

CPU Units

Unit	No. of I/O connectors required	Inputs	Outputs	Clock	Model	Model with Fujitsu-compatible connectors	Model with MIL connectors	International standards
20 I/O Points (12 inputs, 8 outputs)	Terminal block	24 VDC: 12 inputs	Relays: 8 outputs	—	CPM2C-20CDR-D	—	—	CE
				○	CPM2C-20C1DR-D	—	—	
32 I/O Points (16 inputs, 16 outputs)	Connector	24 VDC: 16 inputs	Transistors: 16 sinking outputs	—	CPM2C-32CDTC-D	○	—	CE
			Transistors: 16 sourcing outputs	—	CPM2C-32CDT1C-D	○	—	
10 I/O Points (6 inputs, 4 outputs)	Connector	24 VDC: 6 inputs	Transistors: 4 sinking outputs	—	CPM2C-10CDTM-D	—	○	CE
			Transistors: 4 sourcing outputs	—	CPM2C-10CDT1M-D	—	○	
			Transistors: 4 sinking outputs	○	CPM2C-10C1DTM-D	—	○	
			Transistors: 4 sourcing outputs	○	CPM2C-10C1DT1M-D	—	○	
20 I/O Points (12 inputs, 8 outputs)	Connector	24 VDC: 12 inputs	Transistors: 8 sinking outputs	—	CPM2C-20CDTM-D	—	○	CE
			Transistors: 8 sourcing outputs	—	CPM2C-20CDT1M-D	—	○	
			Transistors: 8 sinking outputs	○	CPM2C-20C1DTM-D	—	○	
			Transistors: 8 sourcing outputs	○	CPM2C-20C1DT1M-D	—	○	
32 I/O Points (16 inputs, 16 outputs)	Connector	24 VDC: 16 inputs	Transistors: 16 sinking outputs	—	CPM2C-32CDTM-D	—	○	CE
			Transistors: 16 sourcing outputs	—	CPM2C-32CDT1M-D	—	○	

Expansion I/O Units

Unit	No. of I/O connectors required	Inputs	Outputs	Model	Model with Fujitsu-compatible connectors	Model with MIL connectors	International standards
20 I/O Points (12 inputs, 8 outputs)	Terminal block	24 VDC: 12 inputs	Relays: 8 outputs	CPM2C-20EDR	—	—	CE
32 I/O Points (16 inputs, 16 outputs)	Connector	24 VDC: 16 inputs	Transistors: 16 sinking outputs	CPM2C-32EDTC	○	—	CE
			Transistors: 16 sourcing outputs	CPM2C-32EDT1C	○	—	
24 I/O Points (16 inputs, 8 outputs)	Connector	24 VDC: 16 inputs	Transistors: 8 sinking outputs	CPM2C-24EDTM	—	○	CE
			Transistors: 8 sourcing outputs	CPM2C-24EDT1M	—	○	
32 I/O Points (16 inputs, 16 outputs)	Connector	24 VDC: 16 inputs	Transistors: 16 sinking outputs	CPM2C-32EDTM	—	○	CE
			Transistors: 16 sourcing outputs	CPM2C-32EDT1M	—	○	
Input Unit	Connector	24 VDC: 8 inputs	—	CPM2C-8EDM	—	○	CE
		24 VDC: 16 inputs	—	CPM2C-16EDM	—	○	
Output Unit	Connector	—	Transistors: 8 sinking outputs	CPM2C-8ETM	—	○	CE
		—	Transistors: 8 sourcing outputs	CPM2C-8ET1M	—	○	
	—	Transistors: 16 sinking outputs	CPM2C-16ETM	—	○		
	—	Transistors: 16 sourcing outputs	CPM2C-16ET1M	—	○		

Applicable I/O Connectors for Units with Connectors

Connectors are not provided with CPU Units and Expansion I/O Units with Connectors. Select and use one of the following Connectors.

Fujitsu Connectors

Connection method	OMRON model number	Fujitsu model numbers
Soldered	C500-CE241	FCN-361J024-AU Connector
		FCN-360C024-J2 Connector Cover
Pressure-welded	C500-CE242	FCN-363J024 Housing
		FCN-363J-AU Connector
		FCN-360C024-J2 Connector Cover
Crimped	C500-CE243	FCN-367J024-AU/F

MIL Connectors

Connection method	Model	Qty per box (pieces)	Specification
Crimped	XG4M-2030-T	100	20 poles

Note: Do not use this document to operate the Unit.

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Authorized Distributor:

Note: Specifications subject to change without notice.

Cat.No.R074-E1-1
Printed in Japan
1000-2M

Programmable Controllers

SYSMAC CPM2C

Slim Micro PLCs

Even Smaller Control Panels
with the CPM2C



CPU Unit with
20 Relay Outputs



CPU Unit with
32 Transistor Outputs



MIL connectors available on models
with transistor outputs.

Now, Even Smaller Control Panels with the CPM2C

- Half the size for CPU Units with 20 I/O points (12 inputs, 8 relay outputs.) The Smallest in the Industry.
- Two-thirds the size for CPU Units with 32 I/O points (16 inputs, 16 transistor outputs.)
- Expand to up to 192 I/O points.
- Models available with Fujitsu-compatible connectors or with MIL connectors.



CPU Units with Relay Outputs
CPM2C-20C(1)DR-D
Smallest in Industry



CPU Units with Transistor Outputs
CPM2C-32CDT(1)C-D
CPM2C-10C1DT(1)M-D
CPM2C-20C1DT(1)M-D
CPM2C-10CDT(1)M-D
CPM2C-20CDT(1)M-D
CPM2C-32CDT(1)M-D



Expansion I/O Unit with Relay Outputs
CPM2C-20EDR



Expansion I/O Units with Transistor Outputs
CPM2C-32EDT(1)C
CPM2C-24EDT(1)M
CPM2C-32EDT(1)M



Expansion Input Units
CPM2C-8EDM
CPM2C-16EDM



Expansion Output Units
CPM2C-8ET(1)M
CPM2C-16ET(1)M

MIL Connectors
Models with MIL connectors are available for transistor outputs.



General Specifications

Item	CPU Units		Expansion I/O Units	
	20 I/O points (relay outputs)	32 I/O points (transistor outputs)	20 I/O points (relay outputs)	32 I/O points (transistor outputs)
Supply voltage	24 VDC			
Operating voltage range	20.4 to 26.4 VDC			
Power consumption	4 W	3 W	2 W	1 W
I/O terminals/connectors	Terminal block	Connector	Terminal block	Connector
Power interrupt time	2 ms min.			
Weight	250 g max.	200 g max.	200 g max.	200 g max.
I/O input voltage	20.4 to 26.4 VDC			
I/O relay maximum switching capacity	250 VAC/2 A (cosφ = 1) 24 VDC/2 A (4 A/common)	—	250 VAC/2 A (cosφ = 1) 24 VDC/2 A (4 A/common)	—
I/O transistor maximum switching capacity	—	OUT01□00 to 01□07: 40 mA/4.5 VDC to 300 mA/20.4 V 300 mA/(20.4 to 26.4 V) OUT01□08 to 01□15: 40 mA/4.5 VDC to 100 mA/20.4 V 100 mA/(20.4 to 26.4 V)	—	OUT01□00 to 01□07: 40 mA/4.5 VDC to 300 mA/20.4 V 300 mA/(20.4 to 26.4 V) OUT01□08 to 01□15: 40 mA/4.5 VDC to 100 mA/20.4 V 100 mA/(20.4 to 26.4 V)

Characteristics

Item	CPU Unit	
	20 I/O points (relay outputs)	32 I/O points (transistor outputs)
Instructions	Basic instructions: 14 Special instructions: 105 instructions, 185 variations	
Execution time	Basic instructions: 0.64 μs (LD instruction) Special instructions: 7.8 μs (MOV instruction)	
User program capacity	4,096 words	
Max. I/O capacity	CPU Unit only 20 points	32 points
	With Expansion I/O Units and Expansion Units 180 points max. 192 points max.	
Input bits	IR 00000 to IR 00915	
Output bits	IR 01000 to IR 01915	
Work bits	928 bits: IR 02000 to IR 04915 and IR 20000 to IR 22715	
Special bits (SR area)	448 bits: SR 22800 to SR 25515	
Temporary bits (TR area)	8 bits (TR0 to TR7)	
Holding bits (HR area)/Auxiliary bits (AR area)/Link bits (LR area)	320 bits: HR 0000 to HR 1915 (Words HR 00 to HR 19), 384 bits: AR 0000 to AR 2315 (Words AR 00 to AR 23), 256 bits: LR 0000 to LR 1515 (Words LR 00 to LR 15)	
Timers/Counters	256 timers/counters (TIM/CNT 000 to TIM/CNT 255) 1-ms timers: TMH(-) 10-ms timers: TIMH(15) 100-ms timers: TIM 1-s/10-s timers: TIML(-) Decrementing counters: CNT Reversible counters: CNTR(12)	
Data memory	Read/Write	2,048 words (DM 0000 to DM 2047) (DM 2000 to DM 2021: Error log)
	Read-only	456 words (DM 6144 to DM 6599)
	PC Setup	56 words (DM 6600 to DM 6655)
Interrupt processing	Input interrupts	4 inputs (Shared by the external interrupt inputs (counter mode) and the quick-response inputs.)
	Interval timer interrupts	1 (Scheduled Interrupt Mode or Single Interrupt Mode)
High-speed counter	High-speed counter	1 (20 kHz single-phase or 5 kHz two-phase, linear count method)
	Counter interrupts	1 (set value comparison or set-value range comparison)
	Interrupt Inputs (Counter mode)	4 inputs (Shared by the external interrupt inputs and the quick-response inputs.)
	Count up interrupts	4 inputs (Shared by the external interrupt inputs and the quick-response inputs.)
Pulse output	Two points with no acceleration/deceleration, 10 Hz to 10 kHz each, and no direction control, one point with trapezoid acceleration/deceleration, 10 Hz to 10 kHz, and direction control, or two points with variable duty-ratio outputs. (Pulse outputs can be used with transistor outputs only; they cannot be used with relay outputs.)	
Synchronized pulse control	One point: A pulse output can be created by combining the high-speed counter with pulse outputs and multiplying the frequency of the input pulses from the high-speed counter by a fixed factor. (This output is possible with transistor outputs only; it cannot be used with relay outputs.)	
Quick-response inputs	4 inputs (Shared by the external interrupt inputs and the interrupt inputs (counter mode). Min. input pulse width: 50 μs max.	
Input time constant (ON response time = OFF response time)	Can be set for all input points. (1 ms, 2 ms, 3 ms, 5 ms, 10 ms, 20 ms, 40 ms, or 80 ms)	
Clock function (See note 1.)	Shows the year, month, day of the week, day, hour, minute, and second. (Battery backup)	
Communications functions (See note 2.)	Peripheral port: Supports Host Link, peripheral bus, no-protocol, or Programming Console connections. RS-232C port: Supports Host Link, no-protocol, 1:1 Slave Unit Link, 1:1 Master Unit Link, or 1:1 NT Link connections.	
Power interruption protection function	The contents of the following are protected: HR area, AR area, counter area, DM area, and user program area.	
Memory backup	Flash memory: Program, read-only DM area, and PC Setup	
	Memory backup: The read/write DM area, HR area, AR area, and counter values are backed up. CPU Unit with clock (battery): 2-year lifetime at 25°C CPU Unit without clock (capacitor): 10-day backup at 25°C (See note 3.)	

Note 1: The clock function is available with CPM2C-□□□□C1□□ CPU Units only. It is not available with 32-point CPU Units.
2: A CPM2C-CN111, CS1W-CN114, CS1W-CN118, CPM2C-CIF01, or CPM2C-CIF11 Connecting Cable is required.
3: The CPM2C-BAT01 can be used to back up the capacitor backup range. Memory backup time: 2 years

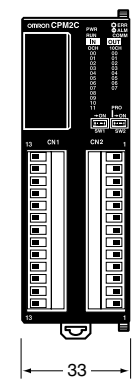
Dimensions (mm)

CPU Units

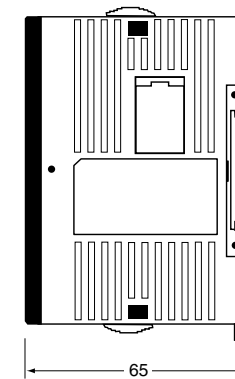
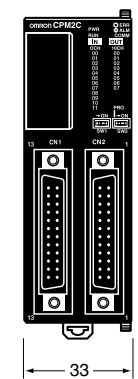
Units with relay outputs:
CPM2C-20CDR-D CPM2C-20C1DR-D

Units with transistor outputs:
CPM2C-10CDTM-D CPM2C-10CDT1M-D CPM2C-10C1DTM-D
CPM2C-10C1DT1M-D CPM2C-20CDTM-D CPM2C-20CDT1M-D
CPM2C-20C1DTM-D CPM2C-20C1DT1M-D

Units with Relay Outputs



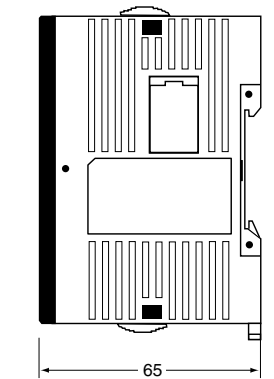
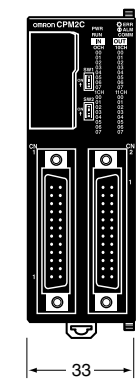
Units with Transistor Outputs



CPU Units

Units with transistor outputs:
CPM2C-32CDTC-D CPM2C-32CDT1C-D
CPM2C-32CDTM-D CPM2C-32CDT1M-D

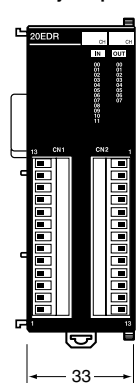
Units with Transistor Outputs



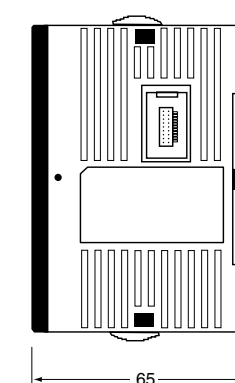
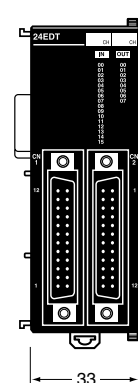
Expansion I/O Units

CPM2C-20EDR CPM2C-32EDTC CPM2C-32EDT1C
CPM2C-24EDTM CPM2C-24EDT1M CPM2C-32EDTM
CPM2C-32EDT1M

Units with Relay Outputs



Units with Transistor Outputs



Expansion Input Units

CPM2C-8EDM CPM2C-16EDM

Expansion Output Units

CPM2C-8ETM CPM2C-8ET1M
CPM2C-16ETM CPM2C-16ET1M

