



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 20-MAR-2023. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

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.

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.

Product Name: Battery Charger
Model Name(s): EnerGenius IQ

Presented to:
STORED ENERGY SYSTEMS, LLC
1840 INDUSTRIAL CIRCLE
CO 80501
United States

Intended Service: Charging of stationary batteries while providing clean stable DC power for continuous loads in Marine and Offshore Applications.

Description: Automatic DC Power Supply / Charger with Intelligent Battery Monitoring & Data Logging suitable for non-hazardous locations. Model QXXXYYYAZZZZZZ Where XXX = DC output voltage Options: 012, 024, 048, 120, 240 Where YYY = DC output current Options: 006, 012, 016, 025, 035, 050, 075, 100, 150 Where A = AC input voltage Options: 3 = 208V, 60 Hz 4 = 230-240V, 50/60 Hz 8 = 480V, 60 Hz P = 115-120/208/230-240V, 50/60 Hz S = 230-240V, 60 Hz T = 115-120/208/230-240V, 60 Hz V = 400V, 50/60 Hz Z = 208/240V, 60 Hz Where Z = single digit option codes

Tier: 5

Ratings: Output Voltage: 12, 24, 48, 120/240 VDC Nominal; Frequency: 50/60 Hz; Operating Temperature: -40°C to + 50°C; Enclosure: IP 22;

Service Restrictions: Unit Certification is not required for this product except where used for essential or emergency services as defined by 4-8-3/5.11.1(a) of the Steel Vessel Rules or 6-1-7/19.9 of the MODU Rules.

Comments: - The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. - The charging facilities are to be such that a completely discharged battery is recharged to at least 80% capacity in not more than 10 hours.

- Each user must use output cables that have sufficient current carrying capacity as per ABS Steel Vessels Rules 4-8-2/7.7.1.

Notes / Documentation:

PRODSPEC-135, EnerGenius IQ detailed product specification, Revision: R 20140619-E117114, UL Certificate of Compliance, Date: 06-19-2014 EC Declaration of Conformity In accordance with EN ISO 17050-1:2010, Date: 07-14-2017 Supporting Documentation listed in ABS Task T1182566: Product Specification PRODSPEC- 135, EnerGenius IQ detailed product specification, Rev. L SENS IPX2 Q1 and Q2 Enclosure Drip Test; Cascade TEK Test Report Number: CTC C662 Dated May 22, 2013;

Term of Validity:

This Product Design Assessment (PDA) Certificate 18-HS1725925-PDA, dated 21/Mar/2018 remains valid until 20/Mar/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.

ABS Rules:

Rules for Conditions of Classification, Part 1 - 2018 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2018 ABS Rules for Building and Classing Steel Vessels: 4-8-3/5.9 Rules for Conditions of Classification, Part 1 - 2018 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2018 ABS Rules for Building and Classing Mobile Offshore Drilling Units: 6-1-7/9.17

National Standards:

UL 1012, 8th Edition CAN/CSA C22.2 NO. 107.2-01, R2016

International Standards:

EN 50581:2012 EN 60335-1:2012/A11:2014 EN 60335-2-29:2004/A2:2010 EN 61000-6-2:2005/AC:2005 EN 61000-6-4:2007/A1:2011

Government Authority:

EUMED:

Others:

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	18-HS1725925-PDA	23-MAR-2018	20-MAR-2023



ABS Programs

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 was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. 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.