



Mitsubishi

A Series

Driver: Mitsubishi AJ71 Module

Overview

Maple Systems' **Silver Series/HMI500 Series** Human-Machine Interface Terminals (Maple HMI's) communicate with Mitsubishi A Series PLCs using the Computer Link protocol. When configured with EZware-500, the Maple HMI's is the master in a point-to-point single master, single slave format. Please refer to the *Silver Series Installation and Operation Manual* for information on connecting multiple Maple HMI's to a single Modbus RTU port.

Compatible PLCs	
Family	Model
A Series	AJ71C24

Communications Cable

The Maple HMI should be connected to either the RS422/RS485 connection on the front of the AJ71C24 module. Use Maple Systems cable 7443-0084-5 if connecting to the RS485 terminals or cable 7443-0013-5 if connecting to the 25 pin connector.

A list of communications cables offered by Maple Systems as well as cable assembly instructions to assist you in assembling your own communications cable are available on our website at www.maple-systems.com/cables.htm.

WARNING: If your communications cable is not wired exactly as shown in our cable assembly instructions, damage to the HMI or loss of communications can result.

Module Settings

Parity Check must be enabled.
Sum Check must be enabled.
Mode must be set to Protocol 1 for the selected port (RS232 or RS422).
Computer Link / Multidrop Link must be set to Computer Link.
Station Number must be set to 0.
Baud Rate, Parity, Data Bits, and Stop Bits must be the same as set in EZware-500.

Accessible PLC Memory

Register Memory

The following table lists the controller's register memory ranges that the Maple HMI's are able to access. Please note that your controller's memory range may be *smaller* or *larger* than that supported by these HMI's. The following register memory can be displayed in 16, 32, or 64 bit format on the Maple HMI.

PLC Register Type	Address Range	Format	PLC Register Description
D	0 - 9999	dddd (d=decimal)	Data Registers
TV	0 - 255	ddd	Timer Current Value
CV	0 - 255	ddd	Counter Current Value

Discrete Memory

The following table lists the controller's discrete memory ranges that the Maple HMI's are able to access. Please note that your controller's memory range may be *smaller* or *larger* than that supported by these HMI's. The following discrete memory is displayable in single-bit format on the Maple HMI.

PLC Bit Type	Address Range	Format	PLC Bit Description
X	0 - 7FF	hhh (h=hexadecimal)	Input Bits
Y	0 - 7FF	hhh (h=hexadecimal)	Output Bits
M	0 - 9999	dddd (d=decimal)	Internal Control Relays

Memory Not Supported

The following PLC memory areas are not currently supported by the Maple HMI's:

- S (States)

Important Memory Considerations

If your PLC's memory range is smaller than the range supported by the Maple HMI's, it is possible to configure the HMI to monitor a PLC memory address which does not exist. Since this can cause unpredictable results, when you configure the HMI please ensure that all selected PLC memory addresses are valid for your PLC model.

Do not configure the HMI to write to any PLC memory address which should only be written to by the PLC.

EZware-500 Settings

The following table lists the communications settings that must be configured in EZware-500. These settings can be found in the Edit-Set System Parameters menu under the PLC tab. Please note:

- the **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in the Mitsubishi AJ71C24 PLC
- the **Options** column lists EZware-500's options; your PLC may not support every option

Name	Recommended Settings	Options	Important Notes
PLC type:	Mitsubishi A Series AJ71		
Serial port I/F:	RS485	RS232, RS485	
Data Bits:	8	7 or 8	Must match the module setting.
Stop Bits:	1	1 or 2	Must match the module setting.
Baud Rate:	9600	9600,19200, 38400,57600, 115200	Must match the module setting. Use the fastest baud rate supported by PLC.
Parity:	Even	Even, Odd, None	Must match the module setting.
HMI station No.:	0	N/A	Does not apply to this protocol.
PLC station No.:	0	N/A	Does not apply to this protocol.
Multiple HMI:	Disable	Disable, Master, Slave	use for multiple OITs
HMI-HMI link speed:	38400	38400, 115200	use for multiple OITs
PLC time out constant (sec)	3.0	1.5 to 5.0	adjust if longer timeout is required
PLC block pack:	0	0-10	see <i>Silver Series Installation and Operation Manual</i>