



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
GB20PTB00039

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

电工仪表
Electric Meter

认可标准/Approval Standard

1. 中国船级社《钢质海船入级规范》(2018)及其修改通报第4篇第1、3章
Chapter 1&3, Part Four of China Classification Society Rules for Classification of Sea-Going Steel Ships 2018 and its Amendments

用于/Intended for

船舶与海上设施/Ships and Offshore Installations

证书有效期至/This Certificate is valid until 2024年11月25日/Nov. 25,2024

发证机构/Issued by 中国船级社哥本哈根办事处
CCS Copenhagen Office

签发日期/Date 2020年11月25日
Nov. 25,2020

本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体,必须同时使用。纸质证书每页均须由本社盖章方为有效,电子证书含数字签名方为有效,本证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。有关方对所持证书的真实性有疑问时,可以向本社检验机构咨询。This Certificate is issued pursuant to the Rules of the Society and related regulation. All pages of the certificate are taken as a whole and are used simultaneously. No paper certificate page is valid without bearing the stamp of the Society, no electronic certificates is valid without the digital signature, and no copied form of the certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices.

Form No: T01.

联系方式/Contact Us, 见本社官方网站/See official web site of the Society (<http://www.ccs.org.cn>)



UTN:P020-89417450

产品明细/Product Description

电工仪表/Electric Meter (M0001)

名称/Name	属性(值)/Value	单位/Unit
型号/Type	See Additional Pages for details	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : NP20PPP03743

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : 02B RF electromagnetic field immunity EQ Ref.: 4910217502N

试验报告日期/ Test Report Date : 2020-08-31

试验报告编号/ Test Report No. : 16A Radiated disturbance EQ Ref.: 4910216501M

试验报告日期/ Test Report Date : 2020-08-31

试验报告编号/ Test Report No. : 27A - IP Test Ref.: 4910211527E

试验报告日期/ Test Report Date : 2018-06-12

试验报告编号/ Test Report No. : 7B RF Common Mode DQ Ref. 4910217507H

试验报告日期/ Test Report Date : 2009-11-13

试验报告编号/ Test Report No. : EPC 0471 A Tests Ref.: 4910212100F

试验报告日期/ Test Report Date : 2017-04-04

试验报告编号/ Test Report No. : EPC 0741 B tests Ref.: 49102175010

试验报告日期/ Test Report Date : 2017-04-27

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:

认可后的产品检验由制造厂按本社批准的产品检验计划进行检验, 经检验合格后由制造厂签发合格证明, 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 in accordance with the product inspection scheme approved by the Society. 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, 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. 如果属于获得型式认可B 模式证书，且无需颁发船用产品证书/等效证明文件的情况，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。

If belong to the situation of the product has type approval mode B certificate, and marine product certificate/equivalent document is not necessary, 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

本证书由原型式认可证书 (No. CP17T00001_01) 换新并替代原证书。

This certificate is renewed from and supersedes the previous Type Approval Certificate No. CP17T00001_01.

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.

中国船级社哥德堡办事处

CCS Gothenburg Office

注：本证书含有附页，共3页

Note: The certificate is attached with additional 3 page(s)

Production description:**AC Ammeters and Voltmeters**

90° Moving iron indicating instruments.

<i>Type</i>	<i>Size (mm)</i>	<i>Measuring range(A)</i>	<i>Measuring range(V)</i>
EQ48-x	48x48	40-600	1-25
EQ72-x	72x72	40-800	1-60
EQ96-x	96x96	40-800	1-60
EQ144-x	144x144	40-800	1-60

Technical Specification:

- ✧ Accuracy: Class 1.5 to EN 60051 and IEC 51
- ✧ Working range: Ammeters are designed with a 2 times overload range. The instruments will withstand starting currents up to 10 times nominal load for 5 sec and 5 times continuously.
- ✧ Scale range: The scale is standard designed with a 2 times overload range
- ✧ Protection: Housing IP52, with gasket IP54; Terminals IP20

Documents:

Data sheet: 4921210163B

Production description:**DC Ammeters and Voltmeters**

90°/240° Moving Coil indicating instruments with exchangeable or non-exchangeable scales.

<i>Type</i>	<i>Size (mm)</i>	<i>Measuring range</i>	<i>Measuring range</i>
DQ48-x	48x48	1mA~600mA, 4~20mA	60mV-600V
DQ72-x	72x72	1mA~5-10-15-40A, 4~20mA	60mV-600V
DQ96-x	96x96	1mA~5-10-15-40A, 4~20mA	60mV-600V
DQ144-x	144x144	1mA~5-10-15-40A, 4~20mA	60mV-600V
DQ48-xc/-c	48x48	1mA~600mA, 4~20mA	60mV-600V
DQ72-xc/-c	72x72	1mA~5-10-15-40A, 4~20mA	60mV-600V
DQ96-xc/-c	96x96	1mA~5-10-15-40A, 4~20mA	60mV-600V
DQ144-xc/-c	144x144	1mA~5-10-15-40A, 4~20mA	60mV-600V

Technical Specification:

- ✧ Accuracy: Class 1.5to EN 60051 and IEC 51
- ✧ Scale range: Linear
- ✧ Protection: Housing IP52, with gasket IP54; Terminals IP20

Documents:

Data sheet: 4921210012S

Production description:**Watt and Var meters**

The meters consist of a 90° /240° moving coil movement and a built-in electronic watt or var transducer P.C.B., housed in a standard case.

<i>Type</i>	<i>Size (mm)</i>	<i>Scale deflection 90°</i>	<i>Scale deflection 240°</i>
WQ96-x	96x96	<input checked="" type="checkbox"/>	--
WQ96-c	96x96	--	<input checked="" type="checkbox"/>
WQ144-x	144x144	<input checked="" type="checkbox"/>	--
WQ144-c	144x144	--	<input checked="" type="checkbox"/>

Technical Specification:

- ✧ Accuracy: Class 1.5to EN 60051 and IEC 51
- ✧ Protection: Housing IP52, with gasket IP54; Terminals IP20

Documents:

Data sheet: 4921210005J

Production description:**Single and double frequency meters**

FQ: Pointer frequency meter consisting of a moving coil instrument with built-in electronics for converting the frequency to a voltage signal. Accurate and linear read-out. Exchangeable scale.

2FQ: Double frequency meter consisting of 2 moving coil instruments mounted diagonally in one housing. A compact instrument with accurate and linear read-out.

<i>Type</i>	<i>Size (mm)</i>	<i>Scale/Measuring range(Hz)</i>	<i>Measuring voltage(V)</i>
FQ72-x	72x72	45~55,55~65,45~65	100-110-230-400-440,AC±15%
FQ96-x	96x96	45~55,55~65,45~65	100-110-230-400-440,AC±15%
2FQ96-x	96x96	45~55,55~65,45~65	100-230,AC±15% or 230-440,AC±15%

Technical Specification:

- ✧ Accuracy: Class 1.5 to EN 60051 and IEC 51
- ✧ Protection: Housing IP52, with gasket IP54

Documents:

Data sheet: 4921210047L

Production description:**Power factor meters**

The meters consist of a 90° /240° moving coil movement and a built-in electronic transducer, housed in a standard case.

<i>Type</i>	<i>Size (mm)</i>	<i>Scale deflection 90°</i>	<i>Scale deflection 240°</i>
PFQ96-x	96x96	<input checked="" type="checkbox"/>	--
PFQ 96-c	96x96	--	<input checked="" type="checkbox"/>
PFQ 144-x	144x144	<input checked="" type="checkbox"/>	--
PFQ 144-c	144x144	--	<input checked="" type="checkbox"/>

Technical Specification:

- ✧ Accuracy: Class 1.5 to EN 60051 and IEC 51
- ✧ Standard measuring ranges: 0.5 cap...1...0.5 ind., 0.7 cap....1...0.3 ind., 0....1 cap., 0....1 ind.
- ✧ Measuring voltage: 57.7~63 .5-100-110-127-220-230-240-380-440-415-440 VAC±20% .
- ✧ Measuring current: -/1A and -/5A from external current transformer.
- ✧ Protection: Housing IP52 (IP54 on request); Terminals IP20

Documents:

Data sheet: 4921210002H