Voltage Input Specifications for 4-Channel Modules

Specification	1746-NI4	1746-NIO4I	1746-NIO4V	1746-FIO4I	1746-FIO4V
Overall accuracy drift (maximum)	+63 ppm/°C of full scale (maximum)			+88 ppm/°C (maximum)	
Gain error @ 25 °C (77 °F)	+0.263% (maximum)			+0.323% of full scale	
Gain error, 0…60 °C (32…140 °F)	+0.461% (maximum)			+0.530% of full scale	
Gain error drift	±57 ppm/°C			±79 ppm?/°C	

Output Specifications for 4-Channel Modules

Specification	1746-FIO4I	1746-NIO4I	1746-NO4I	1746-FIO4V	1746-NIO4V	1746-NO4V
Number of outputs	2	2	4	2	2	4
Backplane current (mA) @ 5V	55 mA	55 mA	55 mA	55 mA	55 mA	55 mA
Backplane current (mA) @ 24V	150 mA	145 mA	195 mA(1)	120 mA	115 mA	145 mA
Isolation voltage	Tested @ 500V AC and 710V DC for 60 seconds					
Full scale	21 mA			10V DC		
Output range (normal)	0…20 mA -1 LSB			±10V DC -1 LSB		
Output coding	0…32,764 for 0…21 mA			-32,768…+32,764 for ±10V DC		
Output resolution (per LSB)	2.56348 µA			1.22070 mV		
Converter resolution	14-bit			14-bit		
Conversion method	R-2R ladder			R-2R ladder		
Step response	2.5 ms (5…95%)			2.5 ms (normal)		
Load range	0…500 Ω			1K…? Ω		
Load current, max	N/A			10 mA		
Overrange capability	5% (0…21 mA -1 LSB)			N/A		
Overall accuracy @ 25 °C (77 °F)	±0.298% of full scale			±0.208% of full scale		
Overall Accuracy, 0…60 °C (32…140 °F)	±0.541% of full scale			±0.384% of full scale		
Overall accuracy drift, max	±70 ppm/°C of full scale			±0.384% of full scale		
Gain error @ 25 °C (77 °F)	±298% of full scale			±208% of full scale		
Gain Error, 0…60 °C (32…140 °F)	±516% of full scale			±374% of full scale		
Gain error drift, max	±62 ppm/°C of full scale			±47 ppm/°C of full scale		

(1) The 1746-NO4I and 1746-NO4V analog output modules have connections for user-supplied 24V dc power supplies. When external 24V DC power is used, the module only draws 5V DC current from the SLC backplane. If an external 24V DC power supply is required, the tolerance must be 24V ±10% (26.6…26.4V DC). The user power supplies for SLC 500 modular systems, 1746-P1, 1746-P2, 1746-P5, and 1746-P6 power supplies do not meet this specification.