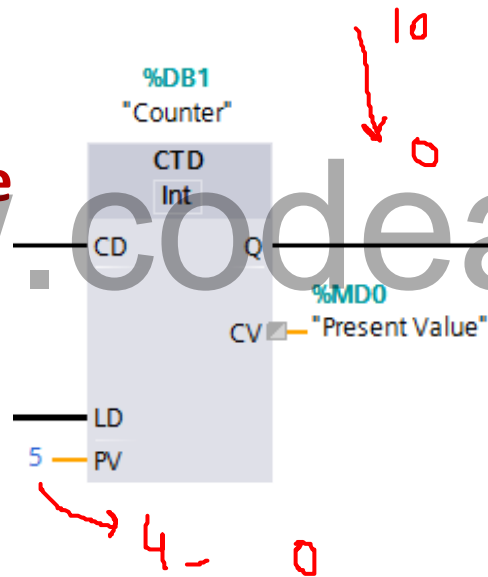


Siemens S7-1200

CPU 1212C AC/DC/Relay

Counter Operations (CTD)

- Count Down
- Exercise Example



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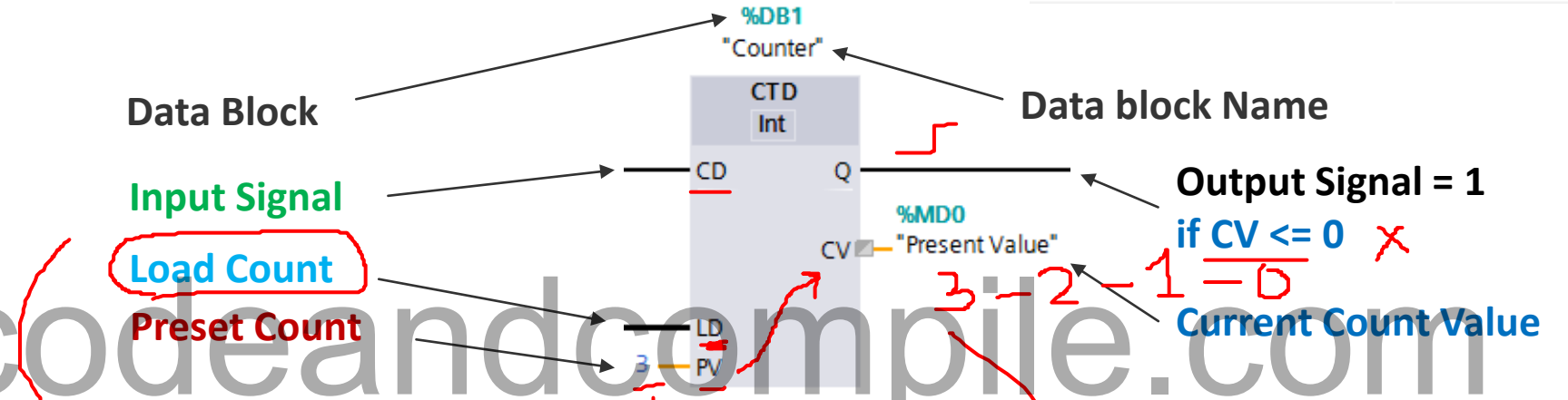
Counter Operations in LAD – CTD (Count Down)



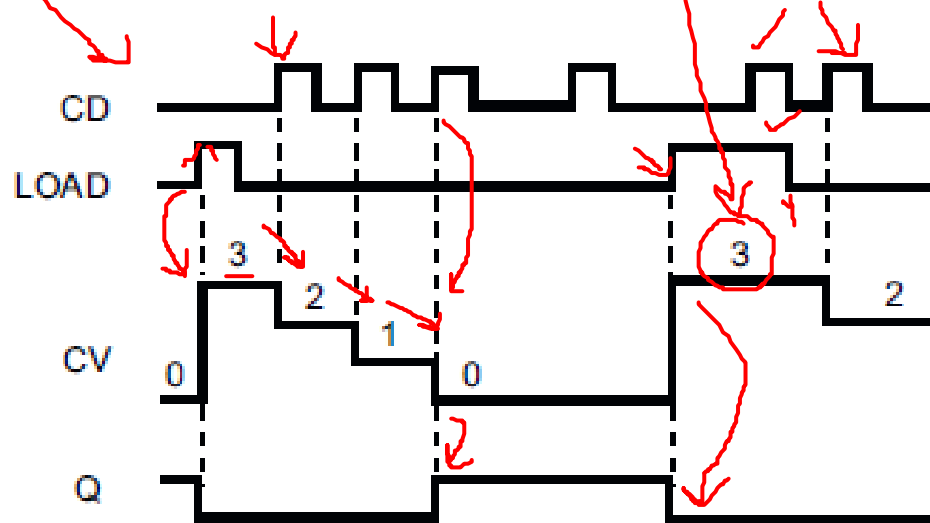
Count Down

The "**count down**" counter (CTD) counts **down by 1** when the value of **input parameter CD changes from 0 to 1**.

+1 Counter operations	
CTU	Count up
CTD	Count down
CTUD	Count up and down



Example If Preset Count = 3

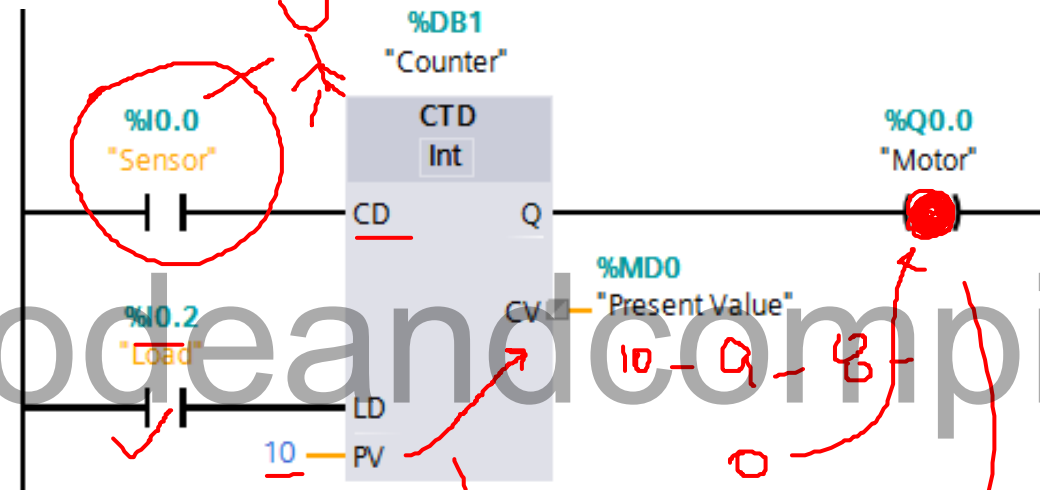


Exercise Example

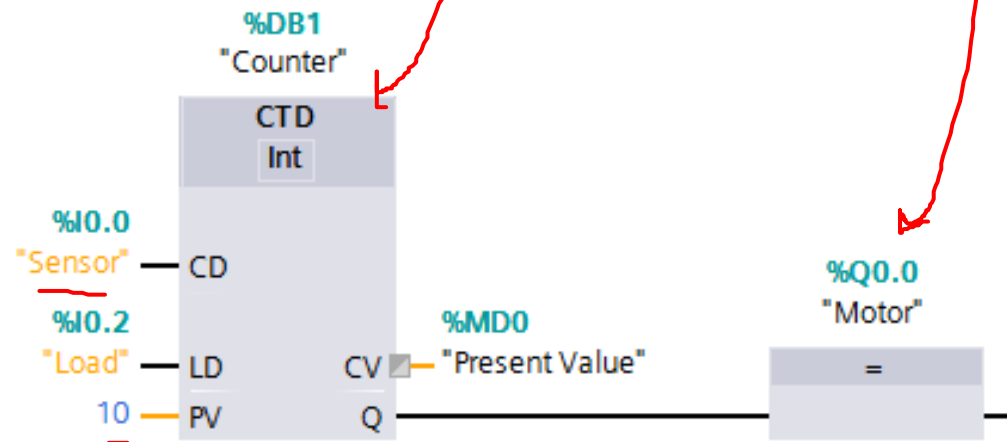


Write a logic by utilizing CTD to count the number of persons (I0.0) passing from the gate (Q0.0). If 10 people passes the gate (motor) should be closed.

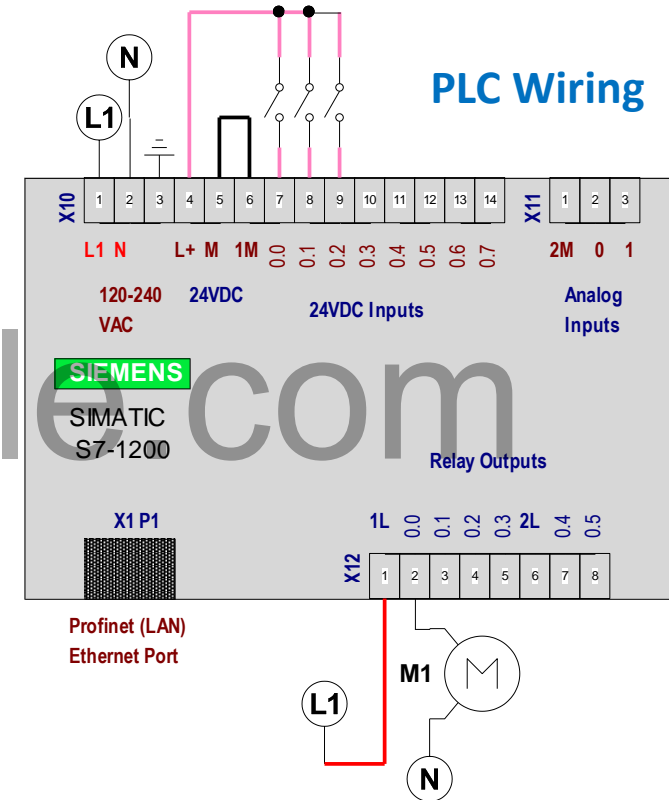
Ladder Solution



FBD Solution



PLC Wiring



What did we learn in this lesson?

- ▶ **CTD** is used to **count the input in downwards direction**
- ▶ If the **value of parameter CV (current count value)** is **equal to or less than 0**, the counter **output parameter Q = 1**.
- ▶ If the value of parameter **LOAD** changes from **0 to 1**, the value at **parameter PV (preset value)** is loaded to the counter as the new CV.

Thank you

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