

Shanghai Inspection and Testing Institute of Instrumentation and Automatic Systems

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CERTIFICATE OF COMPLIANCE

Certificate No.: **CFS16119**

Applicant: Wuxi Aphe Flow Smart Controls Maker Co., Ltd.

Address: No. 29 Henghua Technical Park, No. 58 Xiuxi Road, Binhu District, Wuxi, Jiangsu, China

Manufacturer: Wuxi Aphe Flow Smart Controls Maker Co., Ltd.

Address: No. 29 Henghua Technical Park, No. 58 Xiuxi Road, Binhu District, Wuxi, Jiangsu, China

Product : Explosion Proof Valve Return Signaler **Model:** ALS-400, ALS-500/600

Description: ALS-400 and ALS-500/600 Explosion Proof Valve Return Signaler is one kind of field instruments checking valve state, which is used to output valve open or close position as open/close contacts signal. The safety function of limit switch is that output valve open or close position as open/close contacts signal.

Standards: IEC61508:2010 Functional safety of electrical/electronic/programmable electronic safety-related systems (Part 1, Part 2)

Conclusion: The Explosion Proof Valve Return Signaler that is classified as a Type A safety-related element can be used up to SIL 3 as a single device according to IEC 61508.

λS	λDU	λDD	$\lambda TOTAL$	SFF	PFDavg(T1=1Ys)
1020.7	113.4	1134.1	2268.2	95.0%	4.967×10^{-4}
Note: The failure rate unit is Fit, 1Fit=1×10 ⁻⁹					

Other explanation: Proof test should be performed according to User Manual.



Authorized Signatory:

National Quality Supervision and Inspection Center for Products of Process Automation Instrumentation

Date of Issue: Jul. 13, 2016

Note:

Test Report Number C15-270-WT is integral parts of this certificate. This Certificate is valid for products compatible with the documents and samples approved by SITI IAS. The documents and sample are kept by SITI IAS.

This Approval shall remain in force until 2021.07.12