

Ordering Information

Ordering Information

■ International Standards

The products shown in the attached tables are those that conform to the UL, CSA, cULus, cUL, NK, Lloyd's Register, and EC Directives as of the end of September 2001.

(U: UL, C: CSA, UC: cULus, CU: cUL, N: NK, L: Lloyd, CE: EC Directives)

Please contact OMRON representative for application conditions.

■ EMC Directives

Applicable Standards

EMI:EN50082-2

EMS:EN61131-2 and EN61000-6-2 (See note.)

PLCs are electrical devices that are incorporated in machines and manufacturing installations. OMRON PLCs conform to the related EMC standards so that the devices and machines into which they are built can more easily conform to EMC standards. The actual PLCs have been checked for conformity to EMC standards. Whether these standards are satisfied for the actual system, however, must be checked by the customer.

EMC-related performance will vary depending on the configuration, wiring, and other conditions of the equipment or control panel in which the PLC is installed. The customer must, therefore, perform final checks to confirm that the overall machine or device conforms to EMC standards.

Low Voltage Directive

Applicable Standard

EN61131-2

Devices that operate at voltages from 50 to 1,000 VAC or 75 to 150 VDC must satisfy the appropriate safety requirements. With PLCs, this applies to Power Supply Units and I/O Units that operate in these voltage ranges.

These Units have been designed to conform to EN61131-2, which is the applicable standard for PLCs.

Power Supply Units

Name	Specifications				Model	International standards
	Rated voltage	Allowed voltage range	Output capacity	Service power supply		
AC Power Supply Units	100 to 240 V AC 50/60 Hz	85 to 265 V AC	18 W	None	CQM1-PA203	U, C, N, L, CE
			30 W	24 V DC 0.5 A	CQM1-PA206	U, C, L, N
	110/230 V AC 50/60 Hz	80 to 138 V AC 160 to 276 V AC	30 W	24 V DC 0.5 A	CQM1-PA216	N, L, CE
DC Power Supply Units	24 V DC	20 to 28 V DC	30 W	---	CQM1-PD026	UC, N, L, CE

CPU Units (with 16 built-in DC input points)

Specifications						Model	International standards
Memory capacity	I/O capacity	Built-in inputs	Built-in RS-232C port	Support of Inner Boards	Support of Controller Link Unit		
Program: 3.2 Kwords DM area: 3 Kwords	256 points	16 DC inputs	No	No	No	CQM1H-CPU11	U, C, N, L, CE
			Yes			CQM1H-CPU21	
Program: 7.2 Kwords DM area: 6 Kwords	512 points			Yes	Yes	CQM1H-CPU51	UC, N, L, CE
Program: 15.2 Kwords DM area: 6 Kwords EM area: 6 Kwords			CQM1H-CPU61			U, C, N, L, CE	

Inner Boards

Name	Specifications	Model	International standards
High-speed Counter Board	4 pulse inputs (high-speed counter) at 500 kHz max. 4 external outputs	CQM1H-CTB41	U, C, N, L, CE
Pulse I/O Board	2 pulse inputs, Single-phase: 50 kHz, Differential phase: 25 kHz 2 pulse outputs, 50 kHz max. Both fixed and variable duty factors are supported.	CQM1H-PLB21	U, C
Absolute Encoder Interface Board	2 absolute encoder (gray code binary) inputs (4 kHz)	CQM1H-ABB21	U, C, N, L
Analog Setting Board	4 analog settings	CQM1H-AVB41	U, C, N, L, CE
Analog I/O Board	4 analog inputs of 0 to 5 V, 0 to 20 mA, -10 to +10 V 2 analog outputs of 0 to 20 mA, -10 to +10 V	CQM1H-MAB42	CE
Serial Communications Board	One RS-232C port and one RS-422A/485 port	CQM1H-SCB41	U, C, N, L, CE

Communications Units

Name	Specifications	Model	International standards
Controller Link Unit (Wired)	Data link (Maximum number of words per node: 8,000) Message communications (SEND/RECV/CMND instructions)	CQM1H-CLK21	U, C, CE

Memory Cassettes

Memory	Memory capacity/Clock function	Model	International standards
Flash memory	16 Kwords	CQM1H-ME16K	U, C, N, L, CE
	with clock	CQM1H-ME16R	
EEPROM	8 Kwords	CQM1-ME08K	UC, N, L, CE
	with clock	CQM1-ME08R	
	4 Kwords	CQM1-ME04K	U, C, N, L, CE
	with clock	CQM1-ME04R	
EPROM Memory Cassette (Memory chip not included)	Cassette with IC socket only (EPROM chip sold separately)	CQM1-MP08K	
	with clock	CQM1-MP08R	
EPROM chip	256 KB (16 Kwords), 150 ns, 27256 IC or equivalent, 12.5 V	ROM-JD-B	CE
	512 KB (32 Kwords), 150 ns, 27512 IC or equivalent, 12.5 V	ROM-KD-B	

Available Models

Memory	Memory capacity/Clock function	Model	International standards
I/O Control Unit	Connects to right-hand side of CPU Block	CQM1H-IC101	U, C, CE
I/O Interface Unit	Connects to left-hand side of Expansion I/O Block	CQM1H-II101	
I/O Extension Cable	For connection with I/O Control Unit and I/O Interface Unit	Cable length: 0.3 m	L, CE
		Cable length: 0.7 m	

I/O Units

Input Units

Input type	Specifications	Model	International standards
DC inputs	8 points, 12 to 24 V DC (independent commons, 1 point/common × 8 circuits)	CQM1-ID211	U, C, N, L, CE
	16 points, 12 V DC (16 points/common × 1 circuit)	CQM1-ID111	
	16 points, 24 V DC (16 points/common × 1 circuit)	CQM1-ID212	UC, N, L, CE
	32 points, 12 V DC (32 points/common)	CQM1-ID112	U, C
	32 points, 24 V DC (32 points/common)	CQM1-ID213	U, C, N, L, CE
	32 points, 24 V DC (32 points/common × 1 circuit)	CQM1-ID214	U, C, CE
AC inputs	8 points, 100 to 120 V AC (8 points/common)	CQM1-IA121	U, C, L, CE
	8 points, 200 to 240 V AC (8 points/common)	CQM1-IA221	

Output Units

Output type	Specifications	Model	International standards
Contact outputs	8 points, 250 V AC ($\cos\phi = 1.0/0.4$)/24 V DC 2 A (16 A/Unit), independent commons	CQM1-OC221	U, C, N, L
	16 points, 250 V AC ($\cos\phi = 1.0/0.4$)/24 V DC 2 A (8 A/Unit)	CQM1-OC222	UC, N, L
	8 points, 250 V AC 2 A ($\cos\phi = 1.0/0.4$)/24 V DC 2 A, independent common	CQM1-OC224	CE
Transistor outputs	8 points, 24 V DC, 2A (5 A/Unit), 8 points/common	CQM1-OD211	U, C, N, L, CE
	16 points, 50 mA at 4.5 V DC to 300 mA at 26.4 V DC, 16 points/common	CQM1-OD212	
	32 points, 16 mA at 4.5 V DC to 100 mA at 26.4 V DC	CQM1-OD213	
	16 points, 24 V DC, 300 mA, PNP outputs	CQM1-OD214	U, C, L, CE
	8 points, 24 V DC, 1.0 A, PNP outputs (4 A/Unit), short-circuit protection	CQM1-OD215	
	32 points, 24 V DC, 0.5 A, PNP outputs (5 A/Unit), short-circuit protection	CQM1-OD216	
AC outputs	8 points, 0.4 A at 100 to 240 V AC, two circuits with 4 points/common each	CQM1-OA221	U, C, L
	6 points, 0.4 A at 100 to 240 V AC, two circuits with 4 points/common and 2 points/common	CQM1-OA222	CE

Dedicated I/O Units

Name	Specifications	Model	International standards	
CompoBus/S Master Unit	Number of I/O points per Master: 128 (64 inputs and 64 outputs) Communications cycle time: 0.5 ms min.	CQM1-SRM21-V1	U, C, CE	
DeviceNet I/O Link Unit	Number of I/O points: 16 inputs and 16 outputs	CQM1-DRT21		
Analog Input Unit	Analog inputs: 4 points	CQM1-AD041	U, C, N, CE	
Analog Output Unit	Analog outputs: 2 points	CQM1-DA021		
Power Supply Units	Required for Analog Input and Output Units.	For one Analog Unit		CQM1-IPS01
		For two Analog Units		CQM1-IPS02
B7A Interface Unit	16 outputs	CQM1-B7A02	---	
	16 inputs	CQM1-B7A12	U, C	
	32 outputs	CQM1-B7A03		
	32 inputs	CQM1-B7A13		
	16 inputs and 16 outputs	CQM1-B7A21	---	
Temperature Control Units	Thermocouple input, transistor (NPN) output, 2 loops	CQM1-TC001	U, C	
	Thermocouple input, transistor (PNP) output, 2 loops	CQM1-TC002		
	Platinum resistance thermometer, transistor (NPN) output, 2 loops	CQM1-TC101		
	Platinum resistance thermometer, transistor (PNP) output, 2 loops	CQM1-TC102		
	Thermocouple input, transistor (NPN) output, 4 loops	CQM1-TC201	U, C, CE	
	Thermocouple input, transistor (PNP) output, 4 loops	CQM1-TC202	U, C, CE	
	Platinum resistance thermometer, transistor (NPN) output, 2 loops (with heater burnout alarm)	CQM1-TC203	U, C, CE	
	Platinum resistance thermometer, transistor (PNP) output, 2 loops (with heater burnout alarm)	CQM1-TC204	U, C, CE	
	Thermocouple input, transistor (NPN) output, 4 loops	CQM1-TC301	U, C, CE	
	Thermocouple input, transistor (PNP) output, 4 loops	CQM1-TC302	U, C, CE	
	Platinum resistance thermometer, transistor (NPN) output, 2 loops (with heater burnout alarm)	CQM1-TC303	U, C, CE	
	Platinum resistance thermometer, transistor (PNP) output, 2 loops (with heater burnout alarm)	CQM1-TC304	U, C, CE	
	Safety Relay Unit	Emergency stop unit: 2 inputs/2 outputs, 4 general-purpose inputs	CQM1-SF200	U, C, CE

DIN Track

Name	Specifications	Model	International standards
Mounting Tracks	Track length: 50 cm	Height: 7.3 mm	L
	Track length: 1 m		
	Track length: 1 m	Height: 16 mm	
End Plate	Fasten mounting brackets on both sides of the PLC to prevent it from sliding left or right. Two End Plates are provided with the CPU Unit.	PFP-M	

Note: DIN Track products must be ordered in lots of ten.

Programming Devices and Accessories

■ Programming Consoles

Name	Specifications	Model	International standards
Programming Consoles	2-m Connecting Cable included (No other Connecting Cables required.)	CQM1H-PRO01-E	U, C, CE
	2-m Connecting Cable included (compatible with C-series PLCs) The CS1W-CN114 peripheral port conversion cable must be purchased separately (see below).	CQM1-PRO01-E	U, C, N, CE
	Requires a separate Connecting Cable. The C200H-CN222 connecting cable, C200HS-CN222 connecting cable, or CS1W-CN114 peripheral port conversion cable must be purchased separately (see below).	C200H-PRO27-E	U, C, N, CE
Connecting Cables	Cable length: 2 m	C200H-CN222	N
	Cable length: 2 m (for CPUs complying with EC directives)	C200HS-CN222	CE
Peripheral Port Conversion Cable	Connects the peripheral port on the CQM1H to a personal computer or Programming Console through a CQM1-CIF01/02 cable.	CS1W-CN114	CE

■ CX-Programmer (Windows)

Name	Specifications	Model	International standards
CX-Programmer (V1.2 or later)	CD-ROM, OS: Windows 95, 98, Me, NT4.0, 2000, or XP	WS02-CXPC1-E-V3□	---

■ CX Protocol (Windows)

Name	Specifications	Model	International standards
CX-Protocol	Protocol macro software OS: Windows 95, 98, Me, NT4.0, 2000, or XP	WS02-PSTC1-E	---

■ Support Software

Product	Model	International standards
Expansion Memory Unit	CPM1-EMU01-V1	---
EEPROM (256 K)	EEROM-JD	---

Maintenance Products

Product	Function	Model	International standards
Battery	Backs up memory in the CPU Unit.	CPM2A-BAT01	---
End Cover	Connects to the I/O Unit located on the extreme right	CQM1H-TER01	U, C, CE

Ordering Information

Programming Device Connecting Cables

Name	Specifications	Model	International standards
Connecting Cables (Peripheral port to Programming Device (computer))	Connects to Programming Console or CQM1-CIF01/02.	CS1W-CN114	CE
	Connects to a D-Sub 9-pin port of an IBM PC/AT or compatible computer. (Use together with the CS1W-CN114.) Length: 3.3 m	CQM1-CIF02	U, C, N, L, CE
Connecting Cables (Peripheral port to RS-422)	Peripheral port to RS-422 conversion cable (length: 0.2 m)	CQM1H-CIF12	U, C, CE
	D-Sub 9-pin computer cable (length: 2 m)	CS1W-CN226	CE
	D-Sub 9-pin computer cable (length: 6 m)	CS1W-CN626	CE
	D-Sub 9-pin receptacle (length: 0.1 m)	CS1W-CN118	CE
Connecting Cables (RS-232C port to Programming Device (computer))	D-Sub 9-pin computer cable (length: 2 m)	XW2Z-200S-V	---
	D-Sub 9-pin computer cable (length: 2 m) (anti-static)	XW2Z-200S-CV	---
	D-Sub 9-pin computer cable (length: 5 m)	XW2Z-500S-V	---
	D-Sub 9-pin computer cable (length: 5 m) (anti-static)	XW2Z-500S-CV	---
USB-Serial Conversion Cable	Converts between USB and RS-232C, cable length: 0.5 m. PC Driver included (CD-ROM).	CS1W-CIF31	N, CE
RS-422 Adapter	Converts peripheral port levels, cable length: 0.2 m.	CQM1-CIF121	U, C, CE