TOS5051

WITHSTANDING VOLTAGE TESTER

LISTED

*This UL Listed Product is available for Inline voltage of AC 120V only.

AC/DC
5 kV
Transformer capacity: 500 VA

Outline

The Model TOS5051 is a withstanding voltage tester having a transformer capacity of 500 VA and test voltage of 0 to 5 kV that allows both application of AC and DC.
The Pass/fail judgement function employs a window comparator type that enables highly reliable testing including that for test lead disconnection and defective contact.
Moreover, as a result of employing a remote control function for start and stop operations and being equipped with output signals for various judgement results, the TOS5051 is able to contribute to greater automation and efficiency of testing.
Various safety devices, including an automatic discharge function (during DC operation), are provided in full consideration of operator safety. In addition, the use of a large, color display makes the TOS5051 extremely legible, providing strong support for more accurate and safer operation.

Features

- Complies with various safety standards
- AC/DC output (0 to 5 kV)
- Large color display
- Digital voltmeter and ammeter
- Digital timer
- Window comparator type employed for Pass/fail judgement.
- Equipped with remote control function
- Various signal outputs
- Automatic discharge function (during DC operation)
- Provided with zero turn-on switch
- Compact size

A high-luminance, fluorescent display tube is employed for display of settings, status and judgement results.

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Specifications

■ Test Voltage — AC and DC
- Applied Voltage — 0 to 2.5/0 to 5 kV
- Maximum Rated Output — AC: 500VA/5 kV, 100 mA (note 1); DC: 50W/5 kV, 10 mA (note 1)
- Wattage Rating — 500 VA
- Waveform — Commercial line waveform
- Voltage Regulation — AC: Max. 15% (for max. rated load to no load); DC: Max. 3% (for max. rated load to no load)
- Switching — Use of a zero turn-on switch
- Ripple (DC) — 50 Vp-p typ. at 5 kV, no load; 100 Vp-p typ. at max. rated output

■ Output Voltmeters
- Scale — Analog: 5 kV full scale, AC/DC
- Accuracy — Analog: ±5% of full scale; Digital: ±1.5% of full scale
- AC Indication — Analog: Mean value response/rms value scale
- Full Scale — Digital: 2.5 kV/5 kV full scale
- AC Response — Digital: Mean value response/rms value display

■ Ammeter
- Accuracy — Digital: ±(5% + 20μA) of upper cutoff current
- AC Response — Digital: Mean value response/rms value display

■ Pass/fail Judgement Function
- Type of Judgement — Window comparator type
  - ● FAIL judgement
    - * When current detected above upper cutoff current
    - * When current detected below lower cutoff current (FAIL signalgenerated when FAIL judgement made)
  - ● PASS judgement
    - * When set time has elapsed and no abnormality is detected
- Upper Cutoff Current Setting Range — AC: 0.1 to 110 mA; DC: 0.1 to 11 mA
- Lower Cutoff Current Setting Range — AC: 0.1 to 110 mA; DC: 0.1 to 11 mA
- Judgement Accuracy — ±(5% of upper cutoff current + 20 μA)
- Current Detection — Integration of current absolute value followed by comparison with reference value
- Calibration — With rms value of sine wave using a pure resistance load
- No-load Output Voltage — Approx. 460V when set to 100 mA AC; Approx. 100V when set to 10 mA DC

■ Test Time Setting Range — 0.5 to 999 s (±10 ms) (timer-off function provided)
- Accuracy — ±20 ms

■ Signal Outputs — H.V ON - Open collector; DANGER - Lamp; TEST - Open collector, fluorescent display tube; PASS - Open collector, fluorescent display tube, buzzer; U FAIL - Open collector, fluorescent display tube, buzzer; L FAIL - Open collector, fluorescent display tube, buzzer; READY - Open collector, fluorescent display tube; PROTECTION- Open collector, fluorescent display tube; STATUS SIGNAL OUTPUT 100V AC (0.3 A Max.) ☛Rating of open collector: 4.5 to 30V DC/ 400 mA (Max. Total)

■ Remote Control — Test and reset operations can be remote controlled in the following cases:
- ● When using a separately sold remote control box
- ● When using a separately sold highvoltage test probe
- ● When controlling with a make contact signal such as a relay or switch
- ● When using low active control by a logic device and so on

■ Interlock Function — Testing can no longer be performed when an interlock signal is input (PROTECTION state).

■ Line Voltage — 100V±10%, 50/60 Hz (note 2)

■ Power Requirements — Max. 50 VA under no-load conditions Approx. 640 VA at rated load

■ EMC (note 3)

Complied with the following standards

IEC61362-1: 1997-03/A1:1998-05
Electrical Equipment for Measurement, Control and Laboratory Use - EMC requirements
Radiated Emissions Class A
Conducted Emissions Class A

IEC61000-4-2:1995-01 /A1:1998-01	Electro-static Discharge
IEC61000-4-3:1995-02	Radiated, radio-frequency, electromagnetic field
IEC61000-4-4:1995-01	Electrical fast transient / Burst
IEC61000-4-5:1995-02	Surge
IEC61000-4-6:1996-04	Conducted disturbances
IEC61000-4-11:1994-06	Voltage dips, short interruptions and voltage variations

Under following conditions
1. Used HV test leadwires TL01-TOS.
2. No discharge in testing.

■ Safety (note 3)

Complied with the following standards
European Community Requirements (73/23/EEC)
UL1244
(The UL-approved products with input voltage of 120V AC satisfy the UL1244 standerd.)

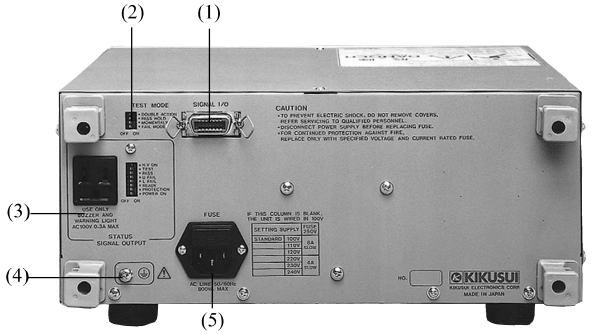
■ Dimensions (MAX) — 320W × 132H × 300D mm (330W × 150H × 365D mm)

■ Weight — Approx. 16 kg (for line voltage of 100V)

■ Accessories — High-voltage test lead TL01-TOS (max. allowable voltage: 5 kV/1.5 m)14-pin amphenol plug (assembled)

Note 1: Continuous output time may be limited depending on current high limit reference value and ambient temperature.
Note 2: Nominal voltages of 110V, 120V, 220V, 230V and 240V available as factory options.
Note 3: CE marking are put only on the products sold in Europe.

Rear Panel



(1)Signal I/O
Input/output connectors for interlock function input/output signals, start/stop remote control input signals and status output signal.
(2)Test Mode Switch
This is a DIP switch for setting special test modes. Parameter settings such as test start and interruption operations can be changed with this switch.
(3)Status Signal Output Terminal
This is a 100V AC output terminal for operating an optional warning lamp unit or buzzer unit. Conditions during AC 100V output (status, judgement results) are set with DIP switches.
(4)Ground Terminal
(5)Line Input Terminal (integrated with fuse holder)

