



CERTIFICATE NUMBER	21-2066182-PDA
EFFECTIVE DATE	28-Jan-2021
EXPIRY DATE	27-Jan-2026
ABS TECHNICAL OFFICE	Hamburg Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ENDRESS + HAUSER FLOWTEC AG

located at

KAEGENSTRASSE 7, CH-4153 REINACH, Switzerland

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Meter, Flowmeter
Model: PROLINE PROWIRL F/D/O/R 200
Endorsements:
Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 27/Jan/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Efstratios Maliatsos
Efstratios Maliatsos, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

ENDRESS + HAUSER FLOWTEC AG

KAEGENSTRASSE 7

CH-4153 REINACH

Switzerland

Telephone: +41-61-715 61 11

Fax: +41-61-711 09 89

Email: info@flowtec.endress.com

Web: www.flowtec.endress.com

Tier: 2 - PDA Issued

Product: Meter, Flowmeter
Model: PROLINE PROWIRL F/D/O/R 200
Endorsements:

Intended Service:
Flow measurement of gas, steam and liquids.

Description:
The device consists of a transmitter and a sensor. The unique Differential Switched Capacitor (DSC) sensor technology ensures high-precision measured values.

Sensor variants:

- Prowirl D: Disc (wafer version);
- Prowirl F: Flanged version;
- Prowirl O: Flanged version for use in high process pressures up to PN 250/Class 1500;
- Prowirl R: Flanged version with integrated nominal diameter reduction;

Rating:

Ambient temperature: -40 to 80°C;

Temperature of medium: -200 to 450°C;

Power supply: 24 V DC;

Output signal: 4...20mA with HART or PROFIBUS PA or FF-Bus or frequency output;

Degree of protection: IP66/67;

(Ex) types Certified:

Ex ia IIC T6-T1 Ga, Ex ia IIC T6-T1 Ga/Gb, Ex d [ia] IIC T6-T1 Ga/Gb, Ex ic [ia] IIC T6-T1 Ga/Gc, Ex ia IIC T6-T1 Gb, Ex d [ia] IIC T6-T1 Gb, Ex nA [ia Ga] IIC T6-T1 Gc, Ex ic [ia Ga] IIC T6-T1 Gc, Ex ic IIC T6-T1 Gc, Ex nA IIC T6-T1 Gc, Ex tb IIIC Txx°C Db, Ex tb [ia Da] IIIC Txx°C Db (IECEX DEK 13.0022);

II 1 G Ex ia IIC T6-T1 Ga, II 1/2 G Ex ia IIC T6-T1 Ga/Gb or Ex d [ia] IIC T6-T1 Gb, II 2 G Ex ia IIC T6-T1 Gb or Ex d [ia] IIC T6-T1 Gb, II 3 (1) G Ex ic [ia Ga] IIC T6-T1 Ga, II 3 (1) G Ex nA [ia Ga] IIC T6-T1 Gc or Ex ec [ia Ga] IIC T6-T1 Gc, II 1/3 (1) G Ex ic [ia Ga] IIC T6-T1 Ga/Gc, II 2 D Ex tb IIIC Txx°C Db, II 2 (1) D Ex tb [ia Da] IIIC Txx°C Db (KEMA 10ATEX0072);

Class I, Division 1, Groups A, B, C and D, Class I Division 2, Groups A, B, C and D, Class II, Division 1, Groups E, F and G, Class III (CSA 2541184).

Service Restriction:

Unit Certification is not required for this product.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- Each particular application and installation is to be specifically approved in conjunction with the relevant system, locations and environmental conditions.
- 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 ABS Surveyor for verification on a case by case basis.
- ATEX certified equipment is not to be installed in hazardous areas on U.S. Flagged Vessels, unless it can be proven to have been tested to the IEC 60079 series standards by an independent laboratory accepted by the U.S. Coast Guard. USCG MI Notice 01-12 (February 7, 2012).

Notes/Drawing/Documentation:

Drawing No. 0_0_Table of Content-update with C-design, 0_0_Table of Content-update with C-design, Revision: 0, Pages: 1

Drawing No. 1.1_product range_Prowirl 200 C-design_IN01039D06EN02.18, 1.1_product range_Prowirl 200 C-

ENDRESS + HAUSER FLOWTEC AG

KAEGENSTRASSE 7

CH-4153 REINACH

Switzerland

Telephone: -41-61-715 61 11

Fax: -41-61-711 09 89

Email: info@flowtec.endress.com

Web: www.flowtec.endress.com

Tier: 2 - PDA Issued

design_IN01039D06EN02.18, Revision: 0, Pages: 1

Drawing No. 1.2_Test procedure Prowirl 200, 1.2_Test procedure Prowirl 200, Revision: 0, Pages: 1

Drawing No. 1.3.1_Prowirl D 200-C_design, Order Code, Revision: 0, Pages: 1

Drawing No. 1.3.2_Prowirl F 200-C_design, Order Code, Revision: 0, Pages: 1

Drawing No. 1.3.3_Prowirl O 200-C_design, Order Code, Revision: 0, Pages: 1

Drawing No. 1.3.4_Prowirl R 200-C_design, Order Code, Revision: 0, Pages: 1

Drawing No. 1.4.1_7D2B-7D2C, Technical Information, Revision: 0, Pages: 1

Drawing No. 1.4.2_7F2B-7F2C, Technical Information, Revision: 0, Pages: 1

Drawing No. 1.4.3_7O2B-7O2C, Technical Information, Revision: 0, Pages: 1

Drawing No. 1.4.4_7R2B-7R2C, Technical Information, Revision: 0, Pages: 1

Drawing No. 2.1_PP1135_Pwyy_Pressure_Burst_Pw-F_MK, 2.1_PP1135_Pwyy_Pressure_Burst_Pw-F_MK, Revision: 0, Pages: 1

Drawing No. 2.2_R62CA619000-B_design, 2.2_R62CA619000-B_design, Revision: 0, Pages: 1

Drawing No. 2.3_R62CA719000-C_design, 2.3_R62CA719000-C_design, Revision: 0, Pages: 1

Drawing No. 2.4_7F2B-7F2C-tests, 2.4_7F2B-7F2C-tests, Revision: 0, Pages: 1

Drawing No. 2.5_Assessment_DNVGL-Signed-TA 401 Endress + Hauser 2020-07-15, 2.5_Assessment_DNVGL-Signed-TA 401 Endress + Hauser 2020-07-15, Revision: 0, Pages: 1

Drawing No. 2.6_Assessment_LR-PRJ11100268754-1-ENDRESS+HAUSER-TA Renewal-PQA Report-July 2020, 2.6_Assessment_LR-PRJ11100268754-1-ENDRESS+HAUSER-TA Renewal-PQA Report-July 2020, Revision: 0, Pages: 1

Drawing No. 3.1_documentation list Proline 200, 3.1_documentation list Proline 200, Revision: 0, Pages: 1

Drawing No. 3.2_list of certificates, list of certificates, Revision: -, Pages: -

Drawing No. 3.3_221778700-10ATEX0072-Iss8-Annex1(all Proline200), Ex Certificate, Revision: -, Pages: -

Drawing No. 3.4_221778700-10ATEX0072-Iss8-Annex5(Prowirl), Ex Certificate, Revision: -, Pages: -

Drawing No. 3.30676-..., 3.1.6_Amplifier, Revision: 0, Pages: 1

Drawing No. 3.30686-0000ZAA, 3.1.2_BlockDiagram, Revision: 0, Pages: 1

Drawing No. 3.30729-...further, 3.1.4_IO_2xx, Revision: 0, Pages: 1

Drawing No. 4.1_Vib_2020_PW200_001_10_2020, 4.1_Vib_2020_PW200_001_10_2020, E+H Flowtec Laboratory, 22-Oct-2020, Revision: 0, Pages: 1

Drawing No. 4.2_EMC2020PCF0008_Prowirl200_B, 4.2_EMC2020PCF0008_Prowirl200_B, E+H Flowtec Laboratory, 08-09-2020, Revision: 0, Pages: 1

Drawing No. 4.3_EMC2020PCF0009_Prowirl200_C, 4.3_EMC2020PCF0009_Prowirl200_C, E+H Flowtec Laboratory, 22-Oct-2020, 08-09-2020, Revision: 0, Pages: 1

Drawing No. 5.1_MI01451D06EN01.19, 5.1_MI01451D06EN01.19, Revision: 0, Pages: 1

Drawing No. 5.2_Testreport Prowirl 200 FF V1.01.00, 5.2_Testreport Prowirl 200 FF V1.01.00, Revision: 0, Pages: 1

Drawing No. 5.3_SW Freigabe Review Prowirl 200 HART V1.03.00, 5.3_SW Freigabe Review Prowirl 200 HART V1.03.00, Revision: 0, Pages: 1

Drawing No. 9600087-..., 3.1.5_FeedThrough_FT10, Revision: 0, Pages: 1

Drawing No. 96001-..., 3.1.10_RemoteDisplay_FHX50, Revision: 0, Pages: 1

Drawing No. 960014-...-A, 3.1.3_IO_OVP_TRM, Revision: 0, Pages: 1

Drawing No. 9_2_970003925_IP6x, IP Test Report, E+H Internal, 19-07-2013, Revision: -, Pages: -

Drawing No. 9_4_970003927_IPx6, IP Test Report, E+H Internal, 15-07-2013, Revision: -, Pages: -

Drawing No. ABS-declaration of conformity_EH-Flowtec, -, Revision: -, Pages: -

Drawing No. Assembly-..., 3.1.11_Assembly, Revision: 0, Pages: 1

Drawing No. CSA2541184_ProToF_FES0204D_FES0228B_ZE003, Ex Certificate, Revision: -, Pages: -

Drawing No. ConnectionBoard-..., 3.1.8_ConnectionBoard, Revision: 0, Pages: 1

Drawing No. Display-..., 3.1.7_Display, Revision: 0, Pages: 1

Drawing No. IECExDEK13.0022_Pwy2_ZE001, Ex Certificate, Revision: -, Pages: -

Drawing No. Online PDA Application, -, Revision: -, Pages: -

Drawing No. PreAmplifier-..., 3.1.9_PreAmplifier, Revision: 0, Pages: 1

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 27/Jan/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment

ENDRESS + HAUSER FLOWTEC AG

KAEGENSTRASSE 7

CH-4153 REINACH

Switzerland

Telephone: -41-61-715 61 11

Fax: -41-61-711 09 89

Email: info@flowtec.endress.com

Web: www.flowtec.endress.com

Tier: 2 - PDA Issued

(whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

2021 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-8-3/ 1.11.1, 4-8-3/1.17, 4-8-3/13, 4-9-9/13.1, 4-9-9/Table 1

2021 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-1/11, 4-3-1/15, 4-3-1/17, 4-3-3/9.1, 4-3-3-/9.3

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA