中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
GB25PTB00025

型式认可证书
CERTIFICATE OF TYPE APPROVAL

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。
This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

DEIF A/S

地址/Address

Frisenborgvej 33, DK-7800 Skive, DENMARK

产品名称/Product

智能控制器
Intelligent controller

认可标准/Approval Standard

1. 中国船级社《钢质海船入级规范》第4篇第1、2、3章
Chapter 1&2&3, Part Four of China Classification Society Rules for Classification of Sea-Going Steel Ships
2. 中国船级社《钢质海船入级规范》第7篇第2章
Chapter 2, Part Seven of China Classification Society Rules for Classification of Sea-going Steel Ships
3. 中国船级社《船舶网络安全指南》（GD14-2024）
China Classification Society Guidelines For Ship Cyber Security (GD014-2024)
4. IACS UR E27 (Rev.1) Cyber resilience of on-board systems and equipment

用于/Intended for

船舶与海上设施/Ships and Offshore Installations
the Power Management System

证书有效期至/This Certificate is valid until **2029年08月25日/ Aug. 25,2029**

发证机构 Issued by 中国船级社慕德堡办事处 CCS Mothenburg Office

签发日期 Date 2025年10月14日 Oct. 14,2025

产品明细/Product Description

电站控制和保护用多功能系统/Multi-Function System for Control and Protection of Generator Plant(M0001)

名称/Name	属性（值）/Value	单位/Unit
型号/Type	iE 650 PLC See additional page for details	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: NP25PPP02402

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No.： EPC 929-05_21_A_398-01 iE 650 AMC 600 A- Tests
试验报告日期/ Test Report Date： 2024-05-24
试验单位/ Laboratory: DEIF A/S
试验单位地址/ Test Address: Frisenborgvej 33, DK-7800 Skive, DENMARK

试验报告编号/ Test Report No.： EPC 929-05_23_A_398-01 iE 650 AMC 600 B - Tests
试验报告日期/ Test Report Date： 2024-05-27
试验单位/ Laboratory: DEIF A/S
试验单位地址/ Test Address: Frisenborgvej 33, DK-7800 Skive, DENMARK

试验报告编号/ Test Report No.： EPC 929-05_20_A_929-01 iE 650 test
试验报告日期/ Test Report Date： 2024-10-09
试验单位/ Laboratory: DEIF A/S
试验单位地址/ Test Address: Frisenborgvej 33, DK-7800 Skive, DENMARK

试验报告编号/ Test Report No.： ie650_e27_testreport
试验报告日期/ Test Report Date： 2025-09-30
试验单位/ Laboratory: DEIF A/S
试验单位地址/ Test Address: Frisenborgvej 33, Skive, 7800, Denmark

认可后的产品检验方式/ Method of Product Inspection after Approval

按规范只认可不进行产品检验的产品/The product approved only in term of the rules：
认可后的产品由制造厂检验合格后签发合格证明，并连同该产品的本社认可证书复印件一并交付用户，制造厂对产品符合公约、法规、本社规范和本社认可的标准规定负责。
After approval, product inspection should be carried out by the Manufacturer. Upon satisfactory inspection, and the Quality Certificate issued by the Manufacturer should be provided to the purchaser together with the copy of the approval certificate issued by the Society. The manufacturer should take responsibility for the product being in compliance with the convention, statutory regulation, the Society rules and the standard accepted by the Society.

认可保持条件/ Maintenance Requirements of Approval

1.型式认可后，如果产品及其重要零部件的设计、所用材料或制造方法有所改变，且影响到产品的主要特性、特征；或产品的性能指标有所更改，且超过认可的范围，则有关图纸和文件应经检验机构审批。并在检验机构认为必要时，经本社检验人员见证有关试验和进行检查，其结果应能证实仍符合认可条件。
After type approval, if there are changes to the design, materials used or manufacturing method of the product and important components and such changes affect major characteristics and properties of the product, or property indexes of the product are changed and exceed the scope of approval, related drawings and documents are to be examined and approved by the concerned survey office. Where deemed necessary by the survey office, the surveyor to the Society will go to witness relevant tests and conduct inspection and the results should be able to demonstrate compliance with the approval conditions.
2.工厂的质量管理体系应保持有效运行，并且与认可时一致。如果质量管理体系发生改变，应经原体系认证机构审核并报本社批准。
The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.
3.认可证书有效期内，如果出现可能导致本社取消认可的情况，工厂应及时采取有效的纠正措施。

Within the validity of the approval certificate, if cases occur that may cause the Society to withdraw the approval, the manufacturer should take corrective actions in a prompt and effective manner.
4.在认可证书有效期内，本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核，以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。
Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.
5. 证书获得者应接受本社每年一次的定期审核，定期审核日为认可证书期满之日对应的每一周年日，检查工作应在周年日的前后三个月内进行。
Those who have obtained the certificate should be subject to periodical audit every year. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit shall be done within a time span of three months before and after the annual surveillance date.

备注/Remarks

1. 本社已审核了产品厂无石棉声明，但本社的审核不免除产品厂按照合同关系向订货方保证产品无石棉的责任。
The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

2. 本证书基于原型式认可证书（No. GB24PTB00043）变更，原证书保持有效。
This Certificate is modified from the previous Type Approval Certificate No. GB24PTB00043, the previous certificate remains valid.

3. 本系统业经上述认可依据中的网络韧性SL0级别验证，系统可满足IACS UR E27 Rev.1。
The approved system was verified in accordance with cyber resilience level SL0, as defined by the approval standards above, and the requirements of IACS UR E27 Rev.1 are fulfilled.

4. 结合具体项目申请本社检验时（或向系统集成商交付产品时），以下文件应提交批准：CBS资产清单、网络系统拓扑图、配置核查报告/When the product is delivered to the system integrator, the following documentation of the specific base individual application is to be submitted for approval in each case:
- CBS asset inventory
- Topology diagrams
- Test report for configuration of security capabilities.

5. 本产品不支持直接与不可信网络连接，不支持无线访问，本系统硬件以及访问界面应设置在受控物理区域/
This product does not support direct connection to untrusted networks and does not support wireless access. all hardware devices and accessible interfaces in the CBS shall be installed in areas with physical access restrictions.

6. 如实际产品交付时重大变化（含硬件及软件）应通知CCS，若变化明显影响本社相关要求时，可能需要进行型式试验，签发新的认可证书。/ Major changes of the type approved system affecting future deliveries shall be informed to CCS. If the changes are considered to affect functionality for which rule requirements apply, a new functional type test may be required, and the certificate may have to be renewed to identify the new version.

7. 工厂应确保产品的开发遵循安全开发生命周期中各阶段的网络安全要求，编制相应的程序和安全更新文件应持续有效，并符合本社《船舶网络安全指南》及IACS UR E27要求。/The manufacturer shall ensure that the development of products meets the cyber security requirements at each stage of Secure Development Lifecycle, and develop corresponding procedures and security update documents that are continuously effective and comply with CCS "Guidelines for Ship Cyber Security" and IACS UR E27 requirements.

中国船级社哥德堡办事处
CCS Gothenburg Office

注：本证书含有附页，共2页
Note: The certificate is attached with additional 2 page(s)

Description of Product

The iE 650 PLC is a PLC-based programmable automation controller (PAC) suitable for land, marine, and wind power control applications.
The controller is a highly flexible, modular PLC and I/O system that is designed for usage across a wide range of industrial applications. It is reliable, robust and flexible.

It includes the following hardware building blocks:		
PCM6.2 computer module	Application:	C/C++ and CODESYS application
	Interface:	1 x DI 24 V DC, 1 x DO 24 V DC,
		4x Ethernet (1 independent, 3 switched (managed),
		2 x CAN, 2 x RS-422/485, 1x USB Host, 1 x Display Port
	Processor:	1.6 GHz quad core
	Memory:	4 GB DDR4 RAM
		128 kB FRAM
	Storage:	32 GB non-volatile (-8 GB user available)
Station interface modules:		
SIM6·1	Interface:	1x EtherCAT OUT (optical-fibre glass 50µm)
		1x EtherCAT IN (optical-fibre glass 50µm)
SIM6·2	Interface:	1x EtherCAT OUT (electrical-RJ45)
		1x EtherCATOUT (optical-fibre glass 50µm)
SIM6·3	Interface:	1x EtherCAT IN (electrical-RJ45)
		1x EtherCAT OUT (optical-fibre glass 50µm)
		1x EtherCAT OUT (electrical-RJ45)
SIM6·4	Interface:	2 x EtherCAT OUT (electrical-RJ45)
SIM6·5	Interface:	2x EtherCAT OUT (optical-fibre glass 50µm)
Power Distribution Modules: PDM6.1	Power supply	30W /24V (18…32V)
		Black-out hold-up for 10ms
Digital Input/Output Modules		
DIO6·1	16 x digital inputs, 10 x digital outputs	
DIO6·2	16 x digital inputs, 16 x digital outputs	
DIM6·1	32 x digital inputs	
DOM6·1	32 x digital outputs	
Analogue input and output modules		
AIO6·1	2 analogue outputs, 16 analogue inputs	
AIO6·2	8 analogue inputs, 8 analogue outputs	
AOM6·2	8 analogue outputs	
AIM6·1	16 analogue inputs	
AIM6·2	8 analogue inputs	
Temperature Input Modules		
TIM6·1	14 temperature inputs	
Communication interface modules		
IFM6·1	2x Profibus DP Master, 2x RS-485	
IFM6·2	CAN (ISO11989)	
	2x RS-422 shielded twisted copper cable	
	2x Digital with frequency measurement	

Condition monitoring modules	
CMM6·1	4 High frequency analogue inputs
CMM6·2	2 High frequency analogue inputs

Software version:

Software	Version
Operating System	BSP 5.0.x.x
PLC Application	2.0.x.x
REST Version	1.0.x.x
CODESYS version	1.3.x.x
HMI Web Config Version	1.0.x.x