CJ1 + CS1 CPUs

Accept no compromise

The latest versions of Omron's CJ1 and CS1 PLCs offer speed and ease of use; Function Block programming without compromise.



One architecture

Omron's CJ1 and CS1 PLC families are both based on a single core architecture. Whereas the modular CJ1 range offers compactness and the ultimate in scalability, the CS1 rack PLCs provide a wide range of advanced control units and dual-redundancy options. Thus both ranges complement each other perfectly.

What both families have in common is a reputation for reliable, high-speed control. The new Version 3 CPUs add IEC 61131-3 compatible Structured Text programming in user-defined Function Blocks, thus increasing code reusability and improving programming efficiency. All CPUs now support this as standard, without the need to install extra memory, or to buy additional software. And without compromising control performance.

One control engine

Conventional ladder programming is efficient and fast for sequence control tasks, but code portability is limited. And in conventional PLC systems, Structured Text programming and userdefined Function Blocks offer more flexibility, but often at extra cost, and with reduced performance. A unique new hardware architecture based on Omron's Multi-lingual Control Engine takes away this dilemma. It is built in at the heart of all CJ1 and CS1 PLCs, and supported by the latest version of Omron's universal PLC programming software, CX-Programmer.

Smart Platform

As the new CPUs are backward-compatible with the preceding models, existing users can seamlessly migrate to the new architecture without changing a single line of code. But Omron's continuously expanding library of pre-tested Function Blocks will make programming the new systems easier than ever. Combining PLCs with temperature controllers, smart sensors, motion controllers or vision systems will become plug-and-work configuration. This significantly reduces the time required for engineering, commissioning and maintenance. The transparent communication architecture of Omron's Smart Platform will provide a fully integrated development environment, from sensor to actuator.





Whereas most PLC manufacturers rely fully on processing Function Blocks in firmware, Omron have developed a core component, which greatly reduces software overhead for Function Block data management.

Although each Function Block is only defined once, each Function Block call from the main program requires a new instance to be created, and parameters and I/O data to be retrieved. After execution, the processed data needs to be returned, and the status needs to be stored for the next execution of the instance. Omron's Multi-Lingual Control Engine autonomously handles the transfer of all data to and from the function block. The result: More efficient programming without losing performance!



Key features of the CJ1/CS1 PLC range

- One architecture
- One control engine
- One software
- One instruction set
- Open networking
- Wide range of capacities
- Structured Text programming
- Function Block Libraries



There is always a CPU to fit your needs

Program capacity (kSteps) Max. I/O capacity **Program capacity** Memory capacity Execution time, Number of models (digital I/O points) (kSteps) (kWords) binary instructions (ns) CS1H series 5120 20 - 250 64 - 448 20 ns 5 CS1G series 960 - 5120 10 - 60 64 - 128 40 ns 4 CJ1H series 2560 60 - 250 128 - 448 20 ns 3 64 - 128 40 ns CJ1G series 960 - 1280 10 - 60 4 CJ1M series 160 - 640 5 - 20 32 100 ns 3 basic 3 with pulse I/O 3 with Ethernet port

Memory capacity in kWords

448

256

128

64

32