测 试 报 告

Measurement Report

{{1}}

报告编号： 号

Report No.

|  |  |
| --- | --- |
| 委托方  Customer | 国网吉林省电力有限公司 |
| 样品名称  Name of Sampile | 电压监测仪 |
| 型号/规格  Type/Specification | {{2}} |
| 出厂编号  Serial Number | {{3}} |
| 制造单位  Manufacturer | {{4}} |



|  |  |
| --- | --- |
| 批 准 人  Approved by | 核验-白羽 |
| 核 验 员  Checked by |  |
| 测 试 员  Measured by | 测试-许文燮 |

**吉林省电力科学研究院有限公司**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 测试日期 | {{5}} | 年 | {{6}} | 月 | {{7}} | 日 |
| Measured Date |  | Year |  | Month |  | Day |

|  |
| --- |
| 1、本次测试的技术依据（代号、名称）：  Reference Documents for This Measurement (Code and Name)  Q/GDW 10817-2018 电压监测仪检验规范,DL/T 2351-2021 电压监测装置运维规程,《电压监测仪产品使用说明书》 |
| 2、本次测试所使用的主要设备：  Main Instruments Used in This Measurement |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | 名 称  Name | 测量范围  Measuring Range | 不确定度/准确度等级  或最大允许误差Uncertainty or Accuracy Class or MPE | 证书编号  Certificate No. | 有效期至  Valid Date to | | 三相交直流多功能检定装置 | 交流电压（10mV~400V），交流电流（10mA~25A），直流电压（10mV~600V），直流电流（10mA~25A）） | 0.05级 | DC50242942Z | 2025-08-29 | | 时钟校验仪 | 1Hz～100kHz | ±0.05s/d | XD30240845Z | 2025-04-22 | | 绝缘电阻测量仪 | 0.2MΩ～100GΩ/（500V～2500V） | ±5% | DC20242003J | 2025-01-08 | |  |  |  |  |  | |
| 3、测试地点及其环境条件：  Place and Environmental Conditions in the Measurement |
| 地点：国网吉林电力物资质量检测中心  Place   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 温度： | 19℃ | 相对湿度： | 48% | 其它： | / | | Temperature | | Relative Humidity | | Others | |
| 4、测试结果使用限制性说明  Restricted Conditions Using The Test Results  / |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.外观检查   |  |  | | --- | --- | | 技术要求 | 结果 | | 电压监测仪面板应整洁，仪器名称、型号、出厂编号、生产日期等信息字迹应清楚醒目，人机界面布局合理，各显示器件及调整器件安装得当。 | {{8}} | | 外表面应光滑且无明显的机械损伤和涂覆层剥落等现象。部件应安装正确，牢固可靠，操作灵活，各紧固部位无松动。塑料件无变形等缺陷。 | | 应在显著位置设有运行状态指示灯。 |   2.电压测量误差试验   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 测试结果（0.05级） | | | | | | | | 量限（V） | 输入值（V） | 第一次 | | 第二次 | | 平均误差（%） | | 标准值（V） | 实测值（V） | 标准值（V） | 实测值（V） | | 220 | 176 | {{9}} | {{10}} | {{11}} | {{12}} | {{13}} | | 220 | {{14}} | {{15}} | {{16}} | {{17}} | {{18}} | | 264 | {{19}} | {{20}} | {{21}} | {{22}} | {{23}} | | 结果 | {{24}} | | | | | |   3整定电压值基本误差试验   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 量限（V） | 电压（V） | 标准值（V） | 误差（%） | 结果 | | 220V | 上限值235.4 | {{25}} | {{26}} | {{29}} | | 下限值198.0 | {{27}} | {{28}} |     4综合测量误差试验   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 合格时间段(min) | | | 超上限时间段(min) | | | 超下限时间段(min) | | | | X | | | Y | | | Z | | | | 超下限率(%) | 理论超下限率(%) | 误差(%) | 超下限率(%) | 理论超下限率(%) | 误差(%) | 超下限率(%) | 理论超下限率(%) | 误差(%) | | {{30}} | {{31}} | {{32}} | {{41}} | {{42}} | {{43}} | {{52}} | {{53}} | {{54}} | | 合格率(%) | 理论合格率(%) | 误差(%) | 合格率(%) | 理论合格率(%) | 误差(%) | 合格率(%) | 理论合格率(%) | 误差(%) | | {{33}} | {{34}} | {{35}} | {{44}} | {{45}} | {{46}} | {{55}} | {{56}} | {{57}} | | 超上限率(%) | 理论超上限率(%) | 误差(%) | 超上限率(%) | 理论超上限率(%) | 误差(%) | 超上限率(%) | 理论超上限率(%) | 误差(%) | | {{36}} | {{37}} | {{38}} | {{47}} | {{48}} | {{49}} | {{58}} | {{59}} | {{60}} | | 电压最大值（V） | {{39}} | | 电压最大值（V） | {{50}} | | 电压最大值（V） | {{61}} | | | 电压最小值（V） | {{40}} | | 电压最小值（V） | {{51}} | | 电压最小值（V） | {{62}} | | | 结果 | | | | {{63}} | | | | |   5时钟准确度试验   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 次数 | 误差（s/d） | 次数 | 误差（s/d） | 误差的平均值（s/d） | 结果 | | 1 | {{64}} | 6 | {{69}} | {{74}} | {{75}} | | 2 | {{65}} | 7 | {{70}} | | 3 | {{66}} | 8 | {{71}} | | 4 | {{67}} | 9 | {{72}} | | 5 | {{68}} | 10 | {{73}} |     6监测统计功能试验   |  |  | | --- | --- | | 技术要求 | 结果 | | 电压监测仪通电，查询并记录监测电压额定值、整定电压上（下）限值，调节输出电源电压，自电压监测仪时钟00秒起加量，使其在测量范围内波动。当监测时间大于1分钟后，通过面板调显或通信接口读取表4规定的电压监测仪统计数据，改变电源电压，在未满下一个1分钟前，各项统计值不变，满1分钟后时间统计、合格率统计、极值统计、平均值、电压监测仪工作状态信息统计随之变更。 | {{76}} | | 设置月统计结算日为每月1日，变更电压监测仪日期为X月2日，自电压监测仪时钟00秒起，保持额定电压通电5分钟, 变更电压监测仪日期为X月20日，查询当月合格时间应为5分钟。 |   7参数设置与查询功能试验   |  |  | | --- | --- | | 技术要求 | 结果 | | 日期与时间：日期、时间 | {{77}} | | 监测点参数：系统标称电压值、整定电压上限值、整定电压下限值、月统计结算日、数据主动上送标记、Umin上送周期、事件主动上送标记。 | | 通讯参数：通讯地址码、电压监测仪地址、用户名和密码。 | | 基本信息：型号、软硬件版本、通讯规约版本、生产厂家、生产日期、出厂编号。 | | 其它信息：权限密码、清除数据、电压监测仪复位。 |   8显示功能及数据安全性能测试   |  |  | | --- | --- | | 技术要求 | 结果 | | 具有背光功能的液晶显示屏、采用菜单式、中文显示截面。 | {{78}} | | 日期与时间：日期、时间 | | 监测电压：U1s | | 统计数据：月统计数据、日统计数据、事件记录、前一次复位后连续工作时间、自投运以来总运行时间 | | 监测点参数：整定电压上限值、整定电压下限值、月统计结算日。 | | 通讯参数：通讯地址码、电压监测仪地址、用户名和密码。 | | 状态指示：电压监测仪运行灯、信号指示灯。 | | 备份恢复试验：电压监测仪可通过已导出的配置文件进行电压监测仪配置恢复，恢复后的状态应与导出配置时的状态一致。 | — | | 用户认证试验：1、电压监测仪的管理软件口令应满足复杂度要求；2、检查电压监测仪在用户认证后，一定时间内无操作，应退出登录。如需继续进行管理，则需要重新进行身份认证。 | — |   9 绝缘电阻试验   |  |  |  |  | | --- | --- | --- | --- | | 参数 | 技术要求 | 测量结果（MΩ） | 结论 | | 电压监测仪监测电压端子——机壳接地端或保护端 | 绝缘电阻≥10 MΩ | 大于10 MΩ | {{79}} | | 电压监测仪通信端子——机壳接地端或保护端 | 绝缘电阻≥10MΩ | 大于10 MΩ | | 电压监测仪监测电压端子——电压监测仪通信端子 | 绝缘电阻≥10MΩ | 大于10 MΩ |   以下空白  Blank below |