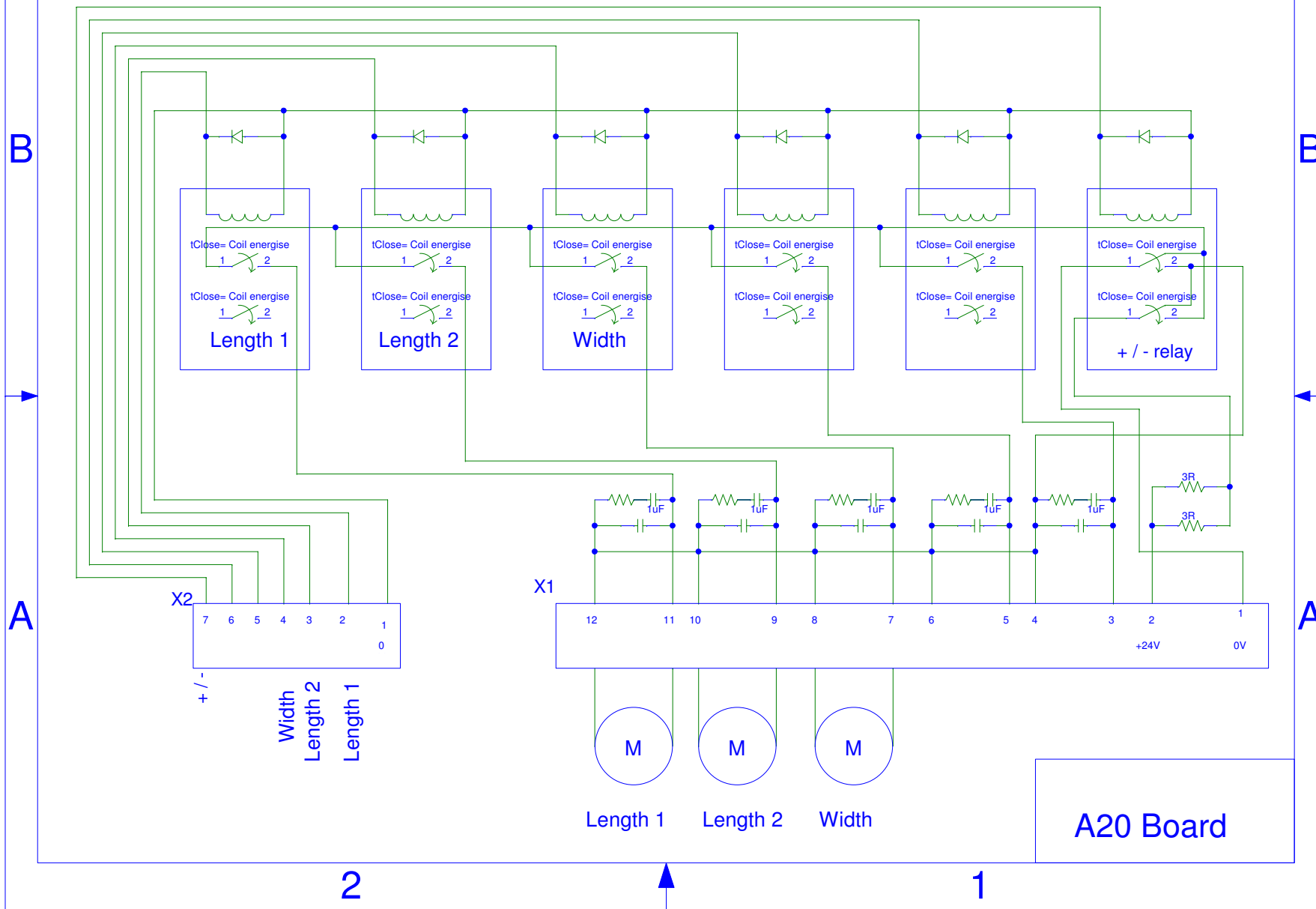


# Schematic and connection diagram of A20 board



## Configuration of A20 board

- Two terminal blocks X1 (12 pins) and X2 (7 pins) are present.
- The board has six 24V relays in which five are used for individual motor actuation and sixth one is used for motor direction reversal.
- Power supply 24V and 0V are given to 2nd and 1st pin of X1 terminal block respectively which is the source of power supply for DC motors.
- Five outputs can be drawn i.e between 3rd and 4th, 5th and 6th, 7th and 8th, 9th and 10th & 11th and 12th pins.
- Common 0V is given to 1st pin of X2 terminal block, which is connected to relay coils.
- Individual 24V taken from PLC can be given to individual pins (2 to 7 of X2) for energizing the corresponding relay coils.
- Two current limiting resistors (3R1) in parallel are connected to pin 2 (24v power supply) of X1.

## Detailed Explanation of A20 board

- This board is used for adjusting the bin size of stacker. It can be adjusted in length and width wise. In this, two different lengths and one width size adjustment are done.

Terminal Block	Pin	Use
X2	2	Length 1
X2	3	Length 2
X2	4	Width
X2	5,6	Spare
X2	7	Direction reversal +/-
X1	7&8	DC motor (width adjustment)
X1	9&10	DC motor (Length 2 adjustment)

X1	11&12	DC motor (Length 1 adjustment)
X1	5&6, 3&4	Spare

For example, considering only Length 1

- **Case 1 (+ Bin Adjustment)** 24V from PLC is given to pin 2 of X2.

Relay designated for pin 2 is energized. when it is energized, 24v and 0v power supply from X1 will go to pin 12 and pin 11 respectively through NC contact after relay energisation.

- **Case 2 (-Ve Bin adjustment)-** 24V from PLC is given to pin 2 and 7 of X2.

Individual relay designated for pin 2 and 7 are energized. when they are energized, 24v and 0v power supply from X1 will go to pin 11 and pin 12 respectively through NC contact after relay energisation. Here 24V supply is exchanged for pins 11 and 12 comparing to previous case 1, therefore motor is reversed.