	Physikalisch-Technische Bundesanstalt Braunschweig und Berlin
OIML Member State Germany	**OIML Certificate No.** **R49/2013-A-DE1-24.02**

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 400

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 R49 Edition (year): 2013

For accuracy class (if applicable): 1 or 2

OIML Certificate No.
R49/2013-A-DE1-24.02

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-1.5-4119543 dated 23.07.2024 that includes 67 pages.

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

No. ZDS-R49/2013-A-DE1-24.02 dated 23.07.2024 that includes 3 pages.

OIML Certificate History

Revision No.	Date	Description of the modification
R49/2013-A-DE1-24.02	23.07.2024	Initial certificate

Identification, signature and stamp

The Issuing Authority

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 53

Dr. Tobias Nickschick

Member of Conformity Assessment Body

Date: 23.07.2024

Annex I: Technical specifications

Environmental conditions

Ambient temperature:	-40 °C … +55 °C		
Temperature class:	T50 (0.1 °C … 50 °C)		
Environmental class:	B, O, M / E2, M3, H3		
Pressure range:	0.3 bar (0.03 MPa) to 51 bar (5.1 MPa)		
Orientation / Mounting:	Any		
Reverse flow:	The water meter is designed to measure reverse flow.		
Power supply:	External power supply:	U =	240 VAC +10%, 24 VDC +25% 100 VAC -15%, 24 VDC -25%
		f =	50/60 Hz ± 4 Hz

Measurement Characteristics

Promag W sensor - standard version:

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

Nominal diameter mm	**Q_1 m³/h**	**Q_2 m³/h**	**Q_3 m³/h**	**Q_4 m³/h**	**Ratio Q_3/Q_1**
25	0.1	0.16	16	20	160
32	0.156	0.25	25	31.25	160
40	0.25	0.4	40	50	160
50	0.39	0.63	63	78.75	160
65	0.5	0.8	100	125	200
80	0.8	1.28	160	200	200
100	1.25	2	250	312.5	200
125	1.6	2.56	400	500	250
150	2.52	4.03	630	787.5	250
200	4	6.4	1000	1250	250
250	6.4	10.24	1600	2000	250
300	10	16	2500	3125	250
350	10	16	2500	3125	250
375	16	25.6	4000	5000	250
400	16	25.6	4000	5000	250
450	16	25.6	4000	5000	250
500	25.2	40.32	6300	7875	250
600	39.38	63	6300	7875	160
700	50.40	80.64	6300	7875	125
750	63	100.8	6300	7875	100
800	63	100.8	6300	7875	100

Note: The values given in this table for Q_3 and the ratio Q_3/Q_1 are maximum values, respectively. The value given for Q_1 is a minimum value. The evaluation is valid for water meters with lower Q_3 values and higher Q_1 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 m³/h	Q_2 m³/h	Q_3 m³/h	Q_4 m³/h	Ratio Q_3/Q_1
50	0.13	0.2	40	50	315
65	0.2	0.32	63	78.8	315
80	0.32	0.51	100	125	315
100	0.51	0.81	160	200	315
125	0.79	1.27	250	312.5	315
150	1.27	2.03	400	500	315
200	2	3.2	630	787.5	315
250	3.17	5.08	1000	1250	315
300	5.08	8.13	1600	2000	315

Note: The values given in this table for Q_3 and the ratio Q_3/Q_1 are maximum values, respectively. The value given for Q_1 is a minimum value. The evaluation is valid for water meters with lower Q_3 values and higher Q_1 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 m³/h	Q_2 m³/h	Q_3 m³/h	Q_4 m³/h	Ratio Q_3/Q_1
50	0.06	0.1	40	50	630
65	0.1	0.16	63	78.8	630
80	0.16	0.25	100	125	630
100	0.25	0.41	160	200	630
125	0.4	0.63	250	312.5	630
150	0.63	1.02	400	500	630
200	1	1.6	630	787.5	630
250	1.59	2.54	1000	1250	630
300	2.54	4.06	1600	2000	630

Note: The values given in this table for Q_3 and the ratio Q_3/Q_1 are maximum values, respectively. The value given for Q_1 is a minimum value. The evaluation is valid for water meters with lower Q_3 values and higher Q_1 values if the requirements of point 4.1 of OIML R 49-1:2013 are met.