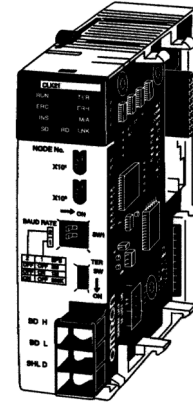


Communications Units

Controller Link Unit CQM1H-CLK21

The Controller Link is an FA network that can send and receive large data packets flexibly and easily among the OMRON CQM1H-series, C200HX/HG/HE, and CS-series PLCs.

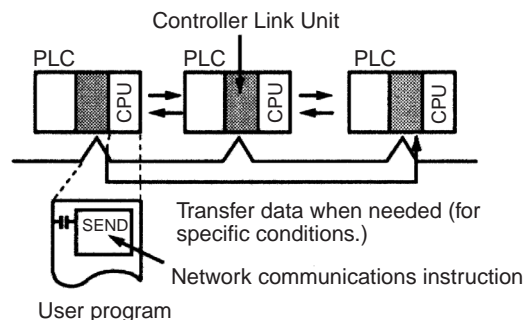
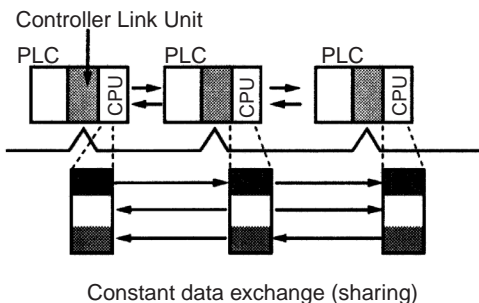
The Controller Link supports data links that enable data sharing and a message service that enables sending and receiving data when required. Data link areas can be freely set to create a flexible data link system and effectively use data areas.



- High-capacity, flexible, and efficient data links
- Message service can transfer large quantities of data.
- Simple twisted-pair wiring
- Easily connects different PLC models and computers.
- Flexible inter-network connections
- Robust error-handling functions

■ Data Links

■ Message Service



Unit Specifications

Item	Specifications
Name	Controller Link Unit
Model number	CQM1H-CLK21
Applicable CPU Units	CQM1H-CPU51/CPU61
Unit classification	Communications Unit
Connection location and number of Units	One Unit only. The Unit must be connected between the Power Supply Unit and the CPU Unit.
Current consumption	270 mA
Dimensions	32 × 110 × 107 mm (W × H × D) (without terminals)
Weight	170 g max.

Communications Specifications

Item	Specifications
Communications method	N:N token bus
Code	Manchester code
Modulation	Baseband code
Synchronization	Flag synchronization (conforms to HDLC frames)
Transmission path form	Multi-drop bus
Baud rate and maximum transmission distance	The maximum transmission distance varies with the baud rate as follows: 2 Mbps: 500 m 1 Mbps: 800 m 500 Kbps: 1 km
Media	Specified shielded twisted-pair cable Number of signal lines: 2, shield line: 1
Maximum number of nodes	32 nodes
Communications functions	Data links and message service
Number of data link words	Transmission area per node: 1,000 words max. Data link area in one CQM1H-series PLC (send/receive): 8,000 words max.
Data link areas	Bit areas (IR, AR, LR, CIO), data memory (DM), and extended data memory (EM)
Message length	2,012 bytes max. (including the header)
RAS functions	Polling node backup function Self-diagnosis function (hardware checking at startup) Echoback test and broadcast test (using the FINS command) Watchdog timer Error log function
Error control	Manchester code check CRC check (CCITT $X^{16} + X^{12} + X^5 + 1$)

Dedicated I/O Units

Summary of Dedicated I/O Units

Name	Specifications	Model number	Page
Analog Input Unit	4 analog input points -10 to +10 V, 0 to 10 V, 1 to 5 V, or 4 to 20 mA	CQM1-AD041	50
Analog Output Unit	2 analog output points -10 to +10 V or 0 to 20 mA	CQM1-DA021	51
Analog Power Supply Units	Power supply for Analog Input or Output Unit (required when using Analog Input or Output Unit)	CQM1-IPS01 (Supplies 1 Unit.) CQM1-IPS02 (Supplies 2 Units.)	52
CompoBus/S Master Unit	128 points (64 inputs and 64 outputs), 64 points (32 inputs and 32 outputs), or 32 points (16 inputs and 16 outputs) selectable with a switch.	CQM1-SRM21-V1	53
DeviceNet I/O Link Unit	DeviceNet Slave: 32 points (16 inputs and 16 outputs)	CQM1-DRT21	56
B7A Interface Units	16 output points	CQM1-B7A02	58
	16 input points	CQM1-B7A12	
	32 output points	CQM1-B7A03	
	32 input points	CQM1-B7A13	
	16 input points and 16 output points	CQM1-B7A21	
Temperature Control Units	Thermocouple input (J/K), ON/OFF or advanced PID control, transistor (NPN) output, 2 loops	CQM1-TC001	61
	Thermocouple input (J/K), ON/OFF or advanced PID control, transistor (PNP) output, 2 loops	CQM1-TC002	
	Platinum resistance thermometer input (Pt, JPt), ON/OFF or advanced PID control, transistor (NPN) output, 2 loops	CQM1-TC101	
	Platinum resistance thermometer input (Pt, JPt), ON/OFF or advanced PID control, transistor (PNP) output, 2 loops	CQM1-TC102	
	Thermocouple input (K, J, L, T, R, S, B), ON/OFF or advanced PID control, manual operation, transistor (NPN) output, 4 loops	CQM1-TC201	
	Thermocouple input (K, J, L, T, R, S, B), ON/OFF or advanced PID control, manual operation, transistor (PNP) output, 4 loops	CQM1-TC202	
	Thermocouple input (K, J, L, T, R, S, B), heater burnout alarm, ON/OFF or advanced PID control, manual operation, transistor (NPN) output, 2 loops	CQM1-TC203	
	Thermocouple input (K, J, L, T, R, S, B), heater burnout alarm, ON/OFF or advanced PID control, manual operation, transistor (PNP) output, 2 loops	CQM1-TC204	
	Platinum resistance thermometer input (Pt100, JPt100), manual operation, ON/OFF or advanced PID control, transistor (NPN) output, 4 loops	CQM1-TC301	
	Platinum resistance thermometer input (Pt100, JPt100), manual operation, ON/OFF or advanced PID control, transistor (PNP) output, 4 loops	CQM1-TC302	
	Platinum resistance thermometer input (Pt100, JPt100), heater burnout alarm, manual operation, ON/OFF or advanced PID control, transistor (NPN) output, 2 loops	CQM1-TC303	
	Platinum resistance thermometer input (Pt100, JPt100), heater burnout alarm, manual operation, ON/OFF or advanced PID control, transistor (PNP) output, 2 loops	CQM1-TC304	
	Safety Relay Unit	Emergency stop unit: 2 inputs/2 outputs, 4 general-purpose inputs	



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