Newer digital electro-mechanical equipment

Motors, pumps, turbines and other types of electro-mechanical equipment are more digitized and more complex than ever before. Programmable Logic Controllers (PLCs) can be now be programmed in the field, and many of the newest control devices include networking capabilities. This adds another dimension to troubleshooting in that it not only demands basic volts, ohms and amps measurements, but also an instrument capable of measuring analog or digital signal attributes such as amplitude, timing or frequency and capable of detecting any signal disturbances and distortion.

Complexity of signals/waveforms

Programmable automated controllers (PACs), PLCs and other industrial digital control devices produce complex signals that are difficult to capture and trigger on an oscilloscope. Indeed, identifying characteristics of signals can be a challenge and even more difficult to determine the root cause of a failure, especially if the test tool is not able to capture and display a signal of interest. Fluke ScopeMeter® test tools provide capabilities that help troubleshooting teams diagnose potential issues and uncover root cause in a straightforward manner. Connect-and-View™ triggering automates signal setup, trigger and capture, while a new Fluke innovation called IntellaSet™ technology adds a sophisticated onboard algorithm that analyzes the measured waveform, then intelligently displays critical measurements values associated with that waveform. As an example, when the measured waveform is a line voltage signal, the V ac + dc and Hz readings are automatically displayed for a sine wave V ac and Hz are displayed, for a dc power source, dc volts, and for a square wave VPeak-Peak and Hz. The ScopeMeter 125B can also help you successfully troubleshoot a range of industrial bus problems. With the 125B Bus Health function, a user can provide a health check on a specific bus communication between the control unit and a motor drive.
6 Test tools you can rely on no matter what problem you face

When you get the call-out to inspect a failure, often you don’t know what tests or measurements will be needed. Will it require just basic volts, ohms or current measurement or will you need to record data to troubleshoot illusive intermittent conditions or track down the source of signal disturbances disrupting communications? Which tools do you take with you? The ScopeMeter Test Tools combine the capabilities of an oscilloscope, multimeter and paperless recorder in an easy to use hand-held tool that has the benefit of being battery operated and rugged, making it possible to use anywhere even in harsh environments. Simplify and extend your troubleshooting arsenal with a ScopeMeter Test Tool.

Fluke. Keeping your world up and running®

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