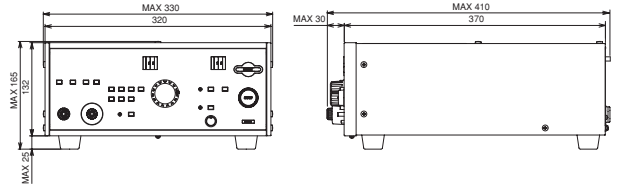


WITHSTANDING VOLTAGE & INSULATION TESTER

自动耐压绝缘测试仪 TOS8830C

对应标准测试的耐压 / 绝缘电阻两用型号

Withstanding voltage/insulation 2 tests in one model supporting the standard test



A 也备有采用英文的型号
The English inscription model is also provided.
还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

- 耐电压和绝缘电阻试验可在一个工序处理
- 耐电压达 AC 4 kV / 100 mA
- 变压器容量 500 VA
- 绝缘电阻达 500 V / 999.9 MΩ
- 操作面板和使用说明书使用简体中文
- 与本公司过去产品 (* 1) 相比，体积约减少了 50%，重量约减轻了 25%
- 电压计以 3 位数字显示
- 绝缘电阻计以 4 位数字显示
- 判定为窗口 - 比较仪方式
- 远程控制功能
- 输出 PASS、FAIL 等接点信号
- 装备了 1 秒~99 秒的数字计时器
- Carries out withstanding voltage and insulation resistance tests in a single process.
- Withstanding voltage: 4 kVAC/100 mA
- Transformer capacity: 500 VA
- Insulation resistance: 500 V/999.9 MΩ
- The operation panel and operation manual are in simplified Chinese.
- Small Size and Light Weight
- The voltmeter provides a 3-digit digital display.
- The insulation resistance meter provides a 4-digit digital display.
- The window comparator method is adopted for judgment.
- Remote control function
- Output of contact point signals such as PASS and FAIL
- Digital timer adjustable to 1 to 99 seconds

* 1 与本公司 TOS8850A 的比较
* 1 Comparison with KIKUSUI TOS8850A

TOS8830C 是安全试验设备的世界性品牌“KIKUSUI”所创制的、面向中国的生产和检查线的耐电压绝缘电阻测试器。该产品以本公司的质量和可靠性作保证，是为了适应中国生产现场所要求的“小型轻便、价格优良”这一需求而开发的。

TOS8830C 可适应最大输出 AC 4 kV / 100 mA 的耐电压试验，以及最大 500 V / 999.9 MΩ 的绝缘电阻试验。各试验除单独操作以外，可以连续进行“耐电压→绝缘电阻”或“绝缘电阻→耐电压”试验。操作面板继承了过去产品 (TOS8850A / TOS8870A) 的“操作性和安全性”，指示计便于识别的 LED 数字仪表上标记出简体中文等，在设计中充分考虑了现场操作人员的便利。另外，结构和主要部件也进行了彻底的修正，实现了优化，与本公司过去产品 (* 1) 相比，体积约减少了 50%，重量约减轻了 25%，同时价格也便宜。

TOS8830C is aimed to meet the needs of manufacturing plants across Asia for more compact testers while maintaining the level of quality and reliability inherent in our existing product portfolio.

TOS8830C supports withstanding voltage tests involving power outputs of up to 4 kVAC/100 mA (transformer capacity of 500 VA), as well as insulation resistance tests at up to 500 V/999.9 MΩ. While each of these tests can be conducted separately, it is also possible to have a series of tests run in succession automatically, as in cases where a withstanding voltage test is performed first followed by an insulation resistance test or vice versa. While inheriting the valuable assets of “ease of operation and safety” from its predecessors, TOS8830C adopts an operator-friendly design including an easy-to-view LED digital meter. The structure of the tester and its circuit have also been reviewed and optimized thoroughly, making TOS8830C smaller and lighter.



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 4.00 kV/1 量程
最大额定负载(*1)	400 VA (4 kV/100 mA)(输入电压为 220 V 时)
变压器容量	500 VA
输出电压波形(*2)	商用电源波形
电压变动率	10% 以下 (从最大额定负载到无负载的迁移过程)
短路电流	200 mA 以上 (输出电压 1.0 kV 以上时)
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 5.00 kV/2 量程
显示分辨率	10 V
精确度	取满量程的 ±1.5% 或 Vm < 1000V: ± (2% of reading + 20 V), Vm ≥ 1000V: ± (2% of reading + 10 V) 中的较小值 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载交流电压，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]

判定方法	双限比较器方式
上限基准值	1/2/4/8/10/25/100 的 7 量程 通过量程的组积，可在 1 mA 到 50 mA 范围内，以 1 mA 为单位设定
下限基准值	0 到上限基准值的 1/2 处连续可变
判定精确度	上限基准值的 ± (5% + 20 μA) 下限基准值的 ± 20 %

[时间]

测试时间	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

绝缘电阻测试仪

[输出部]

额定输出电压	-500 Vdc
精确度	$\begin{pmatrix} -500 & +20 \\ & -0 \end{pmatrix} Vdc$
最大额定负载	0.5 W (-500 V/1 mA)
最大额定电流	1 mA
波纹	2 Vp-p 以下 (500 V 无负载时) 10 Vp-p 以下 (最大额定负载时)
电压变动率	1% 以下 (从最大额定负载→无负载)
短路电流	12 mA 以下
放电功能	测试结束时强制放电 (放电电阻为 25 kΩ)
输出电压监视功能	输出为 -10% 以下时，切断输出保护功能工作

[电阻计]

显示	Rm < 10.0 MΩ: □□.□ MΩ 10.0 MΩ ≤ Rm < 100.0 MΩ: □□.□ MΩ 100.0 MΩ ≤ Rm < 1000 MΩ: □□.□ MΩ Rm: 测量绝缘电阻值
有效测量范围	0.50 MΩ 到 999.9 MΩ
精确度	Rm < 20 MΩ: ± (5% of reading) Rm ≥ 20 MΩ: ± (10% of reading) Rm: 测量绝缘电阻值 湿度 20% 到 70%RH (无凝结露水状态)、没有测试导线晃动等的干扰
保持功能	在合格期间内，保持测试结束时的测量电阻值

Provides the electrical and mechanical specifications for the TOS8830C. 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 4.00 kV / single range
Maximum rated load (*1)	400 VA (4 kV/100 mA) (at an input voltage of 220 V)
Transformer capacity	500 VA
Output voltage waveform (*2)	AC line waveform
Voltage regulation	10% or less (during transition from the maximum rated load to no-load)
Short-circuit current	200 mA or more (at output voltage of 1.0 kV or more)
Switching	A zero-start switch is used.

[Voltmeter]

Display	Digital three-digit indication
Measurement range	0.00 kV to 5.00 kV/double ranges
Display resolution	10 V
Accuracy	±1.5% f.s or Vm ≥ 1.00 kV: ± (2% of reading + 10 V), Vm < 1.00 kV: ± (2% of reading + 20 V) -whichever is smaller where Vm: 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]

Judgment method	Compares the reference values and measured leakage current using a window comparator. The result is returned as a PASS or FAIL.
Upper reference limit	1/2/4/8/10/25/100 mA (7 ranges) May be set from 1 mA to 50 mA in 1 mA steps by a combination of ranges.
Lower reference limit	Continuously variable from 0 to 1/2 of the upper reference limit
Judgment accuracy	± (5% + 20 μA) with respect to the upper reference limit ± 20% with respect to the lower reference limit

[Time]

Test time	1 s to 99 s (the TIMER off function provided), Resolution: 1 s
Timer accuracy	-0 ms, +50 ms

Insulation Resistance Tester

[Output section]

Rated output voltage	-500 Vdc
Accuracy	$\begin{pmatrix} -500 & +20 \\ & -0 \end{pmatrix} Vdc$
Maximum rated load	0.5 W (-500 V / 1 mA)
Maximum rated current	1 mA
Ripple	2 Vp-p or less (at 500 V and no-load) 10 Vp-p or less (at the maximum rated load)
Voltage regulation	1% or less (during transition from the maximum rated load to no-load)
Short-circuit current	12 mA or less
Discharge function	Forced discharge at the end of testing (discharge resistance of 25kΩ)
Output voltage-monitoring function	If the output becomes -10% or below, the output is shut off for safety reasons.

[Resistance meter]

Display	Rm < 10.0 MΩ: □□.□ MΩ 10.0 MΩ ≤ Rm < 100.0 MΩ: □□.□ MΩ 100.0 MΩ ≤ Rm < 1000 MΩ: □□.□ MΩ Rm: measured insulation resistance value
Effective measurement range	0.50 MΩ - 999.9 MΩ
Accuracy	Rm < 20 MΩ ±(5 % of reading) Rm ≥ 20 MΩ ±(10 % of reading) Rm: measured insulation resistance value In the humidity range of 20% to 70%RH (no condensation permitted), with no disturbance such as swinging of the test leadwires
Hold function	A measured resistance value applied at the end of testing is held during a PASS period.

[判定功能]

判定方法 用窗口比测仪比较基准值和测量电阻值，然后通知合格或不合格的判定结果
 基准值的上限和下限可独立设定

上限基准值设定范围 0.50 MΩ 到 999.9 MΩ(33 段)

下限基准值设定范围 0.50 MΩ 到 999.9 MΩ(33 段)

判断精确度 $R_m < 20 \text{ M}\Omega$: $\pm (5\% \text{ of reading} + 3 \text{ digit})$
 $R_m \geq 20 \text{ M}\Omega$: $\pm (10\% \text{ of reading} + 10 \text{ digit})$
 Rm: 测量绝缘电阻值

判断等待时间 0.3 s 固定

[时间]

测试时间 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

[测试功能]

耐压→绝缘 按照交流耐压测试→绝缘电阻测试的顺序执行

绝缘→耐压 按照绝缘电阻测试→交流耐压测试的顺序执行

耐压 耐压测试的单独执行

绝缘 绝缘电阻测试的单独执行

[遥控]

连接器 前面板 5 针 DIN 连接器

可能的控制 测试的开始 / 中止

可连接的选购件 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)

电源输出端子 内部电源 (24 V, 100 mA) 输出
 共通 (COMMON) 端子与机壳电位等价

联锁 (INTERLOCK) 输入端子 端子间开放时为保护 (PROTECTION) 状态

[特殊测试模式]

双动作 (DOUBLE ACTION) 仅在按完测试停止按钮后约 0.5 秒以内按测试开始按钮时测试开始

合格保持 (PASS HOLD) 保持合格判定

瞬时 (MOMENTARY) 仅仅在按住测试开始 (START) 按钮的期间进行测试

不合格方式 (FAIL MODE) 通过遥控的 STOP 信号使不合格或保护状态的解除无效

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 650 VA

[绝缘电阻] 交流输入 (AC INPUT) 一机壳间
 30 MΩ 以上 (500 Vdc)

[耐压]

交流输入 (AC INPUT) 一机壳间
 1390 Vac, 2 秒内加载, 20 mA 以下

[接地连续性] 25 Aac/0.1 Ω 以下

[外形尺寸 (最大部分)] 320 (330) W × 132 (165) H × 370 (410) D mm

[质量] 约 18 kg

[附属品] 高电压测试导线 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

[Judgment function]

Judgment method Compares the reference values and measured leakage current using a window comparator. The result is returned as a PASS or FAIL. A reference value can be independently set for the upper and lower limits.

The value set for the upper reference limit Any of the following 33 values is valid, to a value ranging from 0.50 MΩ to 999.9 MΩ

The value set for the lower reference limit Any of the following 33 values is valid, to a value ranging from 0.50 MΩ to 999.9 MΩ

Judgment accuracy $R_m < 20 \text{ M}\Omega$: $\pm (5\% \text{ of reading} + 3 \text{ digit})$
 $R_m \geq 20 \text{ M}\Omega$: $\pm (10\% \text{ of reading} + 10 \text{ digit})$
 Rm: measured insulation resistance value

Judgment wait time 0.3 s fixed

[Time]

Test time 1 s to 99 s (the TIMER off function provided), Resolution: 1 s

Timer accuracy -0 ms, +50 ms

Common Items, Other Functions

[Test function]

ACW→IR Conducts tests in the sequence of withstanding voltage testing and insulation resistance testing.

IR→ACW Conducts tests in the sequence of insulation resistance testing and withstanding voltage testing.

ACW Conducts withstanding voltage test singly.

IR Conducts insulation resistance test singly.

[Remote control]

Connector 5-pin DIN connector on the front 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)

Power output terminal Output of internal power (24 V at 100 mA)
 The COMMON terminal has a potential equal to the chassis potential.

INTERLOCK input terminal A PROTECTION state is invoked when the terminals are open.

[Special test modes]

DOUBLE ACTION Starts testing only when the START switch is pressed within approx. 0.5 sec. after the STOP switch has been released.

PASS HOLD Holds PASS judgment.

MOMENTARY Performs testing only while the START switch is pressed.

FAIL MODE Disables cancellation of the FAIL or PROTECTION state caused by a remote STOP signal.

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: 650 VA maximum

[Insulation resistance] AC INPUT to chassis
 30 MΩ or more (at 500 Vdc)

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

[Grounding continuity] 25 Aac / 0.1 Ω or less

[Dimensions (largest section)] 320 (330) W × 132 (165) H × 370 (410) D mm

[Weight] Approx. 18 kg

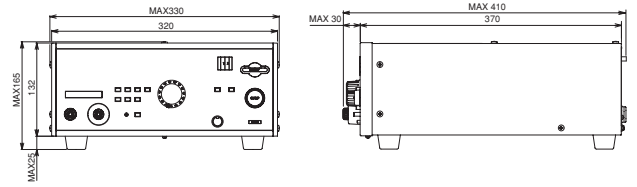
[Accessories] High-voltage test leads TL01C-TOS (approx. 1.5 m): 1 set / Power cord: 1 / INTERLOCK jumper: 1 / Operation Manual: 1 copy

WITHSTANDING VOLTAGE TESTER

耐压测试仪 TOS8040C

对应标准测试的耐压专用型号

Withstanding-voltage-specific model supporting the standard test



A 也备有采用英文的型号
The English inscription model is also provided.
还备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 manual and operation manual details, contact us.



特点 Features

- 耐压为 AC 4 KV/100 mA
- 符合各种安全标准
- 数字电压计
- 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 1 mA~100 mA 内判定
- 采用窗口比较器方式进行良否判定
- 装备了远程控制功能
- 各种信号输出功能
- 搭载了过零投入开关
- Withstanding voltage: 4 kVAC/100 mA
- Supporting various safety standard tests
- Digital voltmeter
- Digital timer (0.5 to 9.9 s; 1 to 99 s, Resolution: 0.1 s)
- Judgement range: 1 mA to 100 mA
- Window comparator method adopted for judgment
- Various remote control functions
- Various signal output functions
- Zero turn-on switch

TOS8040C 系列是根据各种安全标准进行电子设备和电子部件耐压试验的测试仪。与传统类型相比，小型、轻量而可输出 AC 4 KV。良否判定功能采用了窗口比较器方式，不仅在检测到面板面上所设定的大于或等于上限基准值的漏电电流时可以判定 FAIL，而且在检测到小于或等于下限基准值的电流时也能够判定 FAIL，同时还可以进行测试引线的断线和接触不良等测试。可以远程控制启动/停止操作，同时利用判定结果的输出功能，可以实现测试的自动化和省力化。另外，为了防止操作疏失和事故，该系列上装备有、联锁功能、铰接插入口的高压输出端子、大型 DANGER 指示灯等，确保了高度的安全性和可靠性。

The TOS8040C Series is a tester for conducting withstanding voltage tests on electronic devices and components in accordance with the relevant safety standards. Although smaller and lighter than its predecessors, it provides an output of 4 kVAC. The tester adopts a window comparator method for acceptance judgment, enabling it to identify fault not only upon detecting a leak current exceeding the high reference level preset on its panel but also when it detects a current below the low reference level. This allows you to include the checks for test lead disconnection and poor contact in your testing activity. The starting and stopping of the tester can be controlled remotely. Using the tester's judgment result output function together with this remote control capability helps you automate your testing process and save labor. What's more, the tester has many features to protect against inadvertent operations and accidents, such as interlock functions, a high-voltage output terminal with a small jack, and a large DANGER lamp, thereby achieving high levels of safety and reliability.



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 4.00 kV/1 量程
最大额定负载(*1)	400 VA (4 kV/100 mA)(输入电压为 220 V 时)
变压器容量	500 VA
输出电压波形(*2)	商用电源波形
电压变动率	10% 以下 (从最大额定负载到无负载的迁移过程)
短路电流	200 mA 以上 (输出电压 1.0 kV 以上时)
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 5.00 kV/2 量程
显示分辨率	10 V
精确度	取满量程的 ±1.5% 或 Vm < 1000V: ± (2% of reading + 20 V), Vm ≥ 1000V: ± (2% of reading + 10 V) 中的较小值 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]

判定方法 双限比较器方式

上限基准值	1/2/4/8/10/25/100 的 7 量程 通过量程的组积，可在 1 mA 到 50 mA 范围内， 以 1 mA 为单位设定
下限基准值	0 到上限基准值的 1/2 处连续可变
判定精确度	上限基准值的 ± (5% + 20 μA) 下限基准值的 ± 20%

[时间]

测试时间	0.1 量程: 0.5 s 到 9.9 s, 分辨率: 0.1 s 1 量程: 1 s 到 99 s (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	前面板 5 针 DIN 连接器
可能的控制	测试的开始 / 中止
可连接的选配件	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)
电源输出端子	内部电源 (24 V, 100 mA) 输出 共通 (COMMON) 端子与机壳电位等价
连锁 (INTERLOCK) 输入端子	端子间开放时为保护 (PROTECTION) 状态

[特殊测试模式]

双动作 (DOUBLE ACTION)	仅在按完测试停止按钮后约 0.5 秒以内按测试 开始按钮时测试开始
合格保持 (PASS HOLD)	保持合格判定
瞬时 (MOMENTARY)	仅在按住测试开始 (START) 按钮的期间进行 测试
不合格方式 (FAIL MODE)	通过遥控的 STOP 信号使不合格或保护状态的 解除无效

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 650 VA

[绝缘电阻]

交流输入 (AC INPUT) 一机壳间	30 MΩ 以上 (500 Vdc)
交流输入 (AC INPUT) 一机壳间	1390 Vac, 2 秒内加载, 20 mA 以下

[接地连续性]

25 Aac/0.1 Ω 以下	320 (330) W × 132 (165) H × 370 (410) D mm
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[外形尺寸(最大部分)]

[质量]

[附属品]

高电压测试导线 TL01C-TOS (约 1.5 m): 1 组 /
电源线: 1 根 / 连锁 (INTERLOCK) 用跳线: 1 根 /
使用说明书: 1 本

Provides the electrical and mechanical specifications for the TOS8040C. 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 4.00 kV / single range
Maximum rated load (*1)	400 VA (4 kV/100 mA)(at an input voltage of 220 V)
Transformer capacity	500 VA
Output voltage waveform (*2)	AC line waveform
Voltage regulation	10% or less(during transition from the maximum rated load to no-load)
Short-circuit current	200 mA or more (at output voltage of 1.0 kV or more)
Switching	A zero-start switch is used.

[Voltmeter]

Display	Digital three-digit indication
Measurement range	0.00 kV to 5.00 kV/double ranges
Display resolution	10 V
Accuracy	±1.5% f.s or Vm ≥ 1.00 kV: ± (2% of reading + 10 V), Vm < 1.00 kV: ± (2% of reading + 20 V) -whichever is smaller where Vm: 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]

Judgment method	Compares the reference values and measured leakage current using a window comparator. The result is returned as a PASS or FAIL.
Upper reference limit	1/2/4/8/10/25/100 mA (7 ranges) May be set from 1 mA to 50 mA in 1 mA steps by a combination of ranges.
Lower reference limit	Continuously variable from 0 to 1/2 of the upper reference limit
Judgment accuracy	± (5% + 20 μA) with respect to the upper reference limit ± 20% with respect to the lower reference limit

[Time]

Test time	×0.1 mA range: 0.5 s to 9.9 s, Resolution: 0.1 s ×1 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 front 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)
Power output terminal	Output of internal power (24 V at 100 mA) The COMMON terminal has a potential equal to the chassis potential.
INTERLOCK input terminal	A PROTECTION state is invoked when the terminals are open.

[Special test modes]

DOUBLE ACTION	Starts testing only when the START switch is pressed within approx. 0.5 sec. after the STOP switch has been released.
PASS HOLD	Holds PASS judgment.
MOMENTARY	Performs testing only while the START switch is pressed.
FAIL MODE	Disables cancellation of the FAIL or PROTECTION state caused by a remote STOP signal.

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: 650 VA maximum

[Insulation resistance]

AC INPUT to chassis	30 MΩ or more (at 500 Vdc)
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[Withstand voltage]

AC INPUT to chassis	20 mA or less when 1390 Vac is applied for 2 seconds
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[Grounding continuity]

25 Aac / 0.1 Ω or less	320 (330) W × 132 (165) H × 370 (410) D mm
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[Dimensions (largest section)]

[Weight]

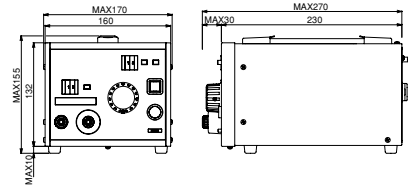
[Accessories]

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

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



A 也备有采用
英文的型号
The English inscription model
is also provided.
还备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 ~ 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
可连接的选配件 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 Ω 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 Ω 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 Vm: 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 Ω 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 Ω 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



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