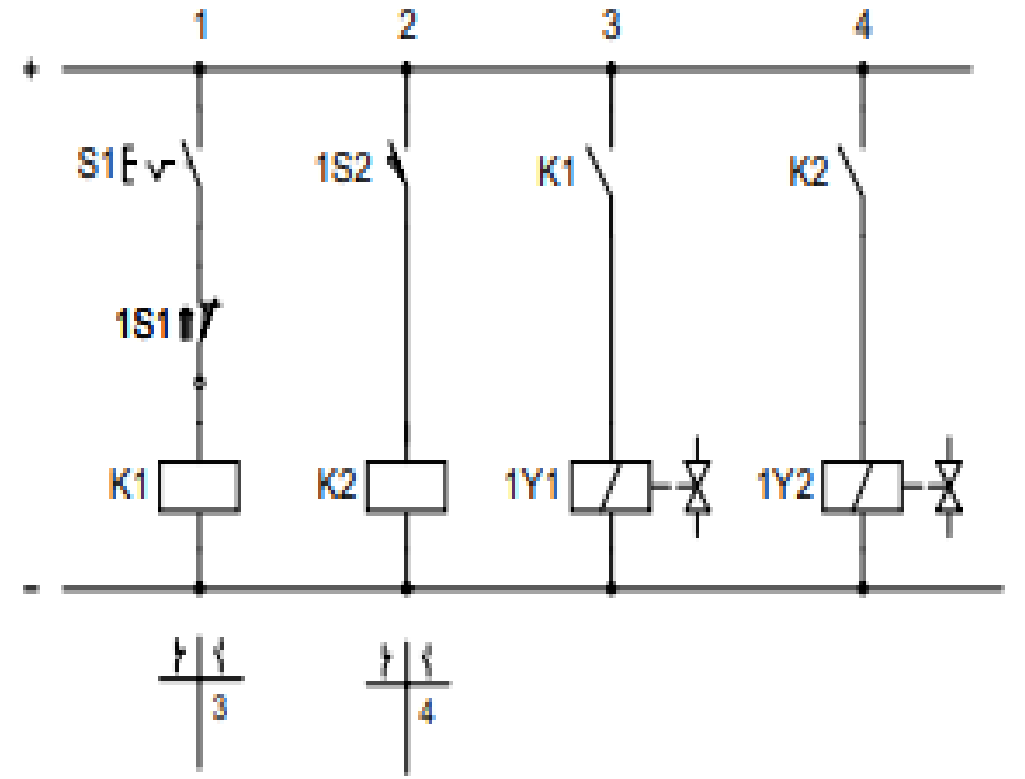
Using a rotary indexing table plastic containers are to be separated in linear sequence. By pressing a pushbutton switch the oscillating piston rod of a cylinder drives the rotary table in sequence via a pawl. When the pushbutton is pressed again, this drive is switched off.

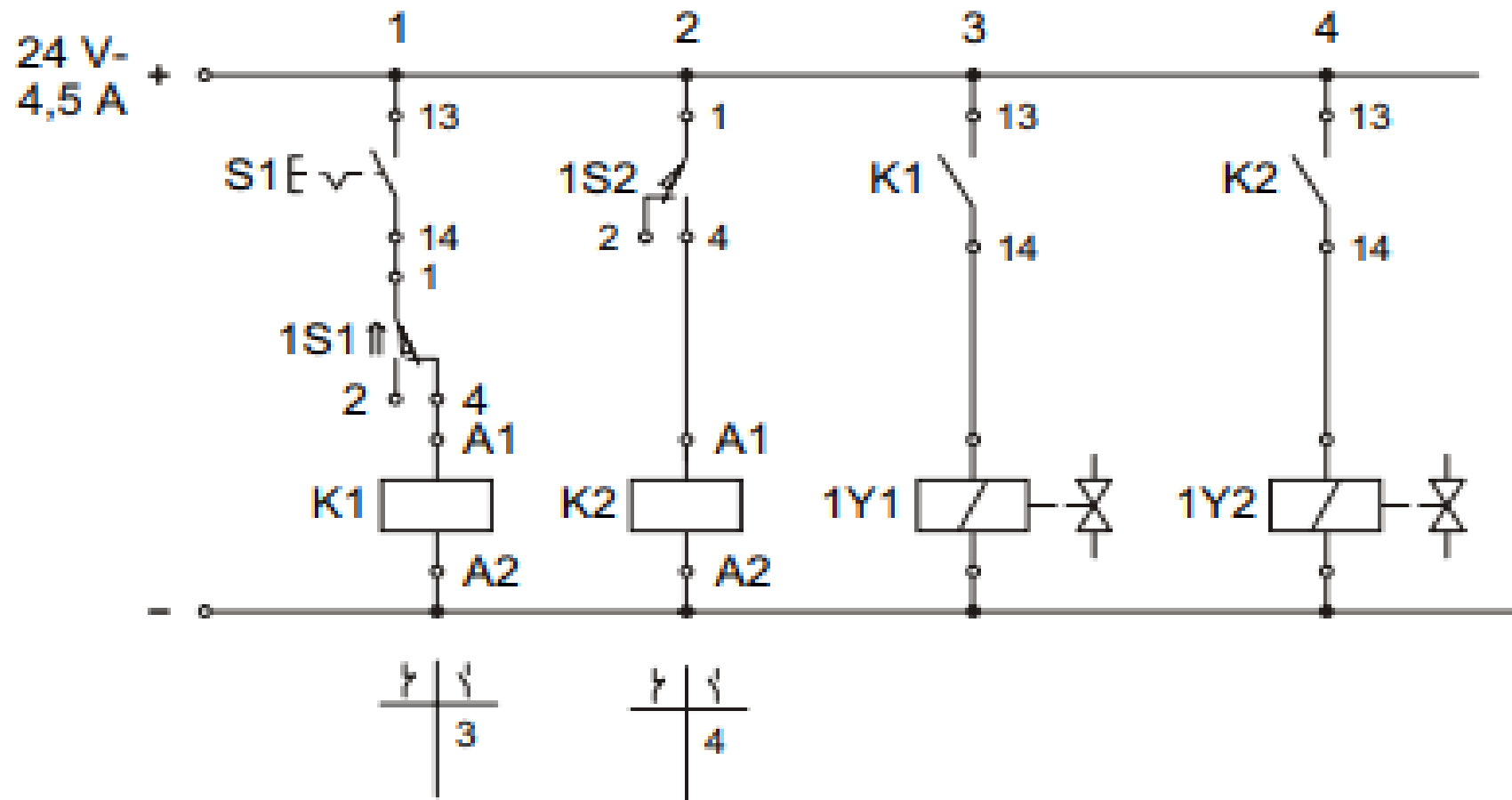




Representation without manifold

1S2





Solution description

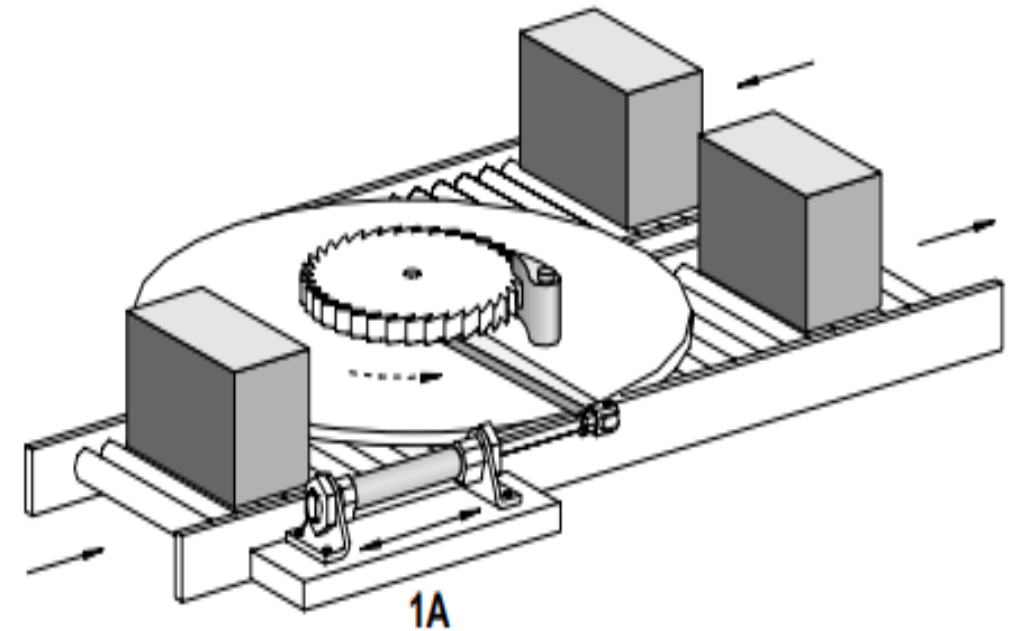


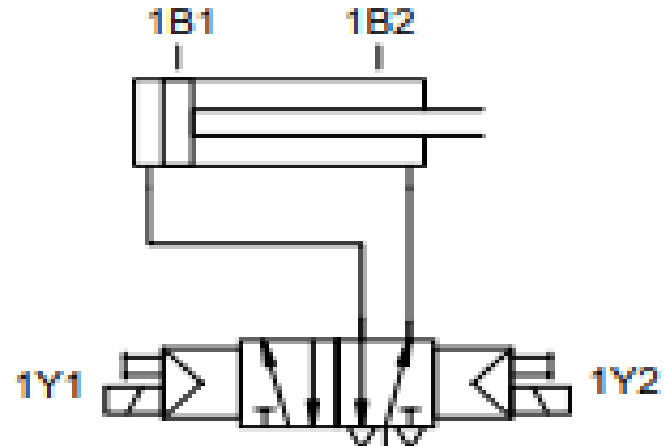
By pressing the latching pushbutton switch S1 the electric circuit for the relay K1 is closed and the contact K1 is made. The electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances to the forward end position and switches limit switch 1S2. After leaving the retracted end position, the electric circuit for the relay K1 is opened via limit switch 1S1 and the contact K1 is brought into the normal position. The electric circuit for the relay K2 is closed by means of limit switch 1S2 and the contact K2 is made. The electric circuit for the solenoid coil 1Y2 is closed and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod of the double-acting cylinder returns to the retracted end position and switches limit switch 1S1. After leaving the forward end position the electric circuit for the solenoid coil 1Y2 is opened by means of limit switch 1S2.

The electric circuit for the relay K1 is again closed via the limit switch 1S1 by means of the latched pushbutton switch S1 and the contact K1 is made. The electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double acting cylinder advances again to the forward end p

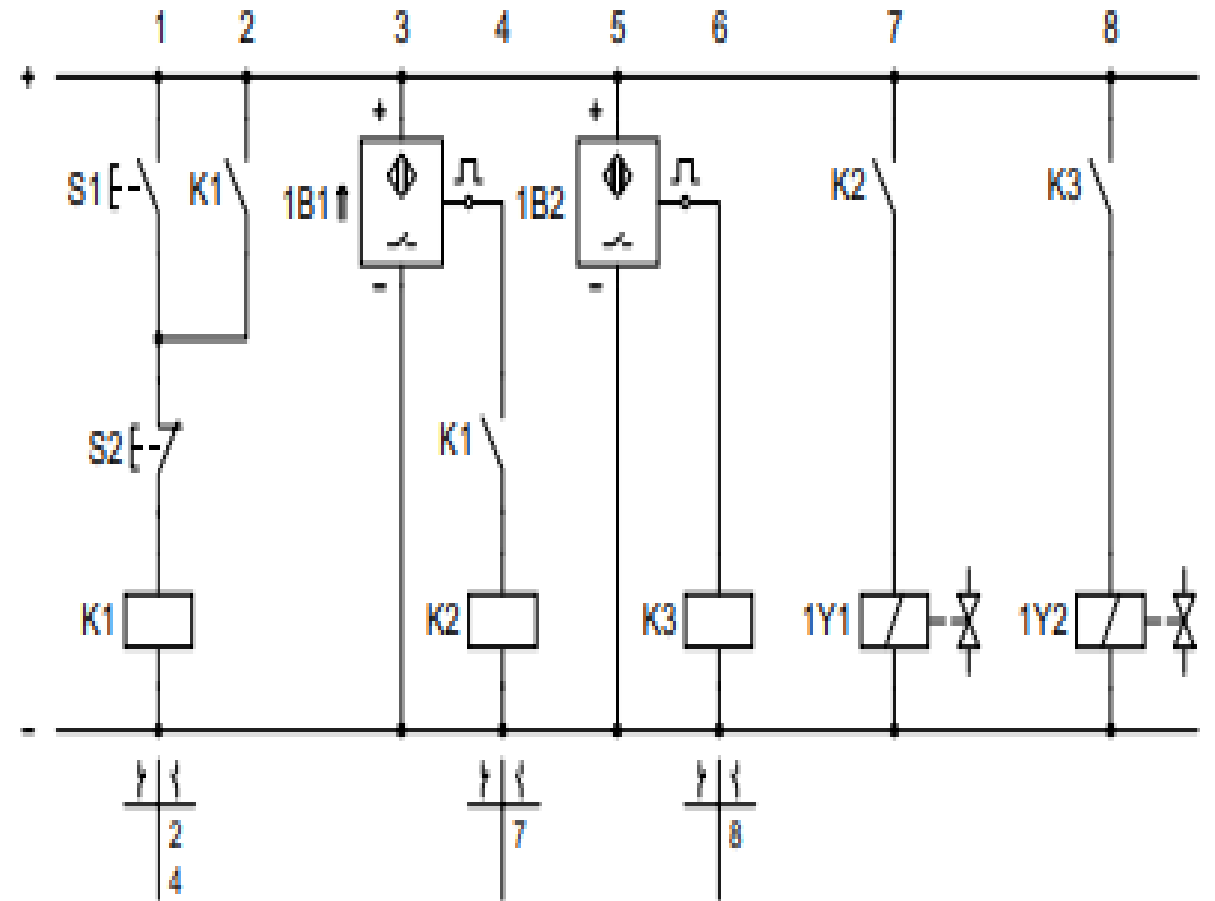
4. Diverting device

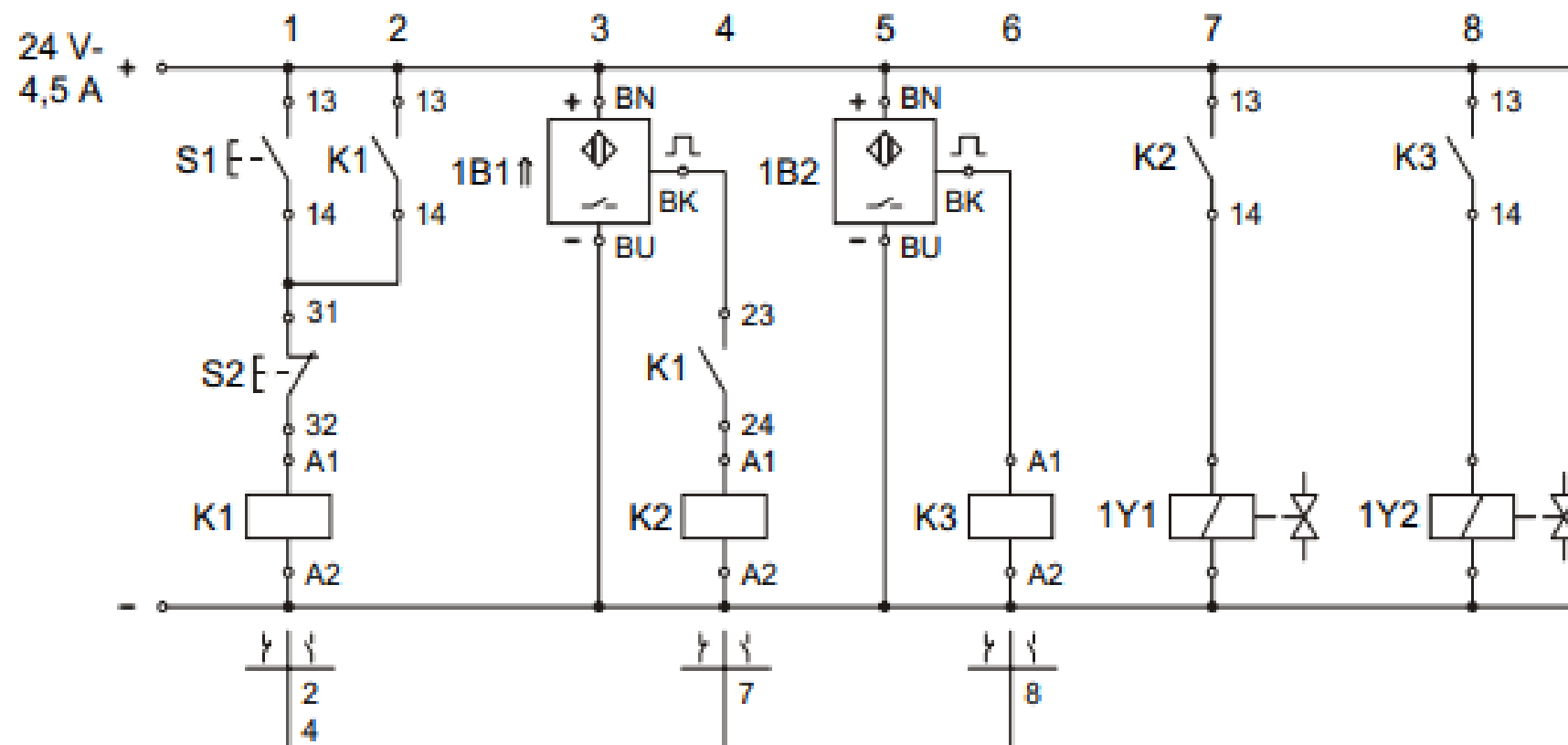
Using a diverting device parts are to be removed from one conveyor track onto another in linear sequence. By pressing a pushbutton switch the oscillating piston rod of a cylinder pushes the turntable via a pawl in stepped sequence. The parts are diverted and transported onwards in the opposite direction. By pressing another pushbutton switch the drive unit is switched off.





Representation without manifold





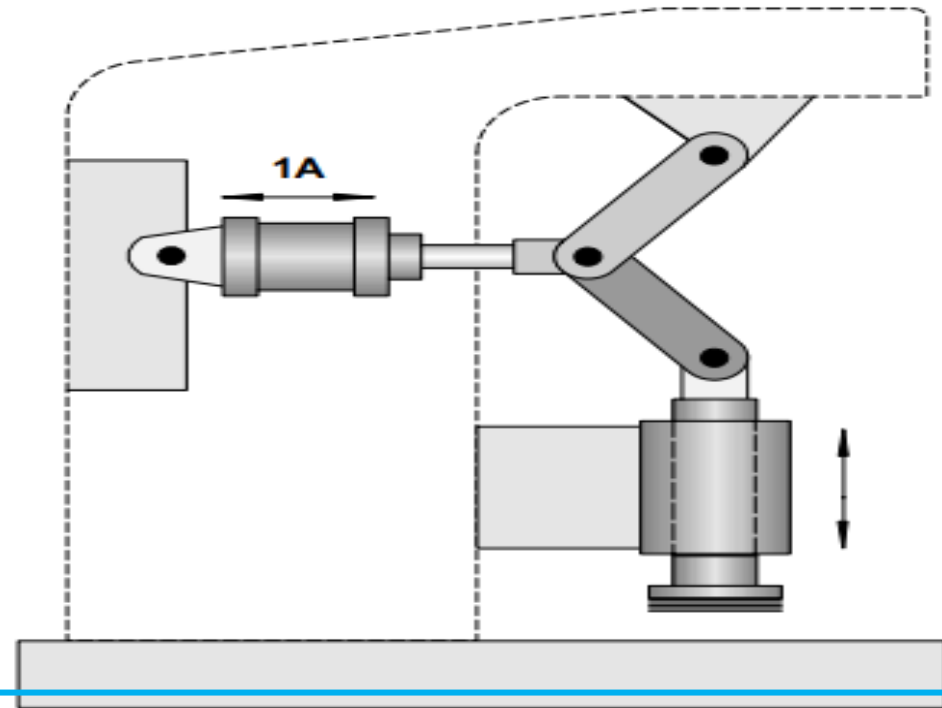
By pressing the pushbutton switch S1 (ON) the electric circuit is closed for relay K1 via the un actuated pushbutton switch S2 (OFF) and the bank of contacts is made. After releasing pushbutton switch S1 (ON) the electric circuit for the relay K1 is kept closed via the latching circuit with contact K1 (13, 14). The electric circuit for the relay K2 is closed with contact K1 (23, 24) and the contact K2 is actuated. The electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances to the forward end position actuating sensor 1B2. After leaving the rear end position, the electric circuit for the relay K2 is opened via sensor 1B1 and the contact K2 is brought to the normal position.

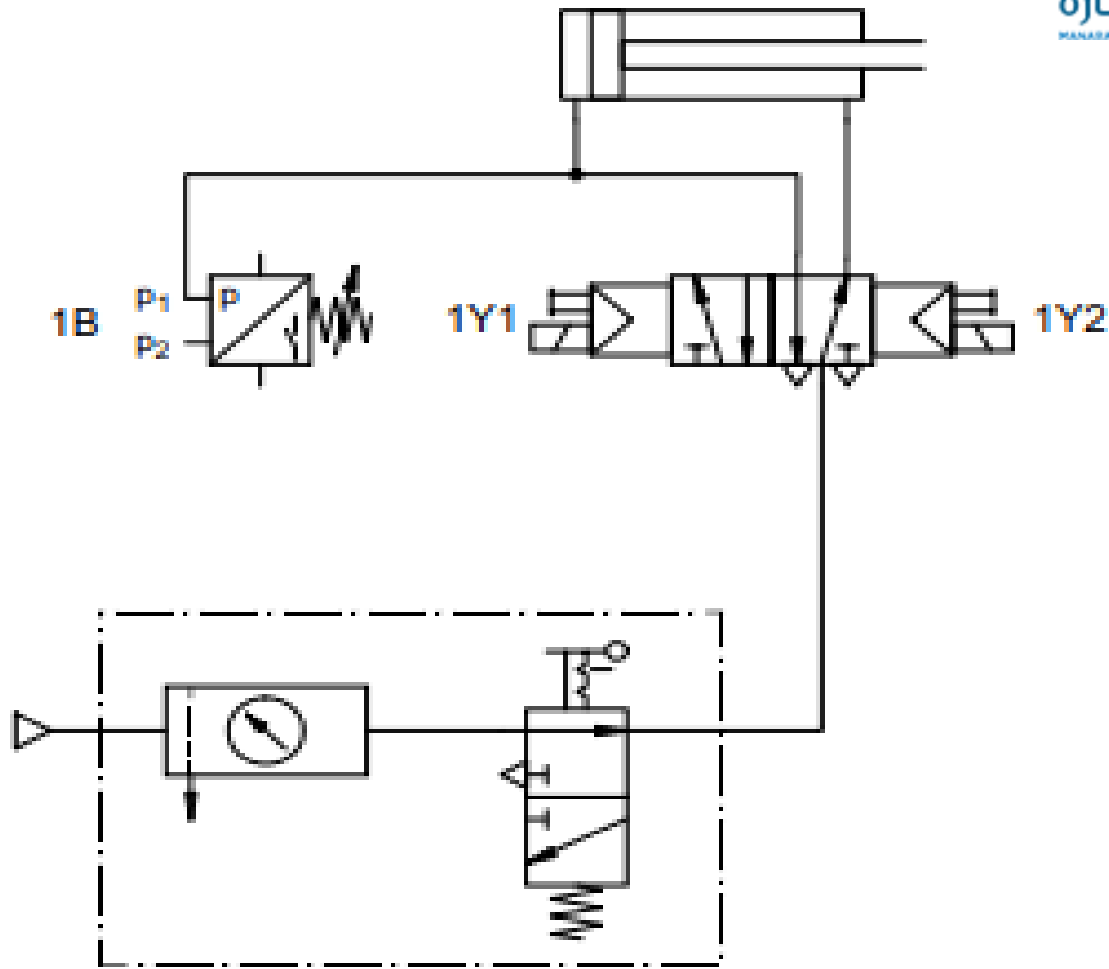
The electric circuit for the relay K3 is closed via sensor 1B2 and the contact K3 is made. The electric circuit for the solenoid coil 1Y2 is closed and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod returns to the rear end position and actuates the sensor 1B1. After leaving the forward end position the electric circuit for relay K3 is opened via sensor 1B2 and the contact K3 is brought to the normal position. The electric circuit for the relay K2 is closed via sensor 1B1 and the contact K2 is made. The electric circuit for the solenoid coil 1Y1 is closed and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances again to the forward end position. By pressing the pushbutton switch S2 (OFF), the electric circuit for the relay K1 is opened and the bank of contacts is brought to the normal position.

5. Stamping device

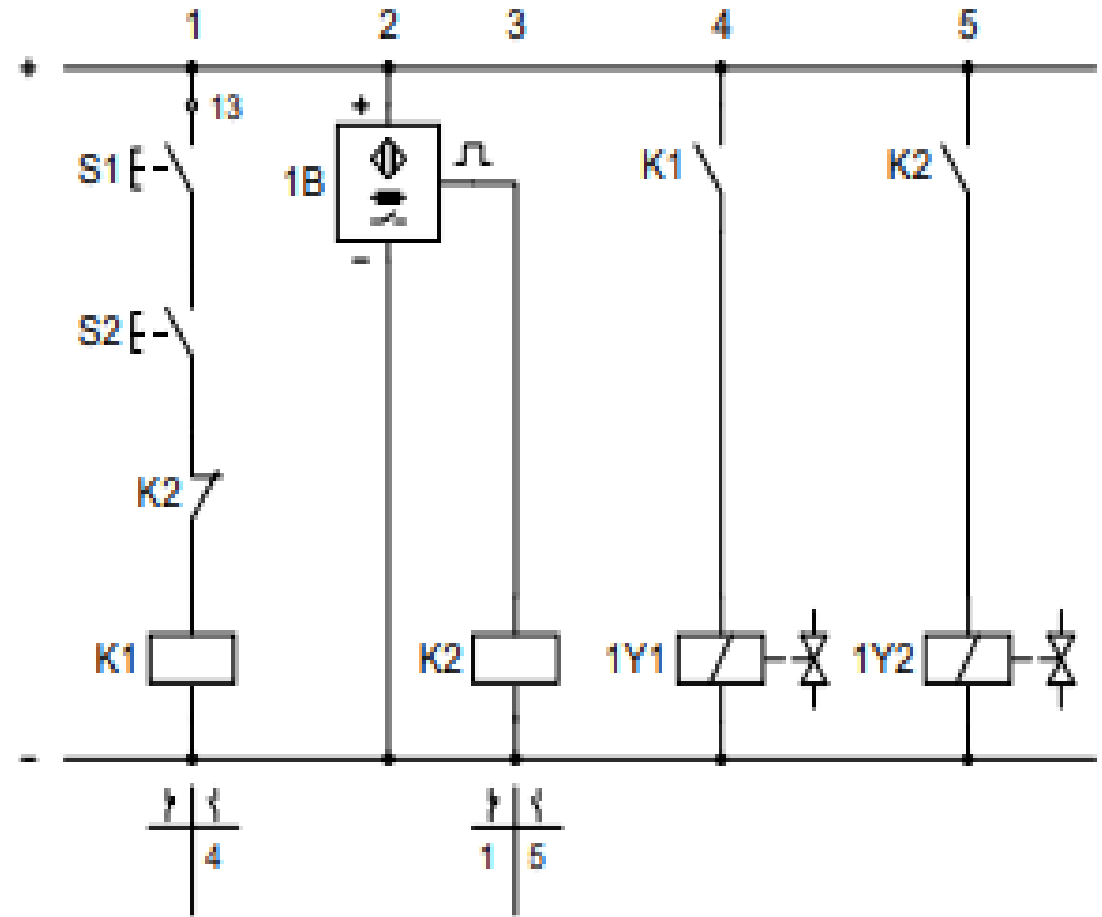
Parts are to be stamped with

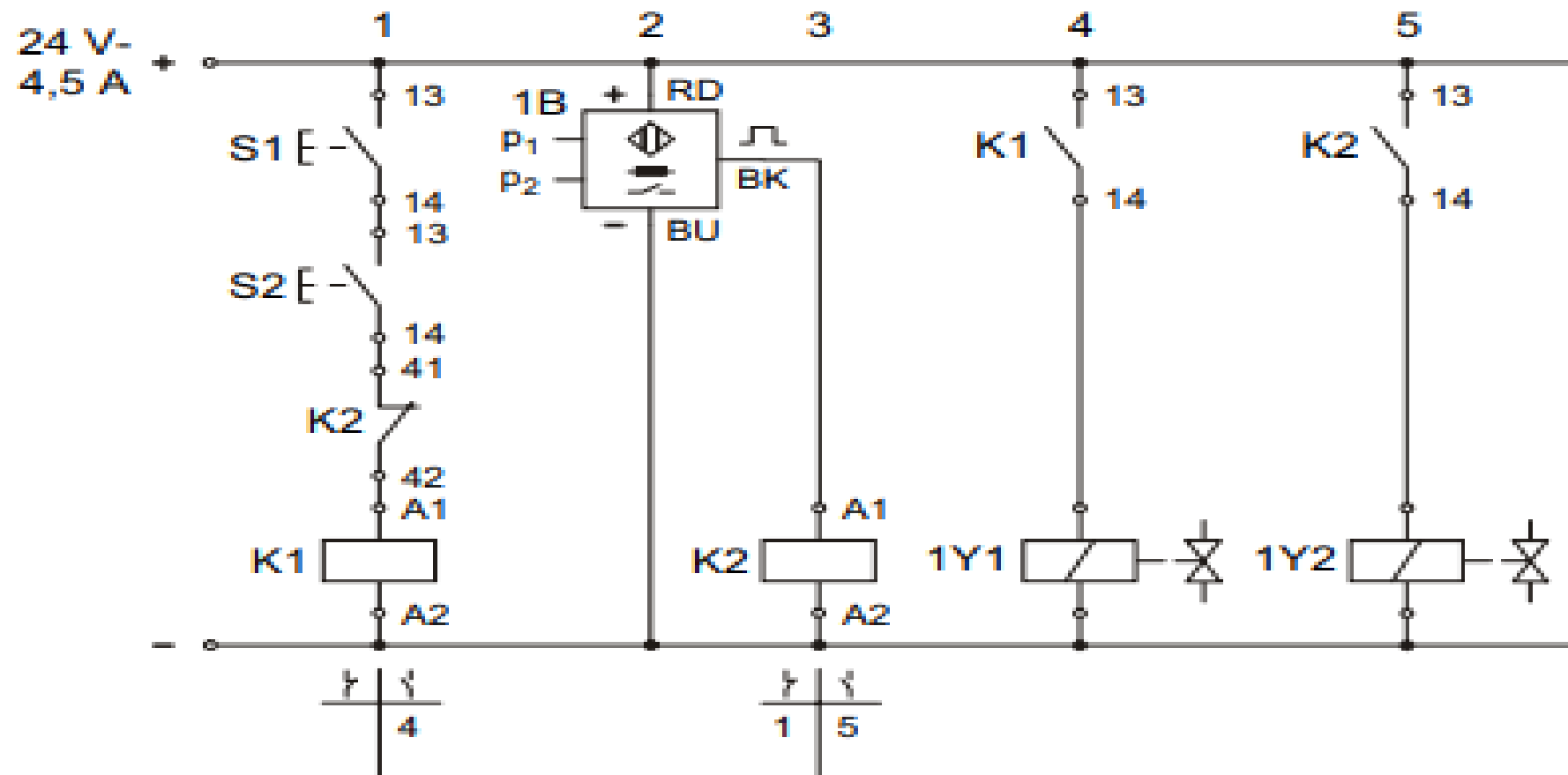
a stamping device. By pressing two pushbutton switches the die is pushed down and the part is stamped. When the stamping pressure has been achieved the die is returned to its start position.





Representation without manifold





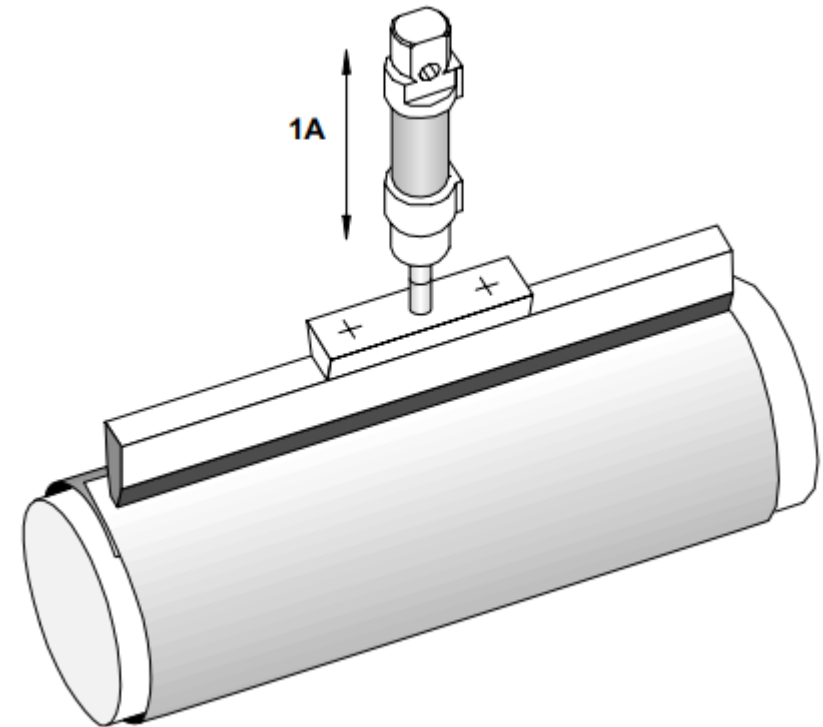


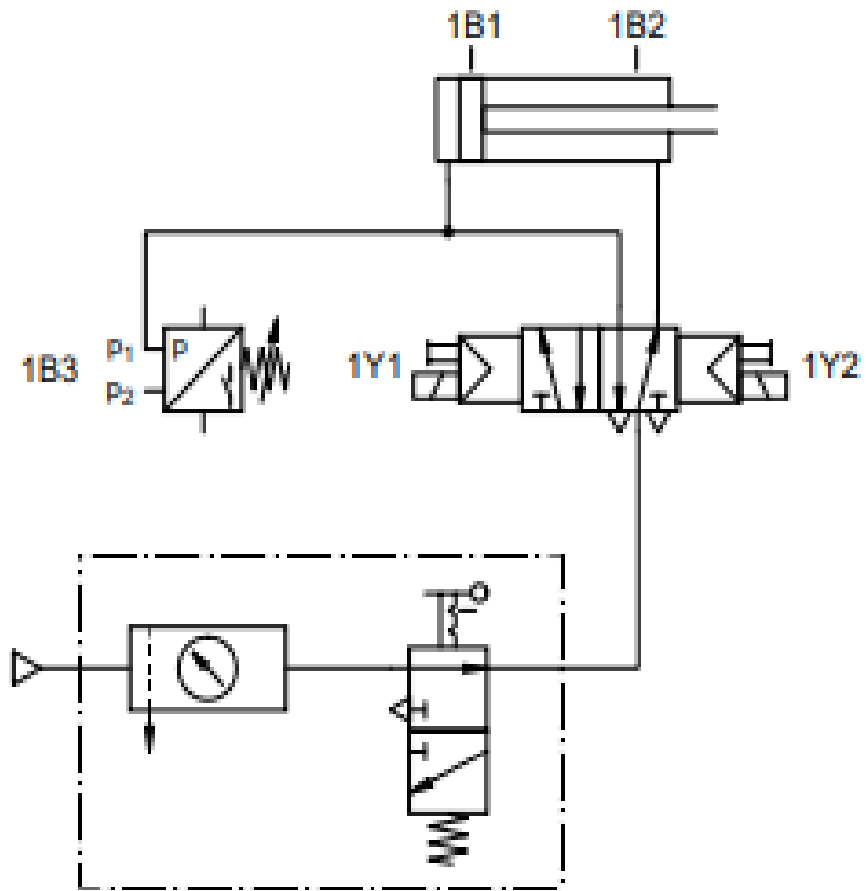
By pressing the pushbutton switches S1 and S2 the electric circuit for the relay K1 is closed and the bank of contacts is made. The electric circuit for the solenoid coil 1Y1 is closed with contact K1 (13, 14) and the 5/2-way double solenoid valve is reversed. The piston rod of the doubleacting cylinder advances to the forward end position. When the pre-set switching pressure has been achieved in the supply line of the double-acting cylinder, the pressure switch 1B is actuated. The electric circuit for the relay K2 is closed and the bank of contacts is actuated. The electric circuit for the relay K1 is opened with contact K2 (41, 42) and the bank of contacts is brought to the normal position. The electric circuit for the solenoid coil 1Y1 is opened. At the same time the electric circuit for the solenoid coil 1Y2 is closed with contact K2 (13, 14) and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod of the double-acting cylinder returns to the retracted end position.

When the switching pressure has dropped the pressure switch 1B is returned to its initial position by means of a reset spring. The electric circuit for the relay K2 is opened and the bank of contacts is brought to the normal position. The electric circuit for the solenoid coil 1Y2 is opened.

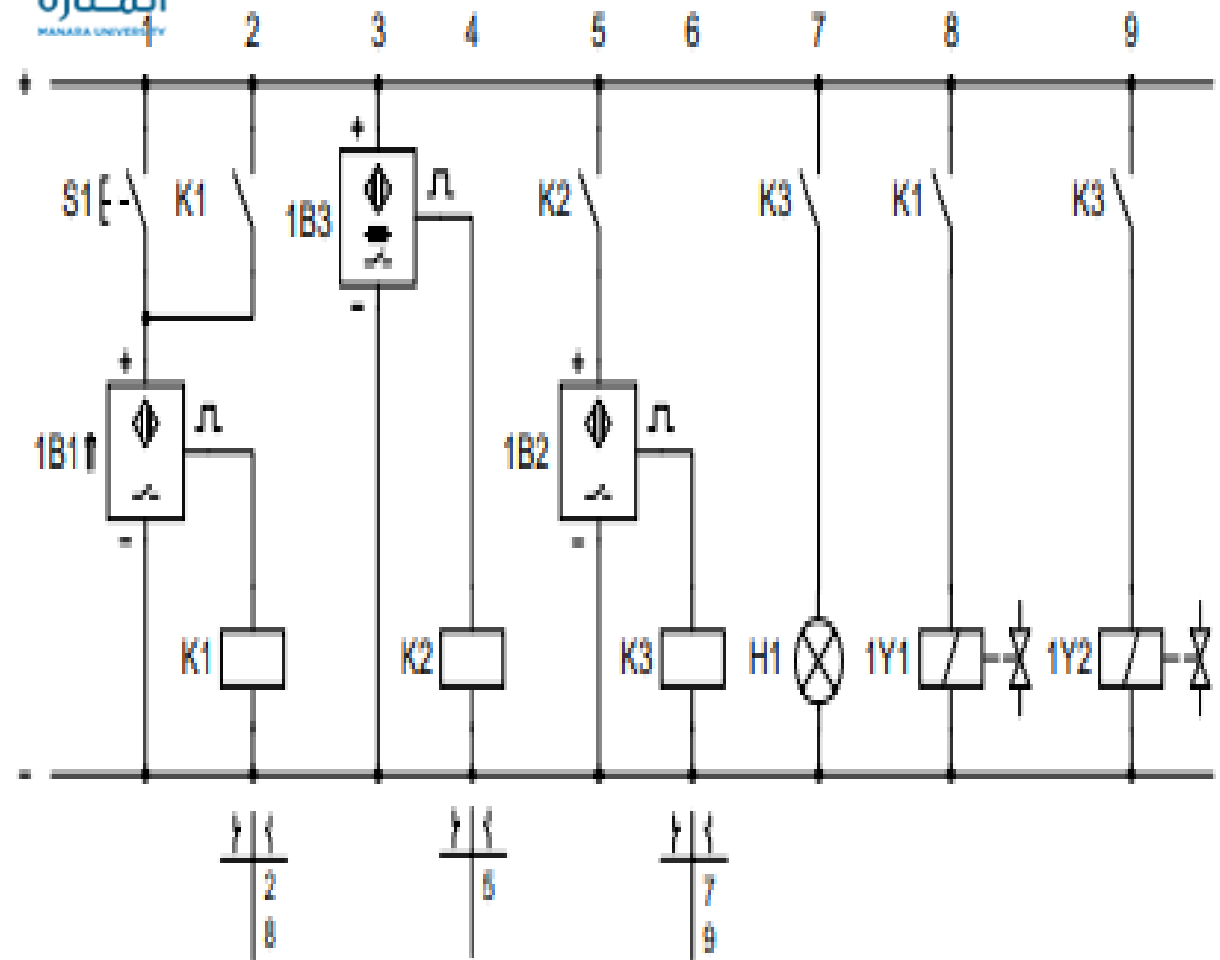
6.Heat sealing device

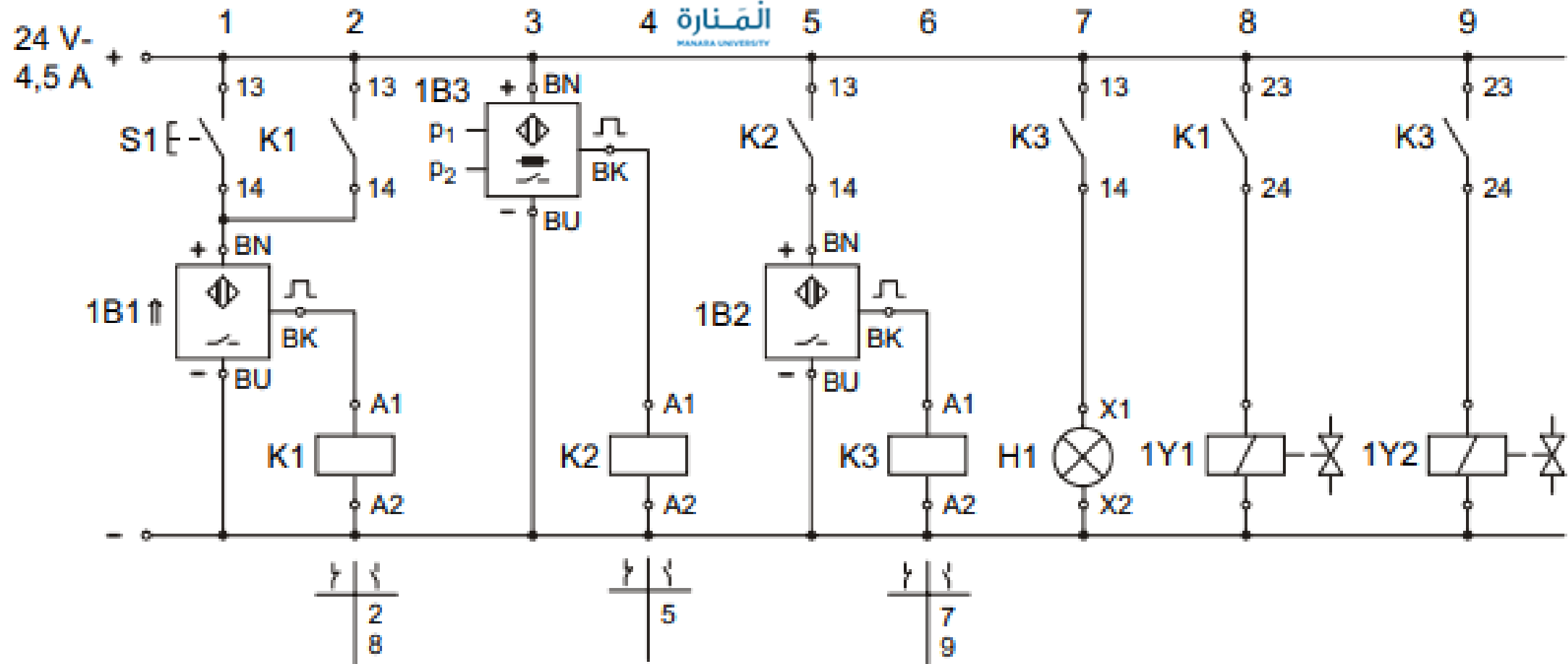
Using a hot pressing die, packing material is to be sealed by application of heat and pressure. By pressing a pushbutton switch the heating rail is advanced and the packaging material is heated along the adhesive strip. After the adhesion pressure has been reached, the heating rail is returned to its start position.





Representation without manifold



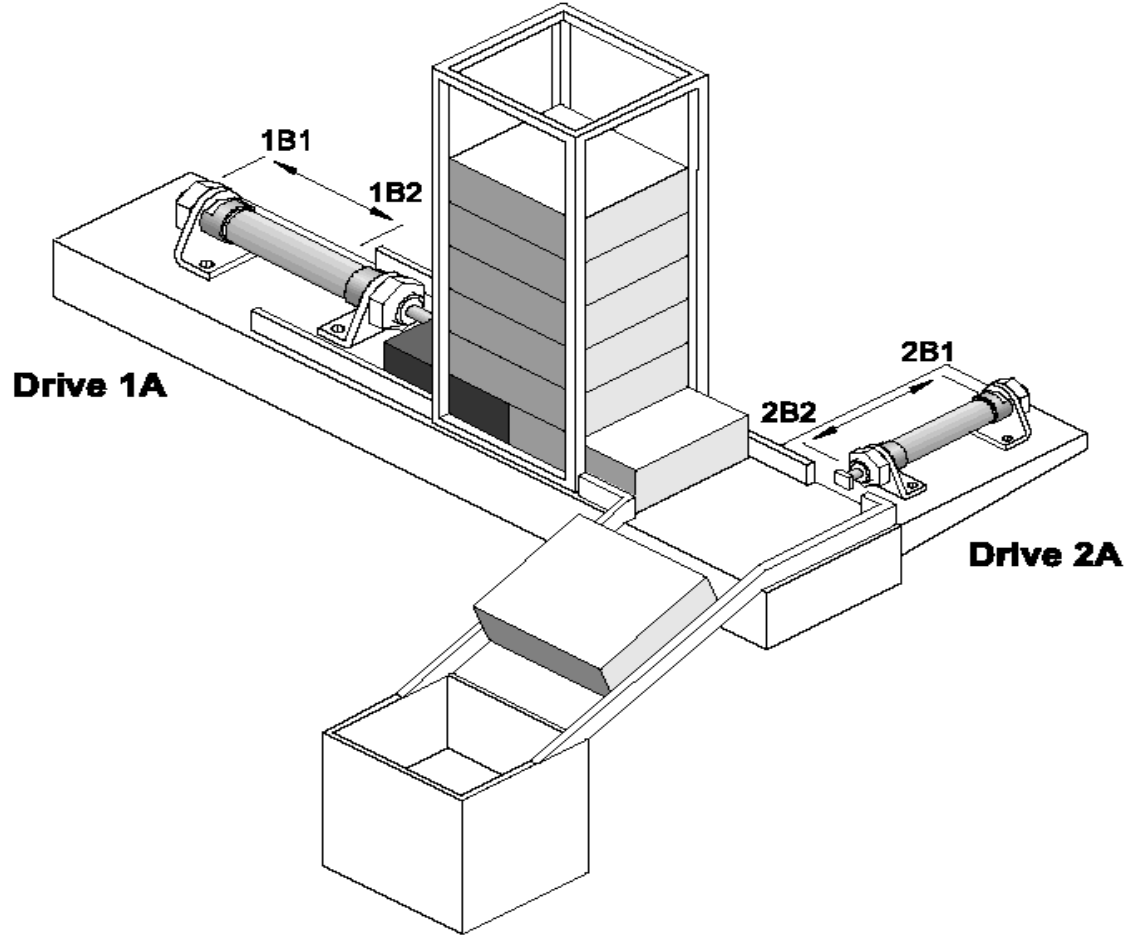




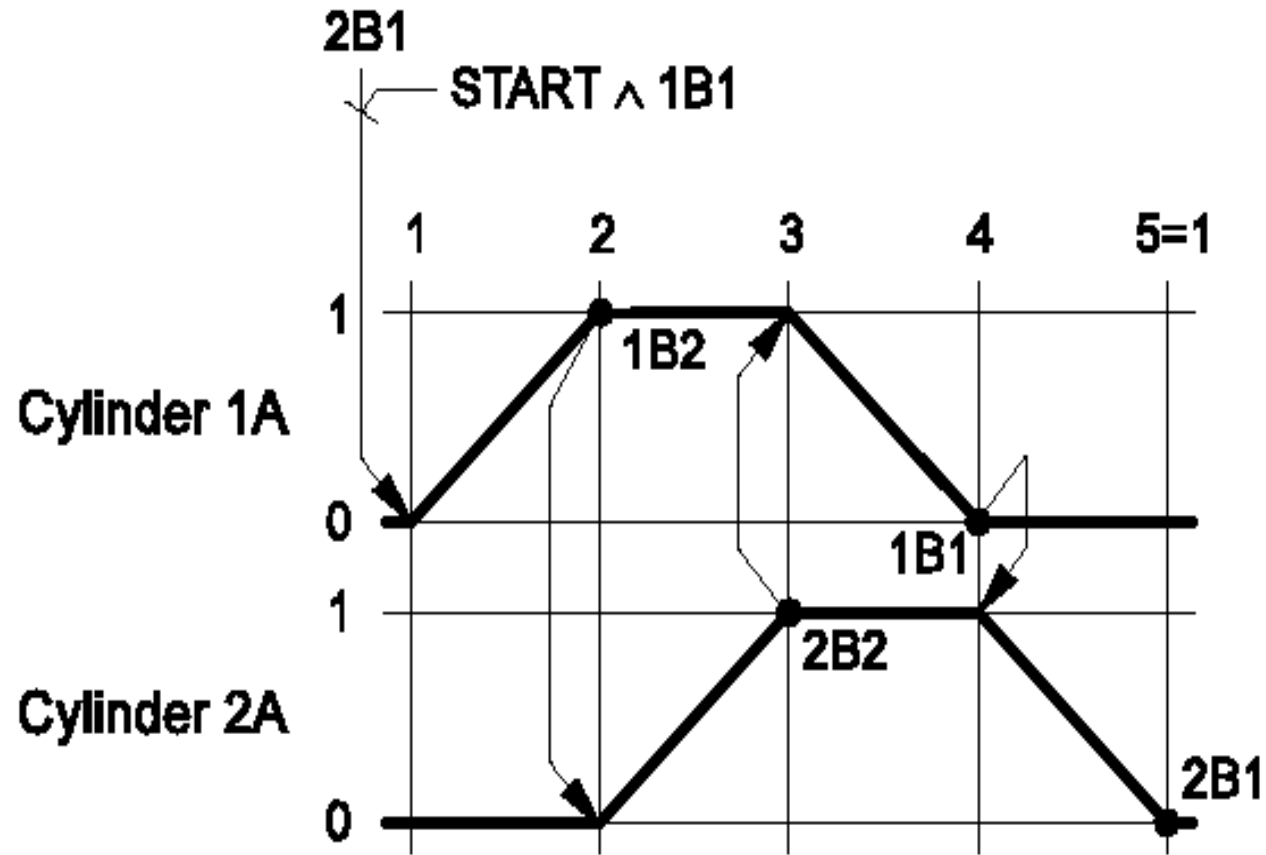
By pressing the pushbutton switch S1 the electric circuit for the relay K1 is closed and the bank of contacts is made. After releasing the pushbutton switch S1 the electric circuit for the relay K1 remains closed via the latching circuit with contact K1 (13, 14). The electric circuit for the solenoid coil 1Y1 is closed with contact K1 (23, 24) and the 5/2-way double solenoid valve is reversed. The piston rod of the double-acting cylinder advances to the forward end position and actuates sensor 1B2. As long as sensor 1 B2 is in the forward end position and not energised no signal is supplied. After leaving the rear end position, the sensor 1B1 opens the electric circuit for the relay K1 and the bank of contacts is brought into the normal position. The electric circuit for the solenoid 1Y1 is opened.



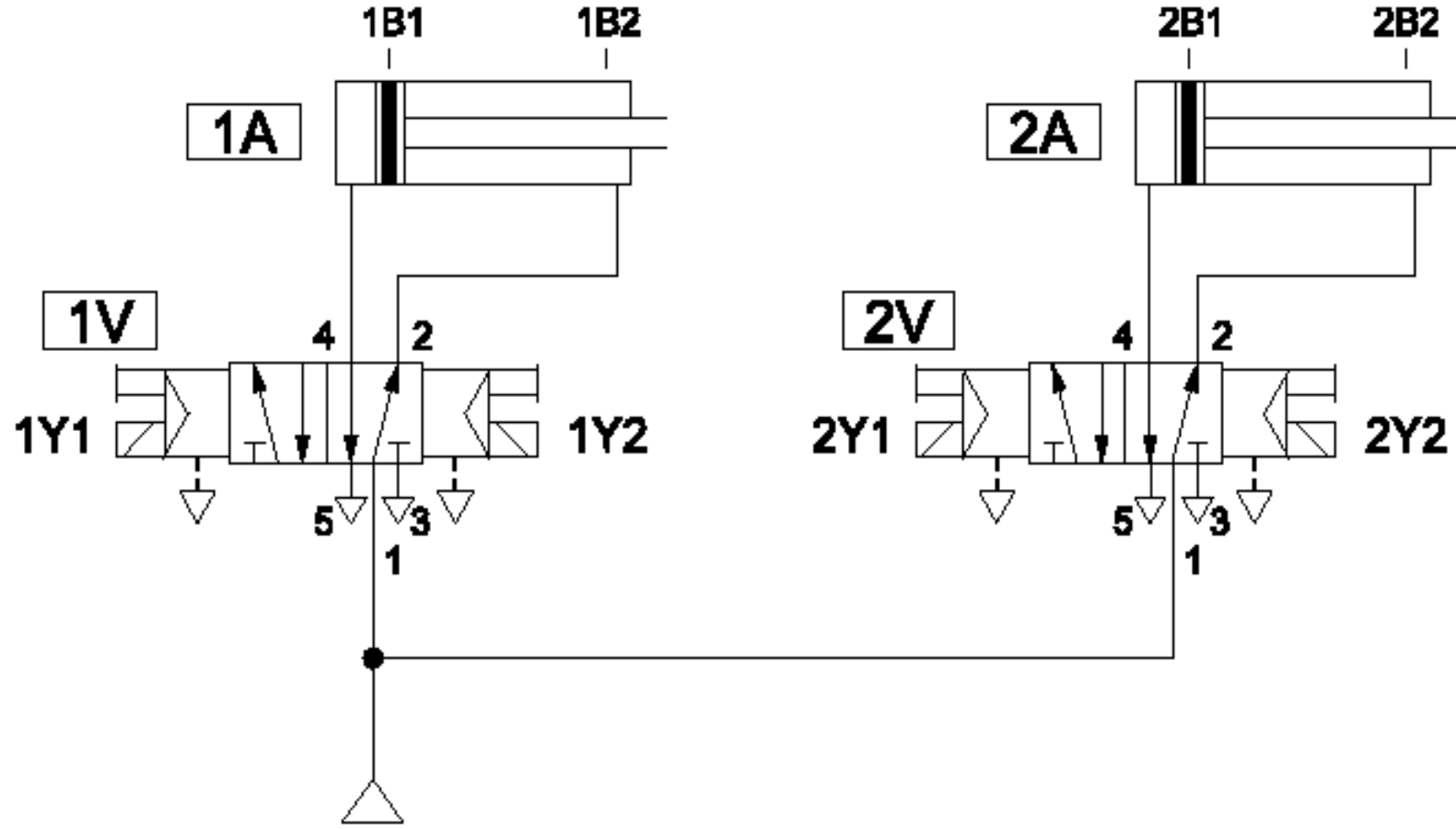
When the pre-set switching pressure has been reached in the supply line of the double-acting cylinder, the pressure switch 1B3 is actuated. The electric circuit for the relay K2 is closed and the bank of contacts is made. 1B2 can now also supply a signal. The electric circuit for the relay K3 is closed and the bank of contacts is made. The electric circuit for the indicating lamp H1 is closed via contact K3 (13, 14). At the same time the electric circuit for the solenoid coil 1Y2 is closed with contact K3 (23, 24) and the 5/2-way double solenoid valve is switched back to its initial position. The piston rod of the double-acting cylinder returns to the retracted end position and actuates sensor 1B1. After leaving the forward end position, the electric circuit for the relay K3 is opened via sensor 1B2 and the bank of contacts is brought into the normal position. The electric circuits for the indicating lamp H1 and the solenoid coil 1Y2 are opened. After the switching pressure has been reduced, the pressure switch 1B3 is brought into its initial position by means of a reset spring.

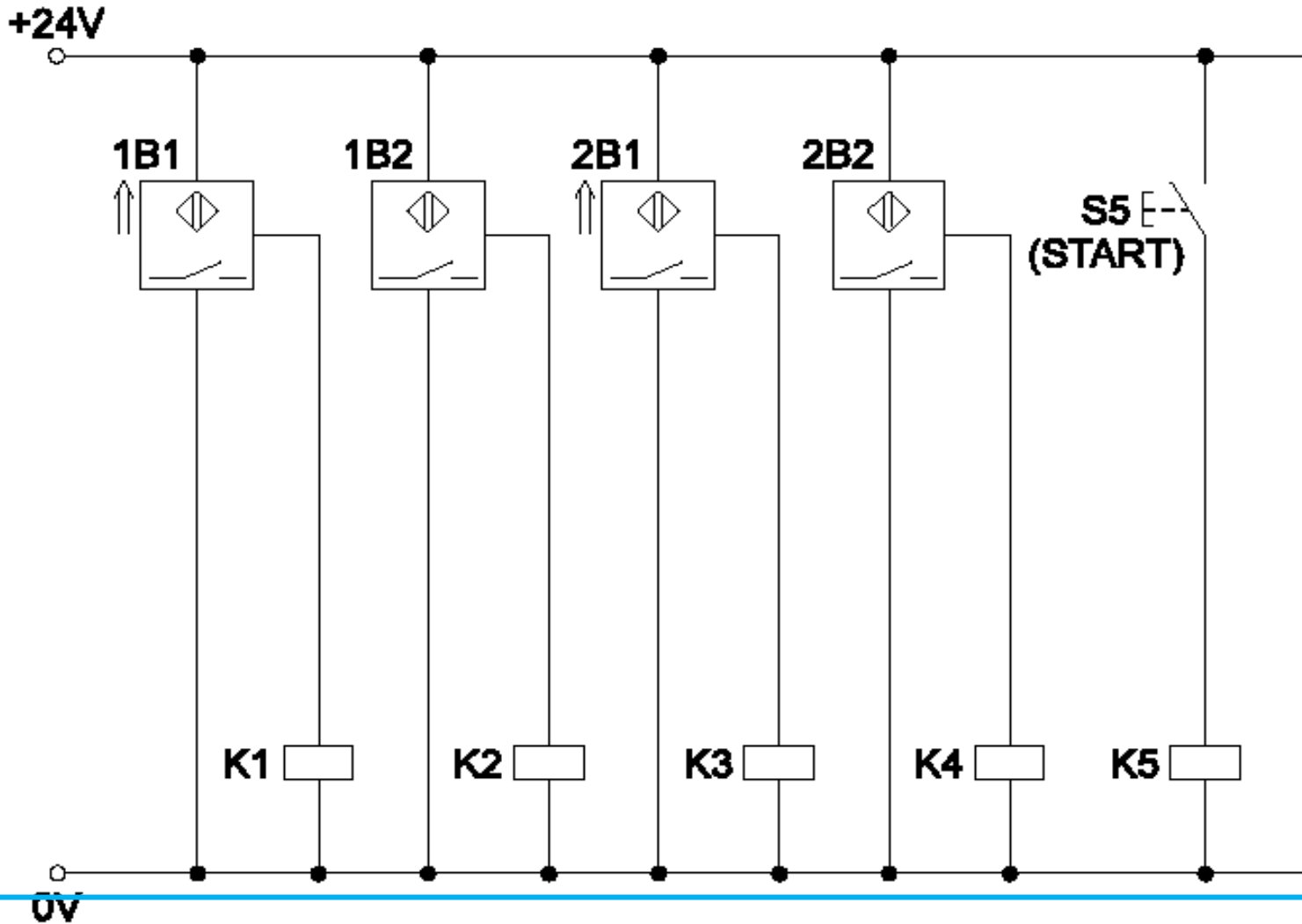


مخطط (الإزاحة - الخطوة) لجهاز التغذية:



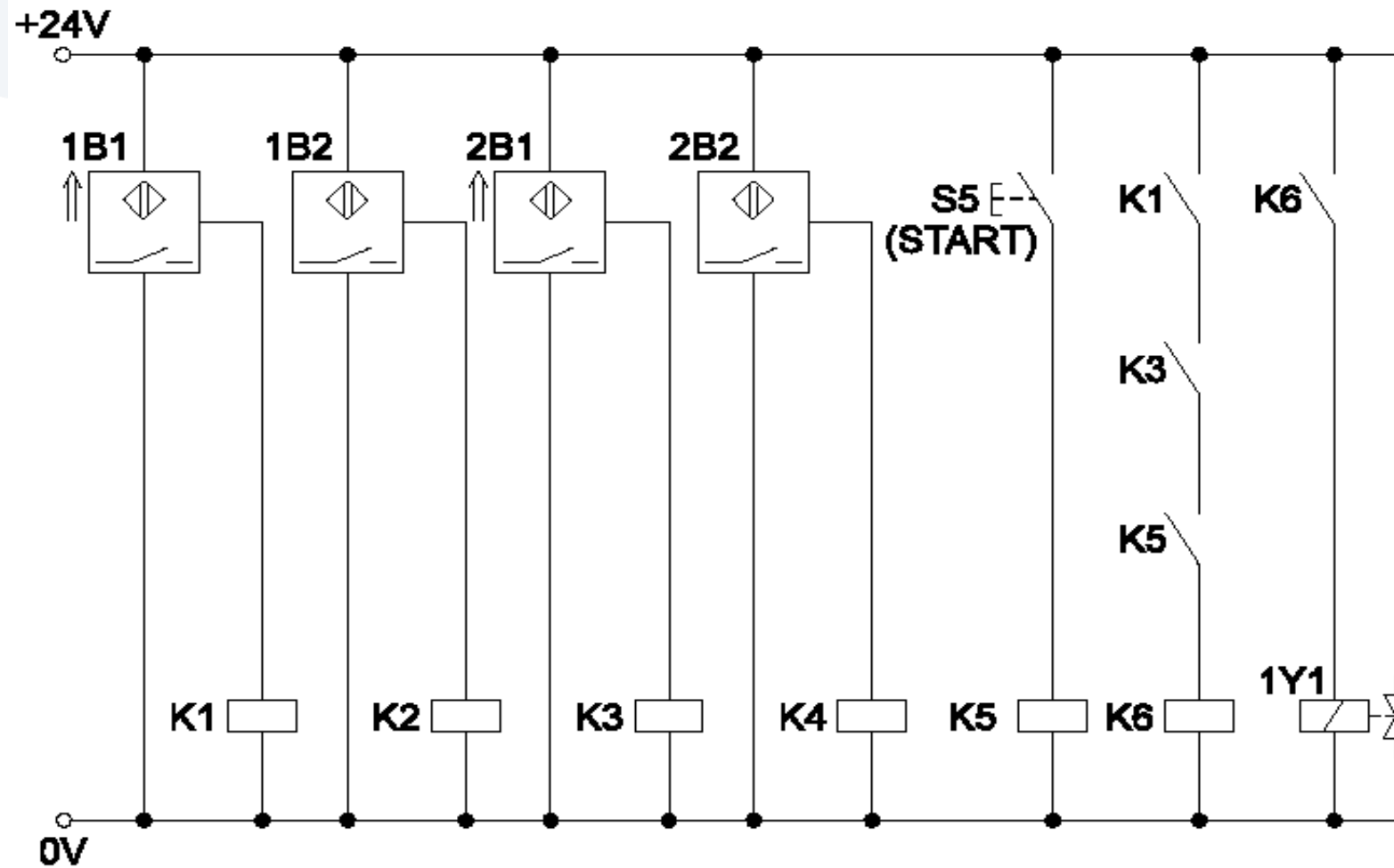
مخطط الدارة الهوائي لجهاز التغذية:





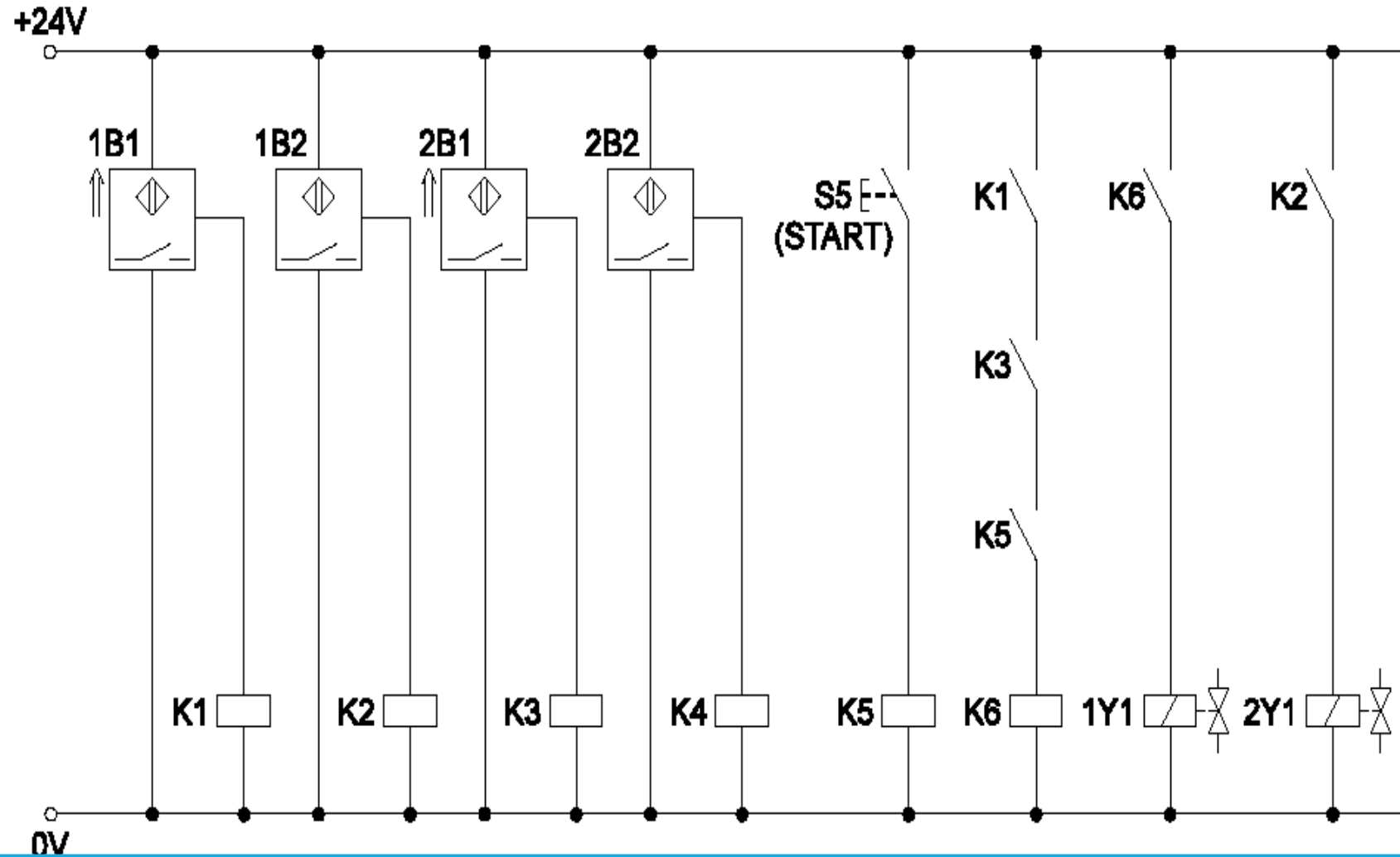
خطوة التتابع الأولى:

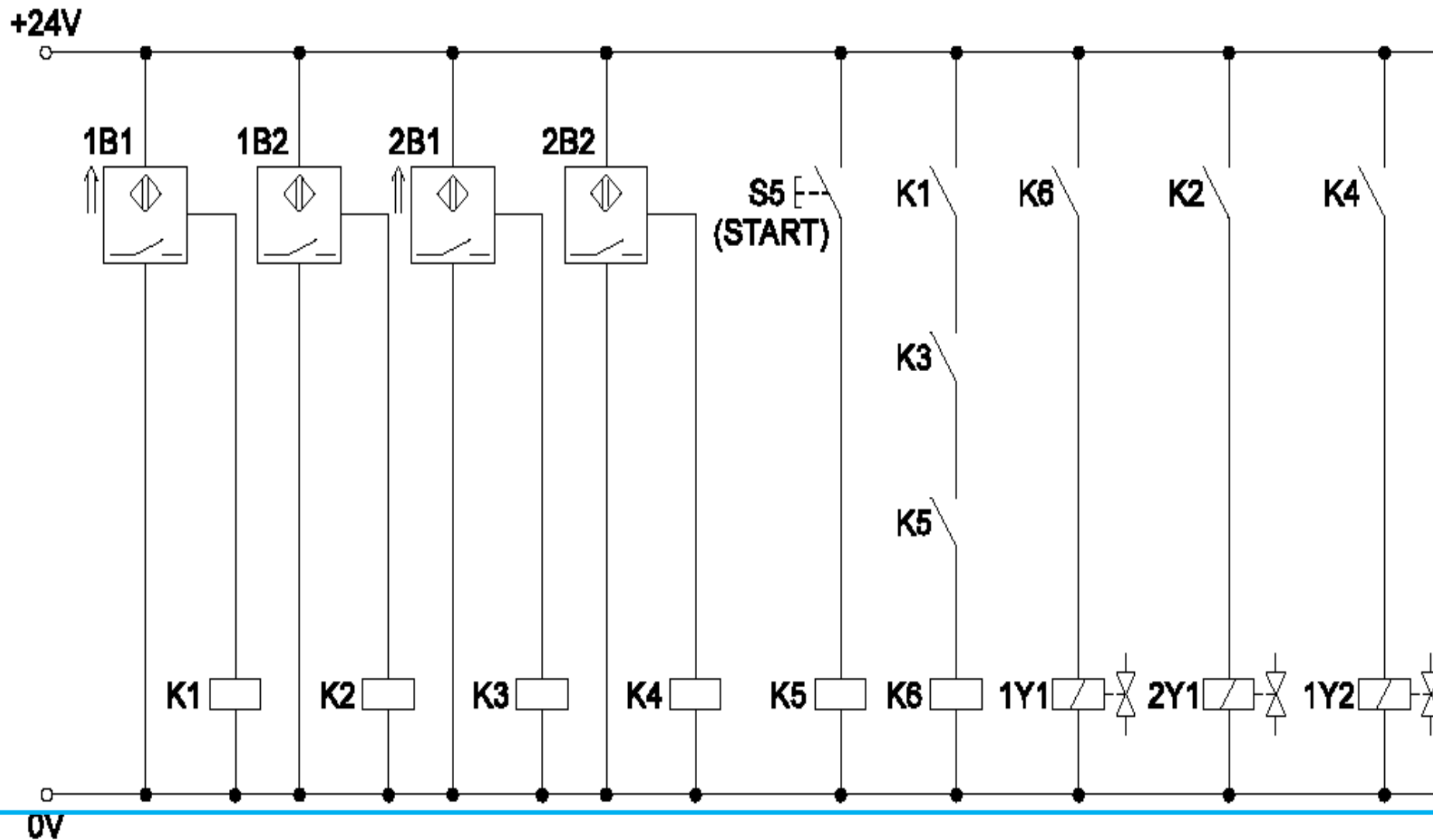
تقدم 1A



خطوة التتابع الثانية:

تقدم 2A

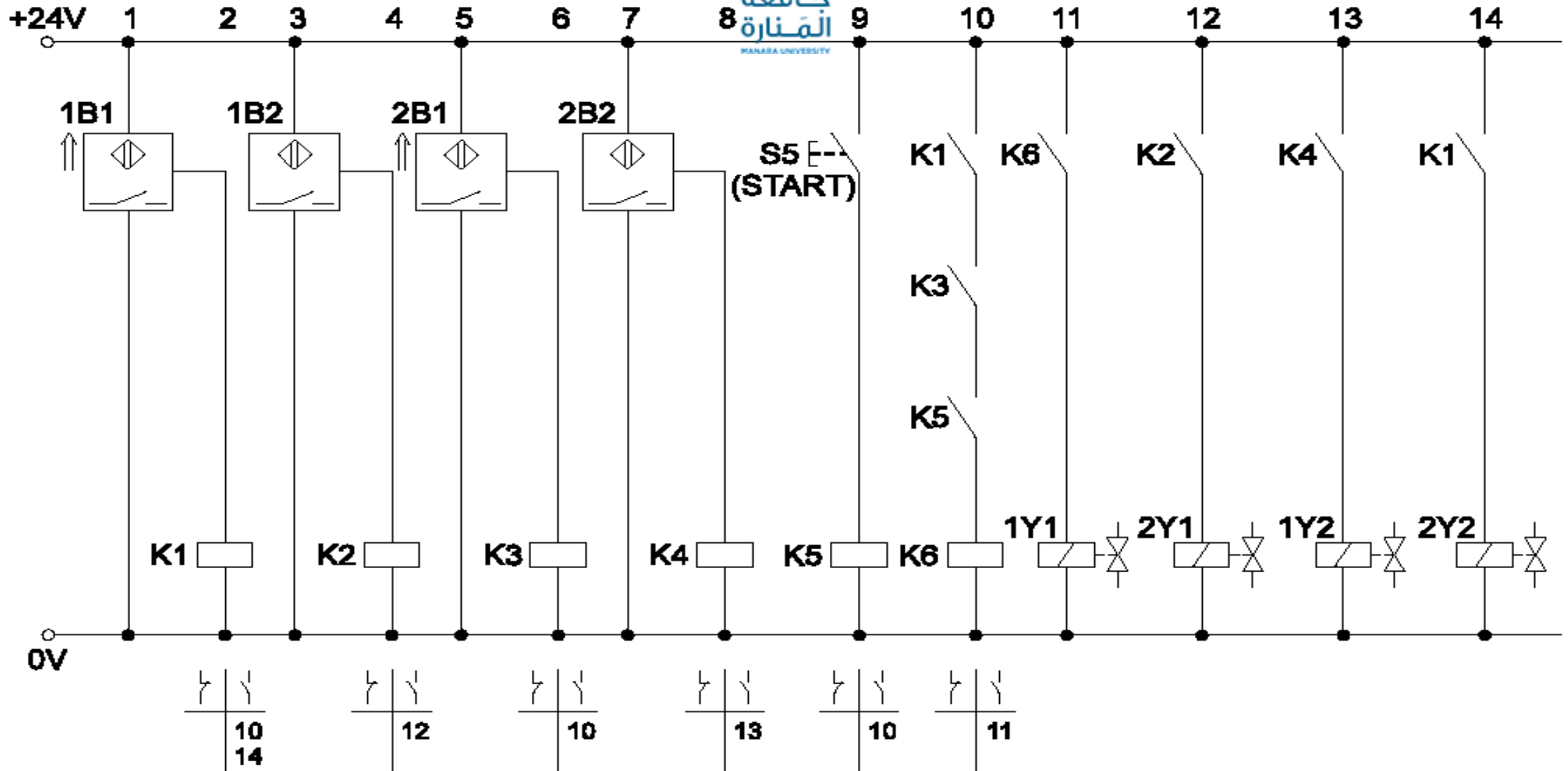






جامعة
المنارة
MANARA UNIVERSITY

خطوة التتابع الرابعة: تراجع 2A





جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَةُ
الْمَنَارَةِ
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY



جَامِعَة
الْمَنَارَة
MANARA UNIVERSITY