

TOS5050

WITHSTANDING VOLTAGE TESTER



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

AC
5 kV
Transformer capacity: 500 VA

Outline

The Model TOS5050 is a withstanding voltage tester for AC use only having a transformer capacity of 500 VA and test voltage of 0 to 5 kV.

Functions include Pass/fail judgement (using a window comparator type), remote control function, memory backup function, interlock function and other features that realize high levels of safety, reliability and ease of operation during use by the operator. In addition, the use of a large color display and a considerable reduction in size make the TOS5050 both more legible and easier to handle.

Features

- Complies with various safety standards
- AC use only (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
- 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 only
Applied Voltage	0 to 2.5/0 to 5 kV
Maximum Rated Output	AC: 500VA/5 kV, 100 mA (note 1)
Wattage Rating	500 VA
Waveform	Commercial line waveform
Voltage Regulation	Max. 15% (for max. rated load to no load)
Switching	Use of a zero turn-on switch
■ Output Voltmeters	
Scale	Analog: 5 kV full scale
Accuracy	Analog: $\pm 5\%$ of full scale Digital: $\pm 1.5\%$ of full scale
Indication	Analog: Mean value response/rms value scale
Full Scale	Digital: 2.5 kV/5 kV full scale
Response	Digital: Mean value response/rms value display
■ Ammeter	
Accuracy	Digital: $\pm(5\% + 20\mu A)$ of upper cutoff current
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 signal generated when FAIL judgement made)
	● PASS judgement * When set time has elapsed and no abnormality is detected
Upper Cutoff Current	0.1 to 110 mA
Setting Range	
Lower Cutoff Current	0.1 to 110 mA
Setting Range	
Judgement Accuracy	$\pm(5\%$ of upper cutoff current + $20\mu A)$
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
■ Test Time Setting Range	0.5 to 999 s (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/ 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 $\pm 10\%$, 50/60 Hz (note 2)
■ Power Requirements	Max. 25 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	Electro-static Discharge
/A1:1998-01	
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 standard.)	

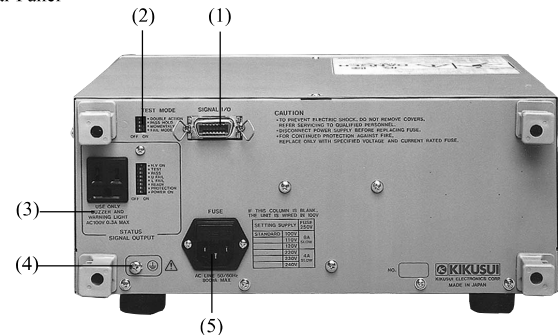
■ Dimensions (MAX)	320W \times 132H \times 300D mm (330W \times 150H \times 365D mm)
■ Weight	Approx. 15 kg (for line voltage of 100V)
■ Accessories	High-voltage test lead TL01-TOS (max. allowable voltage: 5 kV/1.5 m) 14-pin amphenol plug (assembled)

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)