

Channel Configuration Procedure

The channel configuration word consists of bit fields, the settings of which determine how the channel will operate. See the chart below and the descriptions that follow for configuration information. Appendix B contains a configuration worksheet.

After determining the configuration for each channel, follow the steps outlined in chapter 2, *Quick Start*, or in chapter 6, *Ladder Logic Configuration Examples*, to enter this configuration data into your ladder program and copy it to the 1746-NI8 module.

Channel Configuration Word (O:e.0 through O:e.11) – Bit Definitions

Bit(s)	Define	To Select ^①	Make these bit settings in the Channel Configuration Word																	
			15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
0-2	Input Type	SET DIP SWITCH TO "OFF" FOR VOLTAGE INPUT	± 10V dc														0	0	0	
			1-5V dc															0	0	1
			0-5V dc															0	1	0
			0-10V dc															0	1	1
		SET DIP SWITCH TO "ON" FOR CURRENT INPUT	0-20 mA															1	0	0
			4-20 mA															1	0	1
			± 20 mA															1	1	0
			0-1 mA															1	1	1
3-5	Data Format	Engineering Units														0	0	0		
		Scaled-for-PID														0	0	1		
		Proportional Counts														0	1	0		
		1746-NI4 Data Format														0	1	1		
		User Defined (Class 3)														1	0	0		
		User Defined (Class 3)														1	0	1		
		Illegal (configuration error)																		
		Illegal (configuration error)																		
6 and 7	Open Circuit	Zero														0	0			
		Upscale														0	1			
		Downscale														1	0			
		Illegal																		
8-10	Filter Frequency	No Filter						0	0	0										
		75 Hz						0	0	1										
		50 Hz						0	1	0										
		20 Hz						0	1	1										
		10 Hz						1	0	0										
		5 Hz						1	0	1										
		2 Hz						1	1	0										
		1 Hz						1	1	1										
11	Channel Enable	Channel Disabled					0													
		Channel Enabled					1													
12-15	Unused	Unused ^②	0	0	0	0														

^① In addition to programming the configuration word, you must also use the DIP switches to select voltage or current.

^② Ensure unused bits 12-15 are always be set to zeros.