



概述 General



YFL1-100/225 剩余电流式电气火灾监控探测器，适用于交流 50Hz，额定电压 AC4-400V，额定电流 100/225 及以下的电路中，广泛应用于危险场所、高层建筑、公共场所及住宅楼宇的单元供电系统。如加油站、各种危险品仓库、医院、各种营业厅、展览厅、商场、宾馆、饭店、图书馆、写字楼、电信邮政大楼、机房、重要房间、财富金融、广播电视、重要部门及人员密集的建筑、娱乐场所和政府机关企事业单位的办公楼等场所的用电系统，可有效的保障安全用电和防止电气火灾的发生。

YFL1-100/225 剩余电流式电气火灾监控探测器（以下简称 YFL1 监控探测器）是伊发电器有限公司严格按照国家标准 GB14287.2-2005《剩余电流式电气火灾监控探测器》研发生产的，其是一款智能型消防电子产品。本产品符合 GB14048.2《低压开关设备和控制设备》和其它相关标准要求的全智能化产品，可现场软件升级。该产品相当于电气黑匣子，为防止电气火灾的发生起保护和报警作用。

产品断路器部分具有隔离功能，其相应的符号为 $\text{—} \diagup \text{—} \times \text{—}$

YFL1-100/225 residual current type electric fire monitoring detector is suitable for circuits of AC50Hz, rated voltage of AC4-400V and rated current up to and including 100/225, the products are widely applied to dangerous goods areas, high-rise buildings, public places and unit power supply systems in residential buildings, such as electric systems in gas stations, various dangerous goods warehouses, hospitals, various business halls, exhibition halls, marketplaces, hotels, libraries, office buildings, telecommunication & post buildings, machine rooms, important rooms, financial buildings, broadcast & TV buildings, important departments as well as densely populated places, recreation places, governmental office buildings, etc, guarantee safety in utilizing electric energy and prevent electric fire effectively.

YFL1-100/225 residual current type electric fire monitoring detector (hereinafter referred to as YFL1 monitoring detector) is an intelligent electronic fire-control product researched and developed by Yifa company strictly according to GB14287.2-2005 Alarm system for electric fire prevention Part 2: Leakage current detectors for electric fire prevention. The products are in conformity with GB14048.2 Low-voltage switchgear and controlgear and other relevant standards, the software can be updated on-site. Like an electric black box, this product sends out alarm and prevents electric fire effectively.

Circuit breaker part of the product also has isolation function, its corresponding symbol as $\text{—} \diagup \text{—} \times \text{—}$

型号说明 Model description

YF L 1 - □ / □ □

YF 企业代号 Enterprise code
L 剩余电流式 Residual current type
1 设计序号 Design No.
□ 壳架电流等级 Frame size
□ N 级结构代号 N-pole structure code
□ G 无过载保护 G without overload protection

注：N 极结构代号：N 极与其它三极一起合分无代号，N 极不与其他三极一起合分始终接通用 3+N 表示

Note: N-pole structure code: there is no code when the N-pole makes and breaks together with the other three poles, the code is 3+N when the N-pole does not make and break together with the other three poles, but always makes.

使用环境条件 Service conditions

- 1、产品适用于建筑内无粉尘导电尘埃、无腐蚀性、易燃易爆气体，无雨雪侵袭的地方；
- 2、海拔高度 ≤ 2000 米（海拔高度 > 2000 米时需降容使用，降低额定电流）；
- 3、使用环境温度 -10~+40℃，日平均最高温度 ≤ +35℃；相对湿度 ≤ 50%（环境温度 +40℃时）；
- 4、产品安装使用地点的外磁场干扰，任何方向的磁场强度应不超过地磁场的 5 倍，远距离通讯线路附近无强电磁干扰；
- 5、产品安装位置应无强烈阳光直射，即避免液晶显示器受强烈阳光照射而被损坏；
- 6、产品要安装在通风散热良好的环境下使用。

1. The products should be set in indoor environment where free of conductive dust, corrosive gas, flammable or explosive gas, rain or snow attack;
2. Altitude ≤ 2000m (it should be used with derated capacity when the altitude >2000m, reduce the rated current);
3. Ambient temperature: -10~+40℃, daily mean max temperature ≤ +35℃; relative humidity ≤ 50% (at ambient temperature +40℃);
4. External magnetic field interference in installation and operation site: magnetic field strength in any direction should not exceed 5 times of earth magnetic field, no strong electromagnetic interference around the remote communication lines;
5. Installation position of the product should be far away from direct sunlight, otherwise, the LCD may be damaged due to strong sunniness;
6. The products should be used in environment with favorable ventilation and heat dispersion.



使用要求 Operating requirements

- 1、无外箱的 YFL1-100/225 监控探测器安装使用在非电工专业人员和未成年人触及不到的地方，防止触电或改变 YFL1-100/225 产品正确的接线状态而失去保护性能；
- 2、电源进出线导线截面应符合标准规定的施工要求，接线端外露超出外壳。
- 3、产品输出控制端口接线采用导线截面应不小于 0.5mm^2 。
- 4、产品必须垂直安装，倾斜不大于 5° 。
- 5、产品必须严格按照规定接线，主电源进线 L1(A)、L3(B)、L5(C)、N 各相不能接错；
- 6、接口控制线应符合指示说明要求；接线时请注意每个端口的属性，防止损害产品内部器件；
- 7、电源正弦波畸变 $\leq 5\%$ ；
- 8、使用前请认准阅读操作设置方法，确保正确使用。

1. YFL1-100/225 monitoring detector without outer box should be installed and operated in places out of reach of layman or young person, preventing accidental electric shock, or accidental changing of wiring state of the product that would lead to invalidation of protective performance;
2. Sectional area of incoming and outgoing conductors of power supply should be in accordance with the construction requirements stipulated by the standards, exposed connection terminal goes out of the enclosure.
3. Wiring of output control port should use conductors whose sectional area not smaller than 0.5mm^2 .
4. The product must be installed vertically, obliquity not more than 5° ;
5. Wiring must be carried out according to the stipulations strictly, incoming lines L1 (A), L3 (B) and L5 (C) of main power supply as well as N phases should be wired accurately;
6. Interface control wire should be in accordance with requirements of indication description; pay attention to the attribute of each port when wiring, take care not to damage the inner elements of product;
7. Sine wave distortion of power supply $\leq 5\%$;
8. Please read the operating and setting methods carefully before using, guaranteeing accurate operation.

产品结构和工作原理 Structure and working principle

YFL1-100/225 剩余电流式电气火灾监控探测器的结构，是由外壳，断路器系统、控制电源、采样、微电脑控制、液晶显示、控制接口组成。断路器系统是主电路的控制开关；控制电源部分是整个产品的供电电源；液晶显示和按键是起着人机对话与信息显示的作用；接口部分承担着报警的声光、报警控制、产品当前状态输出；远程操作、各种传感器的控制输入与上位机（电脑）间的通讯。

YFL1-100/225 剩余电流式电气火灾监控探测器的基本工作原理：各种用电信息经由传感器采集后，送输入信号调理电路，经处理后的信号送至 MCU 微处理器运算、识别、判断后，送给输出控制电路和显示器。

YFL1-100/225 residual current type electric fire monitoring detector is composed of enclosure, circuit breaker system, control power source, sampler, microcomputer controller, LCD and control interface. Circuit breaker system is the control switch of main circuit; control power source supplies power for the whole product; LCD and keys serve for man-machine conversation and information display; interface part serves for sound and light alarm, alarm control and current state output of product; remote operation, various sensor's control input and communication with host (computer).

Basic working principle of YFL1-100/225 residual current type electric fire monitoring detector: various electric information collected by sensor will be sent to signal conditioning circuit, and the signals after processing will be sent to MCU microprocessor for operation, identification and judgment, then sent to output control circuit and the display.

设计图样基本简化标图 Basic simplified diagram of design drawing

YFL1-100/225 系列监控探测器是独立运行的工作机，并可以有多种远程监控方式组建监控网络，设计图样可采用简化标图，基本简化标图（见图 B1）。

YFL1-100/225 series monitoring detector is an independently running device, it can constitute monitoring network through multi remote monitoring methods, basic simplified diagram of design drawing (see fig.B1).

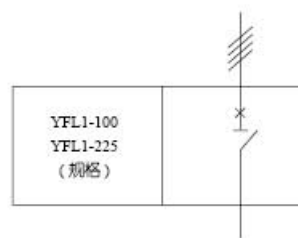


图 B1 YFL1-100/225 设计图样基本简化标图 Fig. B1 Basic simplified diagram of design drawing of YFL1-100/225

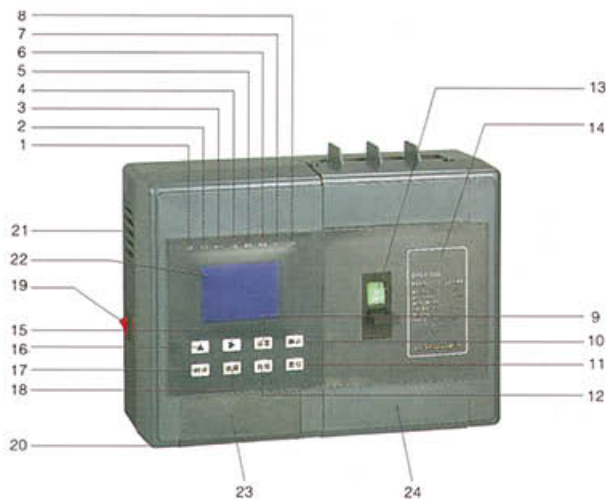
YFL1-100/225 系列电气火灾监控探测器 - 剩余电流式

Series electric fire monitoring detector-residual current type



人机对话功能示意图 (见图 B2) Schematic diagram of man-machine conversation (see fig. B2)

- | | |
|----------------------------------|--|
| 1. 过压灯 Over-voltage lamp | 17. 时间调整键
Time regulation key |
| 2. 欠压灯 Under-voltage lamp | 18. 故障查询键
Fault search key |
| 3. 缺相灯 Open-phase lamp | 19. 控制电源开关
Switch of control power source |
| 4. 过载灯 Overload lamp | 20. 外壳下盖
Lower cover of enclosure |
| 5. 漏电灯 Leakage current lamp | 21. 喇叭 Horn |
| 6. 接地灯 Earthing lamp | 22. 液晶显示 LCD |
| 7. 运行灯 Running lamp | 23. 外接端子盖
External terminal cover |
| 8. 远程灯 Remote lamp | 24. 输出端子盖
Output terminal cover |
| 9. 设置键 Set key | |
| 10. 确认键 Conformation key | |
| 11. 复位键 Reset key | |
| 12. 自检键 Self-inspection key | |
| 13. 断路器 Circuit breaker | |
| 14. 标牌 Rating plate | |
| 15. 左移键 Shift left | |
| 16. 加一键 Gradually increasing key | |



主要技术参数 Main technical parameters

壳架等级电流 Inm(A) Frame size	100	225
产品型号 Model	YFL1-100	YFL1-225
额定工作电流 In(A) Rated working current	16, 20, 25, 32, 40, 50, 63, 80, 100	100, 125, 140, 160, 180, 200, 225
极数 Pole number	4 极, 3 极 4 线 4-pole, 3-pole 4-wire	
额定绝缘电压 Ui(V) Rated insulation voltage	AC690	
额定工作电压 Ue(V) Rated working voltage	AC400	
短路分断能力 (KA) Short-circuit breaking capacity	35	
额定剩余动作电流 I Δ n(mA) Rated residual operating current	200, 300, 400, 500, 800, 900	
额定剩余不动作电流 I Δ no(mA) Rated residual non-operating current	0.8 I Δ n	
剩余电流动作类型 Operating type of residual current	S	
延时整定值 (S) Setting value of time delay	0.1-0.9 (出厂整定: 0.2s) Factory setting	
最低工作电压 Uk(Vac) Min working voltage	40<Uk<50	
操作性能	通电 Electrified	3000
Operating performance N	不通电 Unelectrified	8500
相动作电流值 (In) N-phase operating current value	0.35-0.65	
附加保护	过压 Over-voltage	270V
Addition protection	欠压 Under-voltage	155V (延时时间: 1s) Delay time
	缺相 Open-phase	0
报警声压 (A 计权) Alarm sound pressure (A-weighting)	≥ 70Db/m	

智能化控制特性 Characteristics of intelligent control

过载保护、短路保护特性 Characteristics of overload and short-circuit protection

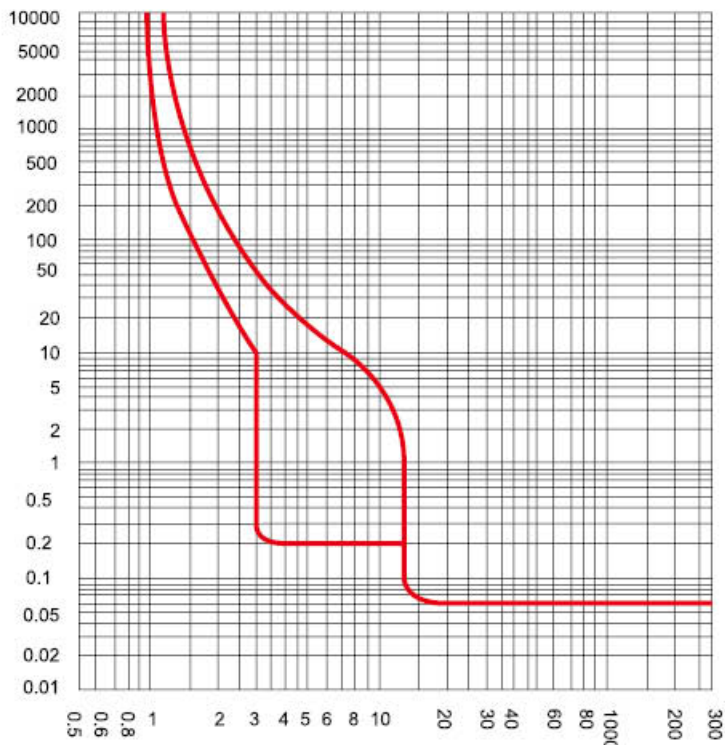
规格 Spec.	1.05In(冷态) 不动作时间 (h)	1.3In(热态) 动作时间 (h)	短路保护动作值 Short-circuit protection operating value	
	1.05In (cold state) Non-operating time(h)	1.3In (thermal state) Operating time(h)	整定范围 Setting range	出厂设置 Factory setting
YFL1-100A	2	2	3~12In	10In ± 20%
YFL1-225A				

YFL1-100/225 系列电气火灾监控探测器 – 剩余电流式

Series electric fire monitoring detector-residual current type



动作保护特性曲线图 (见图 B3) Curve diagram of operating protection characteristics (see fig.B3)



额定电流倍数 Rated current multiple

图 B3 YFL1-100/225 曲线图

Fig.B3 YFL1-100/225 curve diagram

防火报警 Fire alarm

当具有实时监控功能的监控探测器检测到故障剩余电流时立即发出声、光报警，并可切断电源，有效的保障用电安全和防止电气火灾的发生，将电气火灾消灭在萌芽状态。

When the monitoring detector that has real-time monitoring function detects fault residual current, it will send out sound and light alarm, and cut off the power supply, guarantee safety of electricity utilization and prevent fire hazard effectively.

显示功能 Display function

LED 指示灯 LED indicator lamp		设有过压、欠压、缺相、过载、短路、漏电、接地故障运行、远程分断指示灯、用于显示工作状态，指示故障性质 Indicator lamps of over-voltage, under-voltage, open-phase, overload, short-circuit, leakage current, earth fault running and remote breaking, used to display the working states, and indicate fault property
液晶显示 LCD	工作状态显示 Working state display	显示当前日期、时间、剩余电流(漏电)报警动作值、三相电压(Ua、Ub、Uc) 三相电流(Ia、Ib、Ic); 过压、欠压、缺相保护设置显示; 跳闸保护功能、显示, 故障跳闸时电气数据显示 Display the current date, time, residual current (leakage current) alarm operating value, three-phase voltage (Ua, Ub, Uc); three-phase current (Ia, Ib, Ic); display of over-voltage, under-voltage and open-phase protection setting; tripping protection function display, display of electric data at fault tripping
	设置显示 Setting display	显示“时间调整”, “保护项目(欠压、过压、缺相)” “跳闸功能或报警声” 设置 Display settings of “time regulation”, “protection item (under-voltage, over-voltage, open-phase)”, “tripping function or alarm sound”
	自检显示 Self-inspection display	自检合格显示“自检 OK” 若自检不合格则一直显示“自检失败” Display “SELF-INSPECTION OK” for product passed the self-inspection, otherwise, it always displays “SELF-INSPECTION FAILED”
	故障查询显示 Fault search display	显示历次电气故障数据 Display all previous electric fault data



通讯功能 (网络管理) Communication function (network management)

独立运行的 YFL1-100/225 剩余电流式电气火灾监控探测器具有通讯功能, 可组成电气火灾报警监控系统, 进行网络管理。

YFL1-100/225 采用国际标准 RS485 通讯接口, RS485 通讯协议是适合于远距离数据通讯标准; RS485 接口具有良好的抗噪声干扰性, 长的传输距离和多站能力等上述优点。因为 RS485 接口组成的半双工网络, 一般只需二根连接, RS485 是通过 DB-9 的两个引脚 RD×(2 脚) 和 T×D(3 脚) 来控制数据的输入和输出, 信号地线 SG(5 脚)。

Independently running YFL1-100/225 residual current type electric fire monitoring detector possesses communication function, it can be formed into electric fire alarm monitoring system, for network management.

YFL1-100/225 adopts international standard RS485 communication interface, RS485 communication protocol accords with remote data communication standards; RS485 interface has good performance of anti noise interference, has advantages of long transmission distance and multi-station capacity. As the semiduplex operation network formed by RS485 interfaces usually need two connecting wires only, RS485 controls the data input and output through two pins RD×(pin 2) and T×D(pin 3) of DB-9, signal earth wire SG(pin 5).

通信组网示例 (见图 B4) Example of network building for communication

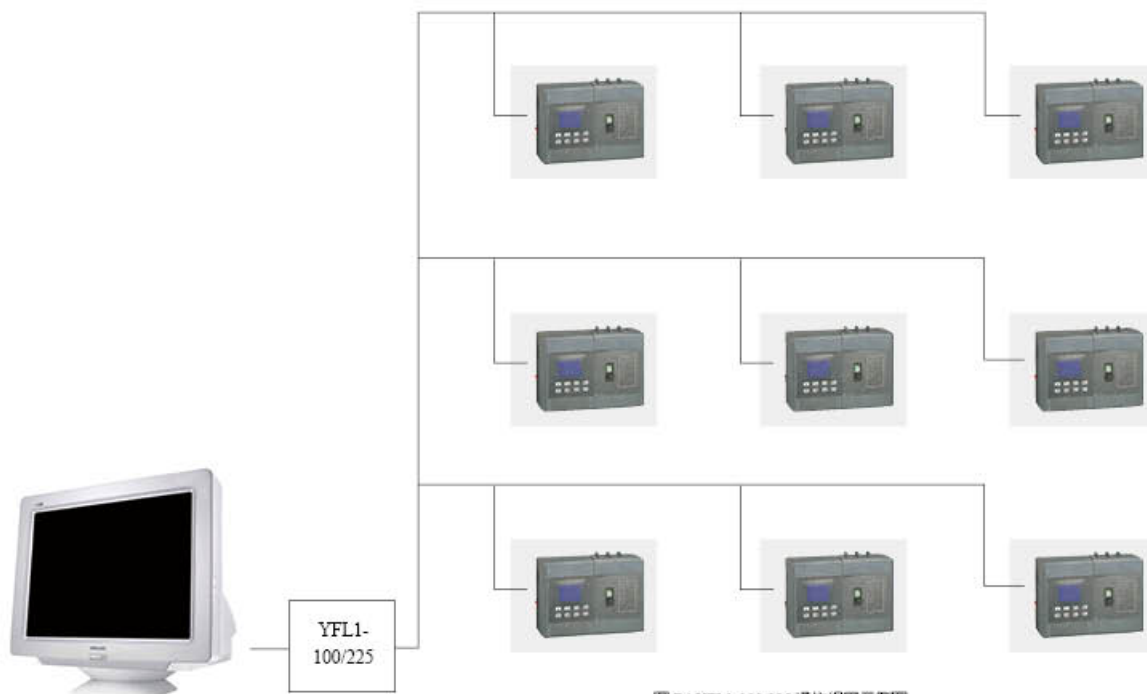


图 B4 YFL1-100/225 通信组网示例图

Fig.B4 Example of network building for communication of YFL1-100/225

用 YFL1-100/225 监控探测器组成监控网络时, 请勿用环形结构。YFL1-100/225 监控探测器的设计是一主 (计算机为主机) 多从式。可在一条总线上挂多个 YFL1-100/225 监控探测器。打开监控软件后在命令输入框输入 8 位数据操作指令。该设备具有三条指令, 分别如下:

- 1、本机身份证 + 两位数字 (故障内容查询指令);
注: 只有当两位数字大于 0 小于 40 时才有效;
- 2、本机身份证 +RA(当前电气参数读取指令);
- 3、本机身份证 +TZ(超级跳闸指令)。

其中本机身份证为 6 位数 (如生产需要, 在以后的升级产品中位数会有所不同), 故障次数为两位数字且小于等于 40。当输入故障次数超出实际发生故障次数, 或等于 0, 则机器不会返回任何信息。当输入指令中所包含的本机身份证存在此网络, 但指令长度不是 8 位, 则相应设备会返回 “指令错误, 请重新输入”!

可点面板上 “保存” 按钮将 YFL1 监控探测器传回参数进行保存, 以备分析。如输入的指令中所包含的本机身份证不在网络, 则无任何信息返回。

通信参数: 通信波特率 -9600bps; 数据位 -8; 停止位 -1; 校验 -None。

注: 每两条指令中间请保持 1S 间隔时间。

YFL1-100/225 系列电气火灾监控探测器 – 剩余电流式

Series electric fire monitoring detector-residual current type



Don't use ring structure when building a monitoring network with YFL1-100/225 monitoring detector. YFL1-100/225 monitoring detector is of one-host (take computer as the host) multi slave type. It is able to set multi YFL1-100/225 monitoring detectors on one bus line. Open the monitoring software, input 8-digit operating command in command input frame. This equipment has the following three pieces of command:

1. Local ID + two digits (fault content search command);

Note: it is effective only when these two digits are larger than 0 and smaller than 40!

2. Local ID + RA (current electric parameter reading command);

3. Local ID + TZ (super tripping command).

Thereinto, local ID is a 6-digit data (digit number of the updated products in the future may be changed according to the production demand), failure number is a two-digit data that is smaller than 40. When the input failure number is beyond the actual failure number or equal to 0, the machine would feed back nothing information. When the local ID contained in the input command exists in the network, but command length is not an 8-digit, then corresponding device would feed back "wrong command, please input again" !

It is able to store the parameters returned by YFL1 monitoring detector by clicking the "STORE" on the panel, saved for analysis. If the local ID contained in the input command not exists in this network, then no information would be returned.

Communication parameters: communication baud rate-9600bps; digit number-8; check-None.

Note: please keep an interval time of 1S between every two pieces of command.

记忆功能 (电气黑匣子) Memory function (electric black box)

可永久记忆 40 次故障参数, 超出 40 次时, 从首次开始覆盖, 因此具有电气黑匣子作用。

It is able to store 40 times of fault parameters permanently, when it is beyond 40 times, it would cover the old fault parameters from the first one, therefore, it has the function of electric black box.

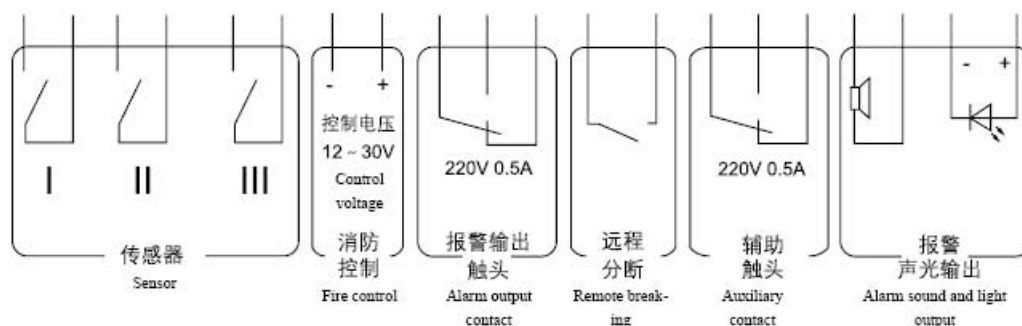
自检功能 Self-inspection function

如果要测试系统功能是否正常, 可在液晶屏显示主监控画面时按 "0/ 自检" 按键, 系统会马上进入自检状态, 如果检测系统正常, 显示 "自检 OK", 则进入正常显示状态, 如果自检不合格, 则一直显示 "自检失败" 而不能进入系统运行, 直到系统修复, 方可进入系统。

When you want to test whether the system functions are normal, just push down the key "0/SELF-INSPECTION" when the LCD displays master monitoring menu, the system would enter into self-inspection state immediately, it would display "SELF-INSPECTION OK" if the system is normal, otherwise, it would always display "SELF-INSPECTION FAILED", and it would be failed to enter into the system for running until the system resume to normal.

多功能控制接口 Multifunctional control interface

控制接口电路示意图 Schematic diagram of control interface circuit





控制接口输入输出额定值及应用 Rated input and output values and application of control interfaces

传感器输入接口 Input interface of sensor	消防控制输入接口 Input interface of fire control	报警触点输出接口 Output interface of alarm contact	远程分断输入接口 Input interface of remote analysis	辅助触点输出接口 Output interface of auxiliary contact	报警声、光输出接口 Output interface of alarm sound and light
开关触点输入 (即无源输入) Input of switch contact (i.e. passive input)	直流电平输入, 可接受电压范围 18-30Vdc, 电流 5-10mA DC level input, acceptable voltage range 18-30Vdc, current 5-10mA	开关触点输出 (承载约定发热电流 3A, 交流 230V 时额定工作电流 0.5A, 使用类别 AC-15,DC-13) Switch contact output (bear the conventional thermal current of 3A, rated working current is 0.5A at AC230V, use category AC-15, DC-13)	开关触点输入 (即无源输入) Switch contact input (i.e. passive input)	开关触点输出 (承载约定发热电流 3A, 交流 230V 时额定工作电流 0.5A, 使用类别 AC-15,DC-13) Switch contact output (bear the conventional thermal current of 3A, rated working current is 0.5A at AC230V, use category AC-15, DC-13)	声 (音) 输出, 光断续直流输出 (音频输出适用于阻抗 $\geq 8\Omega$ 、功率 $\geq 3W$ 的电动扬声器; 光输出为断续直流输出、适合发光二极管指示输出电压 5V, 输出电流: 20mA) Audio frequency output, light brokenly and DC output (audio frequency output is suitable for dynamic speaker of impedance $\geq 8\Omega$, power $\geq 3W$; the light output is of intermittent and DC output, suitable for LED indication, output voltage: 5V, output current: 20mA)
用于传感器、感温器、易燃易爆有害气体探测器等消防设施 For smoke sensing device, temperature sensing device, flammable and explosive and other harmful gas detectors, and other fire-control facilities	用于接收消防控制中心的分断控制信号 Used to receive breaking control signal from fire-control center	用于保护动作时的报警输出控制, 作为报警控制开关使用 For alarm output control of protection operation, used as alarm control switch	用于远距离分断控制 For remote breaking control	表明开关所处状态, 用于接控制中心的指示或判断 It indicates the state of switch, used to receive command or judgment from control center	表明开关所处状态, 用于接控制中心的指示或判断 It indicates the state of switch, used to receive command or judgment from control center

注: 使用时请注意切勿超出允许范围 Note: don't run beyond the permissible range during operating operation

传感器接口 Sensor interface

传感器输入接口是用于连接感烟器、感温器、易燃易爆有害气体探测器等报警输出常开触点的; 属于无源接口, 切勿接入电流, 简化标图 (见图 B5)。

Input interface of sensor is used to connect the alarm output NO contacts of smoke sensing device, temperature sensing device, flammable and explosive as well as other harmful gas detectors; it belongs to passive interface, don't connect it with power supply, see fig.B5 for simplified diagram.



图 B5 设计图样基本简化标图

Fig.B5 Basic simplified diagram of design drawing

YFL1-100/225 系列电气火灾监控探测器 – 剩余电流式

Series electric fire monitoring detector-residual current type



消防控制器输入接口，报警输出接口 Input interface of fire-fighting controller, alarm output interface

消防控制接口是用于连接消防控制中心的控制接口，可接受标准消防控制系统输出的直流控制电压，可接受电压范围 12-30V；报警输出接口是 YFL1 监控探测器的报警输出触头，触头容量为交流 220V，0.5A；使用类别：AC15/DC13(见图 B6)。

Fire control interface is used to connect with the fire control center, it is applicable for DC control voltage output by standard fire control system, acceptable voltage range is 12~30V. Alarm output interface is an alarm output contact of YFL1 monitoring detector, contact capacity is AC220V, 0.5A; Use category: AC15/DC13 (see fig.B6).

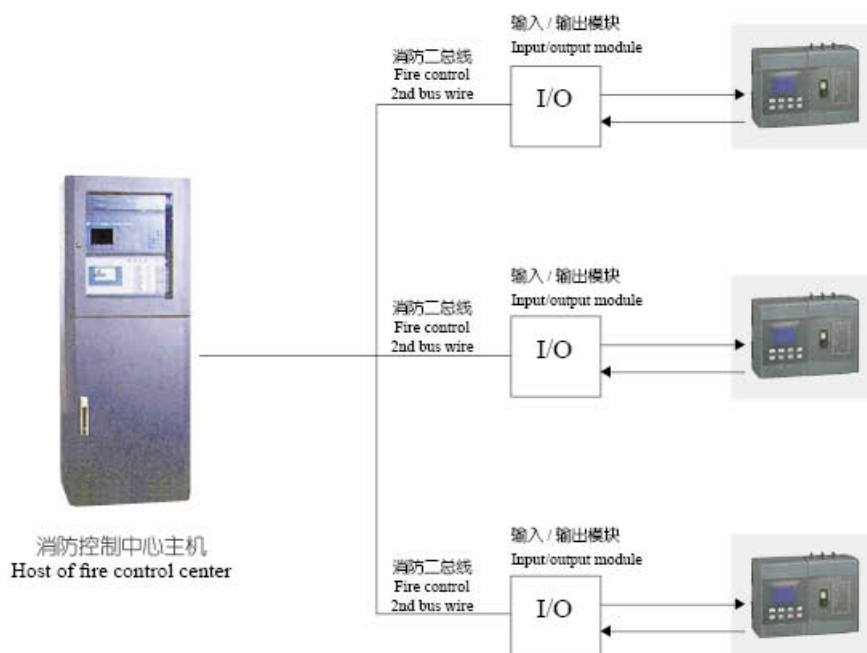


图 B6 消防控制连接示意图
Fig.B6 Schematic diagram of fire control wiring

远程分断接口，辅助触头接口 Remote breaking interface, auxiliary contact interface

远程分断控制接口是供集中控制时，远距离分断电路用；可接入按钮、控制触头等控制开关。辅助触头是供远距离 YFL1-100/225 探测器的断路器状态使用；辅助触头的状态改变是 YFL1 监控探测器内断路器的合与分同步。辅助触头也可以作为组网联动或作为其它控制之用。触头容量为：交流：220V，0.5A；使用类别：AC15/DC13(见图 B7)。

Remote breaking interface is used for remote circuit breaking in centralized control; it can be connected to pushbutton, control contact and other control switches. Auxiliary contact interface is used to indicate the circuit breaker state of YFL1-100/225 monitoring detector remotely; state change of auxiliary contact is simultaneous with making and breaking of circuit breaker inside the YFL1 monitoring detector. Auxiliary contact also can be used for network building or other control purposes. Contact capacity: AC220V, 0.5A; use category: AC15/DC13 (see fig.B7).

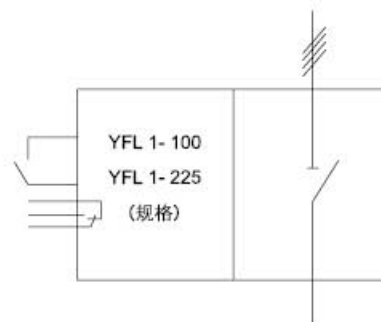


图 B7 设计图样基本简化标图
Fig.B7 Basic simplified diagram of design drawing

YFL1-100/225 系列电气火灾监控探测器 – 剩余电流式

Series electric fire monitoring detector-residual current type



报警声光输出 Alarm sound and light output

报警声、光输出是用于外扬声器、发光二极管等报警指示器，输出能力：声输出 $\geq 2W$ /负载阻抗 $\geq 8\Omega$ ，光输出电流： $\geq 20mA$ (见图 B8)。

Alarm sound and light output is used for outer loudspeaker, LED and other alarm indicator, output capacity: sound output $\geq 2W$ / load impedance $\geq 8\Omega$, light output current: $\geq 20mA$ (see fig.B8).

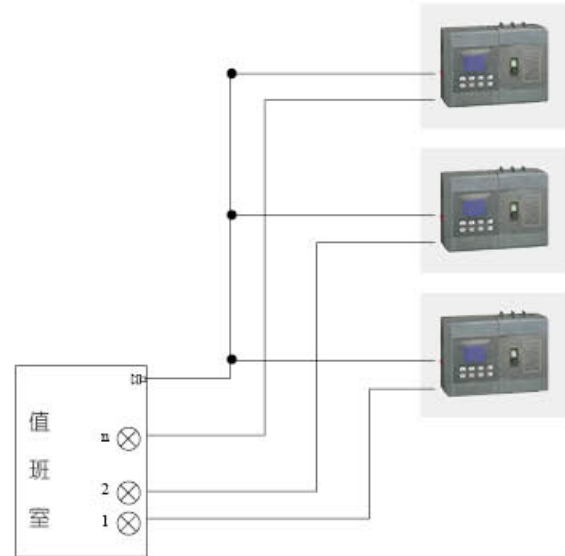


图 B8 声光报警输出组网示意图

Fig.B8 Network building schematic diagram of sound and light alarm output

超低功耗 Extra-low power consumption

正常监控状态时日耗电量小于 0.1 度电。

Daily power consumption under normal monitoring state is less than 0.1kilowatt hour.

宽电压工作 Wide voltage working

具有极大工作电压范围，确保在发生短路故障时线路电压降至 50V 的情况下，仍具有可靠的保护能力，并且不受缺相故障条件限制，只要任何一相有电压就能起到保护作用。

It has rather wide working voltage range, which guarantees reliable protection capability when the line voltage falls to 50V at short-circuit fault, it is free from the limit of open-phase fault conditions, it serves the protection function as long as any one phase is live.



外形与安装尺寸 Outline and installation dimensions

外形尺寸 (见图 B9、图 B10) Outline dimension (see fig.B9, fig.B10)

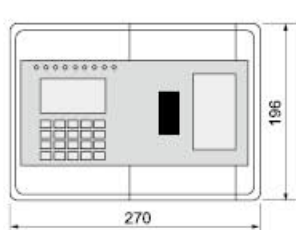


图 Fig. B9 YFL1-100 尺寸
Fig B10 Outline dimension of YFL1-100

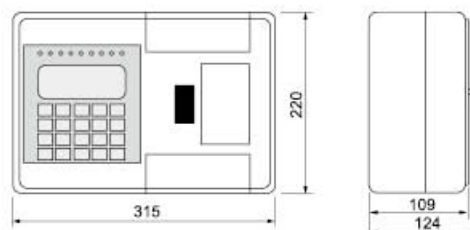


图 Fig. B10 YFL1-225 尺寸
Fig B10 Outline dimension of YFL1-225

直接安装尺寸 (见图 B11) Dimension of direct installation (see fig.B11)

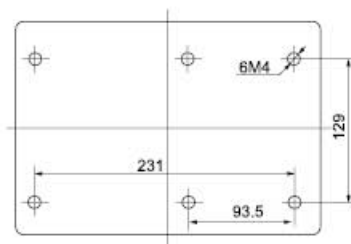
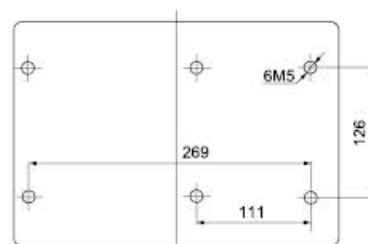


图 B11 YFL1-100/225 直接安装尺寸
Fig B11 Direct installation dimension of YFL1-100/225



底板安装尺寸 (见图 B12、图 B13) Dimension of base plate installation (see fig.B12, fig.B13)

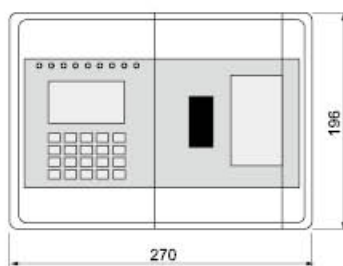


图 Fig. B12 YFL1-100 底板安装尺寸
Fig.B12 Base plate installation dimension of YFL1-100

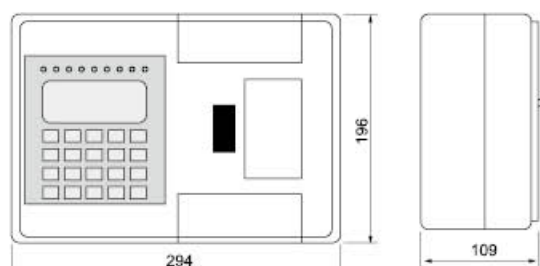


图 Fig. B13 YFL1-225 底板安装尺寸
Fig.B13 Base plate installation dimension of YFL1-225



标准导轨安装 (见图 B14、图 B15) Standard guide-rail installation (see fig.B14)

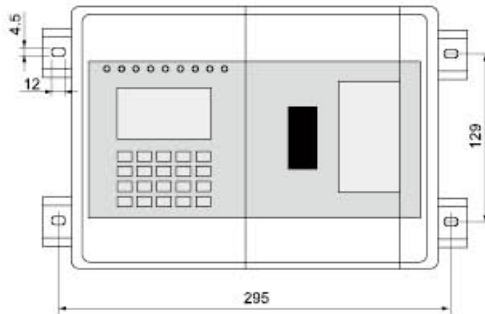


图 B14 YFL1-100 导轨安装尺寸
Guide-rail installation dimension of YFL1-100

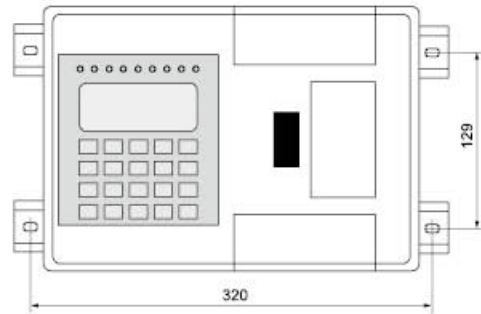


图 B15 YFL1-225 导轨安装尺寸
Guide-rail installation dimension of YFL1-225

出厂设置 Factory setting

产品出厂时已按国家标准配电保护特性或用户要求将产品保护特性整定好, 用户不需调整; 产品漏电电流动作值为 200mA, 报警跳闸“关”, 过压、欠压、缺相保护处于关闭状态, 只报警提示, 不跳闸。

Before leaving the factory, protective characteristics of the product has been well set according to the national standards or users' requirements, users need not to make further regulation; leakage current operating value of the product is 200mA, alarm tripping "OFF", over-voltage, under-voltage, open-phase protection are in closing state, give alarm only, but not trip.

用户选择范围 Selection range

- 1、产品漏电流动作值的选择;
- 2、产品漏电流动作值有两个供选择, 一般为 200mA 与 300mA, 除非用户定货时提出要求;
- 3、保护项目的选用。
供用户选择的保护项目: a) 报警跳闸“开”或“关”; b) 过压保护; c) 欠压保护; d) 缺相保护。

1. Selection of leakage current operating value;
2. There are two leakage current operating values for selection, usually are 200mA and 300mA, except that users have special requirements;
3. Selection of protection items.
Protection items for selection: a) alarm tripping "ON" or "OFF"; b) over-voltage protection; c) under-voltage protection; d) open-phase protection.

出厂设置 Factory setting

- 1、产品型号
- 2、极数: 四极或三极四线, 即四级无代号; 三极四线用 3+N 表示;
- 3、产品额定电流: 选择范围见表 1;
- 4、额定剩余动作电流: 选择范围见表 1;
- 5、N 相接地保护电流: 选择范围见表 1;
- 6、短路保护动作值: 选择范围见表 2。

1. Model of product
2. Pole number: 4-pole or 3-pole 4-wire, there is no symbol for 4-pole; symbol of 3-pole 4-wire is 3+N;
3. Rated current of product: see table 1 for selection range;
4. Rated residual operating current: see table 1 for selection range;
5. Earthing protection current of N-phase: see table 1 for selection range;
6. Short-circuit protection operating value: see table 2 for selection range.