CERTIFICATE NUMBER	26-0417521-PDA
EFFECTIVE DATE	01-May-2026
EXPIRY DATE	30-Apr-2031
ABS TECHNICAL OFFICE	Houston ESD

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

TIMCO INDUSTRIES

located at

1910 UNRUH COURT, NEW ALBANY, IN, United States, 47150

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product:	**Alarm System, High Level and Overfill**
Model:	**LFA-S, High Level/Overfill Alarm Sensors**
Endorsements:	
Tier:	**2 - PDA Issued**

This Product Design Assessment (PDA) Certificate remains valid until 30/Apr/2031 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Soheni Haque

Soheni Haque, Sr. Managing Principal Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

TIMCO INDUSTRIES
1910 UNRUH COURT
NEW ALBANY IN
United States 47150
Telephone: 812-945-8988
Fax:
Email: sales@timcomarine.com
Web: https://timcoindustries.com/

Tier: 2 - PDA Issued

Product: **Alarm System, High Level and Overfill**
Model: **LFA-S, High Level/Overfill Alarm Sensors**
Endorsements:

Intended Service:
Intrinsically Safe High level and overfill alarm system for tank vessels

Description:
Top flange mounted, linear slide float actuating high level normally closed switch at 95% full and overfill normally closed switch at 98% full. Interfaces with loading facility I.S. dock alarms/shutdown system and/or tank barge mounted level alarm annunciator panel having I.S. output to NC switches.

Rating:
Hazardous Area Classification: Class I, Division 1, Groups A, B, C, D; Class II, Groups E, F, G; and Class III; Temp: T4a
Ambient Temperature: -20C to 100C
Magnetic Float-type Level Switch Material: 316 Stainless Steel, rated for pressure up to 120 PSI, and for light Cargo Viscosity down to 0.6 SG.
Switch Type: Hermetically Sealed, Normally Closed (NC) Latching reed switch
Max Switching Power: 10 W to 50 W
Voltage Range: up to 125Vac / 100Vdc; or 12Vdc / 24 Vdc
Current Rating: 0.5A to 1.0A
Mounting: Standard 8" flange
IP protection: the junction box is welded with IP 68 cable gland

Service Restriction:
a) Unit certification is not required for this product.
b) If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
a) Application and use are to be in accordance with the manufacturer's instructions.
b) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
c) This Design Assessment is covering hardware only. Each application / configuration and external connection is to be submitted for approval by system integrator.
d) The high-level and overfill systems be fully independent of each other and of the primary gauging system.
e) Approval of intrinsically safe type circuits is limited to combination with safety barriers type listed in the approved control drawing 20240111 Rev. C.
f) The requirements of SOLAS Regulation V/17 (i.e., EMC testing) for installation on the bridge or in the vicinity of the bridge are not covered by this Design Assessment.
g) Signaling devices which will be installed on the open deck area are not part of the system covered by this Design Assessment.
h) The material of the floating element's sensor is to be compatible with the liquid in the tank.

Notes/Drawing/Documentation:
Drawing No. Datasheet 222-412, WAGO Splicing Connector, Revision: -, Pages:
Drawing No. Datasheet tWIR, Wire Gland Data, Revision: -, Pages:
Drawing No. UL E540290, E540290-Vol1--UL Mark Document Compiler Applicant.pdf, Revision: 1, Pages:
Drawing No. Document List, Project 5627730 Cover Letter, Revision: -, Pages:
Drawing No. 20240111, 2024 LFA-S IS Ctrl Dwg, Revision: C, Pages:
Drawing No. Datasheet D1010, D1010 DIN Rail Repeater Power Supply, Revision: -, Pages:
Drawing No. PDA Document_LFA-S GUIDE_PDA-03Oct25-YP-904_New PDA-HIGH LEVEL-OVERFILL ALARM SENSORS for Haz Location; Model LFA-S, Revision: 1, Pages:

TIMCO INDUSTRIES
1910 UNRUH COURT
NEW ALBANY IN
United States 47150
Telephone: 812-945-8988
Fax:
Email: sales@timcomarine.com
Web: https://timcoindustries.com/

Tier: 2 - PDA Issued

Drawing No. LFA#7 Switch Assy Log, Switch Log, Revision: -, Pages:
Drawing No. Datasheet HSR-190R, HSR 190R Series Reed Switch, Revision: H, Pages:
Drawing No. PO0056119, Switch Purchase Order Test Report, Revision: -, Pages:
Drawing No. UL Follow-up Service Inspection Report, UL Compliance Report E540290, Revision: -, Pages:

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 30/Apr/2031 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:
Rules for Conditions of Classification – Marine Vessels 1A-1-4/7.7, 1A-1-A3 and 1A-1-A4, which cover the following:
• 2026 ABS Rules for Building and Classing Marine Vessel Rules: 4-8-3/1.7, 4-8-3/13.3, 4-8-4/27.7, 5C-1-7/21.15.1, 5C-1-7/21.15.2

National:
NA

International:
UL 508, Edition 18, 2021
UL 913, Edition 8, 2022
CSA C22.2 No. 60079-0, Edition 4, 2019
CSA C22.2 No 60079-11, Edition 2, 2014
CSA C22.2 No. 14, Edition 13, 2018

Government:
NA

EUMED:
NA

OTHERS:
NA