
DI-730 Tackles Tough Industrial Measurements

DATAQ Instruments

Imagine this measurement environment: Simultaneous measurements of 400+ source volts and 50 millivolt current shunts that are hundreds of volts off-ground. Now imagine trying to make this measurement against the background noise of SCRs chopping the motor supply at a 10 kHz rate. Traditional PC-based instrumentation vaporizes in this environment, and our customer knew it. That's why they turned to us for a solution. They needed:

- Eight input channels.
- 1000 volt input-to-output and channel-to-channel isolation.
- Each channel must measure from 10mV to 800V full scale across six fully programmable measurement ranges.
- Each input must be fully protected to 1000V.
- The unit must support 14-bit digitizing resolution and a sample throughput rate of 250kHz.
- The unit must connect to a standard port computer interface.
- All the above must fit in a box small enough to be tucked into an overnight bag or under the service technician's arm.

What we gave them was the DI-730, the most advanced instrument available for demanding PC-based AC drive, DC drive, power, voltage, and current measurements. This instrument is only 1½ inches high, six inches wide, and nine inches deep, which more than satisfied size constraints. Each service technician has his own unit that he easily checks as carry-on baggage. When on site, the tech simply connects the DI-730 to his laptop computer's USB port, runs WinDaq software to visualize the signals under test, records them to the laptop's hard drive, and reviews and resolves problems.

And what did we replace? An expensive, multi-channel chart recorder, miles of chart paper, a shipping crate, and gallons of sweat hauling the unit through airports and to customer sites.