■CP1W-AD041/AD042/DA021/DA041/DA042/MAD11/MAD42/MAD44 Analog Units

Analog values that are input are converted to binary data and stored in the input area, or binary data is output as analog values.

● Analog Input Units

Model		CP1W-AD041		CP1W-AD042	
Item		Voltage Input	Current Input	Voltage Input	Current Input
Number of inputs		4 inputs (4 words allocated)			
Input signal range		0 to 5 VDC, 1 to 5 VDC, 0 to 10 VDC, or –10 to 10 VDC	0 to 20 mA or 4 to 20 mA	0 to 5 VDC, 1 to 5 VDC, 0 to 10 VDC, or -10 to 10 VDC	0 to 20 mA or 4 to 20 mA
Max. rated input		±15 V	±30 mA	±15 V	±30 mA
External input impedance		1 MΩ min.	Approx. 250 Ω	1 MΩ min.	Approx. 250 Ω
Resolution		1/6000 (full scale)		1/12000 (full scale)	
Overall accuracy	25°C	0.3% full scale	0.4% full scale	0.2% full scale	0.3% full scale
	0 to 55°C	0.6% full scale	0.8% full scale	0.5% full scale	0.7% full scale
A/D conversion data		16-bit binary (4-digit hexadecimal) Full scale for –10 to 10 V: F448 to 0BB8 Hex Full scale for other ranges: 0000 to 1770 Hex		16-bit binary (4-digit hexadecimal) Full scale for –10 to 10 V: E890 to 1770 Hex Full scale for other ranges: 0000 to 2EE0 Hex	
Averaging function		Supported (Set in output words n+1 and n+2.)			
Open-circuit detection function		Supported			
Conversion time		2 ms/point (8 ms/all points)		1 ms/point (4 ms/all points)	
Isolation method		Photocoupler isolation between analog I/O terminals and internal circuits. No isolation between analog I/O signals.			
Current consumption		5 VDC: 100 mA max.; 24 VDC: 90 mA max.		5 VDC: 100 mA max.; 24 VDC: 50 mA max.	

● Analog Output Units

Model			CP1W-DA021/CP1W-DA041		CP1W-DA042	
Item			Voltage Output	Current Output	Voltage Output	Current Output
Analog output section	Number of outputs		CP1W-DA021: 2 outputs (2 words allocated) CP1W-DA041: 4 outputs (4 words allocated)		4 outputs (4 words allocated)	
	Output signal range		1 to 5 VDC, 0 to 10 VDC, or –10 to 10 VDC	0 to 20 mA or 4 to 20 mA	1 to 5 VDC, 0 to 10 VDC, or –10 to 10 VDC	0 to 20 mA or 4 to 20 mA
	External output allowable load resistance		2 kΩ min.	350 Ω max.	2 kΩ min.	350 Ω max.
	External output impedance		0.5 Ω max.	---	0.5 Ω max.	---
	Resolution		1/6000 (full scale)		1/12000 (full scale)	
	Overall accuracy	25°C	0.4% full scale		0.3% full scale	
		0 to 55°C	0.8% full scale		0.7% full scale	
	D/A conversion data		16-bit binary (4-digit hexadecimal) Full scale for –10 to 10 V: F448 to 0BB8 Hex Full scale for other ranges: 0000 to 1770 Hex		16-bit binary (4-digit hexadecimal) Full scale for –10 to 10 V: E890 to 1770 Hex Full scale for other ranges: 0000 to 2EE0 Hex	
Conversion time			CP1W-DA021: 2 ms/point (4 ms/all points) CP1W-DA041: 2 ms/point (8 ms/all points)		1 ms/point (4 ms/all points)	
Isolation method			Photocoupler isolation between analog I/O terminals and internal circuits. No isolation between analog I/O signals.			
Current consumption			CP1W-DA021: 5 VDC: 40 mA max.; 24 VDC: 95 mA max. CP1W-DA041: 5 VDC: 80 mA max.; 24 VDC: 124 mA max.		5 VDC: 70 mA max.; 24 VDC: 160 mA max.	