

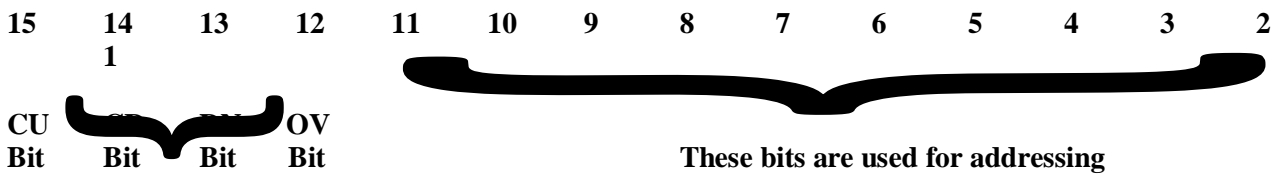
LECTURE - 7

Counter CTU :: CTD

Timers are 3 word instructions:-

- | | | |
|---------------|---------------------|----------|
| 1. Addressing | (C5:0C5:255) | (1 Word) |
| 2. ACC | (Accumulator Value) | (1 Word) |
| 3. PRE | (Preset Value) | (1 Word) |

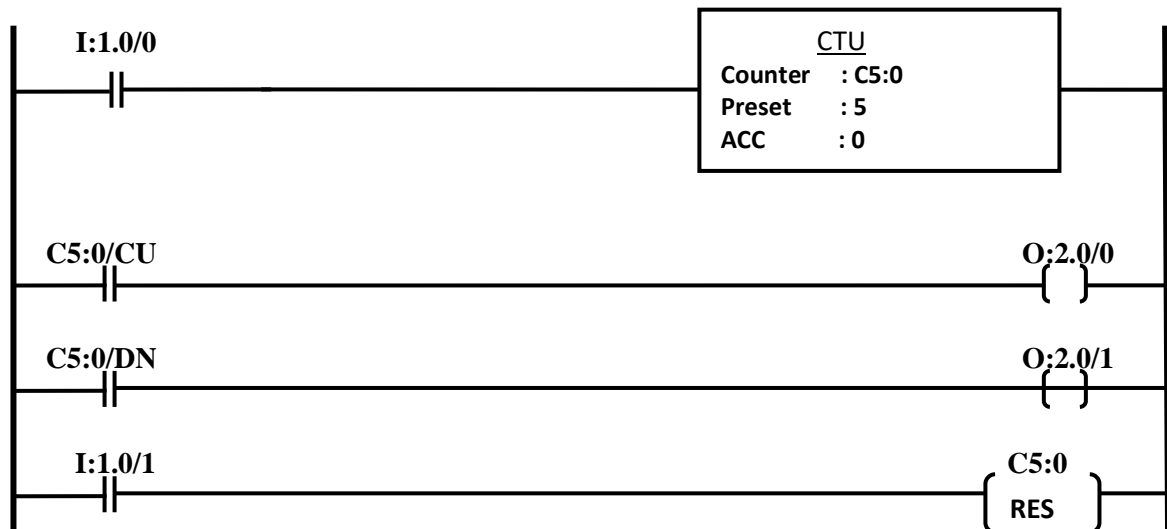
Some of the addressing word's bit are used as output of counter.



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

- Digital :** CU (Counter up Bit)
DN (Done Bit)
Syntax : C5:0/CU or C5:0/DN
- Analog :** PRE (Preset)
ACC (Accumulator)
Syntax : C5:0.PRE or C5:0.ACC

CTU (COUNTER UP)



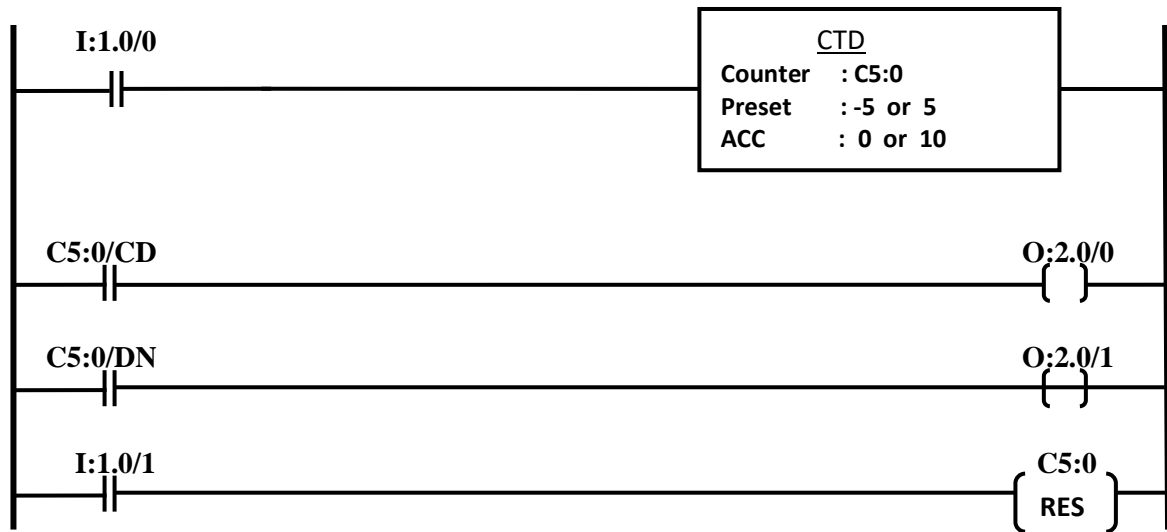
CU (Counter Enable bit) :: This bit is high when the power to the counter block is high. i.e: I:1.0/0 is made on.

DN (Done Bit) :: This bit is high when counter has finished counting or ACC = PRE

Note :: If power is made off, after DN bit is high, it remains high until reset is used i.e. to reset the counter

external reset must be used.

CTD (COUNTER DOWN)



CD (Counter Enable bit) :: This bit is high when the power to the counter block is high. i.e: I:1.0/0 is made on.

DN (Done Bit) :: This bit is initially high and when counter has finished counting or ACC < PRE this bit goes low.

Note :: To reset the counter external reset must be used.