

QAT-2A armature integrated tester

QAT-2A 电枢综合测试台

This testing machine is applied to test armature for kinds of power tool and vacuum cleaner. Its LCD shows all technical data which obtained by industrial control computer, which check and verify the quality of testing stator.

本检测设备适用于各类电动工具、吸尘器等电枢之综合测试，采用工业控制计算机，自动检查判定试品电枢之良否，测试数据显示于液晶显示器上。

Machine specification:

1.AC withstand voltage test.

(1).Testing voltage range: AC100~2800V。

(2).Voltage adjusting mode (-M: Manual adjust.-A: Auto adjust)

a. Manual adjust: manual no-step adjust

b. Auto adjust: input testing voltage to the software, thus machine do automatic loading to the setting value through the test.

(3). Voltage precision: $\pm 3.0\%$

(4). Capacity: 500VA

(5).Leakage current setting 5 steps(0.5/1/2/5/10mA),precision: $\pm 1.0\%$

(6). Voltage load mode: between winding and iron core.

(7) OK/ Reject verify way: goods of its leakage current value higher than setting value is taken as reject. The software will give acousto-optic alarm accordingly.

一、设备规范:

1、交流耐压测试

(1) 测试电压范围: AC100~2800V。

(2) 电压调节方式 (—M 为手动调压、—A 型为自动调压)

(a) 手动调节: 手动无段调节。

(b) 自动调节: 软件中输入测试电压，测试时自动加载到设定值。

(3) 电压精度: $\pm 3.0\%$

(4) 容量: 500VA

(5) 泄露电流设定: 0.5/1/2/5/10mA 五段设定，精度: $\pm 1.0\%$

(6) 加压方式: 线圈与铁芯之间

(7) 合格/不合格品判定方法: 当泄露电流高压泄露电流设定值时，判定为不良品，并由测试软件输出为声光报警。

2. Insulation resistance test

(1).Testing voltage: DC500V

(2).Testing range: 10~500M Ω

(3). Integrated accuracy: $\pm 5.0\%$

(4). Voltage load mode: between coil and iron core.

(5). OK/ Reject verify way: manual setting the low limit of insulation resistance, when the goods of its insulation resistance value lower than setting value is taken as reject. The software will give acousto-optic alarm accordingly.

2、绝缘电阻测试

(1) 测试电压: DC500V

(2) 测试范围: 10~500M Ω

(3) 综合精度: $\pm 5.0\%$

(4) 加压方式: 线圈与铁芯之间

(5) 合格/不合格品判定方法: 手动设定绝缘电阻下限值，当绝缘电阻低于设定下限，判定为不良品，并由测试软件输出为声光报警。

3. Cold resistance test

(1).Testing range:

(a) 0.001-0.999 (resolution ratio 0.100 u Ω).

(b) 1.000-9.999 (resolution ratio 0.010 m Ω)

(2).Precision: $\pm 0.5\%$ auto temperature compensate, could be calculated to resistance value at 20 $^{\circ}\text{C}$

(3).Testing way: between armature stamping and stamping.

(4) OK/ Reject verify way: Program reads the testing value of winding and verify ok/reject by comparison of upper and low reference value. The software will give acousto-optic alarm accordingly when it's reject.

(5). The software search out the minimum value of testing resistance automatically, auto rank ordering and resistance self-learning function.

3、冷态电阻测试

(1) 测试范围:

(a) 0.001~0.999 (分辨率 0.100u Ω)

(b) 1.000~9.999 (分辨率 0.010m Ω)

(2) 精度: $\pm 0.5\%$ 自动温度补偿, 可换算至 20 $^{\circ}\text{C}$ 时电阻值。

(3) 测试方法: 电枢片与片之间

(4) 合格/不合格品判定方法: 由程序读取绕组测试值, 与上下限基准值做比较判定, 不合格时程序声光报警。

(5) 软件自动查询到测试电阻最小值, 自动排序。具有电阻自学习功能

4. Welding electrical test.

(1). Testing range:

(a).0.001-0.999 (resolution ratio 0.010 m Ω)

(2). Precision: $\pm 0.5\%$ auto temperature compensate, could be calculated to resistance value at 20 $^{\circ}\text{C}$

(3).testing way: use six ends method, testing the resistance value of commutator segment and winding welding point.

(4). OK/ Reject verify way: Program reads the resistance testing value of welding and verify ok/reject by comparison of upper and low reference value. The software will give acousto-optic alarm accordingly when it's reject.

4、焊接电阻测试

(1) 测试范围:

(a) 0.001~0.999 (分辨率 0.010u Ω)

(2) 精度: $\pm 0.5\%$ 自动温度补偿, 可换算至 20 $^{\circ}\text{C}$ 时电阻值。

(3) 测试方法: 采用六端法, 测试换向片与绕组焊接点电阻值。

(4) 合格/不合格品判定方法: 由程序读取焊接电阻测试值, 与上下限基准值做比较判定, 不合格时程序声光报警。

5. Between turns insulation test

(1).Testing voltage range: 100V~2800V

(2).Voltage Precision: $\pm 3\%$

(3).Voltage adjusting mode (-M: manual adjust, -A: auto adjust).

(a).Manual adjust: manual no-step adjust

(b).Auto adjust: input testing voltage to the software, thus machine do automatic loading to the setting value through the test.

(4).Pulse rising time: 1.2 μs

(5). Verify way:: $\Delta s/s$ $\Delta f/f$

(6). Voltage load mode: respectively test each winding.

(7). OK/Reject verify way: Program reads the standard value of wave between turns, compare the testing wave to standard wave. The software gives acousto-optic alarm if beyond setting value.

5、匝间绝缘测试

(1) 测试电压范围: 100V~2800V

(2) 电压精度: $\pm 3\%$

(3) 电压调节方式 (-M 为手动调压、-A 型为自动调压)

(a) 手动调节: 手动无段调节

(b) 自动调节: 软件中输入测试电压, 测试时自动加载到设定值。

(4) 脉冲上升时间: 1.2 μs

(5) 判别方式: $\Delta s/s$ $\Delta f/f$ 判别

(6) 加压方式: 各绕组分别测试

(7) 合格/不合格品判定方法: 由程序读取匝间波形之标准值, 测试波形与标准波形之比较, 超过设定值程序声光报警

Main feature:

1.All the armature test such as electrical strength, insulation resistance, DC resistance, welding resistance and between turns of electrical performance test are done automatically at one time fast.

2.Each test items could be on or off randomly. Approval standard also could be set up randomly. The machine will give acousto-optic alarm for reject armature.

3.Identify the malfunction such as between bars short circuit, line cut, resistance value over

limit and give fault point information.

4.Put armature in the optional position, identify winding technical of single fly, double fly etc and accuracy sorting automatically, auto track the concerning bar resistance difference, it give alarm when the coil C.W/CCM hanger direction is wrong.

5.Single station/double station can be chosen, with high practicability and testing efficiency.

6.Customer can do item programming automatically as per testing requirement.

7.The software give second develop interface, connect the system data base easily through internet to read-write the data.

8.The software can do far-end control, and merge the testing system into your company internet to realize the all-in-one.

9.It can save, edit, call kinds model stator and check data specification automatically. The quantity is unlimited.

重要特点

- 电枢的电气强度、绝缘电阻、直流电阻、焊接电阻、匝间测试全部电气性能测试项目一次性高速自动完成；
- 各检测项目可任意开通或屏蔽，并可任意设定判定的合格标准，遇检测结果数据超标自动声光报警；
- 自动识别片间短路、断线、阻值超限等故障并提供故障点信息；
- 电枢任意位置放入，自动识别单飞、双飞等绕线工艺并自动精确排序，自动跟踪对应片阻差异，线圈顺时针 / 逆时针挂钩方向错误自动报警；
- 单工位 / 双工位可选，极高的实用性及测试效率；
- 客户可以根据测试要求自动进行项目编程；
- 软件提供二次开发接口，可以通过网络轻易的连接系统的数据库读写数据；
- 软件可实现远端控制，并可以将测试系统并入贵公司的网络一体化中；
- 可存储、编辑、调用各种型号规格转子自动检测数据标准，数量不受限制；