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	Delta Products DVP Series

Summary

Maple Systems' **HMI5000 Series** Human/Machine Interface Terminals (Maple HMIs) communicate with Delta Products DVP Series PLCs using the Delta Modbus ASCII 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

PLC Family	PLC Model
DVP	DVP-14ES, DVP-24ES, DVP-32ES, DVP-60ES

Communications Cable

The Maple HMI should be connected to the RS-232 programming port on the PLC. 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 RS-232 port must be set to 9600, even parity, 7 data bits and 1 stop bit.

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 - 599 1000 - 1143	dddd	General data registers
CV	0 - 127	ddd	Counter registers - current value
CV2	232 - 255	ddd	High speed counter registers - current value
TV	0 - 127	ddd	Timer registers - current value

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 - 177	ooo	External Input - Bit Registers
Y	0 - 177	ooo	External Output - Bit Registers
M	0 - 1279	dddd	Internal Contacts
S	0 - 127	ddd	Special Auxiliary Contacts
T	0 - 127	ddd	Timer Contacts
C	0 – 127 232-255	ddd	Counter Contacts

Important Memory Considerations

If your PLC's memory range is smaller than the range supported by the Maple HMIs, 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 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 the Delta Products DVP Series PLC.
- The **Options** column lists EZware's options; your PLC may not support every option.

Name	Recommended Settings	Options	Important Notes
Name:	Delta DVP Series		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	Delta DVP Series		
PLC I/F:	RS-232	RS-232, RS-485 2W, RS-485 4W, Ethernet	Must match the PLC port setting.
PLC default station no.:	1	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:	7	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.

Name	Recommended Settings	Options	Important Notes
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
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