International University of Ecuador
Faculty of Technical Sciences

School of Mecatronics engineering

Industrial Automatization

Lab's preparatory No 3: Timer conector

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Lab's preparatory No 3 *

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1 Timer AH3-AB

Some of the basic charateristics of the timer AH3-AB are:

1. Exclusive CMOS IC assures high performance stability, and accuracy.
2. High repeat accuracy ± 1%.
3. Short resetting time-100 msec. ax.
4. Wide variety of type-14 time ranges.(0.1 sec. to 10 hrs)
5. 2 modes selectable via slide switch: Mode A(2C) for DPDT time-limiting output contacts and Mode B(1A1C) for SPDT instantaneous and time-limiting output contacts

Table 1: Multi range timer AH3-AB specifications.

AH3-AB Specifications	
Rated voltage	AC 110V, 220V, 380V, 440V DC 12V, 24V
Rated frequency	50/60Hz
Operating voltage	AC 85-110% of rated voltage DC 80-110% of rated voltage
Consumed power	2VA for AC / About 2W for DC
Control method	Time-limit operation / Self-resetting
Contact rating	250V AC 10A (P.F.=1)
Ambient temp.	-10℃ ∼+55℃
Ambient humidity	45∼85% RH

* UIDE x.

Fig. 1. Connection Diagram

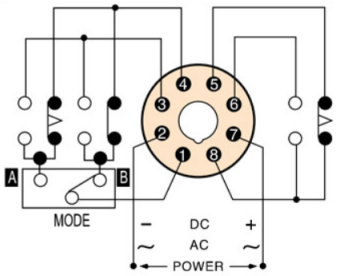
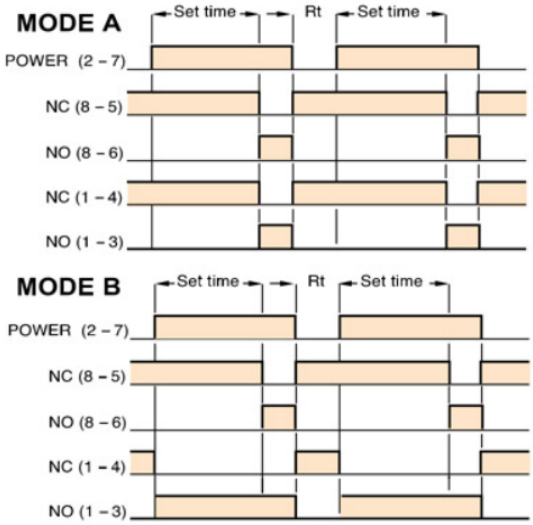
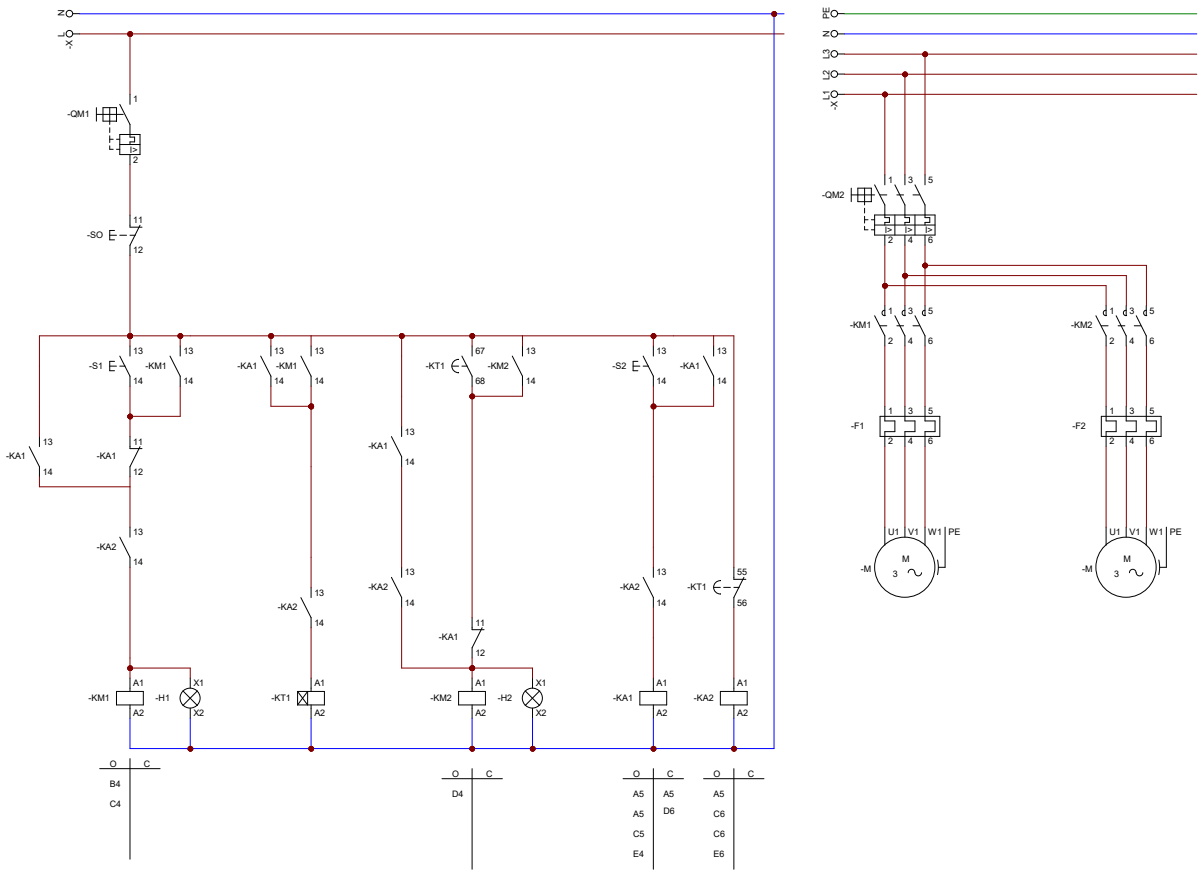


Fig. 2. Modes operation Chart



2 Circuit proposed

1. When button S1 is pressed (momentarily), KM1 must be turned on and after a time t1, contactor KM2 will turn on and KM1 will turn off.
2. If button S2 is pressed (momentarily), contactor KM1 and contactor KM2 will turn on, and after a time t1, KM1 will turn off.
3. Additionally, the circuit will have an emergency stop button S0, which will stop the operation of the fans at any time.
4. Include a lamp that indicates the operation of each fan.
5. The design must use a timed relay (ON DELAY) and optimize the design with the least number of contactor and contacts.



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