



Confirmation of Product Type Approval

Company Name: PAN ELECTRIC INDUSTRIA ELETROELETRONICA LTDA

Address: RUA LUIZ PEDRO DE MARCO 799-CONCEICAO BENTO GONCALVES RIO GRANDE SUL 95.701-040 Brazil

Product: Cable, Instrumentation, Signal, Control and Communication Cables

Model(s): PANNAV ISC

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	26-0296641-PDA	18-JUN-2026	17-JUN-2031
Manufacturing Assessment (MA)	20-4509552	04-NOV-2020	03-NOV-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Control and Instrumentation Cables for Internal Installation of Electrical Panels.

Description

Flame retardant, halogen free, low smoke emission control and instrumentation cables for internal installation of electrical panels. Insulation: HF 90.

Single core with cross sectional areas: 0,5 to 2,5 mm². Complete description as per attached document.

Ratings

Voltage class: 150/250 V

Temperature class: 90°C

Service Restrictions

1. Unit certification is not required except where they are used for electric propulsion systems. All propulsion cables, other than internal wiring in control gears and switchboards, are to be subjected to dielectric and insulation tests in the presence of the Surveyor (see 4-8-5/5.17.11 of the 2026 Marine Vessel Rules).
2. 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

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The following markings are to be provided in accordance with IEC 60092-350: identification of origin (manufacturer's name or trade name); rated voltage (Uo/U) and construction (number of cores and cross sectional area of conductor).

Notes, Drawings and Documentation

Drawing No. DÁTA BOOK ISC, DATABOOK INSTRUMENTAÇÃO ISC 2025 2040180 8226, Revision: -

Drawing No. CRONOGRAMA ISC, CRONOGRAMA DE TESTES ISC 2025 2040180 8226 (TESTS SCHEDULE), Revision: -

Drawing No. CRONOGRAMA ISC 2025 – AJUSTADO, TEST PROGRAM - ISC 2025 – REVISED, Revision: -

Drawing No. 001, TEST REPORT - PANNAV ISC 0.5, issued by PanElectric, dated Sep-2025

Drawing No. 002, TEST REPORT - PANNAV ISC 2.5, issued by PanElectric, dated Sep-2025

Drawing No. 2506130-2-008, TEST REPORT - PAN ELECTRIC - (IEC 60092-376), issued by ITEN – Instituto Tecnológico de Ensaios Ltda., dated 16-Oct-2025

Drawing No. 2506130-2-009, TEST REPORT - PAN ELECTRIC - (IEC 60092-376), issued by ITEN – Instituto Tecnológico de Ensaios Ltda., dated 15-Oct-2025

Drawing No. 2506130-2-009-1, TEST REPORT - PAN ELECTRIC - (IEC 60092-376), issued by ITEN – Instituto Tecnológico de Ensaios Ltda., dated 15-Oct-2025

Drawing No. BR25XZT1 001, TEST REPORT - PAN - IEC 61034-1-ISC 2,5mm², issued by TÜV Rheinland do Brasil Ltda., dated 08-Oct-2025

Drawing No. 7562575-A, PROTOTYPE TESTING REPORT, issued by ABS, dated 15-May-2026

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 17/Jun/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.

ABS Rules

2026 Rules for Conditions of Classification, Part 1A: 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, which covers the following:

2026 Rules for Building and Classing Marine Vessels: 4-8-3/9

2025 Rules for Conditions of Classification - Offshore Units, Part 1B: 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:

2026 Rules for Building and Classing Offshore Units: 4-3-4/7

International Standards

IEC 60092-350:2020

IEC 60092-360:2021

- IEC 60092-376:2025
- IEC 60332-1-1:2004+AMD1:2015
- IEC 60332-1-2:2025
- IEC 60332-3-22:2018
- IEC 60754-1:2011+AMD1:2019
- IEC 60754-2:2011+AMD1:2019
- IEC 60684-2:2025
- IEC 61034-1:2005+AMD1:2013+AMD2:2019
- IEC 61034-2:2005+AMD1:2013+AMD2:2019

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'James J. White', is positioned above the printed name and title.

Corporate ABS Programs
 American Bureau of Shipping
 Print Date and Time: 18-Jun-2026 4:22

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.