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.