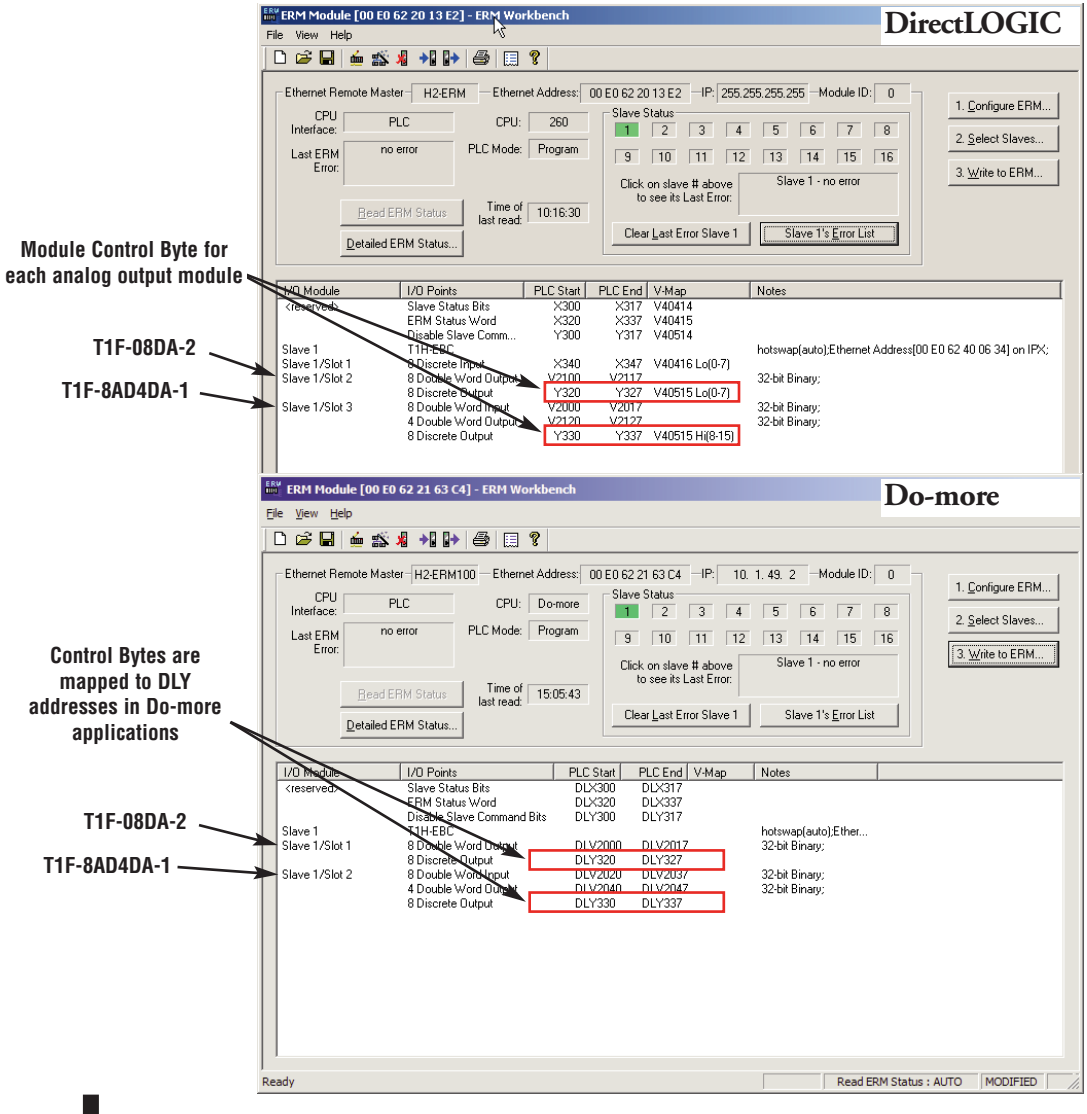
Configuring Terminator I/O Analog Output Modules

In This Appendix:

Analog Output Module Control Byte

Terminator I/O analog voltage and current output and combination analog modules require configuring via the module control byte. Analog input modules do not require configuration. The DirectLOGIC example below shows an ERM network Terminator I/O slave with a discrete input module in slot 1, an analog voltage output module in slot 2 and a combination analog current module in slot 3. Note that the module control bytes are automatically mapped to the "Y" data type registers. The bits within the module control byte are used to enable or disable the analog outputs, select bipolar or unipolar output and select the voltage or current output range. For Do-more applications, the control bits are mapped to DLY addresses, an example is shown below.



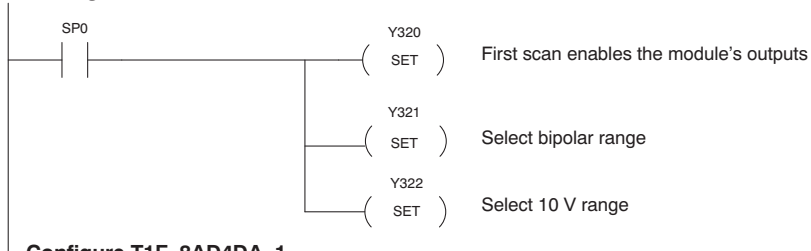
The table below defines the bits of an analog module control byte. Example "Y" bit addresses are listed for the analog module control bytes from the ERM network example on the previous page, along with their equivalent Do-more addresses. The module control byte addresses will vary depending on the location of the analog module in the system, the number of slaves, the amount of output modules used in an ERM network and the starting discrete output address that is user specified. ERM Workbench will list the appropriate control byte for any Terminator analog module that requires configuration.

Module Control Byte of 8 and 16-Channel Analog Output Modules and Analog Combination Modules			
Bit Definitions		**Example Bit Addresses for T1F–08DA–2**	**Example Bit Addresses for T1F–8AD4DA–1**
Bit 0	Outputs Enable 0 = All outputs OFF 1 = All outputs Enabled	DL: Y320 Do-more: DLY320	DL: Y330 Do-more: DLY330
Bit 1	Unipolar / Bipolar 0 = Unipolar selected 1 = Bipolar selected	DL: Y321 Do-more: DLY321	DL: Y331 Do-more: DLY331
Bit 2	5V / 10V Range 0 = 5V range 1 = 10V range	DL: Y322 Do-more: DLY322	DL: Y332 Do-more: DLY332
Bit 3	0 – 20mA / 4–20mA Range 0 = 0 – 20mA range 1 = 4 – 20mA range	DL: Y323 Do-more: DLY323	DL: Y333 Do-more: DLY333
Bit 4–7	Reserved for system use	–	–

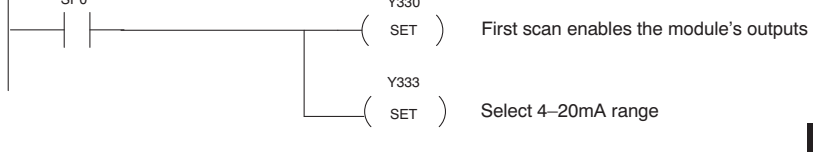
The following example ladder logic code configures the analog output and combination analog modules used in the previous examples. The T1F–08DA–2 is configured for outputs enabled with 10V bipolar range. The T1F–8AD4DA–1 is configured for outputs enabled with 4–20mA unipolar range. The RST instruction can be used to reset the bits, if necessary.

DirectSOFT

Configure T1F–08DA–2



Configure T1F–8AD4DA–1



Do-more Designer