



CERTIFICATE NUMBER
EFFECTIVE DATE
EXPIRY DATE
ABS TECHNICAL OFFICE

21-2091349-PDA-DUP
24-Feb-2021
23-Feb-2026
Rio de Janeiro Engineering -
Machinery

CERTIFICATE OF Product Design Assessment

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

BENCHMARK ELECTRONICS (M) SDN BHD

located at

**FREE INDUSTRIAL ZONE, PHASE 1, BAYAN LEPAS, PENANG,
Malaysia, 11900**

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: Programmable Logic Controller
Model: RX3i, RSTi-EP
Endorsements:
Tier: 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 23/Feb/2026 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.

American Bureau Of Shipping

Roberto B. Assumpção

Roberto B Assumpcao, 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 ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

BENCHMARK ELECTRONICS (M) SDN BHD

FREE INDUSTRIAL ZONE, PHASE 1

BAYAN LEPAS PENANG

Malaysia 11900

Telephone: 604-6441616

Fax: 604-6442033

Email: tienshin.lee@bench.com

Web: www.bench.com

Tier: 5 - Unit Certification Required

Product: Programmable Logic Controller

Model: RX3i, RSTi-EP

Endorsements:

Intended Service:

Marine (Propulsion Control, Power Management, Alarm & Monitoring, Auxiliary Machinery Control) for ACC and ACCU Classed Vessels and Offshore and Industrial Controls.

Description:

The following components of the PACSystems RX3i are covered by this certificate: IC695CHS016CA, IC695CHS012CA, IC695CHS007CA, IC695CPL410CA, IC695PNS001CA, IC695PNS101CA, IC695PNC001CA, IC695ETM001CA, IC694ALG222CA, IC694ALG223CA, IC694ALG232CA, IC694ALG233CA

The following components of the RSTi-EP are covered by this certificate: EPSCPE100CA, EPSCPE115CA

Rating:

Power Supply: 24 Vdc

Operating temperature: 0 to 60°C

Service Restriction:

- 1) 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.
- 2) Tests and approval for hardware only. Each particular application/configuration is to be specifically approved.
- 3) This equipment is not suitable for installation in the outside/exposed to sea atmosphere.

Comments:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) Equipment must be installed in a metal enclosure with all cables coming into the enclosure being shielded.
- 3) Tests and approval are for hardware only.

Notes/Drawing/Documentation:

Drawing No. 00813-0100-0101, EPSCPE100/115, Revision: -, Pages: -
Drawing No. 00813-0100-0102, CPL410 IPI, Revision: -, Pages: -
Drawing No. 41G1244-MD01, ALG392 (30Di5B1) Assembly, Revision: 3, Pages: 1
Drawing No. 41G1301-SC01-000-F0, 40BZ0A1, Revision: 1, Pages: 1
Drawing No. 41G1302-SC01-000-F0, 40BZ0B1, Revision: 1, Pages: 1
Drawing No. 41G1485-SC01-000-EO, 30II5A1 AND 30II3A1, Revision: 3, Pages: 1
Drawing No. 41G1491-AD30, 7 slot backplane final assembly, Revision: 0, Pages: 1
Drawing No. 41G1491-SC01-000-H0, 40BZ0C1, Revision: 1, Pages: 1
Drawing No. 41G1905-SC01-000-B2, ETM_PNS_PNC_SOC, Revision: 0, Pages: 1
Drawing No. 41G1905-SC01-000-B3, ETM_PNS_PNC_SOC, Revision: 0, Pages: 1
Drawing No. 41G1905-SC01-000-C1, ETM_PNS_PNC_SOC, Revision: 0, Pages: 1
Drawing No. 41G2202-SA10, ASY- DIN Mount/Clip, Revision: A, Pages: -
Drawing No. 41G2393-SC01-000-C0, CPU1, Revision: 3, Pages: -
Drawing No. 41G2437-SC01-000-A0, 41G2437 Super CAP Daughter Card for CPU1 Carrier, Revision: 0, Pages: 1
Drawing No. 42G9000-0107, Panel - IO Wrap, MFA, Revision: E, Pages: -
Drawing No. 42G9000-0212-A1, Housing - RX3i, Single, Diecast with Screws, Revision: A1, Pages: 1
Drawing No. 42G9000-0212-A3, Housing - RX3i, Single, Diecast with Screws, Revision: 2, Pages: 1
Drawing No. 42G9000-0213-A5, Side Plate - RX3i Single, Diecast, Revision: 1, Pages: 1
Drawing No. 42G9000-0233, Side Panel - Right, Revision: A, Pages: 1
Drawing No. 42G9000-0234, Side Panel - Left, Revision: A, Pages: 1
Drawing No. 42G9000-0392-A2, Side Plate - RX3i Single, Diecast, ETM, Revision: A5, Pages: 1

BENCHMARK ELECTRONICS (M) SDN BHD

FREE INDUSTRIAL ZONE, PHASE 1

BAYAN LEPAS PENANG

Malaysia 11900

Telephone: 604-6441616

Fax: 604-6442033

Email: tienshin.lee@bench.com

Web: www.bench.com

Tier: 5 - Unit Certification Required

Drawing No. 44c718374, 12-16 SLOT BACKPLANE FINAL ASSEMBLY, Revision: 3, Pages: 1

Drawing No. EU2105, EMC Final Report, Revision: -, Pages: -

Drawing No. GFK-2222AN, RX3i CPU REference Manual, Revision: -, Pages: -

Drawing No. GFK-2314V, RX3i System Manual, Revision: -, Pages: -

Drawing No. NU2105, ENV Marine Final Report, Revision: -, Pages: -

Drawing No. TDD-20200921, Test Plan, Revision: 1.3, Pages: -

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 23/Feb/2026 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.

STANDARDS**ABS Rules:**

2021 Rules for Conditions of Classification, Part 1: 1-1-4/7.7, 1-1-A3, 1-1-A4

2021 Rules for Building and Classing Marine Vessels: 4-8-3/1.7, 4-8-3/1.11, 4-9-5/17, 4-9-6/23, 4-9-9/1, 7, 13; 4-9-9/Table 1

2021 Rules for Conditions of Classification, Offshore Units and Structures, Part 1: 1-1-4/9.7, 1-1-A2, 1-1-A3

2021 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-1/15, 4-3-1/17.1

National:

NA

International:

IACS UR E10 Rev.7: 2018

Government:

NA

EUMED:

NA

OTHERS:

NA