**CX-Automation Suite**

This section describes the software available for programming, communicating with and performing data collection with Omron's programmable controllers.

Hand-held programmers provide a compact alternative to a laptop computer for plant floor diagnostics and testing.

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<td>Use CX-Protocol software to develop serial device protocols</td>
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<td>Connection diagrams</td>
<td></td>
</tr>
</tbody>
</table>
Overview

Omron continues to expand its growing family of software products for programming, communications, and data collection to interface with our full line of programmable controllers, including the compact CJ1 Series.

CX-Automation Suite is Omron’s family of software products that maximize productivity simplifying the already easy to use Omron industrial automation products.

- Suite products use Omron’s CX-Server for powerful and reliable communications
- Support all Omron communication protocols
- All programs have a common look and feel
- Develop a single I/O point (tag) database for your PLC program using CX-Programmer and import it directly to CX-Supervisor or other CX-Automation Suite products

CX-Automation Suite Software Packages

For detailed descriptions of functionality, review the individual data sheet or manual for each product. Visit Omron’s Knowledge Center at www.knowledge.omron.com and search for documentation by the literature number in the right-hand column.

<table>
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<tr>
<th>Software Package</th>
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</thead>
<tbody>
<tr>
<td>CX-Programmer</td>
<td>Program development tool for PLCs</td>
<td>W361</td>
</tr>
<tr>
<td>CX-Simulator</td>
<td>Virtual PLC for program testing/debugging</td>
<td>W366</td>
</tr>
<tr>
<td>CX-Protocol</td>
<td>Serial protocol development for use with Omron PLCs</td>
<td>W344</td>
</tr>
<tr>
<td>CX-Position</td>
<td>Programming/monitoring for single or multi-axis Positioning modules</td>
<td>W398</td>
</tr>
<tr>
<td>CX-Supervisor</td>
<td>Full featured PC-based HMI for Microsoft® Windows®</td>
<td>D504P1</td>
</tr>
<tr>
<td>CX-ServerLITE</td>
<td>ActiveX control for all Omron communication protocols</td>
<td>DS10P1</td>
</tr>
<tr>
<td>CX-ServerOPC</td>
<td>OPC Server for all Omron controllers</td>
<td>DS09P1</td>
</tr>
</tbody>
</table>

CX-Automation Suite Architecture

CX-Server Runtime

At the core of Omron's CX-Automation Suite is CX-Server Runtime, a common framework that all suite products use and share. A solid piece of middleware built on a Windows® 32-bit platform, CX-Server Runtime

- Supports all Omron communication protocols
- Shares a common I/O point database between suite products
- Includes diagnostic tools to aid in installing and using Omron control components.

CX-Server Runtime makes setting up communications easy, using a Windows Explorer® style Smart Configurator: Choose controller types, communication networks and assign I/O points, and the configurator takes care of the rest. I/O points can also be imported/exported using Microsoft® Excel. An entire network of PLC controllers can be configured for communications and data exchange in no time at all.

CX-Server Runtime includes all the Omron communication protocols: Toolbus, Host Link (SYSCOM Way), SYSMAC Net, SYSMAC Link, Controller Link, Ethernet, and can act as a gateway to RNS. It also offers a dynamic data exchange (DDE) Client/Server, and diagnostic tools such as the "Performance Monitor" which displays communication throughput usage to assist in network optimization.
Omron’s CX-Programmer makes working with a PLC easy.

With CX-Programmer, You Can Do All This and More

- Develop, write, modify and debug programs online/offline.
- Import and upgrade existing legacy programs (used in older Omron programming packages) using the file conversion utility.
- Setup hardware.
- Setup and perform communications.
- Setup PLC networks.
- Perform diagnostics, testing and debugging.
- Monitor data and networks.
- Generate reports.
- Share tag data with other CX-Automation Suite products.

Key Features

- Program all Omron Controllers and support network setup in one package.
- Programming software is compatible with Windows® 95/98/NT4.0 Systems 2000/XP. (Note that CX-Programmer version 3.0+ is needed for Windows® XP compatibility.)
- Built-in CX-Net and CX-Server network configuration utilities simplify communications between PLCs and PCs.

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX-Programmer, full version single license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-CXPC1-EV-V</td>
</tr>
<tr>
<td>CX-Programmer, full version 3-pack license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-CXPC1-EL03-V-V</td>
</tr>
<tr>
<td>CX-Programmer, full version 10-pack license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-CXPC1-EL10-V-V</td>
</tr>
<tr>
<td>CX-Programmer, trial version, runs for 30 days</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-CXPC1-ETR-V-V</td>
</tr>
</tbody>
</table>
CX-Programmer Provides a Wealth of Functionality in an Efficient and Intuitive Environment

**Easy Operation**
- Operate either with or without using a mouse.
- Windows Explorer® style interface.
- Enter input/output instructions with function keys.
- Advanced Find/Replace functions.
- Display operand input ranges.
- Convert text inputs to ladder diagrams. Either enter mnemonics into ladder diagram displays or convert text from text editors.
- Import/export I/O data to MS Excel.
- Program with I/O tags (names) rather than specific addresses.

**Numerous Display and Monitoring Options**
- Monitor present values of specified addresses.
- Watch Windows enable monitoring of specific address locations.
- Output Windows can display: errors, search results, file read errors, and program comparison results.

**Data Compatibility with Windows Applications**
- Import I/O table data such as name, address, and I/O comments from Microsoft® Excel spreadsheets.

**Flexible Maintenance Functions**
- Force-setting/resetting.
- Differential monitoring.
- Timer/Counter set value changes.
- Cross-references.
- Data trace and time chart monitoring.
- Online editing of multiple locations and controllers.
- Online editing of different tasks from different computers.

**Remote Programming and Monitoring**
- Access any PLC located on a network from a single location (single port multiple access).
- Access remote PLCs via modem connections.
- Store/read CPU data (programs, parameters, memory contents, or comments) in memory files on optional Flash memory Cards or built-in data file (EM) file memory.
- Display time-stamped error histories (including user-generated error logs) from the CPU.
- Protect programs for access using passwords.
CX-Programmer

- **Import/Export I/O Allocations, Comments and Symbol Names Using Microsoft® Excel**

Reduce costs of program development with Microsoft® Excel.

I/O tables, including symbols, address and I/O comments can be copied and pasted directly from CX-Programmer to MS Excel or from MS Excel to CX-Programmer.
Create Programs with a Text Editor

Mnemonic programs can be created with any standard text editor, such as Notepad, and then pasted into CX-Programmer as a statement list to be used as part of the program. Switch between statement list or ladder logic display format with a click of the mouse.
Use Automatic Address Allocations for Increased Flexibility

CX-Programmer can automatically allocate I/O addresses. Assign a memory block size to any of the available data types, and CX-Programmer will auto allocate and increment addresses with the block.

1. Enter symbols into the variable table, omitting specific addresses.

2. Specify allocation word ranges in the automatic address allocation dialog box.

3. Addresses will be automatically allocated to local or global variables memory areas.
Network Configurations Made Easy

Configuring a network of PLCs couldn’t be easier, with the CX-NET network configuration tool, setup PLC network routing tables, I/O tables, and data link tables.

Quickly connect to any PLC on the network.

From any single location along the network using Omron’s single-port multiple-access (SPMA) technology, you can:

- See devices present on the network.
- Run network diagnostics.
- Create and transfer network routing and data link tables.
CX-Simulator

Key Features

- Transfer logic programs using CX-Programmer just as with actual PLC.
- Simulate input conditions.
- Single step logic programs.
- Set break points.
- Filter for I/O conditions.
- Test/debug serial devices with “Live” connections through serial port.
- Send/receive FINS commands.
- Test/debug HMI/SCADA applications.

CX-Simulator is a powerful software tool that functions as a virtual PLC, making it the ultimate tool for CX-Programmer developers to efficiently design, test and debug program logic as well as serial and network connections. The program runs on a Windows® based PC.

Use CX-Simulator prior to project startup when physical connections to the hardware are not available. Developed programs can be run and edited, I/O can be simulated to conform to field devices, network communications can be tested and program scan rates can be calculated. Existing programs can also be evaluated, providing the most efficient means of improving system performance.

Leverage all the debugging features of CX-Programmer and more. Download ladder programs to CX-Simulator’s virtual PLC just as you would an actual Omron PLC CPU and work “online” with CX-Programmer editing and testing.

Create I/O expressions, or a debugging ladder logic program to simulate virtual external inputs. It’s even possible to input an actual PLC “Data Trace” or collect “Time Chart Monitor” data from CX-Programmer for input simulation.

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number (See Note.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX-Simulator, full version single license,</td>
<td>Microsoft Windows: XP, 2000, NT 4.0</td>
<td>WS02-SIMC1-E □</td>
</tr>
<tr>
<td>with manuals</td>
<td>(service pack 3+), 98</td>
<td></td>
</tr>
</tbody>
</table>

Note: Please contact your local Omron sales office for current version.
When it is time to connect a serial device to a PLC
PLC and exchange data, use CX-Protocol to make
the job simple and easy.

It doesn’t matter if it’s an Omron or non-Omron
product; communicate to any serial device through a
Serial Communications module with both RS-232
and RS-422/485 ports.

With CX-Protocol, develop the communication proto-
coll for any serial device and transfer it to the
module’s processor just like a logic program.

All the serial command processing is executed from
within the PLC Module, not from the PLC
CPU. To call a created protocol for use in a
program, select the CX-Programmer Protocol Macro
(PMCR) command to exchange data between the
serial device and logic program running on the
PLC CPU.

### Key Features

- Communicate with nearly all serial RS-232 and
  RS-422/485 devices.
- Supports half-duplex or full-duplex modes.
- Assignable error check code to send/receive
  commands.
- Conversions for ASCII and Hex numerical data.
- Pre-built functions for inserting into command
  strings.
- Programmable flow control.
- Includes protocols for Omron temperature control-
  lers, panel meters, bar code readers, vision
  sensors, and Hayes compatible modems.
- “Live” monitoring of transmissions for testing/
  debugging command strings.
- Combines with Serial Communications Modules.

### Specifications

<table>
<thead>
<tr>
<th>Description</th>
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<th>Part number (See Note.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX-Protocol, full version single license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-PSTC1-E</td>
</tr>
</tbody>
</table>

Note: Please contact your local Omron sales office for current version.
CX-Position

Simplify configuring and monitoring of motion parameters for the single and multi-axis PLC Position Control modules using CX-Position software. These modules provide flexible motion control of servo and stepper drives using pulse-train command outputs.

CX-Position has the added ability of handling multiple PLCs with multiple modules all in one project. Furthermore, it will now be possible to easily move NC data and perform copy and paste functions in the project.

Key Features

- CX-Position makes entering parameters easy and reduces engineering time. (See screen capture.)
- CX-Position allows you to create backup files on your PC and to document program parameters.
- Windows® Explorer style Interface.
- Easily and quickly configure parameters such as soft limits, homing methods, display units, and max. speed.
- Setup motion sequences, acceleration/deceleration profiles, speeds, dwell times, zone flags, etc.
- Monitor single or multiple modules for position, I/O status (e.g. limits, origin sensors position completed) error log sequences in progress and more.

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number (See Note.)</th>
</tr>
</thead>
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<tr>
<td>CS1W-NC Support software (CX Position)</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>WS02-NCTC1-E□□□</td>
</tr>
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</table>

Note: Please contact your local Omron sales office for current version.
CX-Supervisor provides a complete solution with tools to develop an HMI project from start to finish for Omron programmable controllers, across all Omron network protocols.

- Need the “hook” for third-party HMI/SCADA communications to Omron controllers and networks? Use CX-ServerLite. It provides the activeX control required to exchange data.
- If the legacy third-party HMI system uses an OPC client/server approach, use CX-ServerOPC.

Note: CX-ServerLITE and CX-ServerOPC offer the additional benefits of creating HMI projects in Microsoft Excel and Visual Basic depending on the developer’s skill level.

Each of the Three Software Packages —
- Allows convenient drag-and-drop development of HMI screens using a library of images (switches, lamps, gauges) and other activeX characters/images.
- Provides complete access to all Omron programmable controller platforms, network protocols and controller memory areas. Project developers no longer have the tedious tasks of writing and testing code for communications and building graphical objects for control and display.
- Developers can reuse the I/O point database already created with CX-Programmer to exchange data quickly and easily.

CX-Supervisor Tops the List of HMI Solutions

Are you looking for a Windows-based HMI software package packed with features and large I/O tag counts to interface to PLCs? CX-Supervisor is it!

CX-Supervisor is flexible enough for supervision and control of a single PLC or an entire manufacturing environment of PLCs. Windows Explorer-style development environment makes building the most sophisticated graphical interfaces simple. Intuitive Wizards and an extensive on-line help make it even easier.

More than just a HMI product, CX-Supervisor includes powerful alarm functionalities, logging, trending, database connectivity, and advanced scripting options all contained in one package.

CX-Supervisor supports Microsoft COM/DCOM, DDE, OPC, OLE, activeX, and ADO/OLEDB standard technologies.

Key Features
- Objects/animation, simple drawing object or more complex OLE objects.
- Includes many activeX controls.
- Libraries of over 3000 graphic symbols.
- Create recipes for transferring process data to and from PLCs.
- Alarming provides notification for unwanted conditions of I/O points.
- Security levels limit access to specific project actions for single users or groups.
- Re-uses I/O point database from other CX-Automation Suite products.
- “activeX” container.
- Choice of three languages: CX-Supervisor base script, VBA script, and JAVA script OPC client.
- DDE Client/Server data trending.
- Data logging.
- Data base connections using ADO/OLEDB.

Specifications

<table>
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<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number (See Note.)</th>
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</thead>
<tbody>
<tr>
<td>CX-Supervisor CD-ROM demo version, limited to 20 I/O points, runs continuously for one hour before resetting</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SUPERVISOR-DEMO-V□□□</td>
</tr>
<tr>
<td>CX-Supervisor, CD-ROM full development version, single user license with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SUPERVISOR-V□□□</td>
</tr>
<tr>
<td>CX-Supervisor runtime single user license</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SUPERVISOR-HL-V□□□</td>
</tr>
<tr>
<td>CX-Supervisor runtime version and runtime single user license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SUPERVISOR-RUN-HL-V□□□</td>
</tr>
<tr>
<td>CX-Supervisor, CD-ROM runtime version and runtime single user license software disk, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SUPERVISOR-TOK-V□□□</td>
</tr>
</tbody>
</table>

Note: Please contact your local Omron sales office for current version.
CX-ServerLITE contains an activeX communication control to interface to CX-Server Runtime providing Windows PC-based applications communication to Omron PLCs and temperature controllers. The activeX control can be used within a Microsoft-compliant activeX container making it especially easy when deployed within Excel or Visual Basic. In addition, activeX control also includes a set of graphical Omron activeX controls, making it not only easy for exchange of data but creation of custom HMI applications.

**Key Features**

- "activeX" communication control for PLCs.
- Create HMI applications using Microsoft Excel and Visual Basic.
- Set of Omron activeX graphical controls.
- Works with third-party activeX controls.
- Script command set.
- Drag-and-Drop toolbar.
- Proven and reliable connections to PLC hardware.
- Reuse I/O point database with other CX-Automation Suite products.

**Omron PLC Communications**

Easily connect Windows PC-based applications to Omron hardware. No custom code to write or debug.

**Graphical “activeX” Controls**

Turns Microsoft Excel into a PC-based HMI and saves time in Visual Basic.

**Specifications**

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number (See Note.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX-ServerLITE, full version, single license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SERVER-LITE-V□□□□</td>
</tr>
<tr>
<td>CX-ServerLITE demo version, runs for (1) hour continuously before resetting</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98</td>
<td>CX-SERVER-LITE-DEMO-V□□□□</td>
</tr>
</tbody>
</table>

Note: Please contact your local Omron sales office for current version.
Three CX-ServerOPC Components

CX-Server
Omron’s network communication manager, CX-Server, is included with CX-ServerOPC. CX-Server includes drivers for all of Omron’s networks. This means CX-ServerOPC can interface to all Omron PLCs, temperature controllers and network service board products.

OPC Server
The OPC Server connects to the third party operator interface, such as OPC clients as HMI packages, Visual Basic programs, or C++ programs. The OPC Server then manages connection to Omron’s CX-Server, which exchanges data with Omron devices.

Connect OPC client applications to Omron hardware easily, through use of standard OPC technologies. The Omron OPC Server supports all Omron communication protocols and PLC memory locations in one software package.

OPC Client “activeX” Objects
CX-Server OPC includes a set of activeX objects that allow a customer to create their own CX-Server client application. CX-ServerOPC can be purchased to operate as an open data server for Omron networks, and it can be purchased to create an open data client for any OPC server. These activeX objects can be dragged and dropped into Microsoft Excel to create a simple, dialog-configured HMI that can communicate to an OPC server. These objects can also be added to Visual Basic to create an OPC client.

Now, the Visual Basic programmer does not have the tedious task of writing and testing the underlying OPC client code. Omron has taken care of code debugging concerns by providing CX-ServerOPC with client activeX controls.

IMPORTANT: The Omron OPC Server supports version 2.0 of the OPC specification only. Because of this, OPC Client applications must support OPC v2.0 Data Access (DA) of the OPC specification to be used with the Omron OPC Server.

With OPC Client activeX Control, turn Microsoft Excel and Visual Basic into a powerful OPC client application that can access data from one or many OPC Servers at the same time, supporting multiple vendor platforms and bridging of OPC Server to OPC Server. This means that through using the Omron OPC Client activeX control, a single Excel or Visual Basic application can be developed to interface to Omron PLCs and multiple PLC vendors for a simple way to exchange and share data.

HMI and SCADA applications communicate with control networks using drivers designed to different vendor specifications. In the past, this meant that each HMI vendor had to create a multitude of drivers and driver interfaces to their products. This created a product development and support nightmare.

The OPC standard was created to solve this problem. Now, an HMI vendor can create a single OPC client interface for their software. This OPC client can interface to any OPC server on the market. Vendors, such as Omron, have created reliable OPC servers that support their networks. So, when an OPC client is connected to the OPC server, the HMI package freely exchanges data.

Key Features
• Omron OPC Server providing third-party OPC Client HMI/SCADA applications connectivity to Omron’s other PLCs and Networks.
• OPC Client activeX controls turns Microsoft Excel & Visual Basic into OPC Client applications.
• Bridge between multiple vendor OPC Servers using OPC Client activeX control.
• Set of Omron activeX graphical controls.
• Works with third-party activeX controls.
• Script command set.
• Drag-and-drop toolbar.
• Proven and reliable connections to PLC hardware.
• Reuse I/O point database with other CX-Automation Suite products.

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating system</th>
<th>Part number (See Note.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CX-ServerOPC, full version, single license, with manuals</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98; Microsoft Excel 2000/97, Visual Basic 5.0+</td>
<td>CX-SERVER-OPC-V□□□</td>
</tr>
<tr>
<td>CX-ServerOPC demo version, runs for (1) hour continuously before resetting</td>
<td>Microsoft Windows: XP, 2000, NT 4.0 (service pack 3+), 98; Microsoft Excel 2000/97, Visual Basic 5.0+</td>
<td>CX-SERVER-OPC-DEMO-V□□□</td>
</tr>
</tbody>
</table>

Note: Please contact your local Omron sales office for current version.
Hand-Held Programmers

Compact, Hand-Held Programmers for All Omron Programmable Controllers

- Monitor PLC operations on the factory floor and perform troubleshooting diagnostics.
- Write, modify and debug programs.
- Backlit LCD display on C200H-PRO27-E
- Allows easy viewing under all lighting conditions.

### Hand-Held Programmers

<table>
<thead>
<tr>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand-held programming console with cable attached, 2 m length; connects directly to new version peripheral port</td>
<td>CQM1H-PRO01-E</td>
</tr>
<tr>
<td>Hand-held programming console with back light (cable not included)</td>
<td>C200H-PRO27-E</td>
</tr>
</tbody>
</table>

### Connecting Cables and Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Cable length</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecting Cable for C200H-PRO27-E connects directly to the peripheral port</td>
<td>4 m (13.12 ft length)</td>
<td>C200H-CN422</td>
</tr>
<tr>
<td>Connecting Cable for C200H-PRO27-E allows direct connection to the new version peripheral ports</td>
<td>2 m (6.56 ft length)</td>
<td>CS1W-CN224</td>
</tr>
<tr>
<td></td>
<td>6 m (19.69 ft length)</td>
<td>CS1W-CN624</td>
</tr>
<tr>
<td>Mounting bracket for C200H-PRO27-E</td>
<td>—</td>
<td>C200H-ATT01</td>
</tr>
<tr>
<td>Programming Console Key Sheet</td>
<td>—</td>
<td>CS1W-KS001-E</td>
</tr>
</tbody>
</table>

Note: If you already have a CQM1-PRO01-E, connect to the peripheral port with a CS1W-CN114 Adapter cable.

### CQM1H-PRO01-E Programming Console

Cable Programming Console CQM1H-PRO01-E connects directly to the CJ1 peripheral port.

If you have a CQM1H-PRO01-E, use a CS1W-CN114 Adapter Cable to connect the CJ1 peripheral port.

### C200H-PRO27-E Programming Console

C200H-PRO27-E

CS1W-CN224 (Cable length: 2.0 m)
CS1W-CN624 (Cable length: 6.0 m)
Software Tools and Programming Devices
Hand-Held Programmers

Dimensions
Unit: mm (inch)

CQM1H-PRO01-E

C200H-CN224/CN624 Connecting Cable

C200H-CN224: 2 m
C200H-CN624: 6 m
CPU Programming Cables

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Length</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Device Connecting Cables (for Peripheral port)</td>
<td>CS1W-CN118</td>
<td>0.1 m</td>
<td>Connects DOS computer, D-Sub, 9-pin receptacle (Converts between RS-232C cable and peripheral port)</td>
</tr>
<tr>
<td></td>
<td>CS1W-CN226</td>
<td>2 m</td>
<td>Connects DOS computer, D-Sub, 9-pin</td>
</tr>
<tr>
<td></td>
<td>CS1W-CN626</td>
<td>6 m</td>
<td>Connects DOS computer, D-Sub, 9-pin</td>
</tr>
<tr>
<td>Programming Device Connecting Cables (for RS-232C port)</td>
<td>C200H-CN229-EU</td>
<td>2 m</td>
<td>Connects DOS computer, D-Sub, 9-pin</td>
</tr>
</tbody>
</table>

Software Programming Cables

Connecting to the Peripheral Port

Peripheral Port Connecting Cables

<table>
<thead>
<tr>
<th>Cable</th>
<th>Length</th>
<th>Computer connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS1W-CN226</td>
<td>2 m</td>
<td>D-sub, 9-pin, male</td>
</tr>
<tr>
<td>CS1W-CN626</td>
<td>6 m</td>
<td></td>
</tr>
</tbody>
</table>

Connecting to the RS-232C Port

RS-232C Port Connecting Cables

<table>
<thead>
<tr>
<th>Cable</th>
<th>Length</th>
<th>Computer connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>C200H-CN229-EU</td>
<td>2 m</td>
<td>D-sub, 9-pin, male</td>
</tr>
</tbody>
</table>
ALL DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters into inches, divide by 25.4