



CERTIFICATE NUMBER 23-2428336-PDA
EFFECTIVE DATE 1-AUG-2023
EXPIRATION DATE 31-JUL-2028
ABS TECHNICAL OFFICE Yokohama Engineering Services

CERTIFICATE OF Product Design Assessment

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

KEI SYSTEM CO., LTD.

located at

OSAKA, Japan

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 Computer System

Model KEI-64S

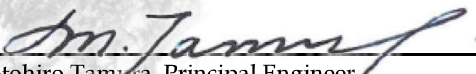
Endorsement: Other

This Product Design Assessment (PDA) Certificate remains valid until 31 July 2028 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


Motohiro Tamura, Principal Engineer

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

KEI SYSTEM CO., LTD.

2-2-23, KISHINOSATO, NISHINARI-KU

OSAKA-CITY OSAKA

Japan 557-0041

Telephone: +81-6-6661-1151

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Email: info3@kei-system.co.jp

Web: www.kei-system.co.jp

Tier: 2 - PDA Issued

Product: Computer System

Model: KEI-64S

Endorsements:

Intended Service:

Monitoring, alarm, data logging, and valve control system for Vessels with ACC, ACCU or ABCU notation.

Description:

KEI-64S computer system consists of Host Computer Type KEI-64S-A/KEI-64A-D, Power supply, ILS Module, ILS interface module, power supply for local and noise filter. See attachment for component details.

Rating:

Rated Voltage: AC100V or AC220V, DC24V. Also see attachment for details.

Operating ambient temperature: 0-55°C

Service Restriction:

(1) Unit Certification is not required for this product. However, unit certification is required by the user to customize this equipment where this equipment is used for Computer-based Systems Category II services in 4-9-3 of the Marine Vessels Rules as applicable. The tests in the presence of the Surveyor are required in accordance with 4-9-9/Table 2 of the Marine Vessels Rules "Performance Tests" where it is used for control, monitoring and safety systems of propulsion machinery, propulsion boilers, vital auxiliary pumps and electrical generating plants. The performance tests are to be carried out at the assembled plant before installation onboard or after installation onboard.

(2) The following items for the requirement applicable to Computer-based Systems in accordance with 4-9-3 of the Marine Vessels Rules;

(a) The assigned system Category II.

(b) The required evidence to be kept by the manufacturer in accordance with 4-9-3/Table 2 of the Marine Vessels Rules.

Comments:

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

(2) Unless specially directed by Administration, this approval is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS (Consolidated Edition 2020), as amended.

Notes/Drawing/Documentation:

(1) Specifications KEI-64S Computer system (ABS Product Design Assessment), Dwg. No. ABS-KEI-64S-502A, Date: 6 March 2018,

(2) Software Quality Control Plan, Dwg. No. KS6-01, Date: 26 April 2017,

(3) KEI-64S Computer system Products List, Dwg. No. ABS-KEI-64S-001, Receive Date: 29 May 2018,

(4) DESIGN AND PERFORMANCE STANDARDS CODES AND RULES, Dwg. No. ABS-KEI-64S-503, Date: 16 January 2018,

(5) TEST PROCEDURE KEI-64S Computer system (ABS Product Design Assessment), Dwg. No. ABS-KEI-64S-501, Date: 6 March 2018,

(6) TEST REPORT KEI-64S Computer system (ABS Product Design Assessment), Dwg. No. ABS-KEI-64S-505, Date: 17 January 2018 issued by KEI SYSTEM CO., LTD.,

(7) TEST REPORT KEI-64S Computer system (ABS Product Design Assessment), Dwg. No. ABS-KEI-64S-505, Date: 29 May 2018 issued by KEI SYSTEM CO., LTD.

(8) Test Report for IACS UR E10, Report No. A-010-21-A dated 16 April 2021 issued by Voluntary EMC Laboratory Accreditation Center Inc.

(9) Test Report for IACS UR E10, Report No. A-405-20-A dated 16 April 2021 issued by Voluntary EMC Laboratory Accreditation Center Inc.

(10) Test Procedure KEI-64S Computer system (CCS Type Approval System), Dwg. No. CCS-KEI-64S-502A, Received date: 2 July 2023.

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Tier: 2 - PDA Issued

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Marine Vessel Rules 1-1-4/7.7, 1-1-A3 & A4, 4-8-3/5, 4-9-3 (Cat II) and 4-9-9/13,
2023 High-Speed Craft 1-1-4/11.9, 1-1-A2 & A3, 4-6-4/7, 4-7-8 (Cat II) and 4-7-9/15

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

IACS UR E10 (Rev. 8 Feb. 2021, Corr. 1, Jan. 2022)

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 23-2428336-PDA
Issue Date: 1 August 2023
Expire Date: 31 July 2028
Company: KEI SYSTEM CO., LTD.
Factory or Works:
Product/Equipment: Computer System
Model: KEI-64S

KEI's List of Equipment / Unit (Module) Type

Name	Type	Manufacturer	Outline
Host computer	KEI-64S-A	KEI system Co., Ltd	This product is host computer of system. Rated input voltage:AC100V~AC220V
	KEI-64S-D		This product is host computer of system. Rated input voltage:DC+24V
Power supply	PLA30F-12	COSEL Co., Ltd	This product is internal power supply for KEI-64S-A.
	STMGFS 302412		This product is internal power supply for KEI-64S-D.
	ESS50-12 (ES series)	ETA Electric Industry Co., Ltd	This product is internal power supply for KEI-64S-A.
	SVB12SC24		This product is internal power supply for KEI-64S-D.
ILS module	ILS-DI	KEI system Co., Ltd	Contact input unit
	ILS-DV		AC voltage input unit
	ILS-DO		Contact output unit
	ILS-AII		Current input unit
	ILS-AVI		Voltage input unit
	ILS-PT		Pt input unit
	ILS-VR4		Potentiometer input unit
	ILS-BIO		Current output unit
	ILS-BVO		Voltage output unit
	ILS-REP		ILS line repeater unit
ILS interface module	ILS-ETH	KEI system Co., Ltd	This product is interface between host computer and ILS modules. (local I/O modules)
Power supply (ES series)	ESS15-24	ETA Electric Industry Co., Ltd	These products are power supply for local. (For AC power supply) The difference by the type is the output maximum rated power. Rated input voltage:AC100V~AC220V Rated output voltage:DC+24V
	ESS30-24		
	ESS50-24		
	ESS75-24		
	ESS100-24		
	ESS150-24		
Power supply (SV series)	SVB24SC24	ETA Electric Industry Co., Ltd	This product is power supply for local.(For DC power supply) Rated input voltage:DC+24V Rated output voltage:DC+24V
Noise Filter	RSAN-2006	TDK-Lambda Corporation	These products are noise filter for local. The difference by the type is the output maximum rated input current.
	RSAN-2010		
	RSAN-2016		