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February 16, 2004

APPLICATION NOTE #03-A

MIL-STD-704 DC TESTING

The Argantix KDC Series Programmable DC Power Supplies contains a powerful digital signal processor (DSP) capable of performing and storing complex tasks. One common military avionics test is MIL-STD-704.

To simplify MIL-STD-704 testing, the 704D & E revision DC test sequences are embedded in the firmware of the KDC Series Programmable DC Power Supplies. The 704 tests are easily initiated through the front panel or remote RS-232/GPIB interfaces. Using the front panel, simply scroll through the front panel menu screens until you reach applications, then select the appropriate test.

704D & E REVISION DC TESTS PERFORMED:

- Steady State
 - Steady state voltage test
 - Ripple test
- Transient Test
 - Transient voltage low
 - Transient voltage high
- Emergency Test
 - Emergency voltage minimum & maximum test
- Abnormal Test
 - Abnormal voltage under
 - Abnormal voltage over

One of the most demanding tests is the ripple test. To perform this test, the KDC power supply superimposes a 400 Hz signal on the 28 Vdc or 270 Vdc output.

While embedded MIL-STD-704 tests cannot be modified, new test sequences can be stored in the KDC power supply's non-volatile memory. There are 8 register locations to store user-defined sequences. Each sequence can contain up to 100 steps. Each step can contain up to 6 parameters.

Note: The KDC Series cannot replicate the 10 Hz to 500 kHz signal for distortion spectrum testing. Additional equipment is required.