产品认证证书

证书编号： CSFS21.00921

申请人名称、地址

重庆川仪调节阀有限公司

重庆市北碚区蔡家岗镇蔡和路 879 号

制造商名称、地址

重庆川仪调节阀有限公司

重庆市北碚区蔡家岗镇蔡和路 879 号

生产厂名称、地址

重庆川仪调节阀有限公司

重庆市北碚区蔡家岗镇蔡和路 879 号

产品商标

产品名称和系列、型号、规格

VF04E 限位开关

认证依据标准

IEC 61508-1:2010，IEC 61508-2:2010

上述产品符合下述自愿性产品认证实施规则的要求：
SITIIAS-RJ03-02 A/4《功能安全产品认证实施规则》，
特发此证。

产品相关信息详见附件。

认证模式

型式试验+初始工厂检查+获证后的监督

发证日期： 2021 年 12 月 17 日 **有效期至：** 2026 年 12 月 16 日

首次发证日期： 2021 年 12 月 17 日

本证书在有效期内的有效性依据发证机构监督的符合结果予以保持，本证书的具体信息可通过发证机构官方网站查询。

中国认可
产品
PRODUCT
CNAS C214-P

批准人： _____ **日期：** 2021 年 12 月 17 日

上海仪器仪表自控系统检验测试所有限公司

地址：中国•上海 上海市漕宝路 103 号 邮编：200233
电话：021-64516350 传真 021-64849355 网址 www.sitiias.com.cn

产品认证证书附件

证书编号： CSFS21.00921

产品名称： 限位开关　　**型号规格：** VF04E

描　　述： VF04E限位开关是自控系统中检测阀门位置的一种现场仪表，用以将阀门的开启或关闭位置以开关量（触点）的信号输出。产品规格说明详见报告J21-043-RZ-CJ-01。

安全功能： 能正确将阀门的开启或关闭位置以开关量（触点）的信号输出。

依据标准： IEC 61508-1:2010 Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 1: General Requirements
IEC 61508-2:2010 Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 2: Requirements for electrical/ electronic /programmable electronic safety-related systems

安全完整性等级(SIL)： 根据 IEC 61508:2010，硬件安全完整性等级确定采用路径 2_H 的方法，VF04E限位开关属于 A 类安全相关组件（Type A），在低要求操作模式下，其 HFT(硬件故障裕度)=0 时，安全完整性等级达到 SIL2；其 HFT(硬件故障裕度)=1 时，安全完整性等级达到 SIL3。

λ	VF04E
λ_S	0.0
λ_{DU}	120.0
λ_{DD}	0.0
PFD_{avg}(T1=1Y)	5.26E-04
SIL（HFT=0）	SIL2
说明：失效率的单位为 FIT, 1FIT=1×10^{-9}	

其他说明： 用户需按安全手册的要求对产品进行安装、使用、定期检查和维护。

备注：

编号为 J21-043-RZ-CJ-01 报告是本证书的支持文件。本证书仅对与认证文件和样品一致的产品有效。认证文件等由 SITIIAS 保存。

上海仪器仪表自控系统检验测试所有限公司

2021 年 12 月 17 日

PRODUCT CERTIFICATION

No.: CSFS21.00921

NAME AND ADDRESS OF THE APPLICANT

Chongqing Chuanyi Control Valve Co., Ltd

No.879 Caihe road, Caijiagang town, Beibei district, Chongqing, P.R. China

NAME AND ADDRESS OF THE Manufacturer

Chongqing Chuanyi Control Valve Co., Ltd

No. 879 Caihe road, Caijiagang town, Beibei district, Chongqing, P.R. China

NAME AND ADDRESS OF THE FACTORY

Chongqing Chuanyi Control Valve Co., Ltd

No.879 Caihe road, Caijiagang town, Beibei district, Chongqing, P.R. China

Product Trademark

NAME, MODEL AND SPECIFICATON

VF04E Limit switch

THE STANDATDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

IEC 61508-1:2010, IEC 61508-2:2010

This is to certify that the above mentioned products have met the requirement of certification rules:

SITIIAS-RJ03-02 A/4 : Implemented rules for certification of functional safety products

Product information detailed in the attachment

CERTIFICATION MODE

Type test+Initial industry inspection+Supervision after obtaining the certificate

Date of Issued: Dec.17, 2021 **Date of expiry:** Dec.16, 2026

Date of original certification: Dec.17, 2021

Validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date. Specific information of this certificate can be found by this certificate issuing agency official website.

FS Approved SITIIAS Functional Safety

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Authorized by: **DATE:** Dec.17, 2021

Shanghai Inspection and Testing Institute of Instrumentation and Automation Systems Co.,Ltd.
Address: 103 Caobao Road Shanghai, P.R. of China ,200233
Tel: 86 21 64516350 Fax: 86 21 64849355 Website: www.sitiias.com.cn

PRODUCT CERTIFICATION ATTACHMENT

No.: CSFS21. 00921

Product: Limit switch **Model:** VF04E

Description: VF04E Limit switch is a kind of field instrument for detecting valve status in automatic control system. The product specifications are shown in report J21-043-RZ-CJ-01.

Safety function: Valve limit switch can correctly output the opening or closing position of the valve as open/close contact signal.

Standards: IEC 61508-1:2010 Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 1: General Requirements

IEC 61508-2:2010 Functional safety of electrical/electronic/programmable electronic safety-related systems – Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems

Safety Integrity Level （SIL）: According to IEC 61508: 2010, VF04E Limit switch is belong to type A safety-related element, hardware safety integrity level is determined via route 2_H. In low demand operation mode, when its HFT (hardware fault tolerance) = 0, the safety integrity level can reach SIL2. when its HFT (hardware fault tolerance) = 1, the safety integrity level can reach SIL3.

λ	VF04E
λ_S	0.0
λ_{DU}	120.0
λ_{DD}	0.0
PFD_{avg}(T1=1Y)	5.26E-04
SIL（HFT=0）	SIL2
Note: The failure rate unit is FIT, 1FIT=10^{-9}.	

Other explanation: Proof test and routine inspection should be performed according to Safety Manual.

Note: Test Report Number J21-043-RZ-CJ-01 is the supporting document of this certificate. This Certificate is valid for products compatible with the documents and samples approved by SITIIAS. The documents and sample are kept by SITIIAS.

Shanghai Inspection and Testing Institute of Instrumentation and Automation Systems Co.,Ltd.

Dec. 17, 2021