LadderWORK APPLICATION NOTES

Code : APP-LW-004
Title : Using CMP_W magnitude comp. **Date** : 05.11.2000
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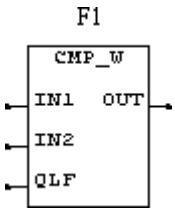
USING THE CMP_W COMPONENT. MAGNITUDE WORD COMPARATOR WITH QUALIFIER INPUT

Shown below is the appareance of the CMP_W component in the LadderWORK worksheet.



The following table will show the meaning of each single pin.

Pin	Meaning
IN1	The first value to be compared should be applied to this pin.
IN2	The second value to be compared should be applied to this pin.
QLF	A value, from 0 to 5, applied to this pin select the appropriate logic equations for the comparing.
OUT	The result of the comparing will be available on this pin

The CMP_W component compares the magnitude of the values applied to the input pins IN1 and IN2.
The result of comparing is function of the value applied to the qualifier input QLF.
Using this function block you have the possibility to change, during run-time, the logic of comparing simply changing the value applied to the QLF pin.
The function block returns TRUE, on its OUT output pin, if the condition is verified else it returns FALSE.

Use the following table for the relationship between value and comparing logic.

QLF PIN	EQUATION	Related Function
0	IN1 == IN2	TRUE when IN1 is equal to IN2
1	IN != IN2	TRUE when IN1 is different by IN2
2	IN1 >= IN2	TRUE when IN1 is greater or equal to IN2.
3	IN1 <= IN2	TRUE when IN1 is less or equal to IN2
4	IN1 > IN2	TRUE when IN1 is greater than IN2
5	IN1 < IN2	TRUE when IN1 is less than IN2

If the value applied to the QLF pin is greater than 5 then the function block returns always FALSE.

For supply a constant value to the QLF pin you can use the CONST or the IDENT function blocks.

Notes :

- This application requires LadderWORK release 1.2x or better
- Refer to the project cmp_w.*pjn* included with the application note