



LTF-631™ High Speed Dielectric Cure Monitor Specifications



Figure 1
LTF-631 High Speed Dielectric Cure Monitor

The LTF-631 High Speed Dielectric Cure Monitor is designed for the study of rapidly reacting materials in Research & Development, Quality Assurance/Quality Control, and Production applications involving thermoset materials--resins, composites, paints and coatings. The 10 Hz to 10 KHz frequency range of the LTF-631 permits excellent sensitivity for SMC/BMC and UV curing systems, and the associated thermocouple input allows correlation of temperature with cure rate and material properties.

The LTF-631 is available with a maximum of four dielectric channels. Each channel consists of one mid-conductivity dielectric sensor input and one thermocouple input. A single-channel instrument may be upgraded at any time with additional channels. In addition to the dielectric channel(s), the LTF-631 has two general analog inputs which may be used for pressure sensors and LVDT signals.

The CureView Data Acquisition Software has functions for defining cure monitoring parameters; data acquisition, analysis and recall; plotting and printing.

When used with either disposable or reusable dielectric sensors, also available from Lambient Technologies, or the user's own sensors, the LTF-631 High Speed Dielectric Cure Monitor and CureView data acquisition software form a complete measurement system for studying dielectric material properties in all processing environments.

Specifications

Physical:

Dimensions: 17" W x 16" L x 3.25" H (43.2 cm W x 40.6 cm L x 8.3 cm H)

Weight: 15 lbs (6.8 Kg)

Electrical:

Power: 100 VAC – 240 VAC, 50/60 Hz autoswitching universal input, 4 A max

Measurement:

Excitation frequencies: 10 Hz, 100 Hz, 1.0 KHz, 10 KHz

Excitation amplitude: Sine wave, 2.0 V nominal (4.0 V peak-to-peak)

Maximum sampling rate: 55 milliseconds/channel or faster

Dielectric interface: Maximum of four (4) channels of mid-conductivity with

--one (1) dielectric sensor, and

--one (1) thermocouple per channel

Instrument inputs: Two (2) start/triggers, and

two (2) analog inputs (0 - 5 V range) per instrument

--analog inputs may be used for pressure sensor or LVDT with suitable electronic interfacing

Outputs: Two (2) TTL/digital outputs

Dielectric sensor type: Interdigitated, parallel plate or single electrode for Mid-Conductivity interfaces

Thermocouple type: J standard, K by special order

Models: LT-631A: 1 channel

LT-631B: 2 channels

LT-631C: 4 channels

Communications: USB (RS-232C with adapter)



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