

TYPE APPROVAL CERTIFICATE

DNV·GL

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No. **42 411 - 16 HH**

Company **Siemens AG
BT CPS
Berliner Ring 23
76437 Rastatt, Germany**

Product Description **Flame safeguard LFS1
Flame safeguard for the supervision of oil and gas flames**

Type **LFS1.11A2; LFS1.21A2; LFS1.11A1; LFS1.21A1**

Environmental Category **A**

Technical Data /
Range of Application **LFS1 units are designed for the supervision of oil burners and gas burners.**

**LFS1.11A2.....230 V AC.....Oil
LFS1.11A1.....120 V AC.....Oil
with flame detector RAR9**

**LFS1.21A2.....230 V AC.....Gas / Oil
LFS1.21A1.....120 V AC.....Gas / Oil
with flame detector ION,
QRA2, QRA2(1), QRA2(2), QRA2.9, QRA4.U, QRA4M.U, QRA10.C**

Display and operating units AZL21.00A9, AZL23.00A9

**Flame safeguards LFS1... are suitable to replace the correspondent types of
flame safeguards LAE10..., LFE10...**

Test Standard **GL Guidelines for the Performance of Type Approvals, Chapter 2- Test
Requirements for Electrical / Electronic Equipment and Systems (VI-7-2),
Edition 2012**

Documents **Test reports in accordance to page 2 of this certificate.**

Remarks **Product(s) approved by this certificate is/are accepted for installation on all
vessels classed by DNV GL.**

Valid until **2021-10-16**


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File No. **I.A.04**

Hamburg, 2016-10-17

Type Approval Symbol




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Test reports:

LFS1.x_N298 N13611 A7-9 Funktionsprüfungen_V0100
LFS1.x_LR-02_GL-03_DNV-01_BV-00_Power Supply Variation_V0200
LFS1.x_N298 N13611 A8-3 VDI-Spannungsunterbrechungen_V0200
LFS1.x_STA-OEM climatic-operation_3K5_V0100
LFS1x_mechanical_tests_transparency_estimation_240415
LFS1.x_N60730-1 N60730-2-5 A12 A13 Feuchtigkeit-Staub-Isolation_V0100
LFS1.x_N298 N13611 A8-9 ESD-Statistische Entladung_V0100
LFS1.x_N298 N13611 A8-6 EFT-BURST_V0200
LFS1.x_N298 N13611 A8-7 CI-Leitung-HF-Ströme_V0200
LFS1.x_N298 N13611 A8-5 SURGE_V0100
LFS1.x_LR-13_GL-12_DNV-06_BV-14_Conducted Low Frequency_V0200
LFS1.x_N55014-1 disturbance_voltage_V0200
LFS1.x_STA-OEM climatic-storage-transportation_V0100.xlsx
AZL2x_climatic_test_ship-approval_V0100
QRA2x4x10x_climatic_test_ship-approval_V0100
RAR9_climatic_test_ship-approval_V0100
QRA2x4x10x_LFS1.2xAx_LR-02_GL-08_DNV-3_4_BV-3_4_Power Supply Failure_variation_V0100
K004720_01_2014_M_A01
K005172_01_2016_M_A01
K005032_01_2015_E_B03
AZL2x_LR-13_GL-12_DNV-06_BV14_High Voltage_V0100
QRA2x4x10x_LR-13_GL-12_DNV-06_BV14_High Voltage_V0100
RAR9_LR-13_GL-12_DNV-06_BV14_High Voltage_V0100
AZL2x_LFS1.xxAx_ESD_ship-approval_V0100
QRA2x4x10x_LFS1.2xAx_emc_ship_approval_V0100
RAR9_LFS1.11Ax_emc_ship-approval_V0100
SW-D-AK3-LFS1_V0100
EN 298 Test Report C-F 1548-00-15

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