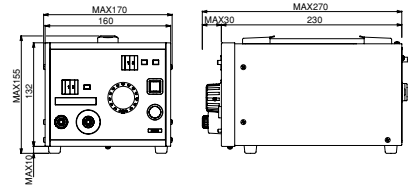


# WITHSTANDING VOLTAGE TESTER

## 耐压测试仪 TOS8030C

用于简易测试的紧凑型号  
Compact model supporting the simplified test



新产品



也备有采用  
英文的型号

The English inscription model  
is also provided.

还配有操作面板和使用说明书采用  
英文的型号。有关这些型号的  
详情，欢迎来电垂询。

There is a model that comes with  
English version of the operation  
panel and operation manual.  
For details, contact us.

### 特点 Features

- 小型、轻量 (160W × 132H × 230D · 约 6 kg)
- 带分辨率为 0.1 秒的数字计时器 (0.5 s ~ 9.9 s, 1 s ~ 99 s)
- 在 0.1 mA ~ 10 mA 内判定
- 搭载了过零投入开关
- 确保安全性的高输出端子，大型 DANGER 指示灯
- Compact and lightweight (160 W × 132 H × 230 D mm; approx. 6 kg)
- Digital timer (0.5 to 9.9 s; 1 to 99 s, Resolution: 0.1 s)
- Judgement range: 0.1 mA to 10 mA
- Zero turn-on switch
- Safe high-voltage output terminal and large DANGER lamp

TOS8030C 是 3 kV/10 mA 的耐压测试仪。本机在小型轻量的同时，还能够判断从 0.1 mA 到 10 mA、0.1 mA 分辨率。并配备了计时器功能、信号输出以及遥控端子。

TOS8030C is an AC withstanding voltage tester supporting an AC output of 3 kV/10 mA. While being a small and lightweight model, the tester judge from 0.1 mA to 10 mA in 0.1 mA steps and has many features including timer, signal output and remote control function.



# 规格 Specifications

本章描述本测试仪的电气规格和机械规格。若无特别指定，本测试仪规格的设置及条件如下。

●预热时间：30分 ●温度：5°C 到 35°C ●湿度：20% 到 80% RH (无凝结露水) ●xx% of reading 是指电压计 (或电阻计) 的读数的 xx%。

## 耐压测试仪

### [输出部]

输出电压范围 ..... 0.05 kV 到 3.00 kV/1 量程  
最大额定负载(\*1) ..... 30 VA (3 kV/10 mA) (在额定输入电压时)  
输出电压波形(\*2) ..... 商用电源波形  
电压变动率 ..... 20% 以下 (从最大额定负载到无负载的迁移过程)  
开关 ..... 使用过零投入开关

### [电压计]

显示 ..... 数字显示 3 位  
测量范围 ..... 0.00 kV 到 4.00 kV  
显示分辨率 ..... 10 V  
精确度 .....  $V_m \geq 1.00 \text{ kV}: \pm (5\% \text{ of reading})$   
 $V_m < 1.00 \text{ kV}: \pm (5\% \text{ of reading} + 30 \text{ V})$   
Vm: 测量电压值  
响应 ..... 平均值响应 / 有效值显示

\*1 关于输出时间限制  
根据电流上限基准值以及工作温度，连续输出时间会受到限制。

\*2 关于测试电压波形  
若容量性的负载上加交流电压，则根据负载容量值的不同，可能即使与无负载相比，输出电压还要上升。若是负载了容量值对电压有依存性的测试材料 (如陶瓷电容等)，则可能产生波形扭曲。但测试电压为 1.5 kV 时，1000 pF 以下容量的影响可忽略不计。

### [判定功能]

上限基准值 .....  $\times 0.1 \text{ mA}$  量程: 可在 0.1 mA 到 9.9 mA 范围内，以 0.1 mA 为单位设定  
 $\times 1 \text{ mA}$  量程: 可在 1 mA 到 10 mA 范围内，以 1 mA 为单位设定  
判定精确度 ..... 上限基准值  $\geq 1 \text{ mA}: \pm (5\% + 20 \mu\text{A})$   
上限基准值  $< 1 \text{ mA}: \pm (5\% + 40 \mu\text{A})$

### [时间]

测试时间 .....  $\times 0.1$  量程: 0.5 s 到 9.9 s, 分辨率: 0.1 s  
 $\times 1$  量程: 1 s 到 99 s (备有关闭定时器功能), 分辨率: 1 s  
精确度 ..... -0 ms, +50 ms

## 共通项目, 其他功能

### [遥控]

连接器 ..... 背面板 5 针 DIN 连接器  
可能的控制 ..... 测试的开始 / 中止  
可连接的选项件 ..... 遥控器: RC01C-TOS, RC02C-TOS  
高电压测试探针: HP01AC-TOS, HP02AC-TOS

### [信号输入输出]

连接器 ..... 后面板 14 针无螺丝端子  
状态信号输出 ..... 输出准备就绪信号、有高压信号、合格信号、不合格信号以及保护信号  
闭合接点信号 (接点额定值: 1 A / 30 Vdc)  
联锁(INTERLOCK) ..... 端子间开放时为保护 (PROTECTION) 状态  
输入端子

## 普通规格

### [环境]

工作环境 ..... 室内使用, 高度 2000 m 为止  
规格保证范围 ..... 温度 5°C 到 35°C  
湿度 20% 到 80% RH (无凝结露水状态)  
工作范围 ..... 温度 0°C 到 40°C  
湿度 20% 到 80% RH (无凝结露水状态)  
保存范围 ..... 温度 -40°C 到 70°C  
湿度 90% RH 以下 (无凝结露水状态)

### [交流输入]

公称输入额定值 ..... 220 Vac 50 Hz/60 Hz  
输入电压范围 ..... 200 V 到 240 Vac  
消耗电力 ..... 无负载时 (准备就绪状态) 50 VA 以下  
额定负载时 ..... 最大 45 VA  
[绝缘电阻] ..... 交流输入 (AC INPUT) 一机壳间  
30 M $\Omega$  以上 (500 Vdc)

### [耐压]

交流输入 (AC INPUT) 一机壳间  
1390 Vac, 2 秒内加载, 10 mA 以下

[接地连续性] ..... 25 Aac/0.1 $\Omega$  以下

[外形尺寸(最大部分)] ..... 160 (170) W  $\times$  132 (155) H  $\times$  230 (270) D mm

[质量] ..... 约 6 kg

[附属品] ..... 高压测试导线 TL01C-TOS (约 1.5 m): 1 组 / 电源线: 1 根 / 联锁 (INTERLOCK) 用跳线: 1 根 / 使用说明书: 1 本

Provides the electrical and mechanical specifications for the TOS8030C. The specifications are based on the following conditions and settings, unless otherwise specified.

●Warm-up time: 30 minutes ●Temperature: 5°C to 35°C ●Humidity: 20% to 80% R.H. (with no dew condensation) ●"xx% of reading" represents xx% of voltmeter (or resistance meter) reading.

## Withstanding Voltage Tester

### [Output section]

Output voltage range ..... 0.05 kV to 3.00 kV / single range  
Maximum rated load (\*1) ..... 30 VA (3 kV/10 mA) (Normal input voltage)  
Output voltage waveform (\*2) ..... AC line waveform  
Voltage regulation ..... 20% or less (during transition from the maximum rated load to no-load)  
Switching ..... A zero-start switch is used.

### [Voltmeter]

Display ..... Digital three-digit indication  
Measurement range ..... 0.00 kV to 4.00 kV  
Display resolution ..... 10 V  
Accuracy .....  $V_m \geq 1.00 \text{ kV}: \pm (5\% \text{ of reading})$   
 $V_m < 1.00 \text{ kV}: \pm (5\% \text{ of reading} + 30 \text{ V})$   
where  $V_m$ : measured voltage value  
Response ..... Mean value response/rms value indication

\*1 Time limitations on the output  
The continuous output time may be limited depending on the upper limit of the reference current value and the ambient temperature.

\*2 Test voltage waveform  
If AC voltage is applied to a capacitive load, the output voltage in certain cases may rise above the value at no-load, depending on the value of the capacitive portion of the load. Moreover, for samples whose capacity values show voltage dependency (as with ceramic capacitors), waveform distortions may result. However, for a test voltage of 1.5 kV, the effects of a capacity of 1000 pF or less may be ignored.

### [Judgment function]

Upper reference limit .....  $\times 0.1 \text{ mA}$  range: May be set from 0.1 mA to 9.9 mA in 0.1 mA steps.  
 $\times 1 \text{ mA}$  range: May be set from 1 mA to 10 mA in 1 mA steps.  
Judgment accuracy ..... Upper reference limit  $\geq 1 \text{ mA}: \pm (5\% + 20 \mu\text{A})$   
Upper reference limit  $< 1 \text{ mA}: \pm (5\% + 40 \mu\text{A})$

### [Time]

Test time .....  $\times 0.1 \text{ mA}$  range: 0.5 s to 9.9 s, Resolution: 0.1 s  
 $\times 1 \text{ mA}$  range: 1 s to 99 s (the TIMER off function provided), Resolution: 1 s  
Timer accuracy ..... -0 ms, +50 ms

## Common Items, Other Functions

### [Remote control]

Connector ..... 5-pin DIN connector on the rear panel  
Control available ..... Start/stop of testing  
Optional devices connectable ..... Remote control boxes: RC01C-TOS and RC02C-TOS  
High-voltage test probes: HP01AC-TOS and HP02AC-TOS

### [Signal I/O]

Connector ..... 14-pin screw-less terminal on the rear panel  
Status signal output ..... Output of a READY signal / H.V ON signal / PASS signal / FAIL signal / PROTECTION signal  
Make-contact signal (contact rating: 1 A/30 Vdc)  
INTERLOCK input terminal ..... A PROTECTION state is invoked when the terminals are open.

## General Specifications

### [Environment]

Operation environment ..... Indoor use and altitudes up to 2000 m  
Specifications assured range ... Temperature 5°C to 35°C  
Humidity 20% to 80% R.H. (with no dew condensation)  
Operating range ..... Temperature 0°C to 40°C  
Humidity 20% to 80% R.H. (with no dew condensation)  
Storage range ..... Temperature -40°C to 70°C  
Humidity 90% or less R.H. (with no dew condensation)

### [AC input]

Nominal input rating ..... 220 Vac, 50 Hz or 60 Hz  
Input voltage range ..... 200 V to 240 Vac  
Power consumption ..... At no-load (in READY state): 50 VA or less  
At rated load: 45 VA maximum

[Insulation resistance] ..... AC INPUT to chassis  
30 M $\Omega$  or more (at 500 Vdc)

[Withstand voltage] ..... AC INPUT to chassis  
10 mA or less when 1390 Vac is applied for 2 seconds

[Grounding continuity] ..... 25 Aac / 0.1  $\Omega$  or less

[Dimensions (largest section)] ..... 160 (170) W  $\times$  132 (155) H  $\times$  230 (270) D mm

[Weight] ..... Approx. 6 kg

[Accessories] ..... High-voltage test leads TL01C-TOS (approx. 1.5 m): 1 set / Power cord: 1 / INTERLOCK jumper: 1 / Operation Manual: 1 copy

# OPTIONS FOR ELECTRICAL SAFETY TESTERS

注意 1: 选购件的面板标示文字和使用说明书为英文。  
注意 2: 有★符号的产品由日本菊水电子工业株式会社制造。

Note 1: The panel labels and operation manuals of the optional products are in English.  
Note 2: The products marked ★ are manufactured by KIKUSUI Electronic Corp. of Japan.

## 用于安全测试仪器的选购件

Remote control box

### ■ 远程控制箱

#### ● RC01C-TOS

用于单手操作的 One-handed operation  
尺寸 Dimensions: 200W × 70H × 39Dmm  
※附属电缆长度 Accessory cable length: 1.5m



High-voltage test Lead

### ■ 高电压测试引线

#### ● TL01C-TOS

电缆长度 Cable length: 1.5m  
最大使用电压 Maximum operating voltage: 5kV



Warning light unit

### ■ 警告灯单元

#### ● PL02-TOS ★

根据 TOS8830C 背面的 AC/DC24V 信号进行 ON / OFF 控制。  
The light is turned on and off by the 24-V AC/DC signal fed from the rear side of TOS8830C.



#### ● RC02C-TOS

用于两手操作的 Double-handed operation  
尺寸 Dimensions: 330W × 70H × 39Dmm  
※附属电缆长度 Accessory cable length: 1.5m



#### ● TL02C-TOS

电缆长度 Cable length: 3m  
最大使用电压 Maximum operating voltage: 5kV



High-voltage test probe (pistol type)

### ■ 高电压测试探针 (手枪型)

#### ● HP01AC-TOS

电缆长度 Cable length: 1.8 m  
最大使用电压 Maximum operating voltage:  
4 kV DC 5 kV

#### ● HP02AC-TOS

电缆长度 Cable length: 3.5 m  
最大使用电压 Maximum operating voltage:  
4 kV DC 5 kV



(相关产品介绍) 菊水电子工业 TOS 系列  
(Information about Related Products) KIKUSUI Electronic Corp. TOS Series

高质量品牌 "KIKUSUI" 的安全测试仪器 !!  
Electrical safety tester developed under the quality brand of KIKUSUI !!

Withstanding Voltage & Insulation Tester  
耐压 / 绝缘电阻测试仪  
TOS9200 Series



Withstanding Voltage & Insulation Tester  
耐压 / 绝缘电阻测试仪  
TOS8870A



Withstanding Voltage Tester  
耐压测试仪  
TOS5000(A) Series



Earth Continuity Tester  
地线导通测试仪  
TOS6200 Series



Insulation Tester  
绝缘电阻测试仪  
TOS7200



●菊水电子工业产品的联系方式  
For information about products of KIKUSUI Electronic Corp., contact:  
菊水电子工业株式会社 上海代表处  
Shanghai Representative Office of KIKUSUI Electronic Corp.  
上海市浦东新区浦东大道 138 号 永华大厦 9 层 A-02 室  
Room A-02, 9F, Yonghua Bldg., No.138, Pudong Road,  
Pudong New District, Shanghai City  
TEL: 021-5882-4320 FAX: 021-5887-9069  
菊水电子工业株式会社 国际部  
International Section, KIKUSUI Electronic Corp.  
横滨市都筑区东山田 1-1-3  
1-1-3, Higashiyamada, Tsuzuki-ku, Yokohama, Japan  
TEL: +81-(0)45-593-7570 FAX: +81-(0)45-593-7571

●制造销售 Manufactured and Sold by

●销售代理店 Distributor



菊水电子(苏州)有限公司  
KIKUSUI ELECTRONICS (SUZHOU) Co.,Ltd.

总部 / 工厂: 苏州高新区滨河路 625 号 创业大厦 12-2-5F  
TEL: 0512-6808-0947 FAX: 0512-6808-6852  
电子邮件: info@kikusui.cn 主页: http://www.kikusui.cn/  
广州办事处: 广州市天河区体育东路 122 号 羊城国际商贸中心东塔 3210 室  
TEL: 020-2264-4908 FAX: 020-3887-0152

Headquarters/Plant: 12-2-5F Chuangye Bldg., No.625, Banghe Road, Gaoxin District, Suzhou City  
TEL: 0512-6808-0947 FAX: 0512-6808-6852 E-mail: info@kikusui.cn Homepage: http://www.kikusui.cn/  
Guangzhou Representative Office: 3210 East Tower Yangcheng International Commercial Center Ti Yu Dong Rd.,  
Tianhe District, Guangzhou, China 510620  
TEL: 020-2264-4908 FAX: 020-3887-0152

■因规格、式样等改进等理由, 登载内容如有变更恕不另行通知。■由于各种原因可能会发生名称或价格的变更, 以及中止生产的情况。■订货和签约时如有不明之处, 请向销售代理店确认。另外, 在没有确认的情况下, 我公司概不负责。■本产品目录中所列产品, 系在具有电气知识监督人员的监督之下使用为前提的业务用设备和装置, 不是面向一般家庭和消费者而设计、制造的产品。■因印刷的原因, 产品目录所列照片与实际产品的颜色和质感等在某些情况下会存在差异。

■Specifications, designs, and other details are subject to change without notice for improvement and/or other reasons.  
■Product names and prices may be changed and production may be discontinued when necessary.  
■If you have any questions when placing an order or signing a purchase contract, please contact our distributor for clarification. We may not have any liability with respect to any loss or damage arising out of your failure to clarify such unconfirmed matters.  
■All the products mentioned in this catalog are business-use equipment and devices premised on use under the supervision of qualified personnel with a sufficient knowledge of electronics. These products are not designed or manufactured for home use by general consumers.  
■Due to the limited fidelity of printing, the actual products may differ in color, texture, and so forth from what they appear in the photos in this catalog.

●2005 年 4 月发行 Issued in April 2005