



Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

OIML Member State
Germany

OIML Certificate No.
R49/2013-A-DE1-2023.01

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: Physikalisch-Technische Bundesanstalt,
Conformity Assessment Body
Address: Bundesallee 100, 38116 Braunschweig, GERMANY
Person responsible: Dr.-Ing. Prof. h. c. Frank Härtig

Applicant

Name: Endress+Hauser Flowtec AG
Address: Kägenstrasse 7, 4153 Reinach, Switzerland

Manufacturer

Name: Endress+Hauser Flowtec AG
Address: Kägenstrasse 7, 4153 Reinach, Switzerland

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

Electromagnetic water meter
Type: Proline Promag W 800

Designation of the module *(if applicable)*

Combined or complete electromagnetic water meter with straight or conical transducer

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 49

Edition (year): 2013

For accuracy class (if applicable): 1 or 2

**OIML Certificate No.
R49/2013-A-DE1-2023.01**

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. PTB-1.5-4113189 dated 21.08.2023 that includes 77 pages.

The technical documentation relating to the identified type is contained in documentation file:

No. ZDS-R49/2013-A-DE1-2023.01 dated 23.08.2023 that includes 5 pages.

OIML Certificate History

Revision No.	Date	Description of the modification
R49/2013-A-DE1-2023.01	23.08.2023	Initial certificate

Identification, signature and stamp

The Issuing Authority


Dr. Tobias Nickschick



Member of Conformity Assessment Body

Date: 23.08.2023

Annex I: Technical specifications

Environmental conditions

Ambient temperature:	-25 °C ... +55 °C	
Temperature class:	T50 (0.1 °C ... 50 °C)	
Environmental class:	B, O, M / E2, H3, M3	
Pressure range:	0,3 bar (0,03 MPa) to 40 bar (4,0 MPa)	
Orientation / Mounting:	Any	
Reverse flow:	The water meter is designed to measure reverse flow.	
Power supply	Battery:	U = 3,6 V P _{max} = 500 mW
	External power supply:	U = 85 VAC ... 265 VAC // 19 VDC ... 30 VDC f = 47 Hz ... 63 Hz P _{max} = 4 W

Measurement Characteristics

Promag W sensor - standard version:

Accuracy class	2
Sensitivity class:	U5 / D3
Pressure loss class:	Δp 10

Nominal diameter mm	Q ₁ m ³ /h	Q ₂ m ³ /h	Q ₃ m ³ /h	Q ₄ m ³ /h	Ratio Q ₃ /Q ₁
25	0.10	0.16	16	20	160
32	0.156	0.25	25	31.25	
40	0.25	0.40	40	50	
50	0.39	0.63	63	78.75	
65	0.63	1.00	100	125	
80	1.00	1.60	160	200	
100	1.56	2.50	250	312.5	
125	2.50	4.00	400	500	
150	3.94	6.3	630	787.5	
200	6.25	10	1000	1250	
250	10.00	16	1600	2000	
300	15.63	25	2500	3125	
350	15.63	25	2500	3125	
375	25.00	40	4000	5000	
400	25.00	40	4000	5000	
450	25.00	40	4000	5000	
500	32.00	51.2	4000	5000	125
600	50.00	80	4000	5000	80
700	63.5	101.6	4000	5000	63
750	80.00	128	4000	5000	50
800	80.00	128	4000	5000	50
900	100.00	160	4000	5000	40

Note: The values given in this table for Q₃ and the ratio Q₃/Q₁ are maximum values, respectively. The value given for Q₁ is a minimum value. The evaluation is valid for water meters with lower Q₃ values and higher Q₁ values if the requirements of point 4.1 of OIML R 49-1:2013 are met.

Promag W sensor - conical version:

Accuracy class	1
Sensitivity class:	U0 / D0
Pressure loss class:	Δp 40

Nominal diameter mm	Q ₁ m ³ /h	Q ₂ m ³ /h	Q ₃ m ³ /h	Q ₄ m ³ /h	Ratio Q ₃ /Q ₁
50	0.2	0.32	40	50	200
65	0.315	0.504	63	78.75	200
80	0.5	0.8	100	125	200
100	0.8	1.28	160	200	200
125	1.25	2	250	312.5	200
150	2	3.2	400	500	200
200	3.15	5.04	630	787.5	200
250	5	8	1000	1250	200
300	8	12.8	1600	2000	200

Note: The values given in this table for Q₃ and the ratio Q₃/Q₁ are maximum values, respectively. The value given for Q₁ is a minimum value. The evaluation is valid for water meters with lower Q₃ values and higher Q₁ values if the requirements of point 4.1 of OIML R 49-1:2013 are met.

Accuracy class	2
Sensitivity class:	U0 / D0
Pressure loss class:	Δp 40

Nominal diameter mm	Q ₁ m ³ /h	Q ₂ m ³ /h	Q ₃ m ³ /h	Q ₄ m ³ /h	Ratio Q ₃ /Q ₁
50	0.1	0.16	40	50	400
65	0.158	0.252	63	78.75	400
80	0.25	0.4	100	125	400
100	0.40	0.64	160	200	400
125	0.63	1	250	312.5	400
150	1	1.6	400	500	400
200	1.58	2.52	630	787.5	400
250	2.5	4	1000	1250	400
300	4	6.4	1600	2000	400

Note: The values given in this table for Q₃ and the ratio Q₃/Q₁ are maximum values, respectively. The value given for Q₁ is a minimum value. The evaluation is valid for water meters with lower Q₃ values and higher Q₁ values if the requirements of point 4.1 of OIML R 49-1:2013 are met.

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