

CP1E-E□□(S)D□-□ CP1E-N□□(S□)D□-□/NA20D□-□

Ordering Information





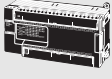
Applicable standards

Refer to the OMRON website (www.ia.omron.com) or ask your OMRON representative for the most recent applicable standards for each model.

Basic Model

●Renewal-type






■E□□S-type CP1E CPU Units (Built-in USB port)

Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
E□□S-type CPU Units with 14 I/O Points 	100 to 240 VAC	8	6	Relay	2K steps	2K words	--	0.16	0.07	CP1E-E14SDR-A *
E□□S-type CPU Units with 20 I/O Points 	100 to 240 VAC	12	8	Relay	2K steps	2K words	--	0.17	0.08	CP1E-E20SDR-A *
E□□S-type CPU Units with 30 I/O Points 	100 to 240 VAC	18	12	Relay	2K steps	2K words	0.30	0.17	0.07	CP1E-E30SDR-A *
E□□S-type CPU Units with 40 I/O Points 	100 to 240 VAC	24	16	Relay	2K steps	2K words	0.30	0.17	0.09	CP1E-E40SDR-A *
E□□S-type CPU Units with 60 I/O Points 	100 to 240 VAC	36	24	Relay	2K steps	2K words	0.30	0.17	0.13	CP1E-E60SDR-A *

* Product no longer available to order.

●Normal-type

■E□□-type CP1E CPU Units (Built-in USB port)




Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
E□□-type CPU Units with 10 I/O Points 	100 to 240 VAC	6	4	Relay	2K steps	2K words	--	0.08	0.04	CP1E-E10DR-A
				Transistor (sinking)			--	0.11	--	CP1E-E10DT-A
				Transistor (sourcing)			--	0.11	--	CP1E-E10DT1-A
	24 VDC			Relay			--	0.08	0.04	CP1E-E10DR-D
				Transistor (sinking)			--	0.11	--	CP1E-E10DT-D
				Transistor (sourcing)			--	0.11	--	CP1E-E10DT1-D
E□□-type CPU Units with 14 I/O Points 	100 to 240 VAC	8	6	Relay	2K steps	2K words	--	0.16	0.07	CP1E-E14DR-A *
E□□-type CPU Units with 20 I/O Points 	100 to 240 VAC	12	8	Relay	2K steps	2K words	--	0.17	0.08	CP1E-E20DR-A *
E□□-type CPU Units with 30 I/O Points 	100 to 240 VAC	18	12	Relay	2K steps	2K words	0.30	0.17	0.07	CP1E-E30DR-A *
E□□-type CPU Units with 40 I/O Points 	100 to 240 VAC	24	16	Relay	2K steps	2K words	0.30	0.17	0.09	CP1E-E40DR-A *

* Product no longer available to order.

Application Model




● **Renewal-type**

■ **N□□S1-type CP1E CPU Units (Built-in RS-232C, RS-485, USB ports)**

Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
N□□S1-type CPU Units with 30 I/O Points 	100 to 240 VAC	18	12	Relay	8K steps	8K words	0.30	0.21	0.07	CP1E-N30S1DR-A *
	DC24V			Transistor (sinking)			--	0.27	0.02	CP1E-N30S1DT-D *
				Transistor (sourcing)			--	0.27	0.02	CP1E-N30S1DT1-D *
N□□S1-type CPU Units with 40 I/O Points 	100 to 240 VAC	24	16	Relay	8K steps	8K words	0.30	0.21	0.09	CP1E-N40S1DR-A *
	DC24V			Transistor (sinking)			--	0.31	0.02	CP1E-N40S1DT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N40S1DT1-D *
N□□S1-type CPU Units with 60 I/O Points 	100 to 240 VAC	36	24	Relay	8K steps	8K words	0.30	0.21	0.13	CP1E-N60S1DR-A *
	DC24V			Transistor (sinking)			--	0.31	0.02	CP1E-N60S1DT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N60S1DT1-D *

* Product no longer available to order.

■ **N□□S-type CP1E CPU Units (Built-in RS-232C, USB ports)**

Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
N□□S-type CPU Units with 30 I/O Points 	100 to 240 VAC	18	12	Relay	8K steps	8K words	0.30	0.21	0.07	CP1E-N30SDR-A *
	DC24V			Transistor (sinking)			--	0.27	0.02	CP1E-N30SDT-D *
				Transistor (sourcing)			--	0.27	0.02	CP1E-N30SDT1-D *
N□□S-type CPU Units with 40 I/O Points 	100 to 240 VAC	24	16	Relay	8K steps	8K words	0.30	0.21	0.09	CP1E-N40SDR-A *
	DC24V			Transistor (sinking)			--	0.31	0.02	CP1E-N40SDT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N40SDT1-D *
N□□S-type CPU Units with 60 I/O Points 	100 to 240 VAC	36	24	Relay	8K steps	8K words	0.30	0.21	0.13	CP1E-N60SDR-A *
	DC24V			Transistor (sinking)			--	0.31	0.02	CP1E-N60SDT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N60SDT1-D *

* Product no longer available to order.



●Normal-type

■N/NA□□-type CP1E CPU Units (Built-in RS-232C, USB ports)

Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
N□□-type CPU Units with 14 I/O Points 	100 to 240 VAC	8	6	Relay	8K steps	8K words	--	0.17	0.07	CP1E-N14DR-A *
				Transistor (sinking)			--	0.22	0.02	CP1E-N14DT-A *
				Transistor (sourcing)			--	0.22	0.02	CP1E-N14DT1-A *
	24 VDC			Relay			--	0.17	0.07	CP1E-N14DR-D *
				Transistor (sinking)			--	0.22	0.02	CP1E-N14DT-D *
				Transistor (sourcing)			--	0.22	0.02	CP1E-N14DT1-D *
N□□-type CPU Units with 20 I/O Points 	100 to 240 VAC	12	8	Relay	8K steps	8K words	--	0.18	0.08	CP1E-N20DR-A *
				Transistor (sinking)			--	0.23	0.02	CP1E-N20DT-A *
				Transistor (sourcing)			--	0.23	0.02	CP1E-N20DT1-A *
	24 VDC			Relay			--	0.18	0.08	CP1E-N20DR-D *
				Transistor (sinking)			--	0.23	0.02	CP1E-N20DT-D *
				Transistor (sourcing)			--	0.23	0.02	CP1E-N20DT1-D *
N□□-type CPU Units with 30 I/O Points 	100 to 240 VAC	18	12	Relay	8K steps	8K words	0.30	0.21	0.07	CP1E-N30DR-A *
				Transistor (sinking)			0.30	0.27	0.02	CP1E-N30DT-A *
				Transistor (sourcing)			0.30	0.27	0.02	CP1E-N30DT1-A *
	24 VDC			Relay			--	0.21	0.07	CP1E-N30DR-D *
				Transistor (sinking)			--	0.27	0.02	CP1E-N30DT-D *
				Transistor (sourcing)			--	0.27	0.02	CP1E-N30DT1-D *
N□□-type CPU Units with 40 I/O Points 	100 to 240 VAC	24	16	Relay	8K steps	8K words	0.30	0.21	0.09	CP1E-N40DR-A *
				Transistor (sinking)			0.30	0.31	0.02	CP1E-N40DT-A *
				Transistor (sourcing)			0.30	0.31	0.02	CP1E-N40DT1-A *
	24 VDC			Relay			--	0.21	0.09	CP1E-N40DR-D *
				Transistor (sinking)			--	0.31	0.02	CP1E-N40DT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N40DT1-D *

* Product no longer available to order.


CP1E-E□□(S)D□-□ CP1E-N□□(S□)D□-□/NA20D□-□

Product name	Specifications						External power supply (24 VDC) (A)	Current consumption (A)		Model
	Power Supply	Inputs	Outputs	Output type	Program capacity	Data memory capacity		5 V	24 V	
N□□-type CPU Units with 60 I/O Points 	100 to 240 VAC	36	24	Relay	8K steps	8K words	0.30	0.21	0.13	CP1E-N60DR-A *
				Transistor (sinking)			0.30	0.31	0.02	CP1E-N60DT-A *
				Transistor (sourcing)			0.30	0.31	0.02	CP1E-N60DT1-A *
	24 VDC			Relay			--	0.21	0.13	CP1E-N60DR-D *
				Transistor (sinking)			--	0.31	0.02	CP1E-N60DT-D *
				Transistor (sourcing)			--	0.31	0.02	CP1E-N60DT1-D *
NA-type CPU Units with 20 I/O Points (Built-in analog) 	100 to 240 VAC	12 (Built-in analog inputs: 2)	8 (Built-in analog outputs: 1)	Relay	8K steps	8K words	0.30	0.18	0.11	CP1E-NA20DR-A
	24 VDC			Transistor (sinking)			--	0.23	0.09	CP1E-NA20DT-D
				Transistor (sourcing)			--	0.23	0.09	CP1E-NA20DT1-D

* Product no longer available to order.








Optional Products

■ Battery Set

Product name	Specifications	Model
Battery Set 	For N/NA□□(S□)-type CP1E CPU Units Note: Mount a Battery to an N/NA□□(S□)-type CPU Unit if the data in the following areas must be backed up for power interruptions. • DM Area (D) (except backed up words in the DM Area), Holding Area (H), Counter Completion Flags (C), Counter Present Values (C), Auxiliary Area (A), and Clock Function (Use batteries within two years of manufacture.)	CP1W-BAT01

■ Option Board (for CP1E N30/40/60 or NA20 CPU Units)

The Options cannot be used for CP1E N14/20, N30/40/60S(1), E10/14/20/30/40/60(S) CPU Units.











Product name	Specifications	Model
RS-232C Option Board 	One RS-232C Option Board can be mounted to the Option Board slot.	CP1W-CIF01
RS-422A/485 Option Board 	One RS-422A/485 Option Board can be mounted to the Option Board slot.	CP1W-CIF11
RS-422A/485 Isolated-type Option Board 		CP1W-CIF12-V1
Ethernet Option Board 	One Ethernet Option Board can be mounted to the Option Board slot. CP1E CPU Units are supported by CP1W-CIF41 version 2.0 or higher. When using CP1W-CIF41, CX-Programmer version 9.12 or higher is required.	CP1W-CIF41
Analog Input Option Board 	Can be mounted in CPU Unit Option Board slot. 2 analog inputs. 0-10V(Resolution:1/4000), 0-20mA (Resolution:1/2000).	CP1W-ADB21 *
Analog Output Option Board 	Can be mounted in CPU Unit Option Board slot. 2 analog outputs. 0-10V (Resolution:1/4000).	CP1W-DAB21V *
Analog I/O Option Board 	Can be mounted in CPU Unit Option Board slot. 2 analog inputs. 0-10V(Resolution:1/4000), 0-20mA(Resolution:1/2000). 2 analog outputs. 0-10V (Resolution:1/4000).	CP1W-MAB221 *

Note: It is not possible to use a CP-series Ethernet Option Board version 1.0 (CP1W-CIF41), LCD Option Board (CP1W-DAM01), or Memory Card (CP1W-ME05M) with a CP1E CPU Unit.

* Support is provided with CP1E CPU Unit version 1.2 and later.

■ Expansion I/O Units and Expansion Units (for CP1E E30/40/60(S), N30/40/60(S□), or NA20 CPU Units)

CP1E E10/14/20(S) or N14/20 CPU Units do not support Expansion I/O Units and Expansion Units.

Unit type	Product name	Specifications			Current consumption (A)		Model		
		Inputs	Outputs	Output type	5 V	24 V			
CP1W Expansion I/O Units	Input Unit 	8	--	24 VDC Input	0.018	--	CP1W-8ED		
	Output Units 	--	8	Relay	0.026	0.044	CP1W-8ER		
				Transistor (sinking)	0.075	--	CP1W-8ET		
				Transistor (sourcing)	0.075	--	CP1W-8ET1		
		--	16	Relay	0.042	0.090	CP1W-16ER		
				Transistor (sinking)	0.076	--	CP1W-16ET		
				Transistor (sourcing)	0.076	--	CP1W-16ET1		
		--	32	Relay	0.049	0.131	CP1W-32ER		
				Transistor (sinking)	0.113	--	CP1W-32ET		
				Transistor (sourcing)	0.113	--	CP1W-32ET1		
	I/O Units 	12	8	Relay	0.103	0.044	CP1W-20EDR1		
				Transistor (sinking)	0.130	--	CP1W-20EDT		
				Transistor (sourcing)	0.130	--	CP1W-20EDT1		
		24	16	Relay	0.080	0.090	CP1W-40EDR		
Transistor (sinking)				0.160	--	CP1W-40EDT			
Transistor (sourcing)				0.160	--	CP1W-40EDT1			
CP1W Expansion Units	Analog Input Unit 	4CH	--	Input range: 0 to 5 V, 1 to 5 V, 0 to 10 V, ±10 V, 0 to 20 mA, or 4 to 20 mA. Resolution: 1/6000	0.100	0.090	CP1W-AD041		
				Resolution: 1/12000	0.100	0.050	CP1W-AD042		
	Analog Output Unit 	--	2CH	Output range: 1 to 5 V, 0 to 10 V, ±10 V, 0 to 20 mA, or 4 to 20 mA.	Resolution: 1/6000	0.040	0.095	CP1W-DA021	
					Resolution: 1/6000	0.080	0.124	CP1W-DA041	
					Resolution: 1/12000	0.070	0.160	CP1W-DA042	
	Analog I/O Unit 	4CH	4CH	4CH	Input range: 0 to 5 V, 1 to 5 V, 0 to 10 V, ±10 V, 0 to 20 mA, or 4 to 20 mA. Output range: 1 to 5 V, 0 to 10 V, ±10 V, 0 to 20 mA, or 4 to 20 mA. Resolution: 1/12000	0.120	0.170	CP1W-MAD44	
			4CH	2CH		Resolution: 1/12000	0.120	0.120	CP1W-MAD42
			2CH	1CH		Resolution: 1/6000	0.083	0.110	CP1W-MAD11
	Temperature Sensor Unit 	2CH	--	Sensor type: Thermocouple (J or K)		0.040	0.059	CP1W-TS001	
		4CH	--	Sensor type: Thermocouple (J or K)		0.040	0.059	CP1W-TS002	
		2CH	--	Sensor type: Platinum resistance thermometer (Pt100 or JPt100)		0.054	0.073	CP1W-TS101	
		4CH	--	Sensor type: Platinum resistance thermometer (Pt100 or JPt100)		0.054	0.073	CP1W-TS102	
		4CH	--	Sensor type: Thermocouple (J or K) 2channels can be used as analog input. Input range: 1 to 5 V, 0 to 10 V, 4-20 mA		Resolution: 1/12000	0.070	0.030	CP1W-TS003
				Sensor type: Thermocouple (J or K)					
CompoBus/S I/O Link Unit 	8	8	CompoBus/S slave		0.029	--	CP1W-SRT21 *1		

* 1 Product no longer available to order.

■ I/O Connecting Cable

Product name	Specifications	Model
I/O Connecting Cable	80 cm (for CP1W Expansion I/O Units and Expansion Units) Only one I/O Connecting Cable can be used in each PLC.	CP1W-CN811

Note: An I/O Connecting Cable (approx. 6 cm) for horizontal connection is provided with CP1W Expansion I/O Units and Expansion Units.

■DIN Track Accessories

Name	Specifications	Model
DIN Track	Length: 0.5 m; Height: 7.3 mm	PFP-50N
	Length: 1 m; Height: 7.3 mm	PFP-100N
	Length: 1 m; Height: 16 mm	PFP-100N2
End Plate	A stopper to secure the Units on the DIN Track.	PFP-M

CP1E-E□□(S)D□-□ CP1E-N□□(S□)D□-□/NA20D□-□

General Specifications

Type	AC power supply models		DC power supply models
Model	CP1E-□□□S□□□-A CP1E-□□□□□-A		CP1E-□□□S□□□-D CP1E-□□□□□-D
Enclosure	Mounted in a panel		
Dimensions (H × D × W)	<p>E/N/NA□□-type</p> <p>CPU Unit with 10 I/O points (CP1E-E10D□-□): 90mm *1 × 85mm *2 × 66 mm</p> <p>CPU Unit with 14 or 20 I/O points (CP1E-□14D□-□/□20D□-□): 90mm *1 × 85mm *2 × 86 mm</p> <p>CPU Unit with 30 I/O points (CP1E-□30D□-□): 90mm *1 × 85mm *2 × 130 mm</p> <p>CPU Unit with 40 I/O points (CP1E-□40D□-□): 90mm *1 × 85mm *2 × 150 mm</p> <p>CPU Unit with 60 I/O points (CP1E-N60D□-□): 90mm *1 × 85mm *2 × 195 mm</p> <p>CPU Unit with 20 I/O points and built-in analog (CP1E-NA20D□-□): 90mm *1 × 85mm *2 × 130 mm</p> <p>E/N/□□S(1)-type</p> <p>CPU Unit with 14 or 20 I/O points (CP1E-□14SD□-□/□20SD□-□): 90mm *1 × 79mm *2 × 86 mm</p> <p>CPU Unit with 30 I/O points (CP1E-□30S(1)D□-□): 90mm *1 × 79mm *2 × 130 mm</p> <p>CPU Unit with 40 I/O points (CP1E-□40S(1)D□-□): 90mm *1 × 79mm *2 × 150 mm</p> <p>CPU Unit with 60 I/O points (CP1E-□60S(1)D□-□): 90mm *1 × 79mm *2 × 195 mm</p>		
Weight	<p>CPU Unit with 10 I/O points (CP1E-E10D□-□): 300g max.</p> <p>CPU Unit with 14 I/O points (CP1E-□14(S)D□-□): 360g max.</p> <p>CPU Unit with 20 I/O points (CP1E-□20(S)D□-□): 370g max.</p> <p>CPU Unit with 30 I/O points (CP1E-□30(S□)D□-□): 600g max.</p> <p>CPU Unit with 40 I/O points (CP1E-□40(S□)D□-□): 660g max.</p> <p>CPU Unit with 60 I/O points (CP1E-□60(S□)D□-□): 850g max.</p> <p>CPU Unit with 20 I/O points and built-in analog (CP1E-NA20D□-□): 680g max.</p>		
Electrical specifications	Supply voltage	100 to 240 VAC 50/60 Hz	24 VDC
	Operating voltage range	85 to 264 VAC	20.4 to 26.4 VDC
	Power consumption	15 VA/100 VAC max. 25 VA/240 VAC max. (CP1E-E10D□-A/□14(S)D□-A/□20(S)D□-A)	9 W max. (CP1E-E10D□-D) 13 W max. (CP1E-N14D□-D/N20D□-D)
		50 VA/100 VAC max. 70 VA/240 VAC max. (CP1E-NA20D□-A/□30(S□)D□-A/□40(S□)D□-A/ N60(S□)D□-A)	20 W max. (CP1E-NA20D□-D/N30(S□)D□-D/N40(S□)D□-D/ N60(S□)D□-D) *4
	Inrush current	120 VAC, 20 A for 8 ms max. for cold start at room temperature 240 VAC, 40 A for 8 ms max. for cold start at room temperature	24 VDC, 30 A for 20 ms max. for cold start at room temperature
	External power supply *3	Not provided. (CP1E-E10D□-A/□14(S)D□-A/□20(S)D□-A) 24 VDC, 300 mA (CP1E-NA20D□-A/□30D□-A/□40D□-A/□60D□-A/ □30SDR-A/□40SDR-A/□60SDR-A)	Not provided
	Insulation resistance	20 MΩ min. (at 500 VDC) between the external AC terminals and GR terminals	Except between DC primary current and DC secondary current
	Dielectric strength	2,300 VAC 50/60Hz for 1 min between AC external and GR terminals Leakage current: 5 mA max.	Except between DC primary current and DC secondary current
Power OFF detection time	10 ms min.	2 ms min.	
Application environment	Ambient operating temperature	0 to 55 °C	
	Ambient humidity	10% to 90%	
	Atmosphere	No corrosive gas.	
	Ambient storage temperature	-20 to 75 °C (excluding battery)	
	Altitude	2,000 m max.	
	Pollution degree	2 or less: Meets IEC 61010-2-201.	
	Noise resistance	2 kV on power supply line (Conforms to IEC61000-4-4.)	
	Overvoltage category	Category II: Meets IEC 61010-2-201.	
	EMC Immunity Level	Zone B	
	Vibration resistance	Conforms to JIS 60068-2-6. 5 to 8.4 Hz with 3.5-mm amplitude, 8.4 to 150 Hz Acceleration of 9.8 m/s ² for 100 min in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total)	
Shock resistance	Conforms to JIS 60068-2-27. 147 m/s ² , 3 times in X, Y, and Z directions		
Terminal block	Fixed (not removable)		
Terminal screw size	M3		
Applicable standards	Conforms to EC Directive		
Grounding method	Ground to 100 Ω or less.		

* 1 Total of 110 mm with mounting brackets.

* 2 Excluding cables.

* 3 Use the external power supply to power input devices. Do not use it to drive output devices.

* 4 This is the rated value for the maximum system configuration. Use the following formula to calculate power consumption for CPU Units with DC power.
Formula: DC power consumption = (5V current consumption × 5 V/70% (internal power efficiency) + 24V current consumption) × 1.1 (current fluctuation factor)

The above calculation results show that a DC power supply with a greater capacity is required.

Performance Specifications

Item		CP1E-E□□SD□-□ CP1E-□□D□-□	CP1E-N□□S□D□-□ CP1E-N□□D□-□ CP1E-NA□□D□-□	
Program capacity		2 K steps (8 Kbytes) including the symbol table, comments, and program indices of the CX-Programmer	8 K steps (32 Kbytes) including the symbol table, comments, and program indices of the CX-Programmer	
Control method		Stored program method		
I/O control method		Cyclic scan with immediate refreshing		
Program language		Ladder diagram		
Instructions		Approximately 200		
Processing speed	Overhead processing time	0.4 ms		
	Instruction execution times	Basic instructions (LD): 1.19 μs min. Special instructions (MOV): 7.9 μs min.		
Number of CP1W-series Expansion Units connected		CP1E-E10D□-□/□14(S)D□-□/□20(S)D□-□: None CP1E-□30(S□)D□-□/□40(S□)D□-□/□60(S□)D□-□/NA20(S□)D□-□: 3 units		
Maximum number of I/O points		CP1E-E10D□-□ : 10 CP1E-□14(S)D□-□: 14 CP1E-□20(S)D□-□: 20 CP1E-□30(S□)D□-□: 150 (30 built in, 40 × 3 expansion) CP1E-□40(S□)D□-□: 160 (40 built in, 40 × 3 expansion) CP1E-□60(S□)D□-□: 180 (60 built in, 40 × 3 expansion) CP1E-NA20D□-□: 140 (20 built in, 40 × 3 expansion)		
Built-in I/O		CP1E-E10D□-□ : 10 (6 inputs, 4 outputs) CP1E-□14(S)D□-□: 14 (8 inputs, 6 outputs) CP1E-□20(S)D□-□: 20 (12 inputs, 8 outputs) CP1E-□30(S□)D□-□: 30 (18 inputs, 12 outputs) CP1E-□40(S□)D□-□: 40 (24 inputs, 16 outputs) CP1E-□60(S□)D□-□: 60 (36 inputs, 24 outputs) CP1E-NA20D□-□: 20 (12 inputs, 8 outputs)		
Built-in input functions	High-speed counters	High-speed counter mode/maximum frequency	Incremental Pulse Inputs 10 kHz: 6 counters 5 counters (only for 10 I/O points) Up/Down Inputs 10 kHz: 2 counters Pulse + Direction Inputs 10 kHz: 2 counters Differential Phase Inputs (4x) 5 kHz: 2 counters	Incremental Pulse Inputs 100 kHz: 2 counters, 10 kHz: 4 counters Up/Down Inputs 100 kHz: 1 counters, 10 kHz: 1 counters Pulse + Direction Inputs 100 kHz: 2 counters Differential Phase Inputs (4x) 50 kHz: 1 counter, 5 kHz: 1 counter
		Counting mode	Linear mode Ring mode	
		Count value	32 bits	
		Counter reset modes	Phase Z and software reset (excluding increment pulse input) Software reset	
	Control method	Target Matching Range Comparison		
	Input interrupts	6 inputs (4 inputs only for 10 I/O points) Interrupt input pulse width: 50 μs min.		
	Quick-response Inputs	6 inputs (4 inputs only for 10 I/O points) Input pulse width: 50 μs min.		
Normal input	Input constants	Delays can be set in the PLC Setup (0 to 32 ms, default: 8 ms). Set values: 0, 1, 2, 4, 8, 16, or 32 ms		
Built-in output functions	Pulse outputs (Models with transistor outputs only)	Pulse output method and output frequency		Pulse + Direction Mode 1 Hz to 100 kHz: 2 outputs
		Output mode		Continuous mode (for speed control) Independent mode (for position control)
		Number of output pulses	Pulse output function not included	Relative coordinates: 0000 0000 to 7FFF FFFF hex (0 to 2147483647) Absolute coordinates: 8000 0000 to 7FFF FFFF hex (-2147483647 to 2147483647)
		Acceleration/deceleration curves		Trapezoidal acceleration and deceleration (Cannot perform S-curve acceleration and deceleration.)
		Changing SVs during instruction execution		Only target position can be changed.
		Origin searches		Included
	Pulse outputs (Models with transistor outputs only)	Frequency		2.0 to 6,553.5 Hz (in increments of 0.1 Hz) with 1 output or 2 Hz to 32,000 Hz (in increments of 1 Hz) with 1 output
		Duty factor	PWM output function not included	0.0% to 100.0% (in increments of 0.1%) Accuracy: +1%/-0% at 2 Hz to 10,000 Hz and +5%/-0% at 10,000 Hz to 32,000 kHz
		Output mode		Continuous Mode
	Built-in analog	Analog input	Analog function not included	
Analog output			Setting range: 0 to 6,000 (2 channels only for NA-type) Setting range: 0 to 6,000 (1 channels only for NA-type)	
Analog adjusters		E/N/NA□□-type: 2 adjusters (Setting range: 0 to 255) E/N□□S(1)-type: None		

CP1E-E□□(S)D□-□ CP1E-N□□(S□)D□-□/NA20D□-□

Item		CP1E-E□□SD□-□ CP1E-E□□D□-□	CP1E-N□□S□D□-□ CP1E-N□□D□-□ CP1E-NA□□D□-□		
Communications	B-type Peripheral USB Port	Conforming to USB 2.0 B type connector			
		Transmission distance	5 m max.		
	Built-in RS-232C port		No built-in RS-232C port	Interface: Conforms to EIA RS-232C.	
				Communications method	Half duplex
				synchronization	Start-stop
				Baud rate	1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6, or 115.2 kbps
				Transmission distance	15 m max.
		Supported protocol	<ul style="list-style-type: none"> • Host Link • 1:N NT Link • No-protocol mode • Serial PLC Links (master, slave) • Modbus-RTU Easy Master 		
	Built-in RS-485 port		No built-in RS-485 port	N30/40/60S1-type only Interface: Conforms to EIA RS-485. 2-wire sensors No isolation	
				Communications method	Half duplex
		synchronization		Start-stop	
		Baud rate		1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6, or 115.2 kbps	
		Transmission distance		50 m max.	
	Supported protocol	<ul style="list-style-type: none"> • Host Link • 1:N NT Link • No-protocol mode • Serial PLC Links (master, slave) • Modbus-RTU Easy Master 			
Serial Option port	Mountable Option Boards	Option Board cannot be mounted.	N30/40/60 and NA20-type only 1 port		
			<ul style="list-style-type: none"> • One RS-232C port: CP1W-CIF01 • One RS-422A/485 port (not isolated): CP1W-CIF11 • One RS-422A/485 port (isolated): CP1W-CIF12-V1 • One Ethernet port: CP1W-CIF41 		
			Depends on Option Board.		
			Depends on Option Board.		
			1.2, 2.4, 4.8, 9.6, 19.2, 38.4, 57.6, or 115.2 kbps		
	Compatible protocols	<ul style="list-style-type: none"> • Host Link • 1:N NT Link • No-protocol mode • Serial PLC Links (master, slave) • Modbus-RTU Easy Master 			
Number of tasks		17 <ul style="list-style-type: none"> • One cyclic execution task • One scheduled interrupt task (always interrupt task 1) • Six input interrupt tasks (interrupt tasks 2 to 7) • Sixteen high-speed counter interrupt tasks (interrupt tasks 1 to 16) 			
Maximum subroutine number		128			
Maximum jump number		128			
Scheduled interrupt tasks		1 interrupt task			
Clock		Clock function not included. The time of error occurrence displays 01-01-01 01:01:01 Sunday	Included. Accuracy (monthly deviation): -4.5 min to -0.5 min at ambient temperature of 55°C, -2.0 min to +2.0 min at ambient temperature of 25°C, -2.5 min to +1.5 min at ambient temperature of 0°C		
Memory backup	Built-in EEPROM	Ladder programs and parameters are automatically saved to built-in EEPROM A section of the Data Memory Area can be saved to the built-in EEPROM.			
	Battery backup With CP1W-BAT01 Battery (Sold separately)	Battery cannot be mounted.	CP1W-BAT01 can be used. Maximum battery service life: 5 years Backup Time Guaranteed value (ambient temperature: 55°C): 13,000 hours (approx. 1.5 years) Effective value (ambient temperature: 25°C): 43,000 hours (approx. 5 years)		
CIO Area	Input Bits	1,600 bits (100 words): CIO 0.00 to CIO 99.15 (CIO 00 to CIO 99)			
	Output Bits	1,600 bits (100 words): CIO 100.00 to CIO 199.15 (CIO 100 to CIO 199)			
	Serial PLC Link Words	1,440 bits (90 words): CIO 200.00 to CIO 289.15 (words CIO 200 to CIO 289)			
Work Area (W)		1,600 bits (100 words): W0.00 to W99.15 (W0 to W99)			
Holding Area (H)		800 bits (50 words): H0.00 to H49.15 (H0 to H49) Bits in this area maintain their ON/OFF status when operating mode is changed.			
Auxiliary Area (A)		Read-only: 7,168 bits (448 words) A0 to A447 Read/write: 4,896 bits (306 words) in words A448 to A753			
Temporary Relay Area (TR) (TR Area)		16 bits: TR0 to TR15			
Timer Area (T)		256 timer numbers (T0 to T255 (separate from counters))			
Counter Area (C)		256 counter numbers (C0 to C255 (separate from timers))			

CP1E-E□□(S)D□-□ CP1E-N□□(S□)D□-□/NA20D□-□

Item	CP1E-E□□SD□-□ CP1E-E□□D□-□	CP1E-N□□S□D□-□ CP1E-N□□D□-□ CP1E-NA□□D□-□
Data Memory Area (D)	2 Kwords: D0 to D2047 Of these, 1,500 words can be saved to the backup memory (built-in EEPROM) using settings in the Auxiliary Area.	8 Kwords: D0 to D8191 Of these, 7,000 words can be saved to the backup memory (built-in EEP-ROM) using settings in the Auxiliary Area
Operating modes	PROGRAM mode: Program execution is stopped. Preparations can be executed prior to program execution in this mode. MONITOR mode: Programs are executed. Some operations, such as online editing, and changes to present values in I/O memory, are enabled in this mode. RUN mode: Programs are executed. This is the normal operating mode.	