DMM-32X-AT to DMM-32DX-AT Migration Guide

The DMM-32DX-AT auto-autocalibrating data acquisition product is upward compatible from the original DMM-32X-AT. Moreover, there are a number of important changes to DMM-32DX-AT which make it a superior analog I/O PC/104 module.

Migrating to the DMM-32DX-AT primarily consists of configuring the D/A converter. The D/A configuration jumpers on the DMM-32DX-AT are slightly different than the DMM-32X-AT and can be overridden by software. The differences between the old board D/A and the new board D/A are how the output voltage span and polarity are defined.

The DMM-32DX-AT has jumpers GN0 and GN1 that set the output voltage span with the following definitions:

GN1	GN0	VOLTAGE SPAN
0	0	5V (0V to +5V unipolar or -2.5V to +2.5V bipolar)
0	1	10V (0V to +10V unipolar or -5V to +5V bipolar)
1	0	20V (-10V to +10V bipolar only)

The DMM-32DX-AT has jumper F/~V that sets the voltage span to be fixed (5V, 10V or 20V) when removed or 5V * (n / 250) with "n" set by the user when installed, which then the GN0 and GN1 jumpers will have the following definitions:

GN1	GN0	SPAN GAIN [VAR = 5V * (n / 250)]
0	0	1X (0V to +VAR unipolar or -1/2 VAR to +1/2 VAR bipolar)
0	1	2X (0V to +2 * VAR unipolar or -VAR to +VAR bipolar)
1	0	4X (-2 * VAR to +2 * VAR bipolar only)

The DMM-32DX-AT has the jumper B/~U that sets the output polarity to unipolar when installed and bipolar when removed.

All these jumper settings apply to the both the 12-bit and 16-bit versions of the new DMM-32DX-AT. The 12-bit version of the DMM-32DX-AT is register compatible with the DMM-32X-AT, but the 16-bit version has new registers that handle the 16-bit output codes. See the DMM-32DX-AT User's Manual for details.

These jumper settings can be overridden when the DMM-32DX-AT is in enhanced mode and then can be set by software, which is a new feature. See the DMM-32DX-AT User's Manual for details.

Part Number Transition

Users of original DMM-32X-AT Part Number . . .	Should Order New DMM-32DX-AT Part Number
DMM-32X-AT	DMM-32DX-AT

More Information

Detailed information about DMM-32DX-AT, including a data sheet, User's Manual and ordering information, may be found at www.diamondsystems.com/products/dmm32dx.