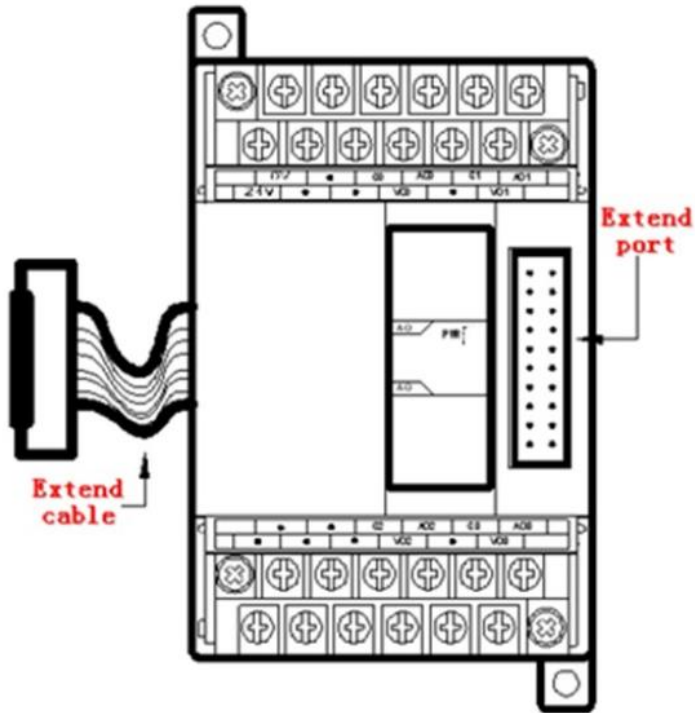


ANALOG OUTPUT MODULO XC-E4DA

1、Specification



Characteristic :

- 12 bits high precision analog output
- 4 channels selectable voltage 0~5V、0~10V , current 0~20mA、4~20mA output
- As special function module of XC, 7 modules could be connected

Items	Voltage output	Current output
Analog output bound	DC0~5V、0~10V	DC0~20mA、4~20mA
Digital output bound	12 bits binary data	
Distinguish Ratio	1/4096(12Bit); the converted data is stored into PLC with the format of HEX	
Integrate precision	0.8%	
Convert speed	2ms per channel	
Insulate format	DC/DC convert, optical coupling insulation	
Power for analog using	DC24V±10%,100mA	
Install format	Can be fixed with M3 screws or directly installed on orbit of DIN46277 (width: 35mm)	
Exterior size	63mm×102mm×73.3mm	

[Extend cable] : Realize data transfer via connecting of extend cable and PLC extend port

[Extend port] : Connect with other expansions

2 . Assignment of Output ID

XC series analog module does not engross I/O units, the converted data is directly transferred into PLC register. The output channel's correspond PLC register ID is:

Output ID list

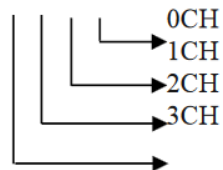
Channel	No.1 unit	No.2 unit	No.3 unit	No.4 unit	No.5 unit	No.6 unit	No.7 unit
0CH	QD100	QD200	QD300	QD400	QD500	QD600	QD700
1CH	QD101	QD201	QD301	QD401	QD501	QD601	QD701
2CH	QD102	QD202	QD302	QD402	QD502	QD602	QD702
3CH	QD103	QD203	QD303	QD403	QD503	QD603	QD703

3 . Setting of working mode

1) Each expansions' input/output have the choice of voltage 0~5V、0~10V , current 0~20mA、4~20mA modes. Via the setting of special FLASH data register FD inside PLC, see the following table:

Module	Channel's ID
	0CH~3CH
1# module	D8250
2# module	D8258
3# module	D8266
4# module	D8274
5# module	D8282
6# module	D8290
7# module	D8298

Take expansion1 as the example:
FD8250 H O O O O



Each channel's working mode is assigned by the correspond register's 4 bits. Each bit's definition is listed in the following table:

Take module 1 as the example:

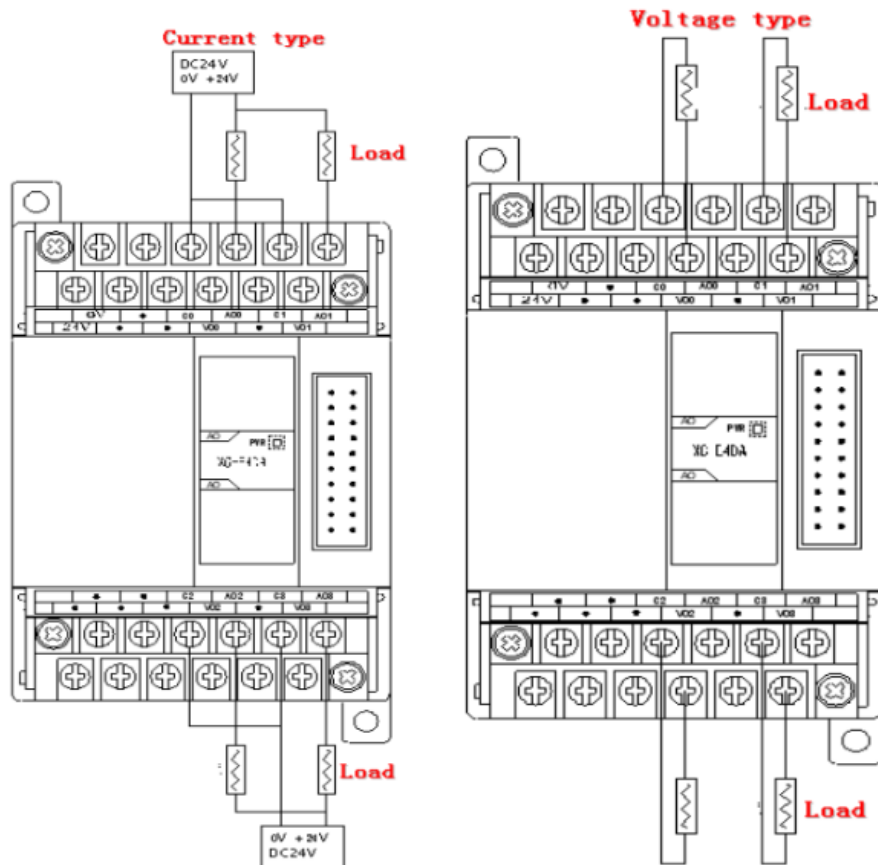
Register FD8250 :

Channel 1				Channel 0			
Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
-		0:Voltage input	0:0~10V 1:0~5V	-		0: Voltage input	0:0~10V 1:0~5V
		1:current input	0:0~20mA 1:4~20mA			1:Current input	0:0~20mA 1:4~20mA
Channel 3				Channel 2			
Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8
-		0: Voltage input	0:0~10V 1:0~5V	-		0: Voltage input	0:0~10V 1:0~5V
		1: current input	0:0~20mA 1:4~20mA			1: current input	0:0~20mA 1:4~20mA

4 . Exterior connection

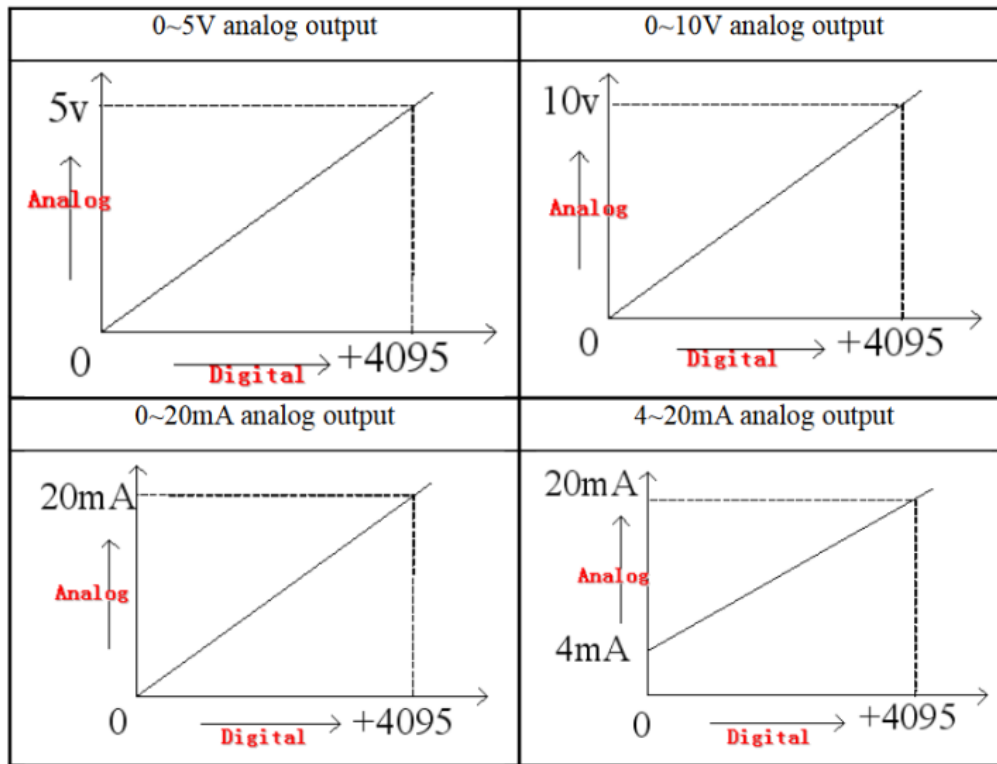
When carry on exterior connection, please note the following two items:

- When connect + 24V power outside, please choose 24V power on PLC main unit to avoid interfere.
- To avoid interfere, please use shield cable and single point grounding with the shield layer.
- Module's 0~20mA or 4~20mA output need 24V power from outside, according to the analog output register QD's value, the module adjusts the loop circuit's current, but the module itself doesn't produce current.



5 . Analog digital convert chart

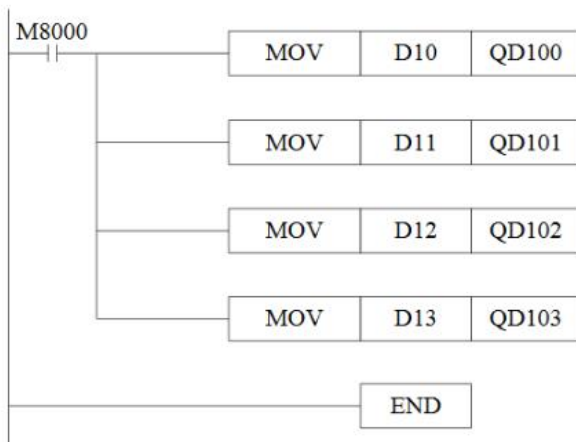
The relationship between PLC's output digital and its correspond analog data is showed in the following chart:



When the output data exceed K4095, D/A converted output analog data keep 5V、 10V or 20mA

6 . Programming

Real time write data into 4 channels



Write data into data register D10 and give channel 0

Write data into data register D11 and give channel 1

Write data into data register D12 and give channel 2

Write data into data register D13 and give channel 3