

MELSECNET/H Control Level Master/Local Network Modules

Use MELSECNET/H to link Q Series systems together on a control level network for the coordinated operation of multiple controllers on a production line or large machine. MELSECNET/H also supports the direct connection of PCs onto the network for SCADA or maintenance applications. MELSECNET/H was designed to offer similar performance benefits to most industrial Ethernet systems, while offering the high degree of performance required in an automation environment.

MELSECNET/H Optical Fiber

Optical fiber media cable is available for connecting MELSECNET/H networks.

Model Number	Description	Stocked Item
AS-1000M-B	Optical fiber cable, sold by the meter	S
DL-72ME	AS-1000M-B connector, MEAU offers the service to provide pre-terminated cables as required	S
PA7003	Splice connector for joining pre-terminated AS-1000M-B cable	-
CAK-0068ME	Optional termination tool kit for AS-1000M-B and DL-72ME for on-site termination work	-

MELSECNET/H Control Level Master/Local Network Modules

Model Number	QJ71LP21-25	QJ71LP21S-25	QJ71LP21G	QJ71LP21GE
Stocked Item	S	-	-	-
Certification	UL • cUL • CE			
Connection Form	Duplex loop type			
Max. Number of Link Points Per Network		MELSECNET/H Mode	MELSECNET/10 Mode	
	LX/LY	8192 points (8k bits)	8192 points (8k bits)	
	LB	16384 points (16k bits)	8192 points (8k bits)	
	W	16384 points (16k words)	8192 points (8k words)	
Max. Number of Link Points Per Station	[LW+LB+LY<=2000 bytes (cyclic communication)]+[LW+LB+LY<=2000 bytes (low-speed cyclic communication)]			
Transient Transmission Capacity	Max. 1920 bytes/frame			
Transmission Speed	10Mbps/25Mbps (depending on switch setting) (*1)		10Mbps	10Mbps
Cable Type	Optical (AS-1000M-B (SI, 200/250)) (*2)	Optical (AS-1000M-B (SI, 200/250)) (*2)	Optical (GI-50/125)	Optical (GI-62.5/125)
Max. Number of Networks	239			
Max. Number of Groups	32			
Number of Stations Connected	64 stations (1: control station, 63: normal station)			
Overall Distance	30km (98360.67 ft.)			
Station to Station Distance	Cable Type	Transmission Speed		2km (6557.38 ft.)
		10Mbps	25Mbps	
	SI	500m (3278.69 ft.)	200m (1312.33 ft.)	
	H-PCF	1km (3278.69 ft.)	400m (1312.33 ft.)	
	Broadband H-PCF	1km (3278.69 ft.)	1km (3278.69 ft.)	
	QSI	1km (3278.69 ft.)	1km (3278.69 ft.)	
Distance Extension Repeater	-			
I/O Device Points Occupied	32 points	48 points (I/O assignment: first 16 points as empty, 1st 32 points as intelligent)	32 points	
External Power Supply	Voltage	-	20.4 to 31.2VDC	-
	Current	-	0.20 A	-
	Terminal Screw Size	-	M3 Screw	-
	Applicable Solderless Terminal	-	R1.25-3	-
	Applicable Wire Size	-	0.3 to 1.25 mm ²	-
	Tightening Torque	-	42 to 58N • cm	-
Internal Current Consumption (5VDC) (A)	0.55	0.55	0.55	0.55
Weight (kg)	0.11	0.20	0.11	0.11
Base Unit Slots Occupied	1	2	1	

Notes:

- 25 Mbps is available for the MELSECNET/H mode only.
- Other types of fiber cables can be used, see "Station-to-station distance". To order pre-assembled AS-1000M-B cables, specify cable length, two DL-72ME connectors, and labor-TSS surcharge.

MELSECNET/H Control Level Master/Local Network Modules

Model Number	QJ71BR11	QJ71NT11B		
Stocked Item	S	S		
Certification	UL • cUL • CE			
Connection Form	Simplex bus type	Token bus		
Max. Number of Link Points Per Network				
		MELSECNET/H Mode	MELSECNET/10 Mode	
	LX/LY	8192 points (8k bits)	8192 points (8k bits)	
	LB	16384 points (16k bits)	8192 points (8k bits)	
	W	16384 points (16k words)	8192 points (8k words)	
			MELSECNET/H Mode, MELSECNET/H Extended Mode (*1)	
LX/LY	8192 points			
LB	16384 points			
W	16384 points			
Max. Number of Link Points Per Station	[LW+LB+LY<=2000 bytes (cyclic communication)]+[LW+LB+LY<=2000 bytes (low-speed cyclic communication)]		MELSECNET/H mode: $\{(LY+LB)/8 + (2 \times LW)\} \leq 2000$ bytes (*2) MELSECNET/H Extended mode: $\{(LY+LB)/8 + (2 \times LW)\} \leq 35840$ bytes (*2)	
Transient Transmission Capacity	Max. 1920 bytes/frame			
Transmission Speed	10Mbps	156kbps/312kbps/625kbps/1.25Mbps/2.5Mbps/5Mbps/10Mbps (Switched by network parameters)		
Cable Type	Coaxial 75Ω; RG-59B/U RG-11A/U	Twisted pair cable or CC-Link Ver.1.10-compatible cable (*4)		
Max. Number of Networks	239			
Max. Number of Groups	32			
Number of Stations Connected	32 stations (1: control station, 31: normal station)			
Overall Distance	500m (1639.34 ft.); RG-11A/U / 300m; (983.61 ft.) (RG-59B/U)			
Station to Station Distance		Communication Speed	Twisted Pair Cable	CC-Link Ver. 1.10-Compatible Cable
		156kbps (*3)	1200m	1200m
		312kbps	600m	900m
		625kbps	400m	600m
		1.25Mbps	200m	400m
		2.5Mbps	(Not applicable)	200m
		5Mbps		150m
	10Mbps	100m		
Distance Extension Repeater	Up to 2.5km (8196.72 ft.) by connection of max. four repeaters. Use A6BR10/ A6BR10-DC repeaters.		-	
I/O Device Points Occupied	32 points	32 points		
Internal Current Consumption (5VDC) (A)	0.75	0.6		
Weight (kg)	0.11	0.13		
Base Unit Slots Occupied	1			

Notes:

1. Mode selection is performed using network parameters.
2. The number of LY points of the stations set in the I/O master station is the sum total of the LY points for output to all stations within the block.
3. This value is set as default of the communication speed.
4. For details of cable specifications, refer to the User Manual.

MELSECNET/H Remote I/O Network Modules

These modules form a complimentary solution to the master/local modules. The master/local modules allow CPUs to be linked for information exchange. The remote I/O modules fit on a base rack in place of the CPU, and allow this rack of I/O to be operated under the control of a remote Q Series CPU over a MELSECNET/H link.

Model Number	QJ72LP25-25		QJ72LP25G	QJ72LP25GE	QJ72BR15
Stocked Item	S		-	-	S
Certification	UL • cUL • CE				
Connection Form	Duplex loop type				Simplex bus type
Max. Number of Link Points Per Station	Remote I/O station to remote master station ((LY+LB)/8 + (2 LW)) </- 1600 bytes				
Transient Transmission Capacity	Max. 1920 bytes/frame				
Transmission Speed	10Mbps/25Mbps (depending on switch setting)		10Mbps		
Cable Type	Optical (AS-1000M-B (SI, 200//250)) (*1)		Optical (GI-50/125)	Optical (GI-62.5/125)	Coaxial 75Ω (RG-59B/U, RG-11A/U)
Max. Number of Networks	239				
Number of Stations	65 stations (1:remote master station, 1:remote I/O station)				33 stations (1:remote master station, 32:remote I/O station)
Overall Distance	30km (98360.66 ft.)				500m (1639.34 ft.) (RG-11A/U); 300m (983.61 ft.) (RG-59B/U)
Distance Extension Repeater	-		-	-	Up to 2.5km (8196.72 ft.) 4 repeaters max. Use A6BR10/A6BR10-DC
Max. Distance Between Stations	Communication Speed: 10Mbps	SI type optical cable: 500m (3278.69 ft.); H-PCF type optical cable: 1km (3278.69 ft.); Broadband H-PCF cable: 1km (3278.69 ft.); QSI type optical cable: 1km (3278.69 ft.)	2km (6557.38 ft.)	2km (6557.38 ft.)	-
	Communication Speed: 25Mbps	SI type optical cable: 200m (1312.33 ft.); H-PCF type optical cable: 400m (1311.48 ft.); Broadband H-PCF cable: 1km (3278.69 ft.); QSI type optical cable: 1km (3278.69 ft.)	-	-	-
5VDC Internal Current Consumption (A)	0.89	0.89	0.89	0.89	1.1
Weight (kg)	0.15	0.15	0.15	0.15	0.16
Base Unit Slots Occupied	1				

Note 1: Other types of fiber can be used. See "Interstation distance". AS-1000M-B is purchased by the meter and can be ordered pre-assembled with DL-72ME connectors and LaborTSS surcharge.

CC-Link Device Level Master/Local Network Module

Device level networks typically link a controller to the physical components of a system that it controls. CC-Link represents the next level down from MELSECNET/H in the networking hierarchy and allows devices such as I/O modules, VFDs, HMIs and servos to be connected to the controller in a very cost effective, high performance way via a single network cable.

Please see the CC-Link section of the Distributed I/O section for a full listing of the CC-Link I/O products available.

Model Number	QJ61BT11N
Stocked Item	S
Certification	UL • cUL • CE
Transmission Rate	Selectable 156 kbps/ 625 kbps/ 2.5 Mbps/ 5 Mbps/ 10 Mbps
Maximum Overall Cable Distance (Maximum Transmission Distance)	Varies according to the transmission rate (156 kbps: 1200m; 10Mbps: 100m)
Maximum Number of Connected Stations (Master Station)	64
Number of Occupied Stations (Local Station)	1 to 4 stations; The number of stations can be switched using the GX Works2 parameter setting
Maximum Number of Link Points Per System	Remote I/O (RX, RY): 8192 points; Remote write register (RWw): 2048 words. Remote read register (RWr): 2048 words
Remote Station/Local Station/Intelligent Device Station/Standby Master Station Maximum Number of Link Points Per Station	Remote I/O (RX, RY): 128 points; Remote write register (RWw): 32 words (master station - remote device station/local station/intelligent device station/standby master station); Remote register (RWr): 32 words (remote device station/local station/intelligent device station/standby master station - master station)
RAS Function	Automatic return function; Slave station cut-off function; Error detection by the link special relay/register
I/O Device Points Occupied	32 points
5VDC Internal Current Consumption	0.46 A
Base Unit Slots Occupied	1