



**NOTES:**

1. ISOLATION IS FOR EXAMPLE ONLY. OTHER DESIGNS MAY REQUIRE ADDITIONAL OR DIFFERENT ISOLATION. REFER TO THE STANDARDS FOR REQUIREMENTS.
2. CREEPAGE DISTANCE FOR SPACINGS ON PRINTED-WIRING BOARDS IS 3 MM FOR DOUBLE AND 1.5 MM FOR BASIC. DISTANCES CAN INCREASE FOR OTHER CIRCUITS OR COMPONENTS, SUCH AS OPTOISOLATORS, TRANSFORMERS, CONVERTERS, RELAYS, AND CONNECTORS. REFER TO THE STANDARDS FOR VALUES IN ALL CASES.
3. CHANNEL-TO-CHANNEL SPACINGS CAN REQUIRE ISOLATION, DEPENDING ON THE INSTALLATION AND RESULTS OF TESTING, INCLUDING HIGH POTENTIALS, FAULTS, AND GROUNDS.
4. DESIGNS USING METAL ENCLOSURES, METAL GROUND CONNECTIONS, OR BOTH THAT DO NOT RELIABLY BOND, OR GROUND, TO EARTH REQUIRE DOUBLE, 2300V-RMS, ONE-MINUTE ISOLATION.
5. MEASUREMENT CIRCUITS CAN REQUIRE ADDED SAFETY GUARDING, CIRCUIT PROTECTION, OR BOTH. REFER TO THE STANDARDS FOR REQUIREMENTS.

**Figure 4**

A system isolation for a typical 250V I/O-measurement system shows isolation: "A" channel-to-bus isolation is double: 2300V rms/one minute. "B" channel-to-ground isolation is basic: 1350V rms/one minute. "C" channel-to-channel isolation is none (functional) or basic: 1350V rms/one minute. "D" channel-to-channel/bus isolation is double: 2300V rms/one minute. "E" channel-to-channel isolation is none (functional) or basic: 500V rms/one minute. Channels 1 and 2 are 250V continuous, and channels 3 and 4 are less than 42.4V peak/60V dc continuous. "GND" is a safety ground reliably connected to earth.