C O N T R O L L E R I N F O R M A T I O N S H E E T

Maple Model(s)	PLC or Controller
HMI5000 Series	Emerson Network Power EC20

Summary

Maple Systems' **HMI5000 Series** Human/Machine Interface Terminals (Maple HMIs) communicate with any Emerson Network Power device that uses the Modbus protocol. When configured with EZware-5000, the Maple HMI is the master in a point-to-point single master, single slave format. Please refer to the *HMI5000 Series Programming Manual* (Maple p/n 1010-1007) for information on connecting multiple Maple HMIs to a single PLC port.

Compatible PLCs	
Family	**CPU Model(s)**
EC20	All

Communications Cable

The Maple HMI should be connected to the PLC's COM1 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.maplesystems.com.

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.*

PLC Settings

The Port on the EC20 must be set to Modbus Protocol Slave Station RTU Mode.
The PLC station # in Easy Builder must match the Station Number set in the PLC.

Accessible PLC Memory

Register Memory

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

(Note: d=decimal)

PLC Register Type	Address Range	Format	PLC Register Description
D	0-7999	dddd	Data Registers
SD	0-255	ddd	Special Data Registers
Z	0-15	dd	Offset Addressing Register
T	0-255	ddd	Timer Registers
C	0-255	ddd	Counter Registers
C_Double	200-255	ddd	32-bit Counter Registers
D_Double	0-7998	dddd	32-bit Data Registers

Discrete Memory

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

(Note: d=decimal, o=octal)

PLC Bit Type	Address Range	Format	PLC Bit Description
X	0-377	ooo	Input Relays
Y	0-377	ooo	Output Relays
M	0-2047	dddd	Auxiliary Relays
SM	0-255	ddd	Special Aux Relays
S	0-1023	dddd	State Relays
T	0-255	ddd	Timer Relays
C	0-255	ddd	Counter Relays

EZware Settings

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

- The **Recommended Settings** column provides the recommended setting based upon the default settings most commonly used in Emerson Network Power devices.

- The **Options** column lists EZware's options; your PLC may not support every option.

Name	Recommended Settings	Options	Important Notes
Name:	Emerson EC20		Description
HMI or PLC	PLC		
Location	Local	Local, Remote	Select *Local* if PLC directly connected to HMI, *Remote* if PLC connected thru another HMI.
PLC type	Emerson EC20		
PLC I/F:	RS-232	RS-232, RS-485 2W, RS-485 4W, Ethernet	Must match the PLC port setting.
PLC default station no.:	0	0-255	Must match the default station no. assigned to the PLC.
Settings: COM:	COM 1	COM1-COM3	Serial port of HMI connected to PLC.
Settings: Baud rate:	9600	9600, 19200, 38400, 57600, 115200	Must match the PLC's port setting. Use the fastest baud rate supported by the PLC.
Settings: Data bits:	8	7 or 8	Must match the PLC's port setting.
Settings: Stop bits:	1	1 or 2	Must match the PLC's port setting.
Settings: Parity:	Even	Even, Odd, None	Must match the PLC's port setting.
Settings: Timeout (sec)	1.0	0.1 to 25.5	Adjust if longer timeout is required.
Settings: Turn around delay (ms)	0	0-1000	Timeout period between HMI polls.
Settings: Send ACK Delay:	0		Not Applicable

Name	Recommended Settings	Options	Important Notes
Settings: Parameter 1:	0		Not Applicable
Settings: Parameter 2:	0		Not Applicable
Settings: Parameter 3:	0		Not Applicable
Interval of block pack words	5	0-512	See *HMI5000 Series Programming Manual* (Maple p/n 1010-1007)
Max. read-command size (words):	32		Not Adjustable
Max. write-command size (words):	32		Not Adjustable