



## Confirmation of Product Type Approval

**Company Name:** SHRIDHAN AUTOMATION PVT. LTD.

**Address:** #B-54, KSSIDC INDUSTRIAL ESTATE KUMBALAGODUMYSORE ROAD KARNATAKA  
560074 India

**Product:** Level Switch

**Model(s):** VFS, HFS, MLI, CLS, FLX, BLS

| <b>Certificate Type</b>         | <b>Certificate Number</b> | <b>Issue Date</b> | <b>Expiry Date</b> |
|---------------------------------|---------------------------|-------------------|--------------------|
| Product Design Assessment (PDA) | 17-SG1658016-PDA          | 11-AUG-2017       | 10-AUG-2022        |
| Manufacturing Assessment (MA)   | 20-4456009                | 24-SEP-2020       | 23-SEP-2025        |
| Product Quality Assurance (PQA) | NA                        | NA                | NA                 |

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### **Intended Service**

Liquid Level Control and Monitoring Systems

### **Description**

VFS: Vertical Mounting Type Magnetic Float Level Switch made of aluminum (Certified safe type option available)

HFS: Horizontal Mounting Type Magnetic Float Level Switch made of aluminum (Certified safe type option available)

MLI: Magnetic Level Indicator ; Optional Switches and Transmitters enclosed in Stainless Steel or Aluminum Enclosures

CLS: Conductivity Type Liquid Level Switch made of aluminum

FLX: Magnetic Float Operated Level Transmitter made of cast aluminum (Certified safe type option available)

BLS: Bilge Level Switches

### **Ratings**

See attachment for details.

### **Service Restrictions**

Unit Certification is not required for this product.

### **Comments**

1. Each particular application and installation is to be specifically approved in conjunction with the relevant systems and tank arrangements.
2. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
3. Each particular application and installation is to be specifically approved in conjunction with the relevant systems and tank arrangements.
4. DNV 14 ATEX 4532X EC-type examination certificate for HFS, FLX and VFS models for installation in hazardous area.
5. MLI is declared as a simple apparatus by the manufacturer for installation in hazardous area
6. ATEX certified equipment is not to be installed in hazardous areas on U.S vessels unless it can be prove to have been tested to the applicable IEC 60079 series standards by an independent laboratory accepted by the U.S coast Guard. USCG notice 01-12 (February 7, 2012).

**Notes, Drawings and Documentation**

1. Drawing no.: SAPL/Design/ABS/VFS-1, Rev.01, Vertical Mounting Type Float Level Switch
2. Drawing no.: SAPL/Design/ABS/VFS-2, Rev.01, Vertical Mounting Type Float Level Switch
3. Drawing no.: CTGE/VFS/9-2010, Vertical Mounting Type Magnetic Float Level Switches Brochure
4. Test report: 201016166, Date: 19-May-2010, Rev.0, In-house Sandvik Materials Technology, Test Certificates for VFS Pipes
5. UL Test: E47258, as updated on 23 Mar 2016, Compliance Report for Reed Switches- VFS
6. UL Test: E223755, as updated on 12 June 2017, Reed Switch Compliance reports for FLX and VFS
7. In-house test report: SAPL/DC/VFS-1, Date: 13-Apr-2011, Rev.00, Design Calculations for VFS (Float switches)
8. Drawing no.: SAPL/Design/ABS/HFS-1, Rev.01, Horizontal Mounting Type Float Level Switch
9. Drawing no.: SAPL/Design/ABS/HFS-2, Rev.01, Horizontal Mounting Type Float Level Switch
10. Drawing no.: SAPL/Design/ABS/HFS-3, Rev.01, Horizontal Mounting Type Float Level Switch
11. In-house test report: SAPL/DC/HFS-1, Date: 16-Apr-2011, Rev.00, Design Calculations for HFS (Float switches)
12. LCIE Test report: 593430B, Date: 08-Feb-2010, Compliance of Microswitch in HFS
13. Drawing no.: CTGE/HFS/9-2010, Horizontal Mounting Type Magnetic Float Level Switches Brochure
14. Drawing no.: SAPL/Design/ABS/MLI-1, Rev.01, Magnetic Level Indicator
15. Drawing no.: SAPL/Design/ABS/MLI-2, Rev.01, Magnetic Level Indicator
16. Drawing no.: SAPL/Design/ABS/MLI-3, Rev.01, Magnetic Level Indicator
17. Test report: V/2504, Date 22-Apr-2011, Metal-lab laboratories services, Test Certificates for MLI – Pipes
18. In-house test report: SAPL/DC/MLI-1, Date: 23-Feb-2011, Rev.00, Design Calculations for MLI
19. Drawing no.: CTGE/MLI/9-2010, Magnetic Level Indicator Brochure
20. Drawing no.: SAPL/Design/ABS/CLS, Rev.01, Conductivity Type Level Switch

21. Drawing no.: CTGE/CLS/9-2010, Conductivity Type Liquid Level Switch Brochure
22. Drawing no.: SAPL/Design/ABS/FLX-1, Rev.01, Magnetic Float Operated Level Transmitter
23. Drawing no.: SAPL/Design/ABS/FLX-2, Rev.01, Magnetic Float Operated Level Transmitter
24. Test report: SAPL/249/2010-11, Date: 19-Mar-2011, Test certificate for electronics instruments/devices for FLX
25. In-house test report: SAPL/DC/FLX-1, Date: 13-Apr-2011, Rev.00, Magnetic Float Level Transmitter-Design Calculations
26. Drawing no.: SAPL/Design/ABS/BLG-1, Rev.0, Bilge Level Switch
27. Document: Bilge Level Switch Brochure
28. Drawing no.: DOC - MLI Switches - IEC 60079-11, MLI Switches-Simple apparatus conformity
29. Document no.: DNV 14 ATEX 4532X, Rev.0, Ec-type examination- HFS, FLX, VFS; DNV test report.

**Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 10/Aug/2022 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.

**ABS Rules**

ABS Steel Vessel Rules (2017): 1-1-4/7.7, 1-1-A3 and A4, 4-6-4/11.7, 4-6-4/13.5.6 (d), 4-6-4/15.3.4(d), 4-8-3/1.11.1

ABS Offshore Support Vessel Rules (2017): 1-1-4/7.7, 1-1-A3 and A4, 4-6-4/11.7, 4-8-3/1.11.1;

ABS Steel Vessel Rules under 90 Meters in Length (2017): 1-1-4/7.7, 1-1-A3 and A4, 4-4-3/13.7, 4-6-3/3.1.1(a);

ABS Facilities on Offshore Installation Rules (2017): 1-1-4/9.7, 1-1-A2 and A3;

ABS Mobile Offshore Drilling Unit Rules (2017): 1-1-4/9.7, 1-1-A2 and A3, 4-2-3/3.7, 4-3-3/3.1.1(a);

ABS High Speed Craft Rules (2017) 1-1-4/7.7, 1-1-A3 and A4, 4-4-3/13.7, 4-6-3/3.1.1(a);

ABS Steel Barges Rules (2017): 1-1-4/7.7, 1-1-A3 and A4;

ABS Rivers and Intracoastal Waterways Rules (2017:) 1-1-4/7.7, 1-1-A3 and A4;

**International Standards**

IEC 60079-0: 2012, IEC 60079-1:2007

**EU-MED Standards**

NA

**National Standards**

NA

**Government Standards**

NA

**Other Standards**

NA



A handwritten signature in blue ink, appearing to read "James W. White".

Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 06-Oct-2020 6:26

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.