



Confirmation of Product Type Approval

Company Name: SELCO APS

Address: BETONVEJ 11, DK-4000 ROSKILDE, Denmark

Product: Power Monitoring Unit

Model(s): T2000/T3000/T3100/T4800/T4500

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-1992604-PDA	25-NOV-2020	24-NOV-2025
Manufacturing Assessment (MA)	20-4548454	03-DEC-2020	02-DEC-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards.

Description

Reverse power relays T2000 protects generators prime mover from physical damage and overload protection for parallel generator configuration.

Frequency relays T3000 monitors frequency for generators, bus bars and other systems.

Voltage relay T3100 provides voltage monitoring on generators, bus bars or any other distribution system.

Auto synchronizer T4500 provides generator synchronization to bus bars by controlling the generator speed.

Load sharer T4800 provides load sharing and frequency control for parallel running generators.

Ratings

T3100: Max. Voltage: 660 Volt, operating temperature: -20 to +70 C degrees; overvoltage level 100-120%; undervoltage level: 80-100%.

T2000 series: Max. Voltage 660V; operating temperature: -20 to +70 C degrees; frequency range: 45-400 Hz; Trip level 2-20% In.

T4500 series: Max. Voltage 660V; operating temperature: -20 to +70 C degrees; Frequency range: 35 to 70 Hz.

T3000 series: Max. Voltage 660V; operating temperature: -20 to +70 C degrees; frequency range: 40 to 70 Hz; underfrequency/overfrequency level: 45 to 65 Hz; Contact rating: AC: 250 V, 2 A, 250 VA; DC: 60 V, 2 A, 100 W.

T4800 series: 60V; operating temperature: -20 to +70 C degrees; frequency range; frequency range: 35 to 70 Hz; Frequency adjustment: 48 to 62 Hz; Proportional band: ± 50 - 250% load; ± 5 - 25% frequency; Dead band zone: ± 2 - 10% load; ± 0.2 - 1.0% frequency.

Service Restrictions

1. Where the product is used in a Category II or III Computer Based Systems as described in Section 4-9-3/Table 1 of the 2020 Marine Vessel Rules, the complete assembly unit or subassembly unit is to be tested at the manufacturer's shop in the presence of the Surveyor to verify compliance with the tests in 4-9-9/15.7 Table 2. Otherwise, unit certification is not required.

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. Environmental & EMC tests performed by Delta: Test report No. DANAK-1911045.

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

Notes, Drawings and Documentation

Drawing No. T2000-T2500-T4800 P20-0110-2, Supplementary test report T2000-T2500-T4800 P20-0110-2

Drawing No. T3200-T3300-T4500-T7900 P20-0110-1, Supplementary test report T3200-T3300-T4500-T7900 P20-0110-1

Support documentation from previous review:

Drawing No. 016, T2000_Datasheet

Drawing No. 017, T3000_Datasheet

Drawing No. 018, T3100_Datasheet

Drawing No. 019, T4500_Datasheet

Drawing No. 020, T4800_Datasheet

Drawing No. Danak-198611

Drawing No. 026, Delta-K251196-3, Rev. 2, Revision: -, Pages: 1

Drawing No. R860729-03E

Drawing No. K24-0393A

Drawing No. Danak-1911045

Drawing No. Danak-19/13483

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 24/Nov/2025 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

2020 Rules for Condition of Classification: 1-1-4/7.7, 1-1-A3 & A4

2020 Marine Vessel Rules: 4-9-9/13, 4-9-9/15.7 Tables 1 & 2

2020 Rules for Conditions of Classifications - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2 & A3

2020 Mobile Offshore Units Rules: 6-1-1/9, 6-1-1/13

International Standards

IACS UR E10: Rev. 7: 2018

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 12-Feb-2021 6:27

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.