IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx DEK 13.0009X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2022-06-28) Issue 2 (2015-05-01) Issue 1 (2014-06-05) Issue 0 (2013-03-01)
Date of Issue:	2023-01-13		
Applicant:	**Endress+Hauser Flowtec AG** Kägenstr. 7 CH-4153 Reinach **Switzerland**		
Equipment:	**Flow Measuring System Proline Promag E/H/L/P/W 100**		
Optional accessory:			
Type of Protection:	**Ex nA, ec**		
Marking:	Ex nA IIC T6 ... T1 Gc or Ex ec IIC T6 ... T1 Gc		

Approved for issue on behalf of the IECEx Certification Body: **R. Schuller**

Position: **Certification Manager**

Signature: (for printed version)

Date: (for printed version) 2023-01-13

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

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Manufacturer: **Endress+Hauser Flowtec AG**
Kägenstr. 7
CH-4153 Reinach
Switzerland

Manufacturing locations:

Endress+Hauser Flowtec AG
Kägenstr. 7
CH-4153 Reinach
Switzerland

Endress+Hauser (Brasil) Fluxômetros Ltda.
Estrada Municipal Antionio Sesti, 600-A- Recreio Costa Verde
CEP 13254-085 Itatiba - SP
Brazil

Endress+Hauser Flowtec AG
35, rue de l'Europe
68700 Cernay
France

See following pages for more locations

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
Edition:4

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

NL/DEK/ExTR12.0034/09

Quality Assessment Report:

DE/TUN/QAR06.0004/10

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Magnetic-inductive Mass Flow Measuring System Proline Promag E/H/L/P/W 100 is intended to be used for flow measurement using the principle of electromagnetic induction.

For further details and for the electrical and thermal data, refer to the Annex 1.

SPECIFIC CONDITIONS OF USE: YES as shown below:
For maximum surface temperature, ambient temperature range and maximum process temperatures see Annex 1 and safety instructions.

Only for Ex nA type of protection:
Enclosure may only be opened at an ambient temperature between +5 °C and +40 °C, with maximum relative humidity 80 % for temperatures up to +31 °C decreasing linearly to 50 % relative humidity at +40 °C.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Changes to Specific Conditions of Use

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Additional manufacturing locations:

Endress+Hauser Flowtec (India) Pvt. Ltd.
M 171-176, Waluj MIDC, Industrial Area
Aurangabad - , Maharashtra State 431136
India

Endress+Hauser Flowtec AG
Division U.S.A., 2330 Endress Place
Greenwood, Indiana 46143
United States of America

Endress+Hauser Flowtec (China) Co. Ltd.
China-Singapore Industrial Park (SIP), Su-Hong-Zhong-Lu No. 465
Suzhou Industrial Park (SIP), Jiang-Tian-Li-Lu No. 31, 215021 Suzhou
Suzhou 215021
China

Annex:

227096500-Annex1 to Certificate of Conformity IECEx DEK 13.0009X.pdf

Annex 1 to: IECEx DEK 13.0009X

Description

The Magnetic-inductive Mass Flow Measuring System Proline Promag E/H/L/P/W 100 is intended to be used for flow measurement using the principle of electromagnetic induction.

The versions in type of protection Ex ec, Ex nA for application in explosive gas atmospheres are provided with an interface for MODbus RS485, EtherNet/IP, PROFINET or Profibus DP or with an analogue 4-20 mA current output signal with digital communication (HART), combined with a Pulse/Frequency/Status (PFS) output. These versions are also available with an optional display.

The transmitter enclosure is made of aluminium or stainless steel and provides a degree of protection of at least IP66/IP67.

Type designation

Proline Promag E/H/L/P/W 100

code 5b1Bee-ffghijknpppqr+#**# and
code O5H1Bee-ffghijknpppqrs+#**#

b = Type of sensor
E, H, L, P, W = Sensor type

ee = Size
02 = DN2
:
:
3T = DN3000
XX = Sensor only

ff = Approval
BS, I6 = Ex ec IIC T6 … T1 Gc
Ex nA IIC T6 … T1 Gc

g = Power supply
D = 24 Vdc

h = Input/output
B = 4-20 mA HART + Pulse/Frequency/Status (PFS)
L = Profibus DP
M = MODbus RS485
N = EtherNet/IP
R = PROFINET

i = Display/Operation
any single number or letter

j = Housing
A = aluminium compact, G300
B = stainless steel compact, G301
C = stainless steel compact, G302

k = Cable entry
any single number or letter

n = Liner
any single number or letter

ppp = Process connection
any triple number or letter

q = Electrodes
any single number or letter

r = Calibration
any single number or letter

s = Customer version
any single number or letter

** = Option (none, two or multiple of two digits)
any combination of numbers and/or letters

#, + = Symbols used as indicator for optional
abbreviation of extended order code

Thermal data

Flow measurement systems Proline Promag E/H/L/P/W 100

Ambient temperature range -40 °C to +60 °C;
process temperature range: -40 °C to +150 °C.

The relation between maximum ambient temperature, maximum process temperature and temperature class, depending on the enclosure type is shown in the following table:

Temperature class	T6	T5	T4		T3 - T1	
Max ambient temperature	30 °C	60 °C	50 °C	60 °C	50 °C	60 °C
Max process temperature	50 °C	95 °C	130 °C	110 °C	150 °C	110 °C

Electrical data

Proline Promag H/L/P/W 100, in type of protection Ex ec, Ex nA (with ff = I5, I6)

Power supply (terminals 1, 2):
U_N = 20 …. 30 Vdc
P ≤ 4.5 W.

Models with h = B (4 – 20 mA, HART plus Pulse/Frequency/Status output)

Output 4 – 20 mA HART (terminals 26, 27)
Output PFS (terminals 24, 25)
U_N ≤ 30 Vdc.

Models with h = L (Profibus DP interface)

Profibus DP (terminals 26, 27)
U_N ≤ 30 Vdc.

Models with h = M (MODbus RS485 interface)

MODbus RS485 (terminals 26, 27)
U_N = 5 Vdc

Models with h = N (EtherNet/IP interface) and with h = R (PROFINET)

EtherNet/IP, PROFINET (connector RJ45):
U_N = 5 Vdc

All models

Service connector; only to be used if the location is known to be non-hazardous
U_{max} = 7.5 V