I/O Modules And Hardware

Analog I/O Modules

Cat. No.§	Number of Inputs	Backplane Current Load	Bandwidth	Step Response at 95%	Update Period	Resolution (bits), Max.⋆
1746-NI4	4 inputs (±10V DC, ±20 mA)	25 mA at 5V DC 85 mA at 24V DC	10 Hz	60 ms	512 µs	16 bits
1746-NI8	8 inputs (±10V DC, ±20 mA)	200 mA at 5V DC 100 mA at 24V DC	1...75 Hz	0.75...730 ms at 99%‡	6 ms / 8 chan	16 bits
1746-NI16I	16 inputs (±20 mA, 4...20 mA, 0...1 mA, or 0...20 mA)	125 mA at 5V DC 75 mA at 24V DC	6...250 Hz	9...630 ms‡	–	16 bits
1746-NI16V	16 inputs (±10V DC, 1...5V DC, 0...5V DC, or 0...10V DC)	125 mA at 5V DC 75 mA at 24V DC	6...250 Hz	9...630 ms‡	–	16 bits

§ Analog input modules do not provide loop power for analog input devices.
⋆ For each module, the data format is BCD or natural binary.
‡ A function of the input filter selection.

1746 Analog Output Modules

Cat. No.	Number of Outputs	Backplane Current Load	Bandwidth	Step Response at 95%	Update Period	Resolution (bits), Max.⋆
1746-NO4I	4 outputs (0...20 mA)	55 mA at 5V DC 195 mA at 24V DC	–	2.5 ms	512 µs	14 bits
1746-NO4V	4 outputs (±10V DC)	55 mA at 5V DC 145 mA at 24V DC	–	2.5 ms	512 µs	14 bits
1746-NO8I	8 outputs (0...20 mA)	120 mA at 5V DC 250 mA at 24V DC	–	1.0 ms	540 µs / 8 channel	16 bits
1746-NO8V	8 outputs (±10V DC)	120 mA at 5V DC 160 mA at 24V DC	–	1.0 ms	540 µs / 8 channel	16 bits

⋆ For each module, the data format is BCD or natural binary.
‡ A function of the input filter selection.

1746 Analog Combination Modules

Cat. No.§	Number of Inputs/ Outputs	Backplane Current Load	Bandwidth	Step Response at 95%	Update Period	Resolution (bits), Max.⋆
1746-NIO4V	2 inputs (±10V DC, ±20 mA) 2 outputs (±10V DC)	55 mA at 5V DC 115 mA at 24V DC	10 Hz	60 ms in 2.5 ms out	512 µs	16 bits in 14 bits out
1746-NIO4I	2 inputs (±10V DC, ±20 mA) 2 outputs (0...20 mA)	55 mA at 5V DC 145 mA at 24V DC	10 Hz	60 ms in 2.5 ms out	512 µs	16 bits in 14 bits out
1746-FIO4I (current outputs)	2 inputs (differential, 0...10V DC, 0...20 mA) 2 outputs (0...20 mA)	55 mA at 5V DC 150 mA at 24V DC	7 Hz	100 ms in 2.5 ms out	512 µs	12 bits in 14 bits out
1746-FIO4V (voltage outputs)	2 inputs (differential, 0...10V DC, 0...20 mA) 2 outputs (±10V DC)	55 mA at 5V DC 120 mA at 24V DC	7 Hz	100 ms in 2.5 ms out	512 µs	12 bits in 14 bits out

§ Analog input modules do not provide loop power for analog input devices.
⋆ For each module, the data format is BCD or natural binary.
‡ A function of the input filter selection.

1746 RTD and Thermocouple Modules

Cat. No.	Number of Inputs	Backplane Current Load	Bandwidth	Step Response at 95%	Update Period	Resolution (bits), Max.⋆
1746-NR4 RTD/Resistance Analog Input Module	4 inputs 100 Ω, 200 Ω, 500 Ω Platinum 120 Ω Nickel 604 Ω Nickel/Iron 10 Ω Copper 150 Ω, 500 Ω, 1000 Ω, 3000 Ω direct resistance	50 mA at 5V DC 50 mA at 24V DC	2.62...65.5 Hz	12...300 ms	17 ms...1.2 s	16 bits
1746-NR8 RTD/Resistance Analog Input Module	8 inputs 100 Ω, 200 Ω, 500 Ω Platinum 120 Ω Nickel 604 Ω Nickel/Iron 10 Ω Copper 150 Ω, 500 Ω, 1000 Ω, 3000 Ω direct resistance	100 mA at 5V DC 55 mA at 24V DC	7.80...1677 Hz	1.47...120 ms	6 ms...2 s	16 bits
1746-NT4 Thermocouple/mV Analog Input Module	4 inputs B, E, J, K, N, R, S, T Thermocouple and ±50 mV or ±100 mV	60 mA at 5V DC 40 mA at 24V DC	2.62...65.5 Hz	12...300 ms	26 ms...1.2 s	16 bits
1746-NT8 Thermocouple/mV Analog Input Module	8 inputs B, E, J, K, N, R, S, T Thermocouple and ±50 mV or ±100 mV	120 mA at 5V DC 70 mA at 24V DC	10...250 Hz	400 ms	356 ms...4.05 s	16 bits
1746-INT4 Isolated Thermocouple/mV Analog Input Module	4 inputs B, C, D, E, J, K, N, R, S, T Thermocouple and ±50 mV or ±100 mV	110 mA at 5V DC 85 mA at 24V DC	8 Hz	400 ms	500 ms	16 bits

⋆ For each module, the data format is BCD or natural binary.
‡ A function of the input filter selection.