Certificate No: LR26268114TA
Issue Date: 26/06/2026
Expiry Date: 25/06/2031

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	**AVAT Automation GmbH**
Address	Derendinger Straße 40, Tübingen, 72072, Germany
Type	Control Units
Description	Combustion Engine Monitoring Modules
Trade Name	E²PRECON-B10, E²PRECON-B12, KC2120, KC2120plus
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2024.
Specified Standard	Manufacturer's specification IACS UR E10 (Rev.9 Aug 2023)
Ratings	Power supply: 24 VDC
Additional Tests	Low Temperature test (-25°C/16h)
Other Conditions	The requirements of the Lloyd's Register (LR) Rules apply where the equipment is installed on LR Classed vessels and offshore installations. The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

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Type Approval Certificate

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

The monitoring modules are suitable for battery operation. Suitability for the operation using a AC-DC power supply module unit has not been supported by documentary evidence.

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 TSO-25-045716/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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