



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX2219X** Issue: **0**

4 Equipment: **Proline Promag 300/500**

5 Applicant: **Endress+Hauser Flowtec AG**

6 Address: Endress+Hauser Flowtec AG Kaegenstrasse 7, CH-4153, Reinach BL, Switzerland
Endress+Hauser Flowtec AG , Cernay, France
Endress+Hauser Flowtec (India) Pvt. Ltd. Waluj, India
Endress+Hauser Flowtec AG Div. U.S.A. Greenwood, USA
Endress+Hauser Flowtec (China) Co. Ltd. Suzhou, P.R. China
Endress + Hauser Flowtec (Brazil) Fluxômetros Ltda., Estrada Municipal Antônio Sesti, 600 A - Recreio Costa Verde – Itatiba / SP, CEP 13254 – 085 – Brazil

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012	EN 60079-1:2014	EN 60079-7:2015	EN 60079-31:2014
EN 60079-26:2015	EN 60079-15: 2010	EN 60079-11:2012	

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the equipment shall be as per the Certificate Annexe.

Project Number 70084415

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Form 9401 Issue 4

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N Jones
Certification Manager

Sira Certification Service

Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2219X
Issue 0

13 DESCRIPTION OF EQUIPMENT

The Proline 300 / 500 is a platform used for flowmeters of type Proline Promag 300 and Proline Promag 500. All flowmeters are available in two versions, a compact version (Proline 300) and a remote version (Proline 500). The remote Proline 500 version is also available as an analog version where the sensor sends analog signals to the transmitter and a digital version where the sensor is connected by a digital circuit to the transmitter with additional electronics located at the sensor for assessment of the sensor signals.

For all versions of the Proline 300, an additional remote Display, e.g. DKX001, may be connected to the electronics.

Different electronics are used for the flowmeters where the sensor is installed in a Zone 1 or 2 location and where the transmitter can be installed in a safe area or Zone 1 or 2 locations. All versions of electronics are designed either with intrinsically safe IO's (Ex ia for Zone 1 or Ex ic for Zone 2) or with non-intrinsically safe IO's. A mix of type of protections, Ex i in combination with non-Ex i IO's is not allowed.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings and Supporting Documentation

Refer to Certificate Annexe.

14.3 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	19 July 2016	R70084415A	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE

15.1 All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe circuits potential equalization must exist.

15.2 The sensors may only be used for those process media, for which the wetted parts are known to be suitable

15.3 Plastic transmitter enclosures for the order codes

Proline Promag 8*5***-(BJ)*****A....,
Proline Promag O8*5***-(BJ)*****A....,
Proline Promag 8*5*xx-(BJ) *****A....

shall be installed in an area of at least pollution degree 2

15.4 Equipment with the following order codes shall be installed using a transient protection not exceeding 140% of the peak rated voltage value at the supply terminals to the equipment.

For order code 'dd' = BN or BS

15.5 For remote versions of Promag flowmeters with a flat gasket within the sensor terminal box, the user shall ensure that flat cover seals are not bent into the seal surface before securing the cover. Seals that are not flat shall be replaced.

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Sira Certification Service

Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
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Issue 0**

- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**
The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.
- 17 **CONDITIONS OF MANUFACTURE**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

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Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Issue 0

See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/00 for a full list of drawings covered by this issue.

1 Order Code

1.1 Proline Promag 300/500

Extended order code Proline Promag 300::

5a3bcc – ddeffghjlpstttuvww + ##**

05a3bcc – ddeffghjlpstttuvwwyy + ##**

5x3bxx – ddeffghjlpww + ##**

for OEM-version

for replacement transmitter only

Extended order code Proline Promag 500::

5a5bcc – ddeffghijkmnopstttuvww + ##**

05b5cdd – ddeffghijkmnopstttuvwwyy + ##**

5x5bxx – ddeffghijkmpqqww + ##**

for OEM-version

for replacement transmitter only

a = Type of sensor

H = Sensor Promag H

P = Sensor Promag P

W = Sensor Promag W

b = Generation

B = Generation of Flowmeter

cc = Size

any combination of number and/or letter up to size = DN3000

dd = Approval

Proline Promag 300 (IECEX + ATEX):

BB = Ex db eb [ia] IIC T6...T1 Gb
Ex tb IIIC T* Db

BD = Ex db [ia] IIC T6...T1 Gb
Ex tb IIIC T* Db

Proline Promag 500 (IECEX + ATEX):

BB = Ex db eb [ia] IIC T6...T4 Gb (transmitter)
Ex eb ia IIC T6...T1 Gb (sensor)
Ex tb IIIC T** Db (transmitter + sensor)

BD = Ex db [ia] IIC T6...T1 Gb (transmitter)
Ex eb ia IIC T6...T1 Gb (sensor)
Ex tb IIIC T** Db (transmitter + sensor)

BJ = [Ex ia] IIC (transmitter)
Ex eb ia IIC T6...T1 Gb (sensor)
Ex tb IIIC T** Db (sensor)

BN = Ex ec [ia Ga] IIC T6...T1 Gc (transmitter)
Ex eb ia IIC T6...T1 Gb (sensor)
Ex tb IIIC T* Db (sensor)

B7 = Ex de [ia] IIC T6...T1 Gb (transmitter)
Ex eb [ia] IIC Gb (sensor)

B8 = Ex d [ia] IIC T6...T1 Gb (transmitter)
Ex eb [ia] IIC Gb (sensor)

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Unit 6, Hawarden Industrial Park,

Hawarden, CH5 3US, United Kingdom

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Per: +44 (0) 1244 670 995

Fax: +44 (0) 1244 539 301

Email: ukinfo@csagroup.org

Web: www.csagroupuk.org

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

- e = Power Supply**
 - D = 24Vdc
 - E = 100-230Vac
 - I = 100-230Vac / 24Vdc
 - X = sensor only
- ff = Input / Output 1**
 - BA = 4-20mA HART
 - BB = 4-20mA WHART
 - CA = 4-20mA HART Ex i
 - CB = 4-20mA WHART Ex i
 - GA = Profibus PA
 - HA = Profibus PA Ex i
 - LA = Profibus DP
 - MA = Modbus RS485
 - NA = EtherNet/IP
 - RA = Profinet IO
 - SA = Foundation Fieldbus
 - TA = Foundation Fieldbus Ex i
 - XX = sensor only
- g = Input / Output 2**
 - A = without Input/Output 2
 - B = 4-20mA
 - C = 4-20mA Ex i
 - D = Configurable IO
 - E = Pulse/Frequency/Switch output
 - F = Pulse output phase-shifted
 - G = Pulse/Frequency/Switch output Ex i
 - H = Relay
 - I = 4-20mA input
 - J = Status input
 - X = sensor only
- h = Input / Output 3**
 - A = without Input/Output 3
 - B = 4-20mA
 - C = 4-20mA Ex i
 - D = Configurable IO
 - E = Pulse/Frequency/Switch output
 - F = Pulse output phase-shifted
 - G = Pulse/Frequency/Switch output Ex i
 - H = Relay
 - I = 4-20mA input
 - J = Status input
 - X = sensor only

Sira Certification Service

Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 878 995
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

- i = Input / Output 4** (Proline 500 only)
A = without Input/Output 4
B = 4-20mA
C = 4-20mA Ex i
D = Configurable IO
E = Pulse/Frequency/Switch output
F = Pulse output phase-shifted
G = Pulse/Frequency/Switch output Ex i
H = Relay
I = 4-20mA input
J = Status input
X = sensor only
- j = Display / Operation**
any single number or letter
- k = Integrated ISEM electronic** (Proline 500 only)
A = Digital
B = Analog
- l = Housing**
any single number or letter
- m = Transmitter Housing**
any single number or letter
- n = Sensor Housing** (Proline 500 only)
any single number or letter
- o = Cable Sensor Connection** (Proline 500 only)
any single number or letter
- p = Cable Entry**
any single number or letter
- qq = Upgrade Kit**
any double digits with combination of number or letter
- s = Liner material**
any single number or letter
- ttt = Process connection**
any triple digits with combination of number or letter
- u = Electrode**
any number or letter
- v = Calibration**
any single number or letter
- w = Device Model (two digit)**
A1 = product version 1
- yy = Customer version (one digit)**
any double digits with combination of number or letter
- ** = Option in two digits (none, two or multiple of two digits)**
any combination of number and/or letter
- #, + = Signs used as indicator for optional abbreviation of extended order code**

Sira Certification Service

Unit 6, Hawarden Industrial Park,

Hawarden, CH5 3US, United Kingdom

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Per: +44 (0) 1244 539 306

Fax: +44 (0) 1244 539 301

Email: ukinfo@csagroup.org

Web: www.csagroupuk.org

Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Promag Remote Transmitter and Remote Sensor:

5*****-... and O5*****-... with order code dd = BB, BD, B7, B8 in combination with k = B:

Transmitter :

terminals 4, 5, 6, 7, 8, 32, 33, 34, 35, 36, 37 -> $U_o = 26.6V$, $I_o = 19.2mA$, $P_o = 128mW$,
 $L_o = 20mH$, $C_o = 94nF$

and

$U_o = 13.3V$, $I_o = 39.2mA$, $P_o = 131mW$,
 $L_o = 20mH$, $C_o = 94nF$

terminals 41, 42 -> $U_N = 60V$, $I_N = 90mA$

Sensor :

terminals 4, 5, 6, 7, 8, 32, 33, 34, 35, 36, 37 -> $U_i = 26.6V$, $I_i = n.a.$, $P_i = n.a.$, $L_i = 0$, $C_i = 0$

terminals 41, 42 -> $U_N = 60V$, $I_N = 90mA$

Interconnection of circuit connected to terminals 4, 5, 6, 7, 8, 37, 36 for use of a cable with a maximum length of 100m is allowed when using a cable which has the following parameters:

Cable inductance ≤ 1 mH/km

Cable capacitance ≤ 1 $\mu F/km$

5*****-... and O5*****-... with order code dd = BJ, BN in combination with k = A:

Transmitter:

terminals 61, 62 -> $U_N = 35V$

terminals 63, 64 -> $U_N = 3.3V$

Sensor:

terminals 61, 62 -> $U_N = 35V$

terminals 63, 64 -> $U_N = 3.3V$

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

2 Parameters

2.1 Electrical Parameters

Power Supply		
Order Code e =	terminal no.	values
D ¹⁾	No. 1(L+/L), 2(L-/N)	U _N = 19.2...28.8V _{DC} U _M = 250V _{AC}
E ¹⁾	No. 1(L+/L), 2(L-/N)	U _N = 85...264V _{AC} U _M = 250V _{AC}
I ²⁾	No. 1(L+/L), 2(L-/N)	U _N = 19.2...28.8V _{DC} /85...264V _{AC} U _M = 250 V

- 1) applicable for products with approval code dd = BA, BB, BC, BD, B7, B8
 2) applicable for products with approval code dd = BI, BJ, BM, BN

Input/Output 1		
Order Code ff =	terminal no.	values
BA, BB, MA	No. 26, 27	U _N = 30V _{DC} U _M = 250V _{AC}
LA, GA, SA	No. 26, 27	U _N = 32V _{DC} U _M = 250V _{AC}
CA, CB	No. 26, 27	U _i = 30V I _i = 100mA P _i = 1.25W L _i = 0 C _i = 0
HA, TA	No. 26, 27	1) U _i = 30V I _i = 570mA P _i = 8.5W L _i = 10μH C _i = 5nF 2) U _i = 32V I _i = 570mA P _i = 8.5W L _i = 10μH C _i = 5nF
NA, RA	IO1 / RJ45	U _N = 30V _{DC} U _M = 250V _{AC}

- 1) applicable for products with approval code dd = BA, BB, BC, BD, B7, B8
 2) applicable for products with approval code dd = BM, BN

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Hawarden, CH5 3US, United Kingdom

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Per: +44 (0) 1244 539 306

Fax: +44 (0) 1244 539 301

Email: ukinfo@csagroup.org

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Input/Output 2		
Order Code g =	terminal no.	values
C, G	No. 24, 25	$U_i = 30V$ $I_i = 100mA$ $P_i = 1.25W$ $L_i = 0$ $C_i = 0$
B, D, E, F, I, J	No. 24, 25	$U_N = 30V_{DC}$ $U_M = 250Vac$
H	No. 24, 25	$U_N = 30V_{DC}$ $I_N = 100mA_{DC} / 500mA_{AC}$ $U_M = 250Vac$

Input/Output 3		
Order Code h =	terminal no.	values
C, G	No. 22, 23	$U_i = 30V$ $I_i = 100mA$ $P_i = 1.25W$ $L_i = 0$ $C_i = 0$
B, D, E, F, I, J	No. 22, 23	$U_N = 30V_{DC}$ $U_M = 250Vac$
H	No. 22, 23	$U_N = 30V_{DC}$ $I_N = 100mA_{DC} / 500mA_{AC}$ $U_M = 250Vac$

Input/Output 4		
Order Code i =	terminal no.	values
C, G	No. 20, 21	$U_i = 30V$ $I_i = 100mA$ $P_i = 1.25W$ $L_i = 0$ $C_i = 0$
B, D, E, F, I, J	No. 20, 21	$U_N = 30V_{DC}$ $U_M = 250Vac$
H	No. 20, 21	$U_N = 30V_{DC}$ $I_N = 100mA_{DC} / 500mA_{AC}$ $U_M = 250Vac$

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Unit 6, Hawarden Industrial Park,

Hawarden, CH5 3US, United Kingdom

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Per: +44 (0) 1244 539 301

Fax: +44 (0) 1244 539 301

Email: ukinfo@csagroup.org

Web: www.csagroupuk.org

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Service Interface		
Order Code dd =	terminal no.	values
BA, BB, BC, BD, B7, B8	Service Interface	Service Interface shall only be installed in areas which are known to be non hazardous
not for: BA, BB, BC, BD, B7, B8	Service Interface	$U_N = 3.3V$

Display remote		
Order Code dd =	terminal no.	values
BA, BB, BC, BD, B7, B8	No. 81, 82, 83, 84	$U_o = 3.9V$ $I_o = 1.5A$ (spark) 200mA (power) $P_o = 600mW$ $R_i = 2.6\Omega$ $C_o = 670\mu F$ $L_o = 0$
not for: BA, BB, BC, BD, B7, B8	No. 81, 82, 83, 84	$U_N = 3.3V$ $I_N = 150mA$

For Transmitter with approval code dd = BA, BB, BC, BD, B7 and B8 connected to the Remote Display of Endress+Hauser, Type DKX001 or ODKX001, the cable parameter with ration L/R = ≤ 0.024 mH/ Ω applies.

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Unit 6, Hawarden Industrial Park,

Hawarden, CH5 3US, United Kingdom

- This certificate and its schedules may only be reproduced in its entirety and without change.

Per: +44 (0) 1244 870 906

Fax: +44 (0) 1244 539 301

Email: ukinfo@csagroup.org

Web: www.csagroupuk.org

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

2.2 Thermal Parameters (Zone 1)

Proline Promag H/P/W 300

Notes:
 This page applies to versions with extended order code covering: 5*3B** - dd***** + #**# 05*3B** - dd***** + #**# 5x3Bxx - dd***** + #**#
 with approval option cCSAus / CSA: dd = CD, C2, C4 IECEx / ATEX: dd = BB, BD

Standard version with sensor not insulated:												
Sensor	Size / DN	Liner	T _{max,ref} [°C]	T _{Apmax} [°C]	T _{max,proc} [°C]							
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)		
Promag P	15...600	PTFE	-40	45	80	90	130	130	130	130		
				50	60	90	130	130	130	130		
				55	---	---	130	130	130	130		
25...200	PFA	-40	40	80	95	130	150	150	150			
			45	80	95	130	130	130	130			
			50	60	90	130	130	130	130			
Promag W	50...2400	HG	-20	50	60	80	80	80	80	80		
				25...1000	PU	-20	50	50	50	50	50	50
				50			80	95	130	150	150	150
Promag H	2...150	PFA	-40	50	80	95	130	150	150	150		
				55	65	80	130	150	150	150		
				55	65	80	130	150	150	150		

Notes: - T_{a,min} = -40°C (for limitation see name plate)

High temperature version with sensor not insulated:											
Sensor	Size / DN	Liner	T _{max,ref} [°C]	T _{Apmax} [°C]	T _{max,proc} [°C]						
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)	
Promag P	15...600	PTFE	-40	50	60	95	130	130	130	130	
				55	---	---	130	130	130	130	
				45	80	95	130	150	150	150	
25...200	PFA	-40	40	80	95	130	150	150	150		
			45	80	95	130	130	130	130		
			50	60	90	130	130	130	130		
Promag W	50...2400	HG	-20	50	60	80	80	80	80	80	
				25...1000	PU	-20	50	50	50	50	50
				50			80	95	130	150	150
25...1000	PU	-20	50	50	50	50	50	50	50		
			50	50	50	50	50	50			
			50	50	50	50	50	50			

Notes: - T_{a,min} = -40°C (for limitation see name plate)

High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec):											
Sensor	Size / DN	Liner	T _{max,ref} [°C]	T _{Apmax} [°C]	T _{max,proc} @T1 [°C]	T _{max} to be measured at reference point at sensor neck [°C]					
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	all	PTFE	-40	55	130	56.4	68.4	74.0	74.0	74.0	74.0
				50	150	56.4	68.4	74.0	74.0	74.0	
				50	150	56.4	68.4	74.0	74.0	74.0	
				50	150	56.4	68.4	74.0	74.0	74.0	
Promag W	all	HG	-20	60	80	56.4	68.4	74.0	74.0	74.0	
				60	80	56.4	68.4	74.0	74.0	74.0	
				60	80	56.4	68.4	74.0	74.0	74.0	
				60	80	56.4	68.4	74.0	74.0	74.0	

Notes: - T_{a,min} = -40°C (for limitation see name plate)
 - location of reference point

Aenderungen:	A	10.05.2016 / Bn	F	Alle gesetzlichen Uferebene, vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch Dritten Personen und Konkurrenzfirmen zugänglich gemacht werden.	Erstellt durch:
	B		G		Erstellt für:
	C		H		Ersteller: FES / Bn
	D		J		FILE: M:\Zeichnung\FES0260A\FES0260A.dwg
	E		K		

Control Drawing IECEx, ATEX, CSA, cCSAus	Gezeichnet	10.05.2016	Bn
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1	Geprüft		
Thermal Parameter	Er-geprüft	10.05.2016	Bn
Proline Promag 300/500	Gesehen		

FES0260A 1/3

Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:
 This page applies to versions with extended order code covering: 5*5B** - dd*****B***** + #**# O5*5B** - dd*****B***** + #**# 5x3Bxx - dd*****B***** + #**#
 with approval option cCSAus / CSA: dd = CD, C2, C4, C7, C8 with approval option IECEX / ATEX: dd = BB, BD, B7, B8

Sensor of Standard version with sensor not insulated										
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,meas} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
	25...200	PFA	-40	50	80	95	130	150	150	150
Promag W	50...2400	HG	-20	60	80	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
Promag H	2...150	PFA	-40	45	---	---	130	150	150	150
				55	---	---	130	130	130	130
				60	80	95	110	110	110	110

Notes: - T_{A,min} = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (for insulation refer to manual of E+H Flowtec)										
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,meas} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	75	95	130	130	130	130
	25...200	PFA	-40	60	80	95	130	150	150	150
Promag W	50...2400	HG	-20	60	75	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50

Notes: - T_{A,min} = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec)											
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,meas @T1} [°C]	T _{max} to be measured at reference point at sensor neck [°C]					
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	69	69	69
Promag W		PFA	-40	60	150	63.8	65.7	69	69	69	69
		HG	-20	60	80	63.8	65.7	69	69	69	69
		PU	-20	50	50	63.8	65.7	69	69	69	69

Notes: - T_{A,min} = -40°C (for limitation see name plate)
 - location of reference point

Transmitter for all versions			
T _{A,max}			
T6 (80°C)	T5 (95°C)	T4 (130°C)	
---	45	60	

Notes: - T_{A,min} = -50°C (for limitation see name plate)

Änderungen:	A	10.05.2016 / Bn	F	Alle geschickten Umkehrrechts vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch Dritten Personen und Kontinenten/Ämtern zugänglich gemacht werden.	Erstellt durch:
	B		C		Erstellt für:
	C		H		Ersteller: FES/ Bn
	D		J		FILE: MZelcng\FES0260A\FES0260A.doc
	E		K		

Control Drawing IECEX, ATEX, CSA, cCSAus		
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1		
Thermal Parameter		
Proline Promag 300/500		
Gezeichnet	10.05.2016	Bn
Geprüft		
Er-geprüft	10.05.2016	Bn
Gesehen		

FES0260A 2/3

Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:

This page applies to versions with extended order code covering:

5*5B** - dd*****A***** + #**# O5*5B** - dd*****A***** + #**# 5x3Bxx - dd*****A***** + #**#
 with approval option cCSAus / CSA: dd = CN, C8 IECEx / ATEX: dd = BJ, BN

Sensor of Standard version with sensor not insulated

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
	25...200	PFA	-40	50	80	95	130	150	150	150
Promag W	50...2400	HG	-20	60	80	95	130	130	130	130
	25...1000	PU	-20	50	80	95	130	150	150	150
Promag H	2...150	PFA	-40	35	80	95	130	150	150	150
				45	80	95	135	135	135	
				55	80	95	115	115	115	

Notes: - T_{a,min} = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor not insulated:

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
	25...200	PFA	-40	60	80	95	130	150	150	150
Promag W	50...2400	HG	-20	60	80	95	130	130	130	130
	25...1000	PU	-20	50	80	95	130	150	150	150

Notes: - T_{a,min} = -40°C (for limitation see name plate)

Transmitter for all versions:

Type of enclosure	T _{max}			
	Ordinary location (°C)	T6 (80°C)	T5 (95°C)	T4 (130°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: - aluminium enclosure: T_{a,min} = -50°C (for limitation see name plate)
 plastic enclosure: T_{a,min} = -40°C

Sensor of High temperature version with sensor insulated (for insulation refer to manual of E+H Flowtec)

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	70	95	130	130	130	130
	25...200	PFA	-40	60	75	95	130	150	150	150
Promag W	50...2400	HG	-20	60	75	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50

Notes: - T_{a,min} = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec):

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} @ T1 [°C]	T _{max} to be measured at reference point at sensor neck [°C]					
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	70.9	70.9	70.9
Promag W		PFA	-40	60	150	63.8	65.7	69	70.9	70.9	70.9
		HG	-20	60	80	63.8	65.7	69	70.9	70.9	70.9
		PU	-20	50	50	63.8	65.7	69	70.9	70.9	70.9

Notes: - T_{a,min} = -40°C (for limitation see name plate)
 - location of reference point



Änderungen:	A	10.05.2016 / Bn	F	Alle gesetzlichen Vorschriften, vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch Dritten Personen und Konstruktoren zugänglich gemacht werden.	Erstellt durch:
	B		G		Erstellt für:
	C		H		Ersteller: FES / Bn
	D		J		FILE: M:\Zelchng\FES0260A\FES0260A.doc
	E		K		

Control Drawing IECEx, ATEX, CSA, cCSAus		
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1		
Thermal Parameter		
Proline Promag 300/500		
Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach		Gezeichnet: 10.05.2016 Bn Geprüft: Ex-geprüft: 10.05.2016 Bn Gelesen: FES0260A 3/3

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

2.3 Thermal Parameters (Zone 2)

Proline Promag H/P/W 300

Notes:
 This page applies to versions with extended order code covering: 5*3B** - dd***** + #**# 06*3B** - dd***** + #**# 5x3Bxx - dd***** + #**#
 with approval option cCSAus / CSA: dd = CS, CZ IECEX / ATEX: dd = BS

Standard version with sensor not insulated										
Sensor	Size / DN	Liner	T _{max} [°C]	T _{A,max} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	50	---	90	130	130	130	130
				55	---	---	130	130	130	130
	25...200	PFA	-40	40	---	---	---	150	150	150
				45	---	95	130	130	130	130
Promag W	50...2400	HG	-20	50	---	80	80	80	80	80
				25...1000	PU	-20	50	---	50	50
Promag H	2...150	PFA	-40	50			---	95	130	150
				55	---	80	130	150	150	150

Notes: - Ta,min = -40°C (for limitation see name plate)

High temperature version with sensor not insulated										
Sensor	Size / DN	Liner	T _{max} [°C]	T _{A,max} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	50	---	90	130	130	130	130
				55	---	---	130	130	130	130
	25...200	PFA	-40	45	---	95	130	180	180	180
				50	---	90	130	160	160	160
Promag W	50...2400	HG	-20	50	---	80	80	80	80	80
				25...1000	PU	-20	50	---	50	50

Notes: - Ta,min = -40°C (for limitation see name plate)

High temperature version with sensor insulated (for insulation refer to manual of E+H Flowtec)										
Sensor	Size / DN	Liner	T _{max} [°C]	T _{A,max} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	50	---	90	130	130	130	130
				55	---	---	130	130	130	130
	25...200	PFA	-40	45	---	95	130	170	170	170
				50	---	90	130	160	160	160
Promag W	50...2400	HG	-20	50	---	80	80	80	80	80
				25...1000	PU	-20	50	---	50	50

Notes: - Ta,min = -40°C (for limitation see name plate)

High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec)															
Sensor	Size / DN	Liner	T _{max} [°C]	T _{A,max} [°C]	T _{max} (T1) [°C]	T _{max} to be measured at reference point at sensor neck [°C]									
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)				
Promag P	all	PTFE	-40	55	130	---	62.2	74.0	75.8	75.8	75.8				
						Promag W	PFA	-40	50	150	---	62.2	74.0	75.8	75.8
											HG	-20	60	80	---
						PU	-20	50	50	---					62.2

Notes: - Ta,min = -40°C (for limitation see name plate)
 - location of reference point

reference point

Änderungen:	A 10.05.2016 / Bn	F	Alle gesetzlichen Überwachungs- verfahrenen.	Erstellt durch:
B		G	Diese Zeichnung darf ohne unsere	Erstellt für:
C		H	Genehmigung weder vervielfältigt werden noch	Ersteller: FES / Bn
D		J	an anderen Personen und Konsumern/Innen-	FILE: MZzeichnung\FES0001\HAUFES001A.doc
E		K	zugänglich gemacht werden.	

Control Drawing IECEX, ATEX, CSA, cCSAus			Gezeichnet	10.05.2016	Bn
Zone 2, Cl.I Div. 2, Cl.I Zone 2			Geprüft		
Thermal Parameter			Ergeprüft	10.05.2016	Bn
Proline Promag 300/500			Gesehen		

Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach

FES0261A 1/3

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:

This page applies to versions with extended order code covering:

5*5B** - dd*****B***** + #**# O5*5B** - dd*****B***** + #**# 5x3Bxx - dd*****B***** + #**#
 with approval option cCSAus / CSA: dd = CS, CZ
 IECEX / ATEX: dd = BS

Sensor of Standard version with sensor not insulated

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
	25...200	PFA	-40	50	80	95	130	180	180	180
Promag W	50...2400	HG	-20	60	80	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
Promag H	2...150	PFA	-40	45	---	---	130	150	150	150
				55	---	---	130	130	130	130
				60	80	95	110	110	110	110

Notes: - T_{a,min} = -40°C (for limitation see name plate)
 - sensor Promag P with liner type PFA may be used for condition of process with T_{med}=180°C @ T_a=50°C for a short period of time (max. 10 min.)

Sensor of High temperature version with sensor not insulated

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
	25...200	PFA	-40	50	80	95	130	180	180	180
Promag W	50...2400	HG	-20	60	80	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50

Notes: - T_{a,min} = -40°C (for limitation see name plate)

Transmitter for all versions

T _{a,max}		
T6 (80°C)	T5 (95°C)	T4 (130°C)
---	45	60

Notes: - T_{a,min} = -50°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (for insulation refer to manual of E+H Flowtec)

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	60	75	95	130	130	130	130
					35	60	95	130	180	180
					40	80	95	130	170	170
Promag W	50...2400	HG	-20	60	75	95	130	150	150	150
					60	75	95	130	150	150
					50	50	50	50	50	50

Notes: - T_{a,min} = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec)

Sensor	Size / DN	Liner	T _{max} [°C]	T _{min} [°C]	T _{max} @ T1 [°C]	T _{max} to be measured at reference point at sensor neck [°C]					
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	70.9	70.9	70.9
Promag W		PFA	-40	60	150	63.8	65.7	69	70.9	70.9	70.9
		HG	-20	60	80	63.8	65.7	69	70.9	70.9	70.9
		PU	-20	50	50	63.8	65.7	69	70.9	70.9	70.9

Notes: - T_{a,min} = -40°C (for limitation see name plate)
 - location of reference point



Änderungen:	A 10.05.2016 / Bn	F	Alle gesetzlichen Vorschriften, vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch Dritten Personen und Konstruktoren zugänglich gemacht werden.	Erstellt durch:	
	B	G		Erstellt für:	
	C	H		Ersteller:	FES / Bn
	D	J		FILE:	MC\Zichng\FES0261A\FES0261A.dwg
	E	K			
Control Drawing IECEX, ATEX, CSA, cCSAus				Gezeichnet:	10.05.2016 Bn
Zone 2, Cl.I Div. 2, Cl.I Zone 2				Geprüft:	
Thermal Parameter				Es-geprüft:	10.05.2016 Bn
Proline Promag 300/500				Gesehen:	
Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach				FES0261A 2/3	

Certificate Annexe



Certificate Number: Sira 16ATEX2219X
Equipment: Proline Promag 300/500
Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:
 This page applies to versions with extended order code covering: 5*5B** - dd*****A***** + #**# O5*5B** - dd*****A***** + #**# 5x3Bxxx - dd*****A***** + #**#
 with approval option cCSA / CSA: dd = CS, CZ IECEx / ATEX: dd = BL, BS

Sensor of Standard version with sensor not insulated										
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,sens} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	50	50	95	130	130	130	130
				60	---	95	130	130	130	130
	25...200	PFA	-40	50	50	95	130	150	150	150
				60	---	95	130	130	130	130
Promag W	50...2400	HG	-20	50	80	80	80	80	80	80
				60	---	80	80	80	80	80
	25...1000	PU	-20	45	50	50	50	50	50	50
				60	---	50	50	50	50	50
Promag H	2...150	PFA	-40	40	50	95	130	150	150	150
				45	50	95	130	145	145	145
	55	---	95	115	115	115	115			
	55	---	95	115	115	115	115			

Notes: - Ta,min = -40°C (for limitation see name plate)
 - sensor Promag P with liner type PFA may be used for condition of process with Tmed=180°C @ Ta=50°C for a short period of time (max. 10 min.)

Sensor of High temperature version with sensor not insulated										
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,sens} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	45	70	95	130	130	130	130
				60	---	95	130	130	130	130
	25...200	PFA	-40	50	40	95	130	180	180	180
				60	---	95	130	150	150	150
Promag W	50...2400	HG	-20	45	50	80	80	80	80	80
				60	---	80	80	80	80	80
	25...1000	PU	-20	45	50	50	50	50	50	50
				60	---	50	50	50	50	50

Notes: - Ta,min = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec)										
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,sens} [°C]					
					T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	15...600	PTFE	-40	45	70	95	130	130	130	130
				60	---	95	130	130	130	130
	25...200	PFA	-40	35	40	95	130	180	180	180
				50	40	95	130	175	175	175
Promag W	50...2400	HG	-20	45	45	80	80	80	80	80
				60	---	80	80	80	80	80
	25...1000	PU	-20	45	50	50	50	50	50	50
				50	---	50	50	50	50	50

Notes: - Ta,min = -40°C (for limitation see name plate)

Sensor of High temperature version with sensor insulated (insulation not in compliance to manual of E+H Flowtec)											
Sensor	Size / DN	Liner	T _{max,lin} [°C]	T _{A,max} [°C]	T _{max,sens} @ T1 [°C]	T _{max} to be measured at reference point at sensor neck [°C]					
						T6 (80°C)	T5 (95°C)	T4 (130°C)	T3 (195°C)	T2 (290°C)	T1 (440°C)
Promag P	all	PTFE	-40	60	130	51.4	65.7	69	70.9	70.9	70.9
Promag W		PFA	-40	60	150	51.4	65.7	69	70.9	70.9	70.9
		HG	-20	60	80	51.4	65.7	69	70.9	70.9	70.9
		PU	-20	50	50	51.4	65.7	69	70.9	70.9	70.9

Notes: - Ta,min = -40°C (for limitation see name plate)
 - location of reference point

Transmitter for all versions				
Type of enclosure	Ordinary location (°C)	T _{A,max}		
		T6 (80°C)	T5 (95°C)	T4 (130°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: - aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
 plastic enclosure: Ta,min = -40°C

Änderungen:	A, 10.05.2016 / Bn	F	Alle geschriebenen Umbeschrift. vorarbeiten.	Erstellt durch:
B		G	Diese Zeichnung darf ohne unsere	Erstellt für:
C		H	Genehmigung weder vervielfältigt werden noch	Ersteller: FES / Bn
D		J	drucken. Personen und Konstruktivform	FILE: M:\Zeichnung\FES00261A\FES00261A.dwg
E		K	zugänglich gemacht werden.	

Control Drawing IECEx, ATEX, CSA, cCSAus	Gezeichnet	10.05.2016	Bn
Zone 2, CLI Div. 2, CLI Zone 2	Geprüft		
Thermal Parameter	Er-geprüft	10.05.2016	Bn
Proline Promag 300/500	Gesehen		

Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach

FES0261A

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