

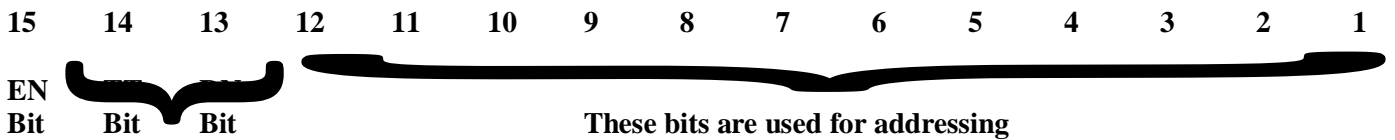
LECTURE - 5

Timers -- TON :: TOF :: RTO

Timers are 3 word instructions:-

- | | | |
|---------------|---------------------|----------|
| 1. Addressing | (T4:0T4:255) | (1 Word) |
| 2. ACC | (Accumulator Value) | (1 Word) |
| 3. PRE | (Preset Value) | (1 Word) |

Some of the addressing word's bit are used as output of timer.



These three bits are use as timer's output.

A timer has three digital outputs and two analog outputs. They are:-

- Digital :
- EN (Enable Bit)
 - TT (Timer Time Bit)
 - DN (Done Bit)

Syntax : T4:0/EN or T4:0/TT or T4:0/DN

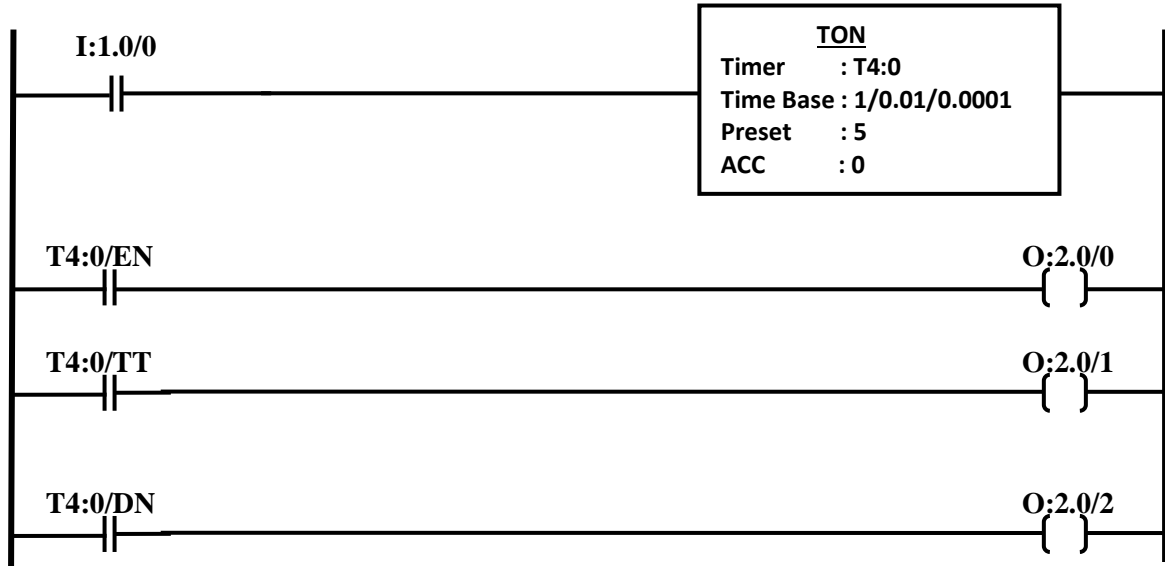
- Analog :
- PRE (Preset)
 - ACC (Accumulator)

Syntax : T4:0.PRE or T4:0.ACC

Timer Time Calculation

Timer Time Value = Preset x Time Base.

TON (ON DELAY TIMER)



- EN (Enable bit) ::** This bit is high when the power to the timer block is high. i.e: I:1.0/0 is made on.
- TT (Timer Time Bit) ::** This bit is high when the timer is running or timer count is counting or ACC < PRE.
- DN (Done Bit) ::** This bit is high when timer count is finished or ACC=PRE.