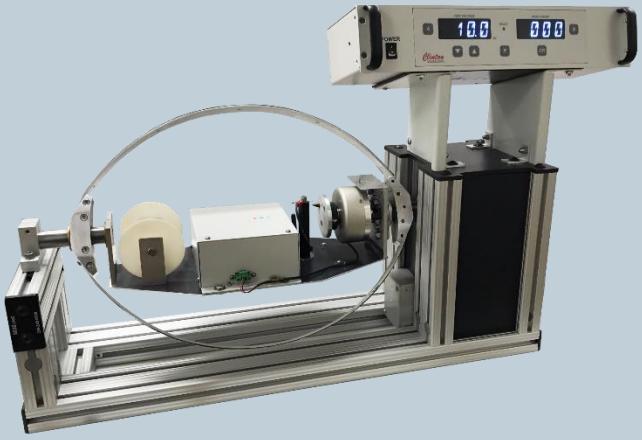
MODEL TST-10B

Wireless Digital Spark Tester for Twinners

- Reliable Spark testing during twinning
- No control loop slip rings required
- Uses 24V DC from inside twinner
- 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



RCW control unit with DCW HV power supply & electrodes shown mounted to a model bow twister (twinner)

The Clinton model TST-10B DC Spark Tester combines the latest in technology and innovative features for DC spark testing of wire and cable during twinning operations.

Using DSP based fault typing, the TST-10B is able to differentiate between four fault conditions: pinhole, direct metal contact, multi-pinhole, and gross bare wire.

The wireless RCW control unit remains outside the twinner and may be located up to 50 feet away. Wireless communication between the DCW high voltage test module and the RCW control unit eliminate the need for troublesome control slip rings, however, slip rings can provide power and ground to the test module if the required 24V and ground is not readily available inside the twinner.

The TST-10B can be quickly configured through a simple 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.

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

Wiring and setup is 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 TST-10B 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 TST-10B spark tester series offers standard electrodes that meet UL, CSA, and all known international standards for wire products and production line speeds. Specifically designed electrodes are available to accommodate a wide range of product sizes and shapes.

The TST-10B can be automatically calibrated for voltage to IEC/CEI 6230, EN 50356, UL and NEMA

TST-10B

SPECIFICATIONS

Voltage Test Range:	Approx. 500 volts to 10KV D.C. For test voltages below 2000 volts, contact factory for electrode recommendation.
Voltage Accuracy	+/- 2% of reading
Output Power	1.5 mA maximum
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 62230
Operating Modes	Continuous HV/remove voltage on fault, momentary process control/latch until reset
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
Power Requirements	
RCW	100 to 240VAC 49-61 Hz. Power supply self-adjusting
TSTB	24V DC 2 amps
Safety	Designed to IEC-1010
Communications	Modbus RTU via RS-485
Optional Communications	Analog, Ethernet IP, Modbus TCP, Profibus, Profinet, DeviceNET

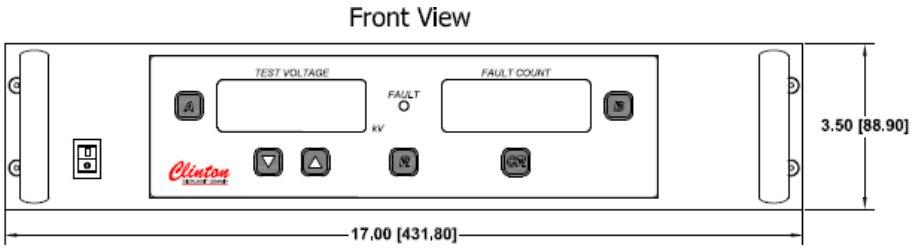
Electrode Options

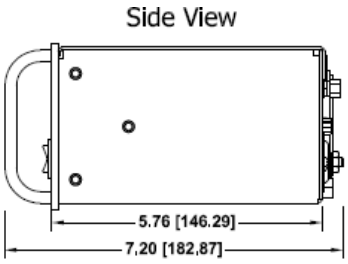
BD-051	Bead Chain Assembly ½" Product Diameter, ½" along the wire line.
BR0.3-2	Brush Assembly 0.2" Product Diameter, ½" along the wire line. (Recommended for Voltages under 2kV)

BD-051

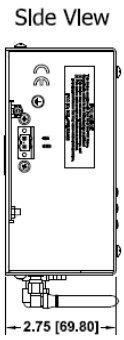
BR0.3-2

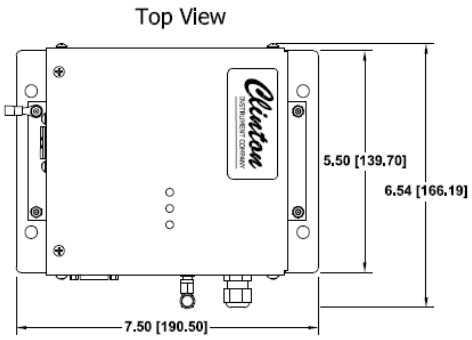
RCW Control Unit

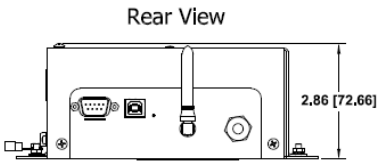




TSTB High Voltage Test Module







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295 East Main St. Clinton, CT 06413 USA Tel: 860-669-7548 Fax: 860-669-3825 www.clintoninstrument.com