



Hitachi

H Series

Overview

Maple Systems' **Silver Series/HMI500 Series** Operator Interface Terminals (Maple OITs) communicate with Hitachi H Series PLCs using the Procedure-1 One-way protocol. When configured with EZware-500, the Maple OIT 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 OITs to a single PLC port.

Compatible PLCs	
Family	Model
H Series	EH150, H20, H40, H64, H200, H250, H252, H300, H302, H700, H702, H1000, H1002, H2000, H4010

Communications Cable

The Maple OIT should be connected to the PLCs communications module (for example: COMH, REM-LH or OREM-LH). Connection to the PLC is accomplished through 1) the board-type PLC's programming/peripheral port located on the PLC's front left side, 2) the CPU's programming/peripheral port, or 3) the Communication module's RS-232 port.

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 Maple OIT or loss of communications can result.

PLC Settings

RS-232 port (mode 2; RS-232 switches: 1,7=OFF 2,3,4,5,6,8=ON)

Accessible PLC Memory

Register Memory

The following table lists the PLC's register memory ranges that Maple's OITs are able to access. Please note that your PLC's memory range may be *smaller* or *larger* than that supported by Maple's OITs. The following register memory is displayable in 16-bit or 32-bit formats on the Maple OIT.

PLC Register Address	Address Range	Format	PLC Register Description
WX	0 - 05F7	0usw where: u = unit number 0 to 5 s = slot number 0 to F w = word number 0 to 7	External Input - Word
WY	0 - 05F7	0usw	External Output - Word
WR	0 - F1FF	hhhh (h = hexadecimal)	Internal Output - Word
WL	0 - 13FF	hhhh	Link Area - Word
WM	0 - 3FF	hhh	Data Area - Word
TC	0 - 255	ddd (d = decimal)	Timer/Counter Current - Word

Discrete Memory

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

PLC Bit Address	Address Range	Format	PLC Bit Description
X	0 - 05F95	0usbb where: u = unit number 0 to 5 s = slot number 0 to F bb = bit number 0 to 95 (decimal)	External Input - Bit
Y	0 - 05F95	0usbb	External Output - Bit
R	0 - 7FF	hhh (h = hexadecimal)	Internal Output - Bit
L	0 - 13FFF	hhhhh	Link Area - Bit
M	0 - 3FFF	hhhhh	Data Area - Bit
T	0 - 255	ddd (d = decimal)	Timer/Counter Device - Bit

Important Memory Considerations

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

Do not configure the OIT 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 Hitachi H Series PLC
- the **Options** column lists EZware-500's options; your PLC may not support every option

Name	Recommended Settings	Options	Important Notes
PLC type:	Hitachi H Series		
Serial port I/F:	RS232	RS232, RS485	
Data Bits:	7	7 or 8	Must match the PLC's port setting.
Stop Bits:	1	1 or 2	Must match the PLC's port setting.
Baud Rate:	19200	9600,19200, 38400,57600, 115200	Must match the PLC's port setting. Use the fastest baud rate supported by the PLC.
Parity:	Even	Even, Odd, None	Must match the PLC's port setting.
HMI station No.:	0	0-255	Does not apply to this protocol.
PLC station No.:	0	0-255	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>