



CERTIFICATE NUMBER  
18-HS1714284-PDA

DATE  
01 Mar 2018

ABS TECHNICAL OFFICE  
Houston ESD - Electrical

## CERTIFICATE OF Design Assessment

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

### **APPLETON GROUP**

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: **Lighting Fixtures, LED, Hazardous Area**

Model: **FDLED Series**

This Product Design Assessment (PDA) Certificate 18-HS1714284-PDA, dated 01/Mar/2018 remains valid until 28/Feb/2023 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING

Tim Kimble  
Engineer/Consultant

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 the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

## APPLETON GROUP

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**Tier: 2 - PDA Issued**

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**Product:** Lighting Fixtures, LED, Hazardous Area

**Model:** FDLED Series

**Intended Service:**

Marine and Offshore Installations, Hazardous Locations.

### Description:

ATX™ FDLED Series Luminaires, Flameproof and Dust-Ignitionproof

Construction: Aluminum end caps and cover, Nitrile O-ring seal, tempered borosilicate glass tube, zinc plated steel, galvanized steel or 316 stainless steel mounting accessories.

### Rating:

Hazardous Area: Gas - IEC Zone 1 & 2, Group IIB / IIC; Dust - Zone 21 & 22;

Enclosure: IP66/67;

Ambient Temperature Range: -30°C to +60°C (-22°F to +140°F);

Input Voltage: 230Vac, 50/60Hz; 1 hour battery duration (emergency);

Nominal Output: 400, 2400 or 4725 lumens

See attached document for additional details

### Service Restriction:

Unit Certification is not required for this product. 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:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

See attached document for additional details

### Notes/Drawing/Documentation:

Brochure, ATX™ FDLED Series Luminaires, Flameproof;

IECEX INE 15.0046X, Certificate of Conformity, Date issued: 2015-11-06;

### Terms of Validity:

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## STANDARDS

### ABS Rules:

2018 Steel Vessel Rules 1-1-4/7.7, 1-1-Appendix 3, 1-1-Appendix 4, 4-8-3/1.3, 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11.1, 4-8-3/1.17.1, 4-8-3/13.3.2, 4-8-3/13.3.3;

2018 MODU Rules 1-1-4/9.7, 1-1-Appendix 2, 1-1-Appendix 3, 4-3-1/9, 4-3-1/11, 4-3-1/15, 4-3-1/17, 4-3-3/9.1.2, 4-

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3-3/9.1.3

**National:**

NA

**International:**

IEC 60079-1:2014-06 Seventh Edition, Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures ‘d’;

IEC 60079-31:2013 Second Edition, Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosures ‘t’

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA