

MODEL IT-30B

Digital Impulse Spark Tester

- Split electrode design for easy string-up
- DSP based voltage regulation and differentiation of four fault-types
- LED display viewable up to 200 feet away
- Customizable front panel password security
- Voltage Watchdog
- Communications: Modbus RTU via RS-485
Optional: Analog, Ethernet/IP, Modbus TCP, Profibus, PROFINET, DeviceNET

The Clinton model IT-30B Impulse Spark Tester combines the latest in technology and innovative features for Impulse spark testing of wire and cable.

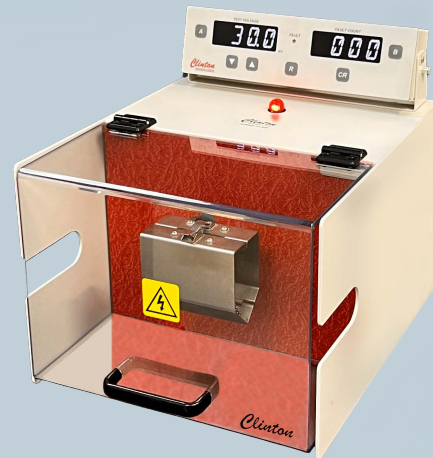
Using DSP based fault typing the IT-30B can differentiate between four fault conditions: pinhole, direct metal contact, multi-pinhole and gross bare wire.

The new BD-12S, BD-13S and BD-14S split electrode designs provide an easy way to string-up wire through the electrode, guaranteeing precise center alignment for the most effective and reliable testing. The bead chain assemblies are positioned to eliminate gaps between bead rows, providing the best coverage around the product at all times.

The IT-30B can be quickly configured for extrusion or re-spooling or operations through a simple configuration menu on the alphanumeric display. During spark testing, critical data such as test voltage, percent load, and counts for particular fault types can be easily accessed. Additionally, descriptive codes inform the operator when there is an error. For example, when the protective electrode cover is open.

The display module can be mounted to the unit as shown, or can be installed up to 200 feet away, with an optional longer interconnecting cable.

IT-30B with RC Control



The IT-30B can connect easily to a PLC with Analog or Modbus RTU via RS-485 full duplex. Optional DeviceNET, Ethernet/IP, PROFINET, Profibus, and Modbus TCP communications are available.

Wiring and setup are done externally; there is no need to open the unit. One form C and three form A relay contacts are located on the rear panel for easy connection to external alarms, lights, or machinery controlled by the spark tester.

Relay function may be selected from options including: high voltage ON indication, fault alarm, bare wire alarm, and voltage watchdog (when enabled, the equipment will alert when a preset upper or lower voltage is exceeded).

The IT-30B features a flexible front panel password security, locking out unauthorized changes to test voltage and other settings. The unit also monitors output voltage at the electrode and notifies the operator if voltage at the electrode should become disconnected.

The IT-30B spark tester series offers standard electrodes that meet MIL-C-13777E, MIL-W-16878, NEMA and all Known international standards for wire products. Specifically designed electrodes are available to accommodate a wide range of product sizes and shapes.

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IT-30B

SPECIFICATIONS

Voltage Test Range	3kV to 30kV Negative Peak
Voltage Accuracy	+/- 3% of reading
Impulse Waveform	Negative Pulse with an exponentially Damped sinusoid.
Rise Time	(10%-90%) 10 +/- 2 microseconds
Impulse Repetition Rate	250 +/-2 Impulses Per Second
Fault Indication	White 3-digit 20.32mm high LED display, amber fault indicating LED
Fault Resolution	Variable with electrode length or directly configurable from 1 millisecond to 2 seconds
Detection Sensitivity	Conforms to IEC MIL-STD-2223
Operating Modes	Continuous HV/remove voltage on fault, momentary process control/latch until reset

IT-30B

SPECIFICATIONS CONTINUED

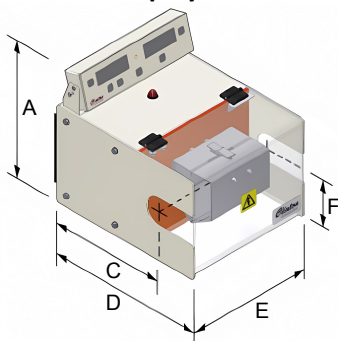
Input Power Requirements	100 to 240VAC 49-61 Hz. Power supply self-adjusting
Communications	Analog, Modbus RTU via RS-485
Optional Communications	Ethernet IP, Modbus TCP, Profibus, Profinet, DeviceNET
Relay Outputs	1 Form C, 3 Form A / Configurable Functionality Relay contacts rated 1A max @ 240VAC or 2A max @120VAC for both NO and NC circuits. Front panel or external reset. In non-latch modes, closure time is adjustable in 10 millisecond increments from 50 milliseconds to 2 ½ seconds
Safety	Designed to IEC-61010-1

IT-30B

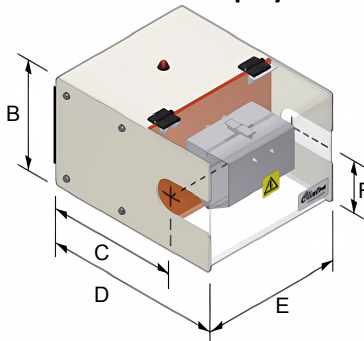
ELECTRODES

BD-12S	Bead Chain Assembly ¼" Product Diameter, 2" along the wire line.
BD-13S	Bead Chain Assembly ¼" Product Diameter, 3" along the wire line.

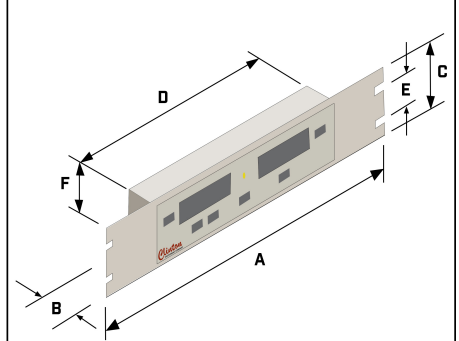
Dimensions for IT-30B with RC Display Mounted



Dimensions for IT-30B with no Display



Dimensions for IT-30B Rack Mounted RC



	A	B	C	D	E	F
BD-12S,	19.0"	10.16"	11.45"	14.88"	12.65"	4.72"
BD-13	(483 mm)	(258 mm)	(291 mm)	(378 mm)	(321 mm)	(120 mm)

A	B	C	D	E	F
19.0"	1.8"	3.5"	11.2"	1.8"	3.1"
(483 mm)	(46 mm)	(89 mm)	(285 mm)	(45 mm)	(79 mm)

Contact us at support@clintoninstrument.com for additional dimensions.

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Specifications subject to change without notice. 4/24 EN