Certificate No: LR2340887TA
Issue Date: 26/07/2023
Expiry Date: 25/07/2028

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**J. P. Sauer & Sohn Maschinenbau GmbH**
Address	Brauner Berg 15, Kiel, 24159, Germany
Place of Production	Kendrion Kuhnke Automation GmbH Lütjenburger Strasse 101, Malente, 23714, Germany
Type	Control Units
Description	Sauer ecc 4.0 base and operator module (V.02.xx.yy)
Trade Name	Compressor Control and Display Unit
Application	Marine and Offshore applications for use in environmental categories ENV1 and ENV2 as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – 2021. The equipment is suitable for the installations in Power Distribution Zones, only.
Specified Standard	Manufacturer's Specification.
Ratings	24V AC (-15%...+20%) 24V DC (-15%...+20%)

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Martin Lange

Electrical & Control - Lead Specialist to
Lloyd's Register EMEA
A member of the Lloyd's Register group

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Additional Tests	Ingress Protection rating: IP54 (display) Flame Retardant test: IEC 60092-101 / IEC 60695-11-5
Other Conditions	Final arrangements of the system have to be in compliance with Lloyd's Register Rules and Regulations. The common/group alarm output of the controller does not comply with the LR Rules and Regulations with regards to the re-initiation of the common/ group alarm if a second fault occurs, prior the first has been rectified (July 2023, Part 6, Chapter 2, Section 2.3.9). Therefore, for class acceptance it must be ensured that the warnings and alarms are transferred individually via the communication interface to the ship's alarm and monitoring system to advise the operator.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document HPC1762143-23 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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