



中国船级社
CHINA CLASSIFICATION SOCIETY

证书编号/Certificate No.
HB21PTB00025_01

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

Endress+Hauser Flowtec AG

地址/Address

Kagenstrasse 7 4153 Reinach Basel-Landschaft Switzerland

产品名称/Product

流量计
Flow Meter

附加标志/Notations

无/Nil.

认可标准/Approval Standard

1. 中国船级社《钢质海船入级规范》（2021）及其修改通报第7篇第2章
Chapter 2, Part 7 of CCS "Rules for classification of sea-going steel ships" 2021 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 2025年09月08日/ Sep. 08, 2025

发证机构/Issued by 中国船级社汉堡分社
CCS Hamburg Branch

签发日期/Date 2021年09月08日
Sep. 08, 2021

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:P021-34598934

产品明细/Product Description**流量计/Flow Meter (M0001)**

名称/Name	属性（值）/Value	单位/Unit
产品名称/Product Name	Coriolis mass Flow Measuring System	
型号/Type	Promass E, F, O 100 / Promass E, F, O, X, Q 300-500	
介质种类/Kind of Medium	Liquids or gases	
额定电压/Rated Voltage	See the additional Page	
直径/Diameter	See the additional Page	
最大工作压力/Max. Working Pressure	See the additional Page	
最高工作温度/Maximum Operating Temperature	See the additional Page	

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No. : NP19PPP04099

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : see additional page

试验报告日期/ Test Report Date :

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

按照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 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. 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, 检查工作可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 periodical audit should be carried out within 3 months before and after the anniversary date which corresponds to the date of expiry of the relevant.

备注/Remarks

本证书由原型式认可证书 (No. HB20PTB00051_01) 变更并替代原证书。

This Certificate is modified from and supersedes the previous Type Approval Certificate No. HB20PTB00051_01.

本认可产品应用于危险区域产品应持有有效的防爆合格证, 否则本证书将自动失效。

This Type Approval Certification will be invalid if the approved products for application in hazardous areas do not hold valid Ex-Certificate.

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.

中国船级社汉堡分社

CCS Hamburg Branch

注: 本证书含有附页, 共3页

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

1: Product Description:

System consisting of transmitter (Promass 100/300/500) and sensor (Promass E/F/O/Q/X):

Promass 100:

Promass E 100 B-design;

Promass E 100 C-design;

Promass F, O 100;

Promass 300 & 500:

Promass E, F, O, Q, X 300/500;

Process connection: flange:

E Sensor: DN 8 to 80 (3/8" to 3");

F Sensor: DN 8 to 250 (3/8" to 10");

O Sensor: DN 80 to 250 (3" to 10") for 300/500 transmitter and DN 80 to 150 (3" to 6") for 100 transmitters;

Q Sensor: DN 25 to 100 (1" to 4");

X Sensor: DN 300 to 400 (12" to 16");

2: Rating:

Temperature of medium:

E 100 B-design: -40°C to 140°C (-40°F to +284°F), E 100 C-design/300/500: -40°C to 150°C (-40°F to +302°F);

F 100/300/500 Standard Version: -50°C to 150°C (-58°F to +302°F), F 100/300/500 Extended Temperature Version: -50°C to 240°C (-58°F to +464°F), F 300/500 High Temperature Version: -50°C to 350°C (-58°F to +662°F), F 300/500 Low Temperature Version: -196°C to 150°C (-320°F to +302°F);

O 300/500: -40°C to 205°C (-40°F to +401 °F);

Q 300/500 Standard Version: -50°C to 205°C (-58°F to +401°F), Q 300/500 Low Temperature Version: -196°C to 150°C (-320°F to +302°F);

X 300/500: -50°C to 180°C (-58°F to +356°F);

Max. Pressure rating (Please consult with the manufacturer for more detail):

up to 100 bar (1450 psi) E 100 B & C Design, F 100, E/F/Q/X 300/500;

up to 250 bar (3625 psi) O 100/300/500;

Power supply: 24V DC;

Output signal for 100 transmitters: 4...20mA, HART protocol., Pulse/frequency/switch, Profibus DP, Modbus RS485, EtherNet, ProfiNet;

Output signal for 300/500 transmitters: 4...20mA, HART protocol., Pulse/frequency/switch, Profibus PA, Profibus DP, Modbus RS485, EtherNet, ProfiNet, Foundation Fieldbus;

Degree of protection:

IP66/67 as standard for all models;

IP69 (sensor only): E 100 C-design/300/500, F 100/300/500, O 500, X 500;

IP69K (sensor only): E 100 B-design, O 100;

3: Service Restriction:

A: All electrical equipment intended for installation in hazardous areas are to be certified safe type based on the class of the hazardous area at its location of installation. Certificates in this regard are to be presented to Surveyor for verification on a case by case basis.

The Ex-Proof parameters of the approved products originate from Ex- Certificate received from manufacturer (Issuing Body, Ex- Certificate No., Standards for Ex-Proof stated in the following, not approved by CCS): IEC Certificate No. IECEXDEK12.0041 for Promass E, F, O 100, Issue No.: 4, Date of issue: 2017-09-21; IEC Certificate No. IECEXCSA16.0034X Appendix A for Promass E, F, O, Q, X 300/500, Issue No.: 3, Date of issue: 2017-12-27; CSA Certificate No. 253717& Project No. 70157646 for Promass 100, Date of issue: 2017-10-1; CSA Certificate No. 70087366, Project No. 70162 for Promass 300/500, Date of issue: 2018-01-26.

B: Each particular application and installation are to be specifically approved in conjunction with the relevant system, locations and environmental conditions.

4: Approval Test Report

No	Test Report No	Test Date	Laboratory / address
1.	EMC Test report No. 07295.183.14 for Promass E 100 Revision: 1.1	2014-09-02	MessTechnikNord/ Industriestrasse 29, D-22880 Wedel, Germany
2.	EMC Test report No. 071997.140.18 for Promass F 300 Revision: 1.3,	2018-08-10	
3.	EMC Test report No. 071997.154.18 for Promass E 500 Revision: 1.0	2018-07-30	
4.	Vibration and Climatic Test report No. 14-5875 for Promass E 100 Revision: 0	2014-08- 19	Paconsult GmbH/ Birkenau 3, D-22087 Hamburg, Germany
5.	Vibration and Climatic Test report No. 18-10301F for Promass E 500 Revision: 0	2018-11-09	
6.	Vibration and Climatic Test report No. 18-10301H for Promass Q 500 Revision: 2	2018-10-30	
7.	Saltmist Test report No. 14-5891B for Promass E 100 Revision: 0	2015-01-07	
8.	Saltmist Test report No. 18-10301A for Promass E 500 & F 300 Revision: 2	2018-10-26	
9.	Pressure Test report for Promass Q 500	2018-06-08	BV/ Neue Strasse 40, D-89073, Germany
10.	Pressure Test report for Promass E 500	2018-05-07	
11.	Pressure Test report for Promass F 300	2018-05-07	
12.	IP6x, x6 & x7 Tests report for Promass 100	2011-10-18	Sira Certification Service/ CSA group Unit 6, Hawarden

			Industrial Park, Hawarden, Deeside, CH5 3US, UK
13.	Pressure Test report for Promass O 500	2018-03-07	E+H Flowtec AG/ Christoph-Merian-Ring 4, CH-4153 Reinach Switzerland
14.	Pressure Test report for Promass E 100 B-design	2015-01-19	
15.	IPx7 Test report for Promass 300, 500	2018-09-25	
16.	IP6x Test report for Promass 300, 500	2018-09-25	
17.	IPx6 Test report for Promass 300, 500	2018-09-25	
18.	IPx6 Test report for Promass E housing G300	2018-09-25	
19.	IPx6 Test report for Promass F housing G305	2018-09-25	
20.	EMC2020PCF0010, PromassF300_6GHz.Ver.1	2020-09-17	
21.	EMC2020PCF0012, PromassE500_6GHz, Ver.1	2020-09-16	
22.	EMC2020PCF0015, PromassE100_6GHz, Ver.1	2020-09-17	

5: Application/Limitation

This type approval does not cover wetted parts. Suitability of pressure contained wetted parts to be considered for each application according to relevant requirements.

6: Place of manufacture

Endress + Hauser Flowtec AG
Reinach, Switzerland

Endress + Hauser Flowtec (China) Co. Ltd.
Suzhou, China

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