GL-957 型短路隔离器使用说明书

一、 总述

GL-957 型短路隔离器用于总线短路故障保护，仅适用于 9000 系列火灾报警控制系统。总线回路正常工作时短路隔离器不动作，当回路上短路隔离器输出端某处发生短路故障（短路电流＞400mA）时，短路隔离器动作切断输出端连接的所有连接设备，从而保证总线工作正常。待故障修复后，短路隔离器可自行将输出端的所有连接设备重新纳入系统。使用短路隔离器便于确定总线发生短路的位置，短路隔离器不需编码，不占用回路中的地址。

二、 主要技术指标

1. 工作方式：无极性二线制
2. 静态电流：＜1.0mA
3. 动作电流：＞400mA
4. 工作指示：红色（正常监视状态不亮，动作时常亮）
5. 使用环境：温度：-10℃～50℃；相对湿度：≤95%（40℃±2℃ 无凝露）
6. 外型尺寸：86×86×40mm（带底座）
7. 重量：约 125 克（带底座）

三、 使用说明

1. 外形示意图如图 **1** 所示。

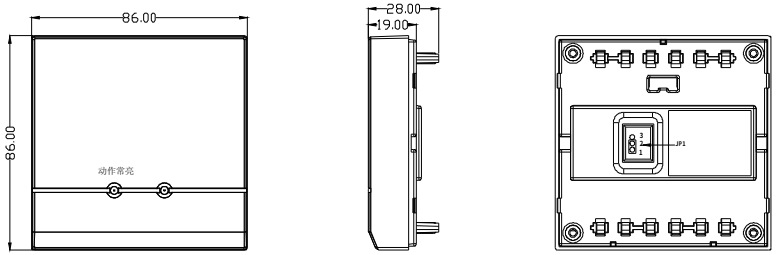


图 1　GL-957 短路隔离器主体

跳线说明：跳线 JP1 只能跳接 1，2 脚；跳接 2，3 脚，短路隔离器失去短路隔离的功能。

2. 短路隔离器底座端子示意图

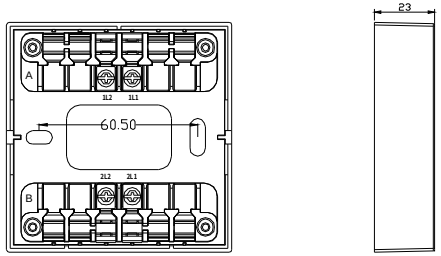


图 2　GL-957 短路隔离器底座

端子说明：

端子标号	功能说明	端子标号	功能说明
1L1	总线输入	**2L1**	总线输出
1L2	总线输入	**2L2**	总线输出

3. 接线方法

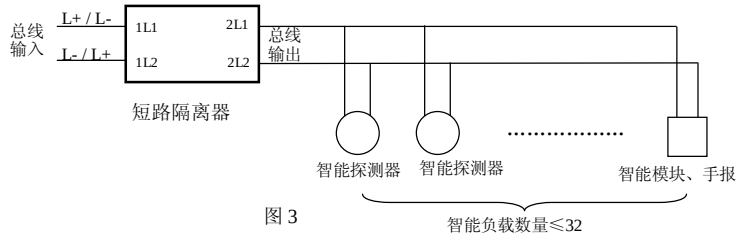


图 3

4. 建议短路隔离器输出端带智能探测器（或智能模块）的数量≤**32**。

四、 安装与调试

1. 确认短路隔离器类型与施工图纸上所注类型相匹配；

2. 按图 **2** 或图 **3** 所示，正确接线；

3. 按施工图纸，使用 **2** 枚 **M4** 螺钉，通过图 **2** 中所示的两个椭圆形螺丝孔，将短路隔离器底座固定好，再将短路隔离器主体插到短路隔离器底座上，并应确保两者接触良好；

4. 待全部短路隔离器安装完毕，且确认无误后，接通控制器电源。对短路隔离器输出端连接的智能终端进行自动登录，自动登录成功后，智能终端巡检指示灯约 **12** 秒闪烁一次，表明短路隔离器已开始工作；

5. 完成安装后进行调试，让短路隔离器输出端短路，短路隔离器应立即动作，并点亮红色指示灯，短路隔离器输出端的智能终端会陆续报丢失，回路板不应报出短路故障。短路撤除后，约 **10** 秒内短路隔离器应能恢复正常工作，短路隔离器输出端的智能终端也应恢复正常工作。

五、 注意事项

1. 不支持多个短路隔离器的级连使用，如果多个短路隔离器串接，当后级的短路隔离器末端短路时，将会导致短路隔离器不停地动作、恢复，使总线工作不正常。

2. 开机 **10** 秒内的总线短路或者控制器复位期间回路发生短路，短路隔离器会出现动作后短暂的恢复，约 **1** 秒后保持动作状态。

3. 当总线线路中出现轻微短路时，短路隔离器不一定会动作，因为短路隔离器只有在负载短路电流超过设定值时才动作，因此短路隔离器不动作不能说明总线中不存在轻微短路的情况。

深圳市泛海三江电子有限公司
SHENZHEN FANHAI SANJIANG ELECTRONICS CO., LTD.
地 址：中国深圳市南山区南山大道光彩新天地大厦三层　　邮 编：518054
总 机：+86(755)86226969　　传 真：+86(755)86223939　　服务热线： 400-7700-119
网 址：www.fhsjdz.com

Instruction Manual of GL-957 Short Circuit Isolator

I. Overview

GL-957 short circuit isolator is used for the short circuit fault protection of buses, it is just used in 9000 series fire alarm control system. When a bus circuit is operating normally, the GL-957 short circuit isolator will not act; when a short circuit fault occurs at a place at the output end of the short circuit isolator in the bus circuit (short circuit current ＞400mA), the short circuit isolator will act to cut off all equipments connected to the output end of it, thus ensuring the buses operate normally. Upon elimination of the short circuit fault, the short circuit isolator can automatically bring the equipments that are cut off into the system again. A short circuit isolator will make it convenient to confirm the location suffering a short circuit fault. The short circuit isolator does not need coding nor occupies the address in the bus circuit.

II. Main technical parameters

4. Operation mode: Non-polarity two-wire system
5. Static current: ＜1.0mA
6. Startup current: ＞400mA
7. Operation indicator: Red (It is out in the normal monitoring status or remains lit in the acting status)
8. Operating environment: Temperature: －10℃～50℃; relative humidity: ≤95% (40℃±2℃, without condensation)
9. External dimensions: 86×86×40mm (with the base)
10. Weight: about 125g (with the base)

III. Instructions for use

1. Outside drawing (Fig.1)

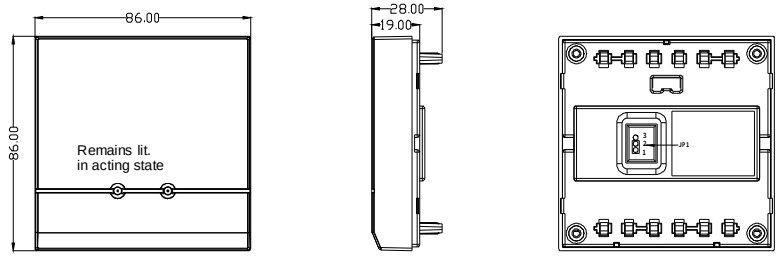


Fig.1 Main Body of a GL-957 Short Circuit Isolator

2. Schematic diagram of the terminals on the base of a short circuit isolator

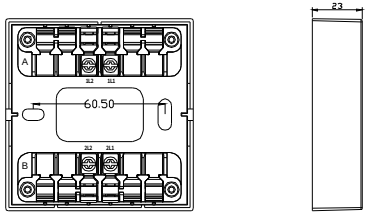


Fig.2 Base of a GL-957 Short Circuit Isolator

Terminal description:

Terminal No.	Function	Terminal No.	Function
1L1	Bus input	**2L1**	Bus output
1L2	Bus input	**2L2**	Bus output

Wire jumper description: JP1 can only be jumped on Pin 1 and 2. If jumped on Pin 2 and 3, short circuit isolator will have no isolation function.

3. Wiring method

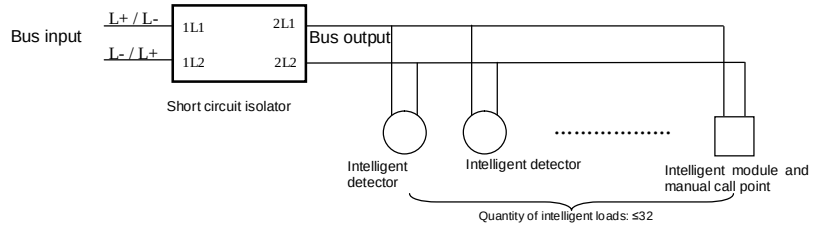


Fig.3

4. It is recommended to arrange 32 or less intelligent detectors (or intelligent modules) at the output end of a short circuit isolator.

IV. Installation and debugging

1、Make sure the type of the isolator matches the type given on the construction drawings.
2、Conduct correct wiring as instructed in Fig.2 or Fig.3.
3、Use two M4 screws to fix the isolator base via the two elliptic screw holes shown in Fig.2, and then insert the main body of the isolator into the isolator base and make sure they contact properly.
4、After the short circuit isolator is installed and checked, connect the power supply of the controller. Conduct automatic login to the intelligent terminal connected to the output end of the short circuit isolator. Upon successful login, the intelligent terminal's inspection indicator will blink once about every 12 seconds, which suggests that the short circuit isolator has begun to operate.
5、Conduct debugging after the installation is completed. Make the output end of the short circuit isolator short. After that, the short circuit isolator will start to act immediately, the red indicator will be lit, the intelligent terminal at the output end of the short circuit isolator will continually report loss and the circuit board will not report a short circuit fault. About 10 seconds after the elimination of the short circuit fault, the short circuit isolator should be able to restore its normal operation and the intelligent terminal at its output terminal should be able to restore its normal operation, too.

V. Precautions

1、The concatenation application of multiple short circuit isolators is not supported. If such concatenation is done, the shorting of the end of the post stage short circuit isolator will make the short circuit isolators keep acting and restoring and the bus operating abnormally.
2、If a short circuit occurs within 10 seconds after controller power up, or if the controller is reset after the output end of the short circuit isolator is shorted, the short circuit isolator may first restore for about one second after it starts to act and then maintain the operation status.
3、In case of a slight short circuit fault in the bus circuit, the short circuit isolator will not always start to act as it will start to act when the short-circuit current of the load is larger than the design value. So, if the short circuit isolator is not acting, it cannot be evidence that there is no slight short circuit fault in the bus circuit.

SHENZHEN FANHAI SANJIANG ELECTRONICS CO., LTD.
Address：3F, Guangcai New World Building, Nanshan Road, Nanshan District, Shenzhen, 518054, P.R.China
Tel： +86(755)86226969 Fax:：+86(755)86223939 Http://www.fhsjdz.com