

NO: PC-189A
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PRODUCT: CP1L Programmable Controller
TYPE: Product Release

CP1L Micro PLC: Start Small...Think Big...Micro PLC has Powerful Capabilities in a Scalable Package

Packed with powerful features and wide-ranging capabilities, Omron's new CP1L Compact Micro PLC seemingly redefines the term Micro PLC. The CP1L family offers scalable I/O, on-line editing, IEC 61131-3 programming, floating-point math, powerful position control, and communications capabilities. Extensive libraries of Omron controls and function blocks simplify program development and shorten design time.



Key Features and Benefits

- **Smart integration** – All-in-one functionality includes high-speed counters, analog, motion and communications.
- **Quick modifications** – PLC programs with online editing allows you to make changes quickly.
- **Save time and money** – CX-Programmer Software with built-in simulation capability allows pre-testing of programs without any hardware.
- **Maximize efficiency** – Select the optimum CPU for your application: 14, 20, 30 or 40 I/O built-in.
- **Easily expandable** – Expand CP1L to 160 I/O points using CJ1W expansion I/O.
- **Save cabinet space** – Compact size measures from just 110 H x 86 W x 85 D mm.
- **Solve complex programming issues** – Built-in floating-point and trigonometric functions.
- **Simplified configuration** – All Omron devices connected to CP1L can be configured, programmed and monitored through a single connection using CX-One Software Suite.

Applications for CP1L Micro PLCs

Two-axis Pulse Outputs

Packing Machine

CP1L

Pulse outputs

Sheet feeding control via Servomotors

Sequence Control

Air Cleaner Control

CP1L

Analog Output Unit

Cleaner fan motor control (Inverter)

Sequence Control with Clock Function

Shopping Mall Fountain Control

CP1L

Additional CP1L Applications

Building Management

- Ventilation and temperature control
- Lighting control
- Energy management
- Elevator/revolving door control

Electronics Assembly

- Control manufacturing machinery
- Inspection of assembled parts

Entertainment

- Animated character mechatronics (theme parks and museums)
- Cinema projection at multiplexes

Food/Beverage

- Pillow/pouch packing machines
- Food processing—washing, sorting, slicing, packaging
- Bakery—mixing, baking

Glass/Metal/Plastic Forming

- Inspect surface condition to automate quality control
- Control oil pressure

Horticulture

- Plant/lawn watering systems
- Greenhouse lighting/vent control
- Plant handling systems
- Saw mill control

Material Handling

- Main axis control
- Positioning conveyors

Pharmaceutical/Chemical

- Dosing control
- Packaging
- Pollution management systems
- Cryogenic freezing

Plastics

- Loading/unloading machines
- Plastic welding systems
- Injection molding machines

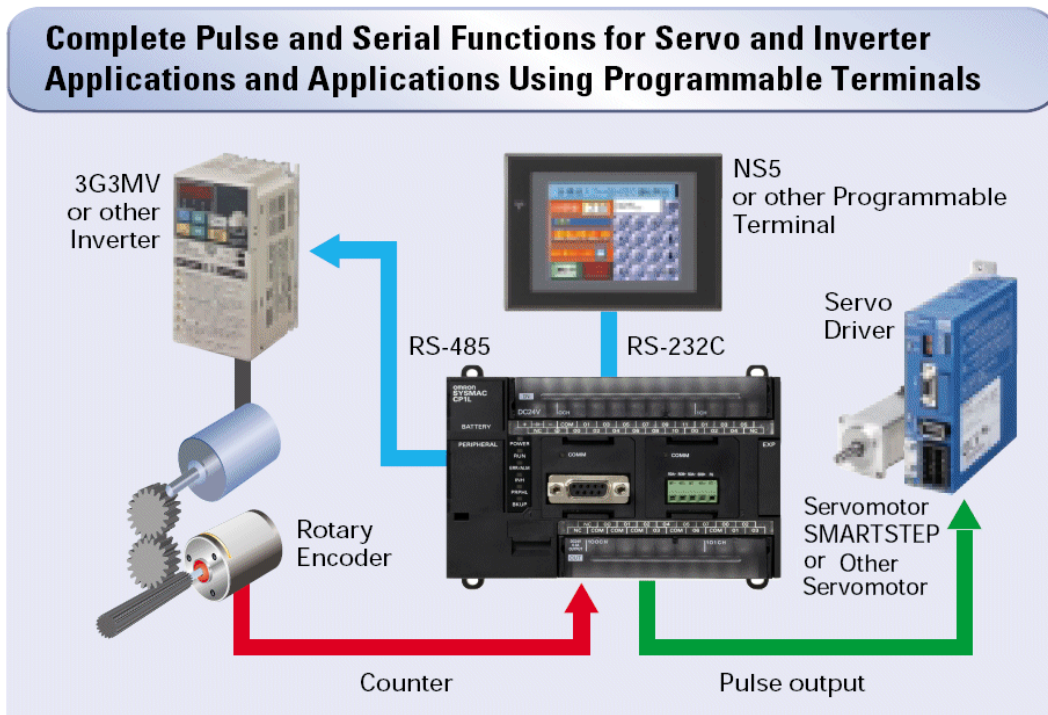
Printing

- Converting OEM
- Printing/publishing
- Silk-screening

Transportation

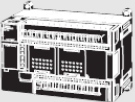
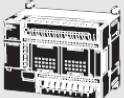


- Garbage truck management
- Sanitation on rail rolling stock and ships

Capabilities Overview



CP1L Micro PLCs

● CP1L CPU Units

CPU Unit	Specifications				Model
	Power supply	Output method	Inputs	Outputs	
CPU - 24 In, 16 Out - 1 Analog In (0-10V) - Up to 3 Expansion Units - Up to 2 Communication Option Boards 	AC power supply	Relay output	24	16	CP1L-M40DR-A
	DC power supply	Transistor output (sinking)			CP1L-M40DR-D
		Transistor output (sourcing)			CP1L-M40DT-D
					CP1L-M40DT1-D
CPU - 18 In, 12 Out - 1 Analog In (0-10V) - Up to 3 Expansion Units - Up to 2 Communication Option Boards 	AC power supply	Relay output	18	12	CP1L-M30DR-A
	DC power supply	Transistor output (sinking)			CP1L-M30DR-D
		Transistor output (sourcing)			CP1L-M30DT-D
					CP1L-M30DT1-D
CPU - 12 In, 8 Out - 1 Analog In (0-10V) - 1 Expansion Unit Max. - 1 Communication Option Board Max. 	AC power supply	Relay output	12	8	CP1L-L20DR-A
	DC power supply	Transistor output (sinking)			CP1L-L20DR-D
		Transistor output (sourcing)			CP1L-L20DT-D
					CP1L-L20DT1-D
CPU - 8 In, 6 Out - 1 Analog In (0-10V) - 1 Expansion Unit Max. - 1 Communication Option Board Max. 	AC power supply	Relay output	8	6	CP1L-L14DR-A
	DC power supply	Transistor output (sinking)			CP1L-L14DR-D
		Transistor output (sourcing)			CP1L-L14DT-D
					CP1L-L14DT1-D

Note: CP1L PLCs are supported by CX-Programmer version 7.1 or higher.

■ Options for CPU Units

Name	Specifications	Model
RS-232C Option Board	For CPU Unit option port.	CP1W-CIF01
RS-422A/485 Option Board	For CPU Unit option port.	CP1W-CIF11
Memory Cassette	Can be used for backing up programs or auto-booting.	CP1W-ME05M

Literature Support

Product	Description	Cat. Number
CP1L Brochure (PDF)	CP1L full explanation of features, specifications	R08I-E-01
Operation manual (PDF)	CP1L programmable controllers operation manual	W462
Programming manual (PDF)	CP1L/CP1H CPU unit programming manual	W451
Introduction Manual (PDF)	CP1L Introduction Manual	W461