technical datasheet

FBT-4

monitoring of fieldbus networks

- Checks for basic fieldbus operation
- Bus-powered
- Monitors:
  - DC power
  - Polarity
  - Packet traffic

The Fieldbus Power & Signal Probe, FBT-4, is used to examine the operation of a live FOUNDATION™ fieldbus network without interfering with its operation. The Probe is intended for maintenance personnel to verify network operation or to troubleshoot an errant network. The Power and Signal Probe is designed to help instrument technicians quickly determine if bus power and signal levels are within specification at individual points on a fieldbus network segment. For example, if a fieldbus transmitter suddenly goes off-line, the FBT-4 can be used to determine if the problem resides in the transmitter itself or is due to an open or short in the network cable system. Inexpensive and portable, the FBT-4 runs on bus power and thus requires no batteries or other external source of power.

Operation

One red and two green LEDs indicate the status of the fieldbus network. They are labelled **Signal**, **Voltage**, and **Reversed**. An illuminated green LED indicates that the network is performing satisfactorily. An illuminated red LED signals an error condition. Functional descriptions of the three indicators are as follows.

Signal - indicates that there is bus activity. It will only light if data traffic is detected with peak to peak amplitude greater than 150 mV. The validity of the data is not checked. You will notice that the LED blinks when there is bus activity. It is driven directly by the frame data and is thus not powered during the brief silence between packets.

Voltage - indicates that the DC Voltage on the fieldbus is greater than the 9.0V dc minimum that is required by the fieldbus standard.

Reversed - indicates that the FBT-4 probes have been connected to the network incorrectly or that the fieldbus has been wired with reversed polarity.

Connection

The pointed probe attached directly to the case of the FBT-4 is the negative input and should be connected to a negative point on the fieldbus. The red wire with the pointed probe should be connected at a positive point on the fieldbus. For hands-free operation, a red mini-hook assembly is available which can be attached to the end of the red pointed probe. A black cable with mini-hook is also available to plug onto the negative terminal of the FBT-4.

Specifications

The Monitor is powered by the fieldbus and draws 12-15mA of current, depending on bus voltage and ambient temperature.

Operating temperature range: 0 - 50°C

Weight: 300g

Size: 11.8 × 5.0 × 2.1cm