

■ **CPU Rack**

(This table continues on the next page.)


 Year (e.g., 1997=7)
 Month (1 to 9, X (10), Y (11), Z (12))
 Day (01 to 31)

CPU Rack (continued)

Name	Specifications		Standards	Part number
 Memory Cards	Flash memory, 15 MB		L, CE	HMC-EF172 (See note.)
	Flash memory, 30 MB			HMC-EF372 (See note.)
	Flash memory, 64 MB			HMC-EF672 (See note.)
	Memory Card Adapter (for computer PCMCIA slot)		CE	HMC-AP001
 Serial Communications Boards	2 × RS-232C ports, protocol macro function		U, C, N, L, CE	CS1W-SCB21-V1
	1 × RS-232C port + 1 × RS-422/485 port, protocol macro function			CS1W-SCB41-V1
 Programming Consoles	An English Keyboard Sheet (CS1W-KS001-E) is required. (Connects to peripheral port on CPU Unit only. Cannot be connected to RS-232C port.)		U, C, N, CE	CQM1-PRO01-E
				C200H-PRO27-E
Programming Console Key Sheet	For C200H-PRO27 and CQM1-PRO01		CE	CS1W-KS001-E
 Programming Console Connecting Cables	Connects the CQM1-PRO01-E Programming Console. (Length: 0.05 m)			CS1W-CN114
	Connects the C200H-PRO27-E Programming Console. (Length: 2.0 m)			CS1W-CN224
	Connects the C200H-PRO27-E Programming Console. (Length: 6.0 m)			CS1W-CN624
CX-Programmer	For 1 license	Windows-based Support Software for ladder programming on Windows 95, 98, Me, NT 4.0, 2000, or XP (Connects to peripheral port on CPU Unit or RS-232C port on CPU Unit or Serial Communications Unit/Board.)	---	WS02-CXPC1-EV3
	For 3 licenses			WS02-CXPC1-EV3 L03
	For 10 licenses			WS02-CXPC1-EV3 L10
Peripheral Device Connecting Cables (for peripheral port)	Connects DOS computers, D-Sub 9-pin receptacle (Length: 0.1 m) (Conversion cable to connect RS-232C cable to peripheral port)		CE	CS1W-CN118
	Peripheral bus or Host Link	Connects DOS computers, D-Sub 9-pin (Length: 2.0 m)		CS1W-CN226
		Connects DOS computers, D-Sub 9-pin (Length: 6.0 m)		CS1W-CN626
Peripheral Device Connecting Cables (for RS-232C port)	Peripheral bus or Host Link, antistatic	Connects DOS computers, D-Sub 9-pin (Length: 2.0 m)	---	XW2Z-200S-CV * CBL-202
		Connects DOS computers, D-Sub 9-pin (Length: 5.0 m)		XW2Z-500S-CV
	Host Link	Connects DOS computers, D-Sub 9-pin (Length: 2.0 m)		XW2Z-200S-V * CBL-202
		Connects DOS computers, D-Sub 9-pin (Length: 5.0 m)		XW2Z-500S-V
CX-Simulator	Windows-based Support Software for simulating ladder program operation on Windows 95, 98, Me, NT 4.0, 2000, or XP		---	WS02-SIMC1-E
CX-Protocol	Windows-based Protocol Creation Software for Windows 95, 98, Me, NT 4.0, 2000, or XP		---	WS02-PSTC1-E
Battery Set	For CS1 Series only. (Install a replacement battery within 2 years of the production date.)		L, CE	CS1W-BAT01

Note: 1. HMC-EF172/EF372/EF672 flash memory cannot be used with CS1G-CPU□□H, CS1H-CPU□□H, CJ1G-CPU□□H, or CJ1H-CPU□□H Modules predating lot number 020108 (i.e., manufactured before January 8, 2002) or with NS-7-series products predating lot number 0852 (i.e., manufactured before May 8, 2002) cannot be used together.

2. * Indicates availability in Canada only.

Expansion Racks

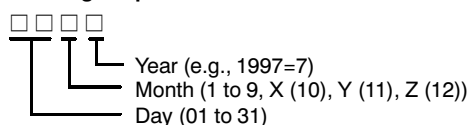
■ Expansion Racks

Name	Specifications		Standards	Part number
CS1 Expansion Backplanes (for CS1 Modules only)	3 slots		U, C, N, L, CE	CS1W-BI032
	5 slots			CS1W-BI052
	8 slots			CS1W-BI082
	10 slots			CS1W-BI102
CS1 Expansion Backplanes 	3 slots		U, C, N, L, CE	CS1W-BI033
	5 slots			CS1W-BI053
	8 slots			CS1W-BI083
	10 slots			CS1W-BI103
C200H Expansion I/O Backplanes 	3 slots		U, C, N, L, CE	C200HW-BI031
	5 slots			C200HW-BI051
	8 slots			C200HW-BI081-V1
	10 slots			C200HW-BI101-V1
Power Supply Modules 	100 to 120 VAC or 200 to 240 VAC, Output capacity: 4.6 A, 5 VDC			C200HW-PA204
	100 to 120 VAC or 200 to 240 VAC (with service supply: 0.8 A, 24 VDC), Output capacity: 4.6 A, 5 VDC			C200HW-PA204S
	100 to 120 VAC or 200 to 240 VAC (with RUN output) Output capacity: 4.6 A, 5 VDC		U, C	C200HW-PA204R
	24 VDC		U, C, N, L, CE	C200HW-PD024
	100 to 120 VAC or 200 to 240 VAC (with RUN output) Output capacity: 9 A, 5 VDC		U, C, N, L, CE	C200HW-PA209R
I/O Interface Unit	For Expansion Racks connected over a distance of more than 12 m. (C200H Modules cannot be used on Long-distance Expansion Racks.)		U, C, CE	CS1W-II102
CS1 I/O Connecting Cables (See note.)	Connects CS1 Expansion I/O Backplanes to CPU Backplanes or other CS1 Expansion I/O Backplanes.	Length: 0.3 m	L, CE	CS1W-CN313
		Length: 0.7 m		CS1W-CN713
		Length: 2 m		CS1W-CN223
		Length: 3 m		CS1W-CN323
		Length: 5 m		CS1W-CN523
		Length: 10 m		CS1W-CN133
		Length: 12 m		CS1W-CN133-B2
Long-distance Expansion Rack Cables	Connect I/O Control Unit to I/O Interface Unit or connects two I/O Interface Modules	Length: 0.3 m	N, L, CE	CV500-CN312
		Length: 0.6 m	N, CE	CV500-CN612
		Length: 1 m		CV500-CN122
		Length: 2 m	CE	CV500-CN222
		Length: 3 m		CV500-CN322
		Length: 5 m		CV500-CN522
		Length: 10 m		CV500-CN132
		Length: 20 m		CV500-CN232
		Length: 30 m		CV500-CN332
		Length: 40 m		CV500-CN432
		Length: 50 m		CV500-CN532

(This table continues on the next page.)

Note: When using a CS1W-CN313 or CS1W-CN713 I/O Connecting Cable with a CS1□-CPU□□H CPU Unit, use only Cables produced on or after September 20, 2001 (production number 2091). Cables with no production number, or produced before September 20, 2001, cannot be used.

Reading the production number



Expansion Racks (continued)

Name	Specifications	Standards	Part number
CS1 to C200H I/O Connecting Cables	Connects C200H Expansion I/O Backplanes to CPU Backplanes or CS1 Expansion I/O Backplanes.	L, CE	Length: 0.3 m CS1W-CN311
			Length: 0.7 m CS1W-CN711
			Length: 2 m CS1W-CN221
			Length: 3 m CS1W-CN321
			Length: 5 m CS1W-CN521
			Length: 10 m CS1W-CN131
			Length: 12 m CS1W-CN131-B2
C200H I/O Connecting Cables	Connects C200H Expansion I/O Backplanes to other C200H Expansion I/O Backplanes.	N, L, CE	Length: 0.3 m C200H-CN311
			Length: 0.7 m C200H-CN711
			Length: 2 m C200H-CN221
		L, CE	Length: 5 m C200H-CN521
			Length: 10 m C200H-CN131

■ C200H Basic I/O Modules

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long distance Racks	SYSMAC BUS Slave Racks			
 DC Input Modules	12 to 24 VDC, 8 inputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L, CE	C200H-ID211
	24 VDC, 16 inputs	Yes	Yes	Yes	No	Yes	16		C200H-ID212
 AC Input Modules	100 to 120 VAC, 8 inputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-IA121
	100 to 120 VAC, 16 inputs	Yes	Yes	Yes	No	Yes	16		C200H-IA122
	100 to 120 VAC, 16 inputs	Yes	Yes	Yes	No	Yes	16	CE	C200H-IA122V
	200 to 240 VAC, 8 inputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-IA221
	200 to 240 VAC, 16 inputs	Yes	Yes	Yes	No	Yes	16		C200H-IA222
	200 to 240 VAC, 16 inputs	Yes	Yes	Yes	No	Yes	16	CE	C200H-IA222V
 AC/DC Input Modules	12 to 24 VAC/VDC, 8 inputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L, CE	C200H-IM211
	24 VAC/VDC, 16 inputs	Yes	Yes	Yes	No	Yes	16		C200H-IM212
 B7A Input Modules	16 inputs	Yes	Yes	Yes	No	Yes	16	U, C, CE	C200H-B7A11
	32 inputs	Yes	Yes	Yes	No	No (See note 2.)	32	U, C	C200H-B7A12
 Interrupt Input Unit	12 to 24 VDC, 8 inputs	Yes	Yes (See note 1.)	Yes (See note 1.)	No (See note 1.)	No	16	U, C, CE	C200HS-INT01

(This table continues on the next page.)

- Note:**
1. Interrupt Input Modules can only be used to input interrupts on the CPU Rack. They will function as normal I/O Modules on other Racks.
 2. C200H-B7A12/02/21/22 are C200H Group-2 Modules.

Basic I/O Modules

C200H Basic I/O Modules (continued)

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long distance Racks	SYSMAC BUS Slave Racks			
Relay Bit Output Modules 	250 VAC/24 VDC, 2 A, 8 outputs max.	Yes	Yes	Yes	No	Yes	16	U, C, N	C200H-OC221
	250 VAC/24 VDC, 2 A, 12 outputs max.	Yes	Yes	Yes	No	Yes	16		C200H-OC222
	250 VAC/24 VDC, 2 A, 12 outputs max.	Yes	Yes	Yes	No	Yes	16	CE	C200H-OC222N
	250 VAC/24 VDC, 2 A, 16 outputs max.	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-OC225
	250 VAC/24 VDC, 2 A, 16 outputs max.	Yes	Yes	Yes	No	Yes	16	CE	C200H-OC226N
	250 VAC/24 VDC, 2 A, independent contacts, 5 outputs max.	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-OC223
	250 VAC/24 VDC, 2 A, independent contacts, 8 outputs max.	Yes	Yes	Yes	No	Yes	16		C200H-OC224
	250 VAC/24 VDC, 2 A, independent contacts, 8 outputs max.	Yes	Yes	Yes	No	Yes	16	CE	C200H-OC224N
Transistor Output Modules 	12 to 48 VDC, 1 A, 8 sinking outputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L, CE	C200H-OD411
	24 VDC, 2.1 A, 8 sinking outputs	Yes	Yes	Yes	No	Yes	16		C200H-OD213
	24 VDC, 0.8 A, 8 sourcing outputs, load short-circuit protection.	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-OD214
	5 to 24 VDC, 0.3 A, 8 sourcing outputs	Yes	Yes	Yes	No	Yes	16		C200H-OD216
	24 VDC, 0.3 A, 12 sinking outputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L, CE	C200H-OD211
	5 to 24 VDC, 0.3 A, 12 sourcing outputs	Yes	Yes	Yes	No	Yes	16		C200H-OD217
	24 VDC, 0.3 A, 16 sinking outputs	Yes	Yes	Yes	No	Yes	16		C200H-OD212
	24 VDC, 1 A, 16 sourcing outputs, load short-circuit protection.	Yes	Yes	Yes	No	Yes	16	CE	C200H-OD21A
B7A Output Modules 	16 outputs	Yes	Yes	Yes	No	Yes	16	U, C, CE	C200H-B7AO1
	32 outputs	Yes	Yes	Yes	No	No (See note 2.)	32	U, C	C200H-B7AO2

(This table continues on the next page.)

- Note:**
1. Interrupt Input Modules can only be used to input interrupts on the CPU Rack. They will function as normal I/O Modules on other Racks.
 2. C200H-B7A12/02/21/22 are C200H Group-2 Modules.

C200H Basic I/O Modules (continued)

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long distance Racks	SYSMAC BUS Slave Racks			
Triac Output Modules 	250 VAC, 1.2 A, 8 outputs	Yes	Yes	Yes	No	Yes	16	CE	C200H-OA223
	250 VAC, 0.3 A, 12 outputs	Yes	Yes	Yes	No	Yes	16		C200H-OA222V
	250 VAC, 0.5 A, 12 outputs	Yes	Yes	Yes	No	Yes	16	U, C, N, L	C200H-OA224
Analog Timer Unit 	4-point timer	Yes	Yes	Yes	No	Yes	16	U, C	C200H-TM001
	External Variable Resistor Connector:	---						---	C4K-CN223

- Note:**
1. Interrupt Input Modules can only be used to input interrupts on the CPU Rack. They will function as normal I/O Modules on other Racks.
 2. C200H-B7A12/02/21/22 are C200H Group-2 Modules.
 3. The C200H-ID001 (no-voltage contacts, 8 inputs, NPN) and C200H-ID002 (no-voltage contacts, 8 inputs, PNP) cannot be used.

■ C200H Group-2 High-density I/O Modules

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
DC Input Modules 	24 VDC, 32 inputs	Yes	Yes	Yes	No	No	32	U, C, N, L, CE	C200H-ID216
	24 VDC, 64 inputs	Yes	Yes	Yes	No	No	64		C200H-ID217
	24 VDC, 32 inputs, 6 mA	Yes	Yes	Yes	No	No	32	U, C, CE	C200H-ID218
	24 VDC, 64 inputs, 6 mA	Yes	Yes	Yes	No	No	64		C200H-ID219
	12 VDC, 64 inputs	Yes	Yes	Yes	No	No	64	U, C	C200H-ID111
Transistor Output Modules	16 mA/4.5 V to 100 mA/26.4 V, 32 sinking outputs	Yes	Yes	Yes	No	No	32	U, C, N, L, CE	C200H-OD218
	0.5 A/ 24 VDC, 32 sourcing outputs, load short-circuit protection	Yes	Yes	Yes	No	No	32	U, C, CE	C200H-OD21B
	16 mA/4.5 V to 100 mA/26.4 V, 64 sinking outputs	Yes	Yes	Yes	No	No	64	U, C, N, L, CE	C200H-OD219
B7A Input Modules	32 inputs	Yes	Yes	Yes	No	No (See note.)	32	U, C	C200H-B7A12
B7A Output Modules	32 outputs	Yes	Yes	Yes	No	No (See note.)	32		C200H-B7A02
B7A I/O Modules	16 inputs, 16 outputs	Yes	Yes	Yes	No	No (See note.)	16		C200H-B7A21
	32 inputs, 32 outputs	Yes	Yes	Yes	No	No (See note.)	32		C200H-B7A22

(This table continues on the next page.)

Note: The C200H-B7A12/02/21/22 are C200H Group-2 Modules.

High-Density I/O Modules

■ C200H Group-2 High-density I/O Modules

Part	Connection		Remarks	Standards	Part number
Applicable connector	Soldered (included with Unit)		From Fujitsu Socket: FCN-361J040-AU Connector bar: FCN-360C040-J2	---	C500-CE404
	Crimped		From Fujitsu Socket: FCN-363J040 Connector bar: FCN-360C040-J2 Contacts: FCN-363J-AU		C500-CE405
	Pressure welded		From Fujitsu: FCN-367J040-AU		C500-CE403
Terminal block connection parts	1:1 connections	Special Cable	For CS1W-ID231/ID261/OD231/ OD232/OD261/OD262/MD2 61/ MD262 and C200H-ID216/ID217/ID218/I D219/ID111/OD218/OD21B/ OD219		XW2Z-□□□B (See note 1.)
		Terminal Block Unit			XW2B-40G4
	1:2 connections	Special Cable			XW2B-40G5
		Terminal Block Unit			XW2D-40G6
					XW2Z-□□□D (See notes 1 and 2.)
					XW2B-20G4
	XW2B-20G5				
	XW2D-20G6				
	XW2C-20G5-IN16				

Note: 1. Refer to the XW2□ Connector-Terminal Block Conversion Unit catalog for details. (Square boxes indicate the cable length.)
2. The XW2Z-□□□D, CS1W-OD□□□, and C200H-OD□□□ cannot be connected. Only the inputs of the CS1W-MD□□□ can be connected.

■ CS1 High-density I/O Modules

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
DC Input Modules	24 VDC, 16 inputs, 7 mA	Yes	No	Yes	Yes	No	16	UC, N, CE, CID2	CS1W-ID211
	24 VDC, 32 inputs, 6 mA	Yes	No	Yes	Yes	No	32		CS1W-ID231
	24 VDC, 64 inputs, 6 mA	Yes	No	Yes	Yes	No	64		CS1W-ID261
	24 VDC, 96 inputs, approx. 5 mA	Yes	No	Yes	Yes	No	96	U, C, N, L, CE	CS1W-ID291
AC Input Modules	100 to 120 VAC, 100 to 120 VDC, 16 inputs	Yes	No	Yes	Yes	No	16	UC, N, CE, CID2	CS1W-IA111
	200 to 240 VAC, 16 inputs	Yes	No	Yes	Yes	No	16		CS1W-IA211
Interrupt Input Unit	24 VDC, 16 inputs, 7 mA	Yes	No	Yes (See note.)	Yes (See note.)	No	16	UC, N, CE, CID2	CS1W-INT01
High-speed Input Unit	24 VDC, 16 inputs, 7 mA	Yes	No	Yes	Yes	No	16		CS1W-IDP01
Safety Relay Unit	24 VDC, 2 channels with 4 inputs each, 4 pts/common	Yes	No	Yes	Yes	No	16	U, C, CE	CS1W-SF200

(This table continues on the next page.)

CS1 High-density I/O Modules (continued)

Name	Specifications	Mountable Racks					Bits allocated (CIO 0000 to CIO 0319)	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Relay Output Modules	250 VAC or 120 VDC, independent contacts, 8 outputs, 2 A	Yes	No	Yes	Yes	No	16	UC, N, CE, CID2	CS1W-OC201
	250 VAC or 120 VDC, 16 outputs, 2 A	Yes	No	Yes	Yes	No	16		CS1W-OC211
Transistor Output Modules 	12 to 24 VDC, 0.5 A, 16 sinking outputs	Yes	No	Yes	Yes	No	16	UC, N, CE, CID2	CS1W-OD211
	24 VDC, 0.5 A, 16 sourcing outputs	Yes	No	Yes	Yes	No	16	U, C, N, CE	CS1W-OD212
	12 to 24 VDC, 0.5 A, 32 sinking outputs	Yes	No	Yes	Yes	No	32	U, C, N, CE, CID2	CS1W-OD231
	24 VDC, 0.5 A, 32 sourcing outputs	Yes	No	Yes	Yes	No	32	U, C, N, CE	CS1W-OD232
	12 to 24 VDC, 0.3 A, 64 sinking outputs	Yes	No	Yes	Yes	No	64	UC, N, CE, CID2	CS1W-OD261
	24 VDC, 0.3 A, 64 sourcing outputs	Yes	No	Yes	Yes	No	64		CS1W-OD262
	12 to 24 VDC, 0.1 A, 96 sinking outputs	Yes	No	Yes	Yes	No	96	U, C, N, L, CE	CS1W-OD291
	12 to 24 VDC, 0.1 A, 96 sourcing outputs	Yes	No	Yes	Yes	No	96		CS1W-OD292
Triac Output Unit	250 VAC, 1.2 A, 8 outputs	Yes	No	Yes	Yes	No	16	UC, N, CE	CS1W-OA201
	250 VAC, 0.5 A, 16 outputs	Yes	No	Yes	Yes	No	16		CS1W-OA211
DC Input/Transistor Output Modules 	24 VDC, 6 mA, 32 inputs, 12 to 24 VDC, 0.3 A, 32 sinking outputs	Yes	No	Yes	Yes	No	Inputs: 32 Outputs: 32	UC, N, CE, CID2	CS1W-MD261
	24 VDC, 6 mA, 32 inputs, 24 VDC, 0.3 A, 32 sourcing outputs	Yes	No	Yes	Yes	No	Inputs: 32 Outputs: 32	U, C, N, CE	CS1W-MD262
	5 VDC, 3.5 mA, 32 inputs, 5 VDC, 3.5 mA, 32 outputs	Yes	No	Yes	Yes	No	Inputs: 32 Outputs: 32	UC, N, CE	CS1W-MD561
	24 VDC, approx. 5 A, 48 inputs, 12 to 24 VDC, 0.1 A, 48 outputs, sinking inputs/outputs	Yes	No	Yes	Yes	No	Inputs: 48 Outputs: 48	U, C, N, L, CE	CS1W-MD291
	24 VDC, approx. 5 A, 48 inputs, 12 to 24 VDC, 0.1 A, 48 outputs, sourcing inputs/outputs	Yes	No	Yes	Yes	No	Inputs: 48 Outputs: 48		CS1W-MD292

Note: Interrupt input is not available when mounted on these Racks (i.e., used as normal I/O Unit).

CPU Selection

■ Connectors for CS1 High-density I/O Modules

Part	Connection		Remarks	Standards	Part number
Applicable connectors	Soldered (included with Unit)		From Fujitsu Socket: FCN-361J056-AU Connector bar: FCN-360C056-J3	---	CS1W-CE561
	Crimped		From Fujitsu Socket: FCN-363J056 Connector bar: FCN-360C056-J3 Contacts: FCN-363J-AU		CS1W-CE562
	Pressure welded		From Fujitsu: FCN-367J056-AU		CS1W-CE563
Terminal block	1:1	Special Cable	For CS1W-ID291/OD291/OD292 2/ MD291/MD292		XW2Z-□□□H-1 (see note.)
		Terminal Block Unit			XW2B-60G4
	1:2	Special Cable			XW2B-60G5
		Terminal Block Unit			XW2Z-□□□H-2 (see note.)
					XW2B-20G4
					XW2B-20G5
	1:3	Special Cable			XW2D-20G6
					XW2B-40G4
					XW2B-40G5
					XW2D-40G6
		Terminal Block Unit			XW2Z-□□□H-3 (see note.)
					XW2B-20G4
					XW2B-20G5
					XW2D-20G6

Note: Refer to the XW2□ Connector-Terminal Block Conversion Unit catalog for details. (Square boxes indicate the cable length.)

■ C200H High-density I/O Modules Classified as Special I/O Modules

Name	Specifications	Mountable Racks					Unit No	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
 DC Input Modules	24 VDC, 32 inputs	Yes	Yes	Yes	No	Yes	0 to 9	U, C, N, L, CE	C200H-ID215
TTL Input Modules	5 VDC, 32 inputs	Yes	Yes	Yes	No	Yes			C200H-ID501
Transistor Output Modules	24 VDC, 32 sinking outputs	Yes	Yes	Yes	No	Yes			C200H-OD215
TTL Output Modules	5 VDC, 32 sinking outputs	Yes	Yes	Yes	No	Yes			C200H-OD501
TTL I/O Modules	5 VDC, 16 inputs, 16 sinking outputs	Yes	Yes	Yes	No	Yes			C200H-MD501
DC Input/Transistor Output Modules	24 VDC, 16 inputs, 16 sinking outputs	Yes	Yes	Yes	No	Yes			C200H-MD215
	12 VDC, 16 inputs, 16 sinking outputs	Yes	Yes	Yes	No	Yes		U, C, N, L	C200H-MD115

■ Connectors for C200H High-density I/O Modules

Part	Connection	Remarks	Standards	Part number
Applicable connectors	Soldered (included with Unit)	From Fujitsu Socket: FCN-361J024-AU Connector bar: FCN-360C024-J2	---	C500-CE241
	Crimped	From Fujitsu Socket: FCN-363J024 Connector bar: FCN-360C024-J2 Contacts: FCN-363J-AU		C500-CE242
	Pressure welded	From Fujitsu: FCN-367J024-AU/F		C500-CE243
Terminal block connection parts	Special Cable	For C200H-ID215/ID501/OD215 / MD115/MD215 For C200H-ID215/ID501/MD115 / MD215/MD501 □□□ = cable length		XW2Z-□□□A (See note.)
	Terminal Block Connector			XW2B-20G4
				XW2B-20G5
				XW2D-20G6
				XW2B-20G5-D
	Special Cable			XW2B-40G5-T
	Terminal Block Connector			XW2Z-□□□A (see note)
				XW2C-20G6-IN16

Note: Refer to the XW2□ Connector-Terminal Block Conversion Unit catalog for details. (Square boxes indicate the cable length.)

Special I/O Modules

■ C200H Special I/O Modules

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Temperature Control Modules 	Thermocouple input, time-proportioning PID, or ON/OFF transistor output	Yes	Yes	Yes	No	Yes	0 to 9	U, C, CE	C200H-TC001
	Thermocouple input, time-proportioning PID, or ON/OFF voltage output	Yes	Yes	Yes	No	Yes			C200H-TC002
	Thermocouple input, PID current output	Yes	Yes	Yes	No	Yes			C200H-TC003
	Temperature-resistance thermometer input, time-proportioning PID, or ON/OFF transistor output	Yes	Yes	Yes	No	Yes			C200H-TC101
	Temperature-resistance thermometer input, time-proportioning PID, or ON/OFF voltage output	Yes	Yes	Yes	No	Yes			C200H-TC102
	Temperature-resistance thermometer input, PID current output	Yes	Yes	Yes	No	Yes			C200H-TC103
Data Setting Console 	Used with Temperature Control Modules. Monitoring, setting, and changing present values, set points, alarm values, PID parameters, bank numbers, etc.	---					---	---	C200H-DSC01
	Connecting Cable, 2 m	---							C200H-CN225
	Connecting Cable, 4 m	---							C200H-CN425

(This table continues on the next page.)

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Heat/Cool Temperature Control Modules 	Thermocouple input, time-proportioning PID, or ON/OFF transistor output	Yes	Yes	Yes	No	Yes	0 to 9	U, C, CE	C200H-TV001
	Thermocouple input, time-proportioning PID, or ON/OFF voltage output	Yes	Yes	Yes	No	Yes			C200H-TV002
	Thermocouple input, PID current output	Yes	Yes	Yes	No	Yes			C200H-TV003
	Temperature-resistance thermometer input, time-proportioning PID, or ON/OFF transistor output	Yes	Yes	Yes	No	Yes			C200H-TV101
	Temperature-resistance thermometer input, time-proportioning PID, or ON/OFF voltage output	Yes	Yes	Yes	No	Yes			C200H-TV102
	Temperature-resistance thermometer input, PID current output	Yes	Yes	Yes	No	Yes			C200H-TV103
Temperature Sensor Modules 	Thermocouple input, K/J selectable	Yes	Yes	Yes	No	Yes	0 to 9	U, C	C200H-TS001
	Thermocouple input, K/L selectable	Yes	Yes	Yes	No	Yes			C200H-TS002
	Temperature-resistance thermometer, JPt 100	Yes	Yes	Yes	No	Yes			C200H-TS101
	Temperature-resistance thermometer, Pt 100	Yes	Yes	Yes	No	Yes			C200H-TS102

(This table continues on the next page.)

Special I/O Modules

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
PID Control Modules 	Voltage output/current input, time-proportioning PID, or ON/OFF transistor output	Yes	Yes	Yes	No	Yes	0 to 9	U, C, CE	C200H-PID01
	Voltage output/current input, time-proportioning PID, or ON/OFF voltage output	Yes	Yes	Yes	No	Yes			C200H-PID02
	Voltage output/current input, PID current output	Yes	Yes	Yes	No	Yes			C200H-PID03
Data Setting Console 	Used with PID Control Modules. Monitoring, setting, and changing present values, set points, alarm values, PID parameters, bank numbers, etc.	---					---	---	C200H-DSC01
	Connecting Cable, 2 m	---							C200H-CN225
	Connecting Cable, 4 m	---							C200H-CN425
Cam Positioner Unit 	48 cam outputs (16 external outputs and 32 internal outputs), Resolver speed: 20 μs (5 kHz)	Yes	Yes	Yes	No	Yes	0 to 9	U, C	C200H-CP114

(This table continues on the next page.)

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number		
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks					
Data Setting Console 	Used with Cam Positioner Unit. Monitoring, setting, and changing present values, set points, alarm values, PID parameters, bank numbers, etc.	---					---	---	C200H-DSC01		
	Connecting Cable, 2 m	---							C200H-CN225		
	Connecting Cable, 4 m	---							C200H-CN425		
ASCII Modules 	24-Kbyte RAM, 2 RS-232C ports	Yes	Yes	Yes	No	Yes	0 to F	U, C, CE	C200H-ASC02		
	200-Kbyte RAM, 2 RS-232C ports	Yes	Yes	Yes	No	Yes			C200H-ASC11		
	200-Kbyte RAM, RS-232C port, RS-422/485 port	Yes	Yes	Yes	No	Yes			C200H-ASC21		
	200-Kbyte RAM, 3 RS-232C ports (1 terminal only)	Yes	Yes	Yes	No	Yes			C200H-ASC31		
Analog Input Modules 	4 to 20 mA, 1 to 5/0 to 10 V (selectable), 4 inputs, 1/4,000 resolution	Yes	Yes	Yes	No	Yes	0 to 9	U, C, N, L	C200H-AD001		
	4 to 20 mA, 1 to 5/0 to 10 V/-10 to +10 V (selectable); 8 inputs; 1/4,000 resolution	Yes	Yes	Yes	No	Yes			0 to F	U, C, N, L, CE	C200H-AD002
	4 to 20 mA, 1 to 5/0 to 10 V/-10 to +10 V (selectable); 8 inputs; 1/4,000 resolution	Yes	Yes	Yes	No	Yes					C200H-AD003

(This table continues on the next page.)

Special I/O Modules

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Analog Output Modules 	4 to 20 mA, 1 to 5/0 to 10 V (selectable); 2 outputs; 1/4,075 resolution	Yes	Yes	Yes	No	Yes	0 to 9	U, C, N, L	C200H-DA001
	4 to 20 mA, -10 to +10 V (selectable), 4 outputs; voltage: 1/8,190 current: 1/4,095	Yes	Yes	Yes	No	Yes	0 to F	U, C, N, L, CE	C200H-DA002
	1 to 5 V, -10 to +10 V (selectable), 8 outputs; 1/4,000 resolution	Yes	Yes	Yes	No	Yes			C200H-DA003
	4 to 20 mA, 8 outputs; 1/4,000 resolution	Yes	Yes	Yes	No	Yes			C200H-DA004
Analog I/O Modules 	2 inputs (4 to 20 mA, 1 to 5 V, etc.) 2 outputs (4 to 20 mA, 1 to 5 V, etc.)	Yes	Yes	Yes	No	Yes			C200H-MAD01

(This table continues on the next page.)

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
High-speed Counter Modules 	One-axis pulse input, counting rate: 50 kcps max.	Yes	Yes	Yes	No	Yes	0 to 9	U, C, CE	C200H-CT001-V1
	One-axis pulse input, counting rate: 75 kcps max., line driver compatible	Yes	Yes	Yes	No	Yes			C200H-CT002
	Two-axis pulse input, counting rate: 75 kcps max., line driver compatible	Yes	Yes	Yes	No	Yes	0 to F		C200H-CT021
	Solder terminal; 40p and a Connector Cover	---					---	---	C500-CE401
	Solderless terminal; 40p and a Connector Cover (Crimped)	---							C500-CE402
	Pressure welded terminal; 40p	---							C500-CE403
	Solder terminal; 40p and a Connector Cover (Horizontal-type)	---							C500-CE404
	Crimp-style terminal; 40p and a Connector Cover (Horizontal-type)	---							C500-CE405

(This table continues on the next page.)

Special I/O Modules

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Motion Control Modules 	G-language program-mable, two-axis analog outputs	Yes	Yes	Yes	No	Yes	0 to F	U, C, CE	C200H-MC221
	MC Support Software IBM PC/AT or compat-ible	---					---	---	CV500-ZN3AT1-E
	Connecting Cable: 3.3 m	---							CV500-CIF01
	Teaching Box	---						U, C, CE	CVM1-PRO01
	Connection cable for Teaching Box: 2 m long	---						CE	CV500-CN224
	Memory Pack	---						U, C, CE	CVM1-MP702
	Terminal Block Con- version Modulesim- plifies wiring.	---						---	XW2B-20J6-6
	Connecting Cable for Terminal Block Con- version Unit	---							XW2Z-100J-F1
Position Control Mod- ules 	One-axis pulse-train open-collec- tor output	Yes	Yes	Yes	No	Yes	0 to F	U, C, CE	C200HW-NC113
	Two-axis pulse-train open-collec- tor output	Yes	Yes	Yes	No	Yes			C200HW-NC213
	Four-axis pulse-train open-collec- tor output	Yes	Yes	Yes	No	Yes			C200HW-NC413
	NC Support Software (SYSMAC-NCT)	---					---	---	WS01-NCTF1-E
	Peripheral Port Con- necting Cables for computer	---					---	CE	CS1W-CN226 (2 m)

(This table continues on the next page.)

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number	
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks				
Position Control Modules 	Peripheral Port Connecting Cables for computer	---					---	CE	CS1W-CN626 (6 m)	
	RS-232C Port Connecting Cables for computer							---	---	XW2Z-200S-CV (2 m) NCT V1.11 or earlier
										XW2Z-500S-CV (5 m) NCT V1.11 or earlier
										XW2Z-200S (2 m) (See note 1.)
										XW2Z-500S (5 m) (See note 1.)
										XW2B-20J6-1B
										XW2B-40J6-2B
										XW2Z-050J-A6 (0.5 m)
										XW2Z-100J-A6 (1 m)
	1-axis Relay Unit for C200HW-NC113							---	---	XW2Z-050J-A7 (0.5 m)
										XW2Z-100J-A7 (1 m)
	2-axis Relay Unit for C200HW-NC213/NC413							---	---	XW2Z-050J-A8 (0.5 m)
										XW2Z-100J-A8 (1 m)
	1-axis U, H, M Connecting Cables for C200HW-NC113	---	---	XW2Z-050J-A9 (0.5 m)						
XW2Z-100J-A9 (1 m)										
2-axis U, H, M Connecting Cables for C200HW-NC213/NC413	---	---	XW2Z-050J-A9 (0.5 m)							
			XW2Z-100J-A9 (1 m)							

(This table continues on the next page.)

Note 1. A 25-pin to 9-pin adapter is required to be connected to a 9-pin, D-sub RS-232C connector on an IBM PC/AT or compatible.

Special I/O Modules

C200H Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
 ID Sensor Modules	Electromagnetic coupling	Yes	Yes	Yes	No	Yes	0 to 9	U, C	C200H-IDS01-V1
	Microwave type	Yes	Yes	Yes	No	Yes		---	C200H-IDS21
 Fuzzy Logic Unit	Use with Fuzzy Support Software	Yes	Yes	Yes	No	Yes	0 to 9	N	C200H-FZ001
	Fuzzy Support Software (IBM PC/AT or compatible)	---					---	---	C500-SU981-E
 DeviceNet Master Unit (See note 1.)	DeviceNet Remote I/O Master, 300 bits max.	Yes	Yes	Yes	No	No	0 to F	U, C, N, L, CE	C200HW-DRM21-V1
 DeviceNet I/O Link Unit	DeviceNet Remote I/O Slave, 64 bits max.	Yes	Yes	Yes	No	No	0 to F	U, C, N, CE	C200HW-DRT21
 Profibus-DP Master Unit	Profibus-DP Remote I/O Master, 30 words max.	Yes	Yes	Yes	No	No	0 to F	CE	C200HW-PRM21
 Profibus-DP I/O Link Unit	Profibus-DP Remote I/O Slave, 100 words in max. 100 words out max.	Yes	Yes	Yes	No	No	0 to F	CE	C200HW-PRT21
 CompoBus/S Master Modules	CompoBus/S Remote I/O, 256 bits max.	Yes	Yes	Yes	No	No	0 to F	U, C, N, L, CE	C200HW-SRM21-V1
 PC Link Unit (See note 2.)	PC Link, single level: 32 Modules, multilevel: 16 Modules	Yes	Yes	Yes	No	No	0 to 9	N, L, CE	C200H-LK401

- Note**
1. The DeviceNet Slaves are allocated up to 2,048 I/O bits (100 words) in the DeviceNet Area.
 2. PC Link Modules are allocated up to 1,024 bits (64 words) in the Link Area.

■ CS1 Special I/O Modules

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Customizable Counter Modules	Pulse input: 2 pts Pulse output: 2 pts Contact input: 12 pts Contact output: 8 pts	Yes	No	Yes	Yes	No	0 to 95	U, C, CE	CS1W-HCP22
	Pulse input: 2 pts Analog output: 2 pts Contact input: 12 pts Contact output: 8 pts								CS1W-HCA22
	Contact input: 12 pts Contact output: 8 pts								CS1W-HIO01
ID Sensor Modules	Single head unit	Yes	No	Yes	Yes	No	0 to 95	U, CE	CS1W-V600C11
	Double head unit	Yes	No	Yes	Yes	No	0 to 94	U, CE	CS1W-V600C12
Analog Input Modules	4 inputs (1 to 5 V, 0 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA) Resolution: 1/4,000	Yes	No	Yes	Yes	No	0 to 95	UC, N, L, CE, CID2	CS1W-AD041-V1
	8 inputs (1 to 5 V, 0 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA) Resolution: 1/4,000	Yes	No	Yes	Yes	No	0 to 95	UC, N, L, CE, CID2	CS1W-AD081-V1
Analog Output Modules	4 outputs (1 to 5 V, 0 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA) Resolution: 1/4,000								CS1W-DA041
	8 outputs (1 to 5 V, 0 to 5 V, 0 to 10 V, -10 to 10 V, 4 to 20 mA) Resolution: 1/4,000							U, C, N, L, CE	CS1W-DA08V
	8 outputs (4 to 20 mA) Resolution: 1/4,000								CS1W-DA08C
Analog I/O Unit	4 inputs (4 to 20 mA, 1 to 5 V, etc.) 4 outputs (1 to 5 V, 0 to 10 V, etc.)								CS1W-MAD44

(This table continues on the next page.)

Special I/O Module

CS1 Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
Process I/O Modules									
Isolated Thermocouple Input Unit	4 inputs, B, E, J, K, N, R, S, T ±80 mV	Yes	No	Yes	Yes	No	0 to 95	UC, CE, CID2	CS1W-PTS01-V1
Isolated Temperature-resistance Thermometer Input Unit	4 inputs, Pt100, JPt								CS1W-PTS02
Isolated Temperature-resistance Thermometer Input Unit (Ni508.4 Ω)	4 inputs, Ni508.4Ω								CS1W-PTS03
Isolated Two-wire Transmission Device Input Unit	4 inputs, 4 to 20 mA, 1 to 5 V								CS1W-PTW01
Isolated DC Input Unit	4 inputs, 4 to 20 mA, 1 to 5 V, 0 to 5 V, ±5 V, 0 to 10 V, ±10 V								CS1W-PDC01
Isolated Pulse Input Unit	4 inputs								CS1W-PPS01
Isolated Control Output Unit	4 outputs, 4 to 20 mA, 1 to 5 V								CS1W-PMV01
Power Transducer Input Unit	8 inputs, 0 to 1 mA, ±1 mA								CS1W-PTR01
100-mV DC Input Unit	8 inputs, 0 to 100 mA, ±100 mV								CS1W-PTR02
Support Software	Setting tool software for the Processing I/O Modules, OS: Windows 95, 98, NT 4.0 (see note)								---

(This table continues on the next page.)

CS1 Special I/O Modules (continued)

Name	Specifications	Mountable Racks					Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks			
High-speed Counter Modules	Pulse input: 2 pts Counting speed: 500 kcps max.	Yes	No	Yes	Yes	No	0 to 92	U, C, CE	CS1W-CT021
	Pulse input: 4 pts Counting speed: 500 kcps max.								CS1W-CT041
	SSI encoder input: 2 pts counting speed: 1.5 mHz max.	Yes	No	Yes	Yes	No	0 to 94	CE	CS1W-CTS21
Motion Control Modules 	4 axes, analog outputs, G language	Yes	No	Yes	Yes	No	0 to 93	U, C, CE	CS1W-MC421
	2 axes, analog outputs, G language								CS1W-MC221
MC Support Software	Windows 95, 98, or NT	---					---	---	WS02-MCTC1-EV2
Computer Connecting Cables	Peripheral port on CPU Unit	---						CE	CS1W-CN226 (2 m)
								CS1W-CN626 (6 m)	
	RS-232C port on CPU Unit							---	XW2Z-200S-CV (2 m)
			XW2Z-500S-CV (5 m)						
Teaching Box		---					---	U, C, CE	CVM1-PRO01
Teaching Box Connecting Cable (2 m)								CE	CV500-CN224
Memory Pack								U, C, CE	CVM1-MP702
MC Terminal Block Conversion Unit for 2 Axes (simplifies wiring I/O connectors)								---	XW2B-20J6-6
MC Terminal Block Conversion Unit for 4 Axes (simplifies wiring I/O connectors)									XW2B-40J6-7
MC Terminal Block Conversion Unit Cable									XW2Z-100J-F1

Note: Setting tool software for the Processing I/O Modules also supports CS1W-AD□□□, CS1WS-DA□□□, and CS1W-MAD44.

CPU Bus Modules

CS1 CPU Bus Modules (Continued)

Name	Specifications	Mountable Racks					Words allocated (CIO 1500 to CIO 1899)	Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks				
Controller Link Modules	Twisted pair	Yes	No	Yes	Yes	No	25 words	0 to F	UC, N, L, CE, CID2	CS1W-CLK21-V1
	Optical ring (H-PCF cable)	Yes	No	Yes	Yes	No	25 words			CS1W-CLK12-V1
	Optical ring (GI cable)	Yes	No	Yes	Yes	No	25 words			CS1W-CLK52-V1
Controller Link Support Board	For PCI Bus (wire type), with Support Software	---					---	---	CE	3G8F7-CLK21-EV1
	For PCI Bus (H-PCF optical type), with Support Software	---					---			3G8F7-CLK12-EV1
	For PCI Bus (GI optical type)	---					---			3G8F7-CLK52-EV1
SYSMAC LINK Modules	Coaxial cable (5C-2V cable)	Yes	No	Yes	Yes	No	25 words	0 to F	U, C, CE	CS1W-SLK21
	Optical cable (H-PCF cable)						25 words		U, C, N, CE	CS1W-SLK11
SYSMAC LINK Support Boards	For PCI Bus (coaxial type), with Support Software	---					---	---	CE	3G8F7-SLK21-E
	For PCI Bus (H-PCF optical type), with Support Software	---					---			3G8F7-SLK11-E
Serial Communications Unit	Two RS-232C Ports	Yes	No	Yes	Yes	No	25 words	0 to F	U, C, N, L, CE	CS1W-SCU21-V1
RS-232C-RS-422A Conversion Unit	1 RS-232C port and 1 RS-422A terminal block	---					---	---	---	NT-AL001
Ethernet Unit	100Base-TX	Yes	No	Yes	Yes	No	25 words	0 to F	UC, CE, CID2	CS1W-ETN21
DeviceNet Unit	Functions as master and/or slave; allows control of 2,048 points max. per master.	Yes	No	Yes	Yes	No	---	0 to F	U, C, CE	CS1W-DRM21

(This table continues on the next page.)

CS1 CPU Bus Modules (continued)

Name	Specifications	Mountable Racks					Words allocated (CIO 1500 to CIO 1899)	Unit No.	Standards	Part number
		CPU Rack	C200H Expansion I/O Racks	CS1 Expansion Racks	CS1 Long-distance Racks	SYSMAC BUS Slave Racks				
CX-Process	For Loop Control Unit, Programming Tool and Monitor Tool software, OS for Tool: Windows 95, 98, NT 4.0, OS for Monitor: Windows NT 4.0 (License key sold separately)	---					---	---	---	WS02-LCTC1-E
License Key for Monitor Software	Hardware key for Monitor software, with license	---					---	---	---	WS02-LCTK1-EL01
Peripheral Device Connecting Cables (for peripheral port)	Connects DOS computers, D-Sub 9-pin receptacle (Length: 0.1 m) (Conversion cable to connect RS-232C cable to peripheral port)	---					---	---	CE	CS1W-CN118
	Peripheral bus or Host Link, Connects DOS computers, D-Sub 9-pin (Length: 2.0 m)	---					---	---		CS1W-CN226
	Peripheral bus or Host Link, Connects DOS computers, D-Sub 9-pin (Length: 6.0 m)	---					---	---		CS1W-CN626
Peripheral Device Connecting Cables (for RS-232C port)	Peripheral bus or Host Link, Connects DOS computers, D-Sub 9-pin (Length: 2.0 m)	---					---	---	---	C200H-CN229-EU
										CBL-202*
USB to Serial 9-pin Adapter	Converts PC USB port to a PC serial 9-pin port for use with Omron serial cables	---					---	---	---	CS1W-C1F31

* Available in Canada only.

DeviceNet

■ DeviceNet Configurator

Name	Specifications	Standards	Part number
DeviceNet Configurator	Software only (Windows 95, 98, NT 4.0, or 2000)	---	WS02-CFDC1-E
	ISA board with software (Windows 95, 98, or NT 4.0)	---	3G8F5-DRM21-E
	PC card with software (Windows 95, 98, ME, 2000, XP)		3G8E2-DRM21-EV1

■ Setting and Monitoring Software

Name	Specifications	Standards	Part number
NX-Server	DDE edition	---	WS02-NXD1-E

■ DeviceNet Slaves

Slave	Specifications	Standards	Part number
Programmable Slaves	Controller with SYSMAC CPM2C CPU No. of remote I/O link points: 1,024 max. Provides CompoBus/S Master.	U, C, CE	CPM2C-S100C-DRT
	4 transistor outputs (sinking) 4 transistor outputs (sourcing)		CPM2C-S110C-DRT
I/O Link Modules	512 internal inputs/512 internal outputs (between CS1 or C200HX/HG/HE PLC and Master)	U, C, CE	C200HW-DRT21
	16 internal inputs/16 internal outputs (between CQM1/CQM1H PLC and Master)		CQM1-DRT21
	32 internal inputs/32 internal outputs (between CPM1A/CPM2A PLC and Master)		CPM1A-DRT21
Remote Transistor I/O Terminals	8 inputs (NPN, + common)		DRT1-ID08
	8 inputs (PNP, - common)		DRT1-ID08-1
	8 outputs (NPN, - common)		DRT1-OD08
	8 outputs (PNP, + common)		DRT1-OD08-1
	16 inputs (NPN, + common)		DRT1-ID16
	16 inputs (PNP, - common)		DRT1-ID16-1
	16 outputs (NPN, - common)		DRT1-OD16
	16 outputs (PNP, + common)		DRT1-OD16-1
	8 input points (NPN with + common) 8 input points (NPN with - common)		DRT1-MD16

(This table continues on the next page.)

DeviceNet Slaves (continued)

Slave		Specifications	Standards	Part number
Remote Transistor I/O Terminals with 3-tier Terminal Block	Common power supply for communications and internal circuits	16 input points (NPN with + common)	---	DRT1-ID16TA
		16 input points (PNP with - common)		DRT1-ID16TA-1
		8 input points (NPN with + common)		DRT1-MD16TA
		8 output points (NPN with - common)		
		8 input points (PNP with - common)		DRT1-MD16TA-1
		8 output points (PNP with + common)		
		16 output points (NPN with - common)		DRT1-OD16TA
		16 output points (PNP with + common)		DRT1-OD16TA-1
	Separate power supplies for communications and internal circuits	16 inputs (NPN, + common)	CE	DRT1-ID16T
		16 inputs (PNP, - common)		DRT1-ID16T-1
		16 I/O (NPN, - common)		DRT1-MD16T
		16 I/O (PNP, + common)		DRT1-MD16T-1
		16 outputs (NPN, - common)		DRT1-OD16T
		16 outputs (PNP, + common)		DRT1-OD16T-1
Remote Transistor I/O Terminals with Connectors		32 inputs (NPN, + common)		DRT1-ID32ML
		32 inputs (PNP, - common)		DRT1-ID32ML-1
		32 outputs (NPN, - common)		DRT1-OD32ML
		32 outputs (PNP, + common)		DRT1-OD32ML-1
		32 I/O (NPN, - common)		DRT1-MD32ML
		32 I/O (PNP, + common)		DRT1-MD32ML-1
	Mounting Bracket B	---	---	SRT2-ATT02
Remote Adapters		16 inputs (NPN, + common)	U, C, CE	DRT1-ID16X
		16 inputs (PNP, - common)		DRT1-ID16X-1
		16 outputs (NPN, - common)		DRT1-OD16X
		16 outputs (PNP, + common)		DRT1-OD16X-1
	Flat Cable Connectors with MIL Plugs	Straight DIP pins	---	XG4A-2031
		L-shaped DIP pins		XG4A-2034
DeviceNet Fiber Amplifier Sensor Communications Unit		Connects to up to 16 Fiber Amplifier Modules for the E3X-DA-N		E3X-DRT21
		Fiber Amplifier Unit (See note 1.)		E3X-DA6-P
		Reduced-wiring Connector (See note 1.)		E3X-CN02
		Terminal Unit		E39-TM1
Sensor Terminals (for 2-wire Sensors)		8 sensor I/O points (NPN), 2 inputs per Sensor		DRT1-HD16S
		8 sensor I/O points (PNP)		DRT1-ND16S
	Cable Connectors	0.3 to 0.5 mm ² (See note 2.)		XS8A-0441
		0.14 to 0.2 mm ² (See note 2.)		XS8A-0442

(This table continues on the next page.)

DeviceNet Slaves

DeviceNet Slaves (continued)

Slave	Specifications		Standards	Part number	
Water-resistant Terminals (transistor I/O)	4 inputs (NPN, + common)		CE	DRT1-ID04CL	
	4 inputs (PNP, - common)			DRT1-ID04CL-1	
	8 inputs (NPN, + common)			DRT1-ID08CL	
	8 inputs (PNP, - common)			DRT1-ID08CL-1	
	4 outputs (NPN, - common)			DRT1-OD04CL	
	4 outputs (PNP, + common)			DRT1-OD04CL-1	
	8 outputs (NPN, - common)			DRT1-OD08CL	
	8 outputs (PNP, + common)			DRT1-OD08CL-1	
Environmentally Resistant Transistor I/O Terminals	8 inputs (NPN, + common)		U, C, CE	DRT1-ID08C	
	16 inputs (NPN, + common)			DRT1-HD16C	
	16 inputs (PNP, - common)			DRT1-HD16C-1	
	8 outputs (NPN, - common)			DRT1-OD08C	
	16 outputs (NPN, - common)			DRT1-WD16C	
	16 outputs (PNP, + common)			DRT1-WD16C-1	
	8 inputs/8 outputs (NPN, + common/- common)			DRT1-MD16C	
	8 inputs/8 outputs (PNP, - common/+ common)			DRT1-MD16C-1	
B7AC Interface Terminal	3 sets of 10 inputs (branching to 3 B7AC Link Terminals)		U, C, CE	DRT1-B7AC	
Analog Input Terminals	2 or 4 inputs (2 or 4 words) (voltage or current)		CE	DRT1-AD04	
	4 inputs (4 words) (voltage or current)			DRT1-AD04H	
Analog Output Terminals	2 outputs (2 words)	Current: 0 to 20 mA, 4 to 20 mA			DRT1-DA02
		Voltage: 1 to 5 V, 0 to 10 V, - 10 to 10 V			
Temperature Input Terminals	4 inputs (4 words)	Inputs: R, S, K1, K2, J1, J2, T, E, B, N, L1, L2, U, W, PLII		DRT1-TS04T	
		Inputs: Pt100, JPt100		DRT1-TS04P	
RS-232C Unit	Two RS-232C ports, 16 inputs (signal status)		U, C, CE	DRT1-232C	

■ Smart DeviceNet I/O Terminals

Basic Modules

Product	Specifications	Standards	Part number
Smart I/O basic Modules automatically collect network status and connected device performance information	16 inputs NPN	cULus, CE	DRT2-ID16
	16 inputs PNP		DRT2-ID16-1
	16 outputs NPN		DRT2-OD16
	16 outputs PNP		DRT2-OD16-1
3-tier Terminal Block Types	16 inputs NPN		DRT2-ID16TA
	16 inputs PNP		DRT2-ID16TA-1
	16 outputs NPN		DRT2-OD16TA
	16 outputs PNP		DRT2-OD16TA-1
	8 inputs NPN 8 outputs NPN		DRT2-MD16TA
	8 inputs PNP 8 outputs PNP		DRT2-MD16TA-1
	32 inputs NPN		DRT2-ID32ML
	32 inputs PNP		DRT2-ID32ML-1
MIL Connector Terminal Block Types	32 outputs NPN		DRT2-OD32ML
	32 outputs PNP		DRT2-OD32ML-1
	16 inputs NPN 16 outputs NPN		DRT2-MD32ML
	16 inputs PNP 16 outputs PNP		DRT2-MD32ML-1
	16 relay outputs		DRT2-ROS16

Expansion Modules

Product	Specifications	Standards	Part number
Smart expansion I/O Modules provide mix and match flexibility in distributed I/O configuration	8 inputs NPN	cULus, CE	XWT-ID08
	8 inputs PNP		XWT-ID08-1
	8 outputs NPN		XWT-OD08
	8 outputs PNP		XWT-OD08-1
	16 inputs NPN		XWT-ID16
	16 inputs PNP		XWT-ID16-1
	16 outputs NPN		XWT-OD16
	16 outputs PNP		XWT-OD16-1

Analog I/O Terminal

Product	Specifications	Standards	Part number
Analog Input Terminal	4 inputs (0 to 5 V, 1 to 5 V, 0 to 10 V, ± 10 V, 0 to 20 mA, 4 to 20 mA) Resolution: 12 bit; 1/6000; 4 ms max./4 pt conversion time	cULus, CE, CL1 Div2	DRT2-AD04
Analog Output Terminal	2 outputs (0 to 5 V, 1 to 5 V, 0 to 10 V, ± 10 V, 0 to 20 mA, 4 to 20 mA) Resolution: 12 bit; 6000; 2 ms/pt conversion time		DDRT2-DA02

DeviceNet Enhanced Products

IP67 Rated Transistor Terminals with M12 Connectors

Product	Specifications	Standards	Part number
Terminals with IP67-rated water-washdown resistance	16 inputs NPN	cULus, CE	DRT2-HD16C
	16 inputs PNP		DRT2-HD16C-1
	8 inputs NPN		DRT2-ID08C
	8 inputs PNP		DRT2-ID08C-1
	8 outputs NPN		DRT2-OD08C
	8 outputs PNP		DRT2-OD08C-1

■ DeviceNet Enhanced Products

Product	Specifications	Standards	Part number
Vision sensors	Single camera system	CE	F150-C10E-2-DRT
	Two camera system	CE	F150-C10E-3-DRT
Operator interface terminal adapter for NT31/NT631 touch screens	Combined with CS1 slave, up to 15 terminals/network; with CJ1 slave, up to 41 terminals/network	cULus, CE	NT-DRT21
Communications module for fiber-optic sensor block	Up to 16 E3X-DA-N amplifiers form a wire saving sensor input slave block	cRUus	E3X-DRT21
Temperature/process controllers, single loop, 1/8 DIN	Controller with LED display; requires plug-in control output modules; to use a heater burnout alarm, order a current transformer	RU, CSA, CE	E5EK-AA2-DRT21
Multi-zone temperature controller, 8 loops, optional display unit	Heating mode, voltage output, heater open circuit Thermo-couple RTD	CE	E5EZ-8AQHD1TCB-V2 E5ZE-8AQHD1PB-V2
	Heating mode, voltage output, Thermo-couple RTD	CE	E5EZ-8AQAD1TCB-V2 E5ZE-8AQAD1PB-V2
	Heating mode, voltage output, Thermo-couple RTD	CE	E5EZ-8ACAD1TCB-V2 E5ZE-8ACAD1PB-V2
	Heating mode, voltage output, heater open circuit Thermo-couple RTD	CE	E5EZ-8VQHD1TCB-V2 E5ZE-8VQHD1PB-V2
	Heating mode, voltage output, Thermo-couple RTD	CE	E5EZ-8VQAD1TCB-V2 E5ZE-8VQAD1PB-V2
	Heating mode, voltage output, Thermo-couple RTD	CE	E5EZ-8VCAD1TCB-V2 E5ZE-8VCAD1PB-V2
Communications module for multi-loop (2 to 32) plug-in temperature controller	Set parameters and monitor status via DeviceNet for all loops	cRUus, CE	E5EK-AA2-DRT21
Intelligent flag ID system	Set addresses and monitor work-in-process based on unique ID via DeviceNet: reads 24 bits of data max.: writes 16 bits of data max.	cRUus, CE	V600-HAM42-DRT
	M12 threaded sensing head	-	V600-HS51
	30.5 x 18 x 10 mm head	-	V600-HS61
	53 x 50 x 23 mm head	-	V600-HS63
	100 x 100 x 30 mm head	-	V600-HS67
AC inverter, MV-series adapter	Monitor Run/Stop and operating conditions and make changes in set values from a PLC via DeviceNet using this adapter for all 3G3MV inverters	RU, CSA, CE	3G3MV-PDRT2
AC inverter, G5-series adapter	Monitor Run/Stop and operating conditions and make changes in set values from a PLC via DeviceNet using this adapter for all G5 inverters	cRUus	SI-N1
AC inverter, RV-series adapter	Monitor Run/Stop and operating conditions and make changes in set values from a PLC via DeviceNet using this adapter for all RV inverters	cRUus	3G3RV-PDRT2

(This table continues on the next page.)

DeviceNet Enhanced Products (continued)

Product	Specifications	Standards	Part number
Servo drive, W-series adapter	Communicate positioning commands, drive parameters, positioning data, motor characteristics etc, between the W-series servo and a DeviceNet master. Commands received via DeviceNet are output to the W-series servo drive	cULus, CE	R88A-NCW152-DRT
High-Density Temperature Controller	DeviceNet-compatible 8-loop Temperature Controller	---	E5ZE-8□D1-□B-V2
Multi-function Compact Inverter DeviceNet Communications Unit	DeviceNet Communications Unit for the 3G3MV AC Inverters	---	3G3MV-PDRT1-SINV
High-Function General-purpose Inverter DeviceNet Communications Module	DeviceNet Communications Unit for the 3G3RV and 3G3FV AC Inverters	---	3G3FV-PDRT1-SIN
Vision Sensor Controller	DeviceNet-compatible F150-3 Vision System	---	F150-C10V3-DRT
Super-compact Signal Converter Bases	DeviceNet-compatible Bases	---	K3FM-BI□/BO□
DeviceNet Wireless Modules	DeviceNet Wireless Master Module 1600 input/1600 output bits	---	WD30-ME
		---	WD30-ME01
	DeviceNet Wireless Slave Module 512 input/512 output bits	---	WD30-SE
		---	WD30-SE01

- Note:**
1. Order Fiber Amplifier Modules and Reduced-wiring Connectors as sets.
 2. XS8A-0441 and XS8A-0442 Connectors are packed in sets of 10. Order these Connectors in multiples of 10.

DeviceNet Multiple I/O Terminal Modules

■ DeviceNet Multiple I/O Terminal Modules

Name		I/O points	Specifications	Standards	Part number
Communications Unit		---	Total Slave I/O points: 1,024 max.	U, C, CE	DRT1-COM
Digital I/O Modules	Modules with Terminal Blocks	16 inputs	NPN (+ common)		GT1-ID16
		16 inputs	PNP (- common)		GT1-ID16-1
		16 outputs	NPN (- common)		GT1-OD16
		16 outputs	PNP (+ common)		GT1-OD16-1
	Modules with MOLEX Connectors	16 inputs	NPN (+ common)		GT1-ID16MX
		16 inputs	PNP (- common)		GT1-ID16MX-1
		16 outputs	NPN (- common)		GT1-OD16MX
		16 outputs	PNP (+ common)		GT1-OD16MX-1
	Modules with Fujitsu Connectors	16 inputs	NPN (+ common)		GT1-ID16ML
		16 inputs	PNP (- common)		GT1-ID16ML-1
		16 outputs	NPN (- common)		GT1-OD16ML
		16 outputs	PNP (+ common)		GT1-OD16ML-1
	Modules with D-Sub 25-pin Connectors	16 inputs	NPN (+ common)		GT1-ID16DS
		16 inputs	PNP (- common)		GT1-ID16DS-1
		16 outputs	NPN (- common)		GT1-OD16DS
		16 outputs	PNP (+ common)		GT1-OD16DS-1
	Modules with High-density Fujitsu Connectors	32 inputs	NPN (+ common)		GT1-ID32ML
		32 inputs	PNP (- common)		GT1-ID32ML-1
		32 outputs	NPN (- common)		GT1-OD32ML
		32 outputs	PNP (+ common)		GT1-OD32ML-1
Analog Input Modules		8 inputs	MOLEX connector	GT1-AD08MX	
		4 inputs	Terminal block	GT1-AD04	
Analog Output Modules		4 outputs	MOLEX connector	GT1-DA04MX	
		4 outputs	Terminal block	GT1-DA04	
Temperature Input Modules		4 inputs	Thermocouple	GT1-TS04T	
		4 inputs	Platinum resistance thermometer	GT1-TS04P	
Counter Unit		1 input, 2 outputs	1 input, 2 outputs Counter Unit with encoder input	CE	GT1-CT01
Relay Output Modules		8 outputs	8 relay outputs, 2A, SPST-NO	U, C, CE	GT1-ROP08
		16 outputs	8 relay outputs, 5A, SPST-NO		GT1-ROS16
I/O Unit Connecting Cable		---	1 m	---	GCM1-100

■ CompoBus/S Slave Modules

Name	Specifications	Standards	Part number
I/O Link Modules	For CPM2C; 8 input points, 8 output points	CE	CPM2C-SRT21
	For CPM1A/CPM2A; 8 input points, 8 output points	U, C, CE	CPM1A-SRT21
Remote I/O Terminals with Transistors	4 input points, NPN (+ common)	U, C, CE	SRT2-ID04
	4 input points, PNP (- common)		SRT2-ID04-1
	4 output points, NPN (- common)		SRT2-OD04
	4 output points, PNP (+ common)		SRT2-OD04-1
	8 input points, NPN (+ common)		SRT2-ID08
	8 input points, PNP (- common)		SRT2-ID08-1
	8 output points, NPN (- common)		SRT2-OD08
	8 output points, PNP (+ common)		SRT2-OD08-1
	16 input points, NPN (+ common)		SRT2-ID16
	16 input points, PNP (- common)		SRT2-ID16-1
	16 output points, NPN (- common)		SRT2-OD16
	16 output points, PNP (+ common)		SRT2-OD16-1
Remote I/O Terminals with Transistors and 3-tier Terminal Block	16 input points, NPN (+ common)		SRT2-ID16T
	16 input points, PNP (- common)		SRT2-ID16T-1
	16 I/O points, NPN (inputs: + common, outputs: - common)		SRT2-MD16T
	16 I/O points, PNP (inputs: - common, outputs: + common)		SRT2-MD16T-1
	16 output points, NPN (- common)		SRT2-OD16T
	16 output points, PNP (+ common)		SRT2-OD16T-1
Remote Input Terminals with Transistors and Connectors (4/8 points)	4 input points, NPN (+ common)	CE	SRT2-ID04MX
	8 input points, PNP (+ common)		SRT2-ID08MX
Remote Output Terminals with Relays	8 relay output points	U, C, CE	SRT2-ROC08
	16 relay output points		SRT2-ROC16
	8 power MOSFET relay output points		SRT2-ROF08
	16 power MOSFET relay output points		SRT2-ROF16

CompoBus/S Modules

CompoBus/S Slave Modules (Continued)

Name	Specifications	Standards	Part number
Remote I/O Terminals with Transistors and Connectors	32 input points, NPN (+ common)	CE	SRT2-ID32ML
	32 input points, PNP (- common)		SRT2-ID32ML-1
	32 output points, NPN (- common)		SRT2-OD32ML
	32 output points, PNP (+ common)		SRT2-OD32ML-1
	32 I/O points, NPN (inputs: + common, outputs: - common)		SRT2-MD32ML
	32 I/O points, PNP (inputs: - common, outputs: + common)		SRT2-MD32ML-1
	8 input points, NPN (+ common)	U, C, CE	SRT2-VID08S
	8 input points, PNP (- common)		SRT2-VID08S-1
	8 output points, NPN (- common)		SRT2-VOD08S
	8 output points, PNP (+ common)		SRT2-VOD08S-1
	16 input points, NPN (+ common)		SRT2-VID16ML
	16 input points, PNP (- common)		SRT2-VID16ML-1
	16 output points, NPN (- common)		SRT2-VOD16ML
	16 output points, PNP (+ common)		SRT2-VOD16ML-1
	Mounting Bracket A		SRT2-ATT01
	Mounting Bracket B		SRT2-ATT02
Waterproof Terminals (with Transistors)	4 input points, NPN (+ common)	CE	SRT2-ID04CL
	4 input points, PNP (- common)		SRT2-ID04CL-1
	4 output points, NPN (- common)		SRT2-OD04CL
	4 output points, PNP (+ common)		SRT2-OD04CL-1
	8 input points, NPN (+ common)		SRT2-ID08CL
	8 input points, PNP (- common)		SRT2-ID08CL-1
	8 output points, NPN (- common)		SRT2-OD08CL
	8 output points, PNP (+ common)		SRT2-OD08CL-1
CompoBus/S Fiber Amplifier Sensor Communication Unit	Connects to up to 14 Fiber Amplifier Modules		E3X-SRT21
Sensor Terminals	8 Sensor inputs (NPN)	---	SRT2-ID08S
	4 remote-teaching Sensor inputs, 4 outputs (NPN)		SRT2-ND08S
	8 Sensor outputs (NPN)		SRT2-OD08S
Analog Input Terminal	1 to 4 inputs (set via DIP switch)	U, C, CE	SRT2-AD04
Analog Output Terminal	1 or 2 outputs (set via DIP switch)		SRT2-DA02
Remote I/O Modules	16 input points, NPN (+ common)	---	SRT2-ID16P
	16 output points, NPN (- common)		SRT2-OD16P
Positioner Drivers (Cannot be used in Long-distance Communications Mode.)	200-VAC input, 6 A	U, CE, CU	FND-X06H-SRT
	200-VAC input, 12 A		FND-X12H-SRT
	200-VAC input, 25 A		FND-X25H-SRT
	200-VAC input, 50 A		FND-X50H-SRT
	100-VAC input, 6 A		FND-X06L-SRT
	100-VAC input, 12 A		FND-X12L-SRT

■ Optional Products

Name	Specifications	Standards	Part number
I/O Unit Cover 	Cover for 10-pin terminal block	---	C200H-COV11
Terminal Block Covers 	Short protection for 10-pin terminal block (package of 10 covers); 8 pts	---	C200H-COV02
	Short protection for 19-pin terminal block (package of 10 covers); 12 pts		C200H-COV03
C200H Unit Connector Cover 	Protective cover for unused I/O Connecting Cable connectors		C500-COV01
CS1 Special I/O Unit Connector Cover	Protective cover for unused I/O Connecting Cable connectors		CV500-COV01
C200H Expansion I/O Backplane Insulation Plates 	Electrically insulate C200H Expansion I/O Backplanes from the control panel to increase noise resistance.	N, L, CE	C200HW-ATT32
	For 3-slot Backplane		C200HW-ATT52
	For 5-slot Backplane		C200HW-ATT82
	For 8-slot Backplane		C200HW-ATT82
	For 10-slot Backplane		C200HW-ATT82
Relay 	24 VDC, for C200H-OC221/OC222/OC223/OC224/OC225	---	G6B-1174P-FD-US
Programming Console Mounting Bracket 	Used to attach C200H-PRO27-E Hand-held Programming Console to a panel.	---	C200H-ATT01
Space Unit	Used for empty I/O slot.	---	C200H-SP001
Terminating Resistor (See note.)	Mounts to end of CS1 Long-distance Expansion Rack	U, C	CV500-TER01

Note: Two Terminating Resistors are included with the CS1W-IC102 I/O Control Unit.

Mounting Rails and Accessories

Name	Specifications	Standards	Part number
DIN Track Mounting Bracket 	1 set (2 included)	---	C200H-DIN01
DIN Tracks 	Length: 50 cm; height: 7.3 cm	---	PFP-50N
	Length: 1 m; height: 7.3 cm		PFP-100N
	Length: 50 cm; height: 16 mm		PFP-100N2
End Plate 	---		PFP-M
Spacer 	---	---	PFP-S

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1. **Offer; Acceptance.** These terms and conditions (these "Terms") are deemed part of all catalogs, manuals or other documents, whether electronic or in writing, relating to the sale of goods or services (collectively, the "Goods") by Omron Electronics LLC and its subsidiary companies ("Seller"). Seller hereby objects to any terms or conditions proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms. Please contact your Omron representative to confirm any additional terms for sales from your Omron company.
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 - c. All sales and shipments of Goods shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Goods shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Goods until the full purchase price is paid by Buyer;
 - d. Delivery and shipping dates are estimates only.
 - e. Seller will package Goods as it deems proper for protection against normal handling and extra charges apply to special conditions.
11. **Claims.** Any claim by Buyer against Seller for shortage or damage to the Goods occurring before delivery to the carrier must be presented in writing to Seller within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Goods from Seller in the condition claimed.
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14. **Indemnities.** Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Goods. Without limiting the foregoing, Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Good made to Buyer specifications infringed intellectual property rights of another party.
15. **Property; Confidentiality.** The intellectual property embodied in the Goods is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Goods are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
16. **Miscellaneous.** (a) **Waiver.** No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller. (b) **Assignment.** Buyer may not assign its rights hereunder without Seller's written consent. (c) **Amendment.** These Terms constitute the entire agreement between Buyer and Seller relating to the Goods, and no provision may be changed or waived unless in writing signed by the parties. (d) **Severability.** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision. (e) **Setoff.** Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice. (f) As used herein, "including" means "including without limitation".

Certain Precautions on Specifications and Use

1. **Suitability of Use.** Seller shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Good in the Buyer's application or use of the Good. At Buyer's request, Seller will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Good. This information by itself is not sufficient for a complete determination of the suitability of the Good in combination with the end product, machine, system, or other application or use. The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of this Good, nor is it intended to imply that the uses listed may be suitable for this Good:
 - (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
 - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - (iii) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this Good.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE SELLER'S PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. **Programmable Products.** Seller shall not be responsible for the user's programming of a programmable Good, or any consequence thereof.
3. **Performance Data.** Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Seller's Warranty and Limitations of Liability.
4. **Change in Specifications.** Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Good may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Seller's representative at any time to confirm actual specifications of purchased Good.
5. **Errors and Omissions.** The information in this catalog has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors, or omissions.

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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.



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