

INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

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IECEx CSA 16.0034X Certificate No.: Page 1 of 6 Certificate history:

Issue No: 8 Status: Current

Date of Issue: 2022-05-20

Applicant: **Endress+Hauser Flowtec AG**

> Kägenstrasse 7 CH-4153 Reinach/BL1 **Switzerland**

Equipment: Proline 300/500 flowmeter system

Optional accessory:

Type of Protection: Ex d, n, i, t, e

Marking:

See below annexes attached to this certificate for details:

Annex A - Proline Promass 300/500 and Proline Cubemass 300/500

Annex B - Proline Promag 300/500

Annex C - Proline Prosonic Flow 300/500

Annex D - Proline t-mass 300/500

Approved for issue on behalf of the IECEx

Certification Body:

Position: **Technical Oversight Specialist**

Signature:

(for printed version)

(for printed version)

20 May 2022

Dorin Stochitoiu

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Issue 7 (2020-10-17)

Issue 6 (2020-05-26) Issue 5 (2019-08-22)

Issue 4 (2019-03-01) Issue 3 (2017-12-27)

Issue 2 (2017-08-31)

Issue 1 (2017-01-17)

Issue 0 (2016-07-13)

Certificate issued by:

CSA Group 178 Rexdale Boulevard Toronto, Ontario M9W IR3 Canada





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Date of issue: 2022-05-20 Issue No: 8

Manufacturer: Endress+Hauser Flowtec AG

Kagenstrasse 7 CH-4153 Reinach/BL1 **Switzerland**

Manufacturing locations:

Endress+Hauser Flowtec AG Kagenstrasse 7

CH-4153 Reinach/BL1 Switzerland Endress+Hauser Flowtec AG

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France

Endress+Hauser Flowtec AG,

Division U.S.A. 2330 Endress Place Greenwood Indiana 46143

United States of America

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

Edition:6.0

IEC 60079-15:2017 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

Edition:5.0

60079-26:2014-10

Edition:3.0

Explosive atmospheres - Part 26: Equipment with Equipment Protection Level (EPL) Ga

IEC 60079-31:2013

Edition:2

Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

IEC 60079-7:2017

Edition:5.1

Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

IEC TS 60079-47:2021

Edition: 1.0

Explosive atmospheres – Part 47: Equipment protection by 2-wire intrinsically safe Ethernet concept (2-WISE)

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 Reports:



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Date of issue: 2022-05-20 Issue No: 8

Quality Assessment Report:

DE/TUN/QAR06.0004/09



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

This certificate covers various type of flowmeters as given below:

- A) Proline Promass 300, Proline Promass 500, Proline Cubemass 300 and Proline Cubemass 500
- B) Proline Promag 300 and Proline Promag 500
- C) Proline Prosonic Flow 300 and Proline Prosonic Flow 500
- D) Proline t-mass 300 and Proline t-mass 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 a version with ISEM electronic integrated in transmitter where the sensor sends analog signals to the transmitter and a version with ISEM electronic in sensor 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. As an exception Proline Prosonic Flow G 500 and Proline t-mass 500 are not available with ISEM integrated in the transmitter and Proline Prosonic Flow P 500 is not available with ISEM integrated in the sensor.

For all versions of the Proline 300, an additional remote Display, e.g. DKX001 or ODKX001, may be connected to the electronics. The remote display is available in two options for the user. Either it is ordered as a separate product or by the product of the flowmeter. An antenna bushing at cable entry for transmitter enclosures in type of protection Ex "eb", Ex "tb" and Ex "ec" is available for connection of an external antenna.

The intrinsically safe output circuits for order code MC/RC meet the requirements for 2-WISE according to the used standards IEC 60079-11:2011 and IEC TS 60079-47:2021.

See below annexes attached to the certificate for details:

Annex A - Proline Promass 300/500 and Proline Cubemass 300/500

Annex B - Proline Promag 300/500

Annex C - Proline Prosonic Flow 300/500

Annex D - Proline t-mass 300/500

SPECIFIC CONDITIONS OF USE: YES as shown below:

See annexes attached to this certificate for specific conditions.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1:

This certificate is updated to include:- Minor changes to product order code- Minor corrections to product marking- Introduction of remote display as part of the flowmeter- Minor corrections to the product drawings

Issue 2:

The addition of model code for replacement transmitter OEM version and new assignment table of replacement transmitter to product of flowmeter.- The addition of new certified sensor "Promass A" sensor with changes to model code.- Update in the ambient temperature reduced optionally to -60°C for sensors of Promass F/Q/X 500 with code for integrated ISEMelectronic k = "B" as described in the technical description document.- All the corresponding drawings were updated.- Combining all the Proline 300/500 sensor models from two separate certificates IECEx CSA 16.0031X and IECEx CSA 16.0034X intoone single certificate IECEx CSA 16.0034X.

Issue 3

The introduction of a new hygienic stainless steel transmitter enclosure for versions Promag 300, Promass 300 and Cubemass300, installation in Zone 2 only.- Revision of corresponding drawings to include the new hygienic enclosure.

Issue 4

Addition of new model version Proline Prosonic Flow G 300/500- Addition of new model version Proline t-mass 300/500- Addition of new Antenna bushing model H337 for external antenna connection- Addition of new order codes for IO1 current output (active) with I/O code xx = "CC" and "CD"- Addition of new order codes for IO2, IO3 and IO4 with I/O code "K" for pulse output Ex i (passive) and with I/O code "L" for pulse outputnon Ex i- Addition of new product order codes to include the following: sensor enclosure G350 (plastic) for Promag 500 in Zone 2 for remote version; an alternative transmitter enclosure G328 (plastic) for Proline 500; changes to order code for Promag W300 and Promag W500- Revised standard IEC 60079-0, Edition 6 to IEC60079-0, Edition 7.0- Revised standard IEC 60079-15, Edition 4 to IEC60079-15, Edition 5.0- Revised control drawings to include the above changes in revision 4.0 of this report.

Issue 5:

This revision includes the following changes:- Addition of product order code "ww = A2" that was missed in the previous edition for model Proline Promag 300/500, Proline Prosonic300/500 and Proline t-mass 300/500. See Certificate Annex for order code details- Correction of entity parameter for IO1 order codes: CA, CB. Affected nameplate drawings are revised in this edition.

Issue 6:

This revision includes the below changes:- Introduction of new model version Proline Prosonic Flow P 500- Changes in nomenclature ("Digital" is now referred as ISEM integrated in sensor, "Analog" is now referred as ISEM integrated in transmitter)- Introduction of new flange sizes for Proline Promass 300/500 for High Temperature (HT) flowmeters- Update of related product documentation- Addition of new manufacturing location in China.

Issue 7:

Update to cover corrections related to the maximum process temperature.

Issue 8:

The following changes are introduced in this issue:

- Introduction of additional sensor sizes DN150/200/250 for Proline Promass Q
- Introduction of additional sensor type CH-050-A. CH-100-A for Proline Prosonic Flow P500 with process temperature up to 435°C
- Introduction of additional IO's with IO-1 order code ff = MB, MC for Modbus and ff = RB, RC for Profinet
- Revision to order codes for Proline Prosonic Flow G300/500 and P500 replacement transmitter
- Introduction of new type of liner ETFE for Proline Promag sensors
- Proline Promag P500/W500, when used with sensor enclosure G300, is now available with rating IP68 in addition to IP67
- Introduction of new standard IEC TS 60079-47 for 2-WISE concept
- Update of standard IEC60079-7:2015 Ed. 5 to IEC60079-7:2017 Ed. 5.1
- Update of certification drawings



Aurangabad - , Maharashtra State 431136

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Additional manufacturing locations:

Endress+Hauser Flowtec (Brazil) Fluxômetros Ltda.

Estrada Municipal Antônio Sesti, 600 Bairro Recreio Costa Verde Itatiba, SP - 13254-085

Brazil

Endress+Hauser Flowtec (China) Co. Ltd.

Suzhou Industrial Park (SIP) Jiang-Tian-Li-Lu No. 31 Suzhou 215021 China

Annexes:

Annex_A_to_IECEx_CSA_16.0034X_Issue_8_Promass.pdf Annex_B_to_IECEx_CSA_16.0034X_Issue_8_Promag.pdf Annex_C_to_IECEx_CSA_16.0034X_Issue_8_Prosonic.pdf Annex_D_to_IECEx_CSA_16.0034X_Issue_8_t-mass.pdf

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

China-Singapore Industrial Park (SIP)

Su-Hong-Zhong-Lu No. 465 Suzhou 215021

China





Annex A:

This Annex is applicable for flowmeters type Proline Promass 300/500 and Proline Cubemass 300/500

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1. Description

The Proline 300 / 500 is a platform used for flowmeters of type Proline Promass 300, Proline Promass 500, Proline Cubemass 300 and Proline Cubemass 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 a version with ISEM electronic integrated in transmitter where the sensor sends analog signals to the transmitter and a version with ISEM electronic in sensor 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 or ODKX001, may be connected to the electronics. The remote display is available in two options for the user. Either it is ordered as a separate product or by the product of the flowmeter.

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.

All Proline Promass 300/500 flowmeters are available for an ambient temperature of -40°C to +60°C and optional -50°C to +60°C. In addition the version of the sensor Proline Promass F/X/Q 500 with ISEM electronic in transmitter is available also for -60°C to +60°C ambient.

All versions of flowmeters Proline Promass 300, Proline Promass 500, Proline Cubemass 300 and Proline Cubemass 500 are available for an enclosure protection of degree IP66, IP67.





2. Order Code

2.1. Proline Promass 300/500, Proline Cubemass 300/500

Extended order code Proline Promass 300 and Cubemass 300:

8a3bcc - ddeffghjlpsstttvww + #**#

O8a3bcc – ddeffghjlpsstttvwwyy + #**# for OEM-version

8x3bxx – ddeffghjlprrssww + #**# for replacement transmitter
O8x3bxx – ddeffghjlprrsswwyy + #**# for replacement transmitter OEM

Extended order code Proline Promass 500 and Cubemass 500:

8a5bcc - ddeffghijkmnopsstttvww + #**#

O8a5bcc – ddeffghijkmnopsstttvwwyy + #**# for OEM-version

8x5bxx – ddeffghijkmopqqrrssww + #**# for replacement transmitter
O8x5bxx – ddeffghijkmopqqrrsswwyy + #**# for replacement transmitter OEM

a = Type of sensor

A = Promass A; C = Cubemass C; E = Promass E; F = Promass F; H = Promass H; I = Promass I; O = Promass O; P = Promass P; Q = Promass Q; S = Promass S; X = Promass X

b = Generation

B = Promass A (type 8A*B**, O8A*B**); Cubemass C; Promass E;

Promass F; Promass H; Promass I; Promass O;

Promass P: Promass Q: Promass S: Promass X

C = Promass A (type 8A*C**, O8A*C**)

cc = Size

any double digits with combination of number or letter

dd = Approval

Proline Promass 300:

BA = Ex db eb [ia] IIB T6...T1 Gb

Ex tb IIIC T** Db

BB = Ex db eb [ia] IIC T6...T1 Gb

Ex tb IIIC T** Db

BC = Ex db [ia] IIB T6...T1 Gb

Ex tb IIIC T** Db

BD = Ex db [ia] IIC T6...T1 Gb

Ex tb IIIC T** Db

BS = Ex ec IIC T5...T1 Gc



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Proline Promass 500:

Proline	: Pro	omass 500 :	
BA	=	Ex db eb [ia] IIB T6T4 Gb	(transmitter)
		Ex ia IIB T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BB	=	Ex db eb [ia] IIC T6T4 Gb	(transmitter)
		Ex ia IIC T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BC	=	Ex db [ia] IIB T6T4 Gb	(transmitter)
		Ex ia IIB T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BD	=	Ex db [ia] IIC T6T4 Gb	(transmitter)
		Ex ia IIC T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BI	=	[Ex ia] IIC	(transmitter)
		Ex ia IIB T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BJ	=	[Ex ia] IIC	(transmitter)
		Ex ia IIC T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BL	=	non-Ex	(transmitter)
		Ex ec IIC T6T1 Gc	(sensor)
BM	=	Ex ec [ia Ga] IIC T6T1 Gc	(transmitter)
		Ex ia IIB T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BN	=	Ex ec [ia Ga] IIC T6T1 Gc	(transmitter)
		Ex ia IIC T6T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BS	=	Ex ec IIC T6T1 Gc	(transmitter + sensor)

e = Power Supply

D = 24Vdc

E = 100-230 Vac

I = 100-230 Vac / 24 Vdc

X = sensor only



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ff = Input / Output 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive)

CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active)

GA = Profibus PA

HA = Profibus PA Ex i

LA = Profibus DP

MA = Modbus RS485

MB = Modbus TCP MC = Modbus TCP Ex i

NA = EtherNet/IP

RA = Profinet IO

RB = Profinet

RC = Profinet Ex i

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 (passive)

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

K = Pulse output Ex i

L = Pulse output

X = sensor only

h = A = without Input/Output 3

B = 4-20mA

C = 4-20mA Ex i (passive)

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

K = Pulse output Ex i

L = Pulse output

X = sensor only





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- i = Input / Output 4 (Proline 500 only) = without Input/Output 4 = 4-20mAС = 4-20mA Ex i (passive) D = Configurable IO Ε = Pulse/Frequency/Switch output
 - F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i
 - Н = Relay
 - = 4-20mA input 1 J = Status input Κ = Pulse output Ex i = Pulse output L
- = sensor only j Display / Operation

Χ

with remote Display : 0

without remote Display: any single number or letter except O

- = Integrated ISEM electronic (Proline 500 only) k
 - = Sensor = Transmitter
- I = Housing (Proline 300 only) any single number or letter
- = Transmitter Housing (Proline 500 only) m any single number or letter
- = Sensor Housing (Proline 500 only) n any single number or letter
- = Cable Sensor Connection (Proline 500 only) 0 any single number or letter
- = Cable Entry р

any single number or letter

= Upgrade Kid qq

any double digits with combination of number or letter

- = Existing Product (refer to section 1.2 for assignment table of flowmeter to replacement transmitter) rr any double digits with combination of number or letter
- = Measuring tube material SS

any double digits with combination of number or letter

= Process connection ttt

any triple digits with combination of number or letter

= Calibration

any single number or letter

= Device model (two digit) (refer to section 1.2 for assignment table of flowmeter to replacement transmitter) ww

A1 = product version 1 A2 = product version 2

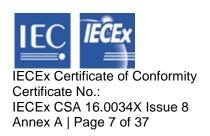
= Customer version (two digits) уу

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





2.2. Assignment of Flowmeter to Replacement Transmitter

The replacement transmitters are assigned to the flowmeter Proline Promass 300/500 as follows:

Product flowmeters		Replacement transmitter type					
model code	Generation code b =	device model code ww =	model code	Generation code b =	existing product rr =		device model code ww =
8A* b ** ww , O8A* b ** ww	В	A1 / A2	8x*bxxrrww, O8x*bxxrrww	В	AA	(all sizes)	A1 / A2
8A* b ** ww , O8A* b ** ww	С	A1 / A2	8x*bxxrrww, O8x*bxxrrww	В	AB	(all sizes)	A1 / A2
8C* b ** ww , O8C* b ** ww	В	A1 / A2	8x*bxxrrww, O8x*bxxrrww	В	CA	(all sizes)	A1 / A2
8E* b ** ww ,	В	A1 / A2	8x* b xx rrww ,	В	EA	(DN815)	A1 / A2
O8E* b ** ww			O8x*bxxrrww		EB EC	(DN2550) (DN80)	A1 / A2 A1 / A2
8F* b ** ww ,	В	A1 / A2	8x* b xx rrww ,	В	FA	(DN815)	A1 / A2
O8F* b ** ww			O8x* b xx rrww		FB FC	(DN2550) (DN80250)	A1 / A2 A1 / A2
8H* b ** ww ,	В	A1 / A2	8x*bxxrrww,	В	НА	(DN840)	A1 / A2
O8H* b ** ww	_		O8x*bxxrrww	_	HB	(DN50)	A1 / A2
8l* b ** ww , O8l* b ** ww	В	A1 / A2	8x*bxxrrww,	В	IA IB	(DN840) (DN40FB80)	A1 / A2 A1 / A2
80*b**ww, 080*b**ww	В	A1 / A2	08x*bxxrrww 8x*bxxrrww, 08x*bxxrrww	В	OA	(all sizes)	A1 / A2
8P* b ** ww ,	В	A1 / A2	8x*bxxrrww,	В	PA	(DN840)	A1 / A2
O8P* b ** ww			O8x*bxxrrww		PB	(DN50)	A1 / A2
8Q* b ** ww ,	В	A1 / A2	8x* b xx rrww ,	В	QA	(DN2550)	A1 / A2
O8Q* b ** ww			O8x* b xx rrww		QB	(DN80100)	A1 / A2
					QC	(DN150250)	A1 / A2
8S* b ** ww ,	В	A1 / A2	8x* b xx rrww ,	В	SA	(DN840)	A1 / A2
O8S* b ** ww			O8x*bxxrrww		SB	(DN50)	A1 / A2
8X* b ** ww , O8X* b ** ww	В	A1 / A2	8x*bxxrrww, O8x*bxxrrww	В	XA	(all sizes)	A1 / A2





2.3. Sensor Groups

In the following tables, the Promass 300/500 sensors are assigned to different sensor groups from A1 to C2 depending on their sensor size and electronics version.

Assignment of Promass sensors and Cubemass sensors installed in Zone 1:

Sensor	Type of	Size of sensor	Group	T _{Med,min}
Group	sensor			
A1	A (type 8A*B**)	01(DN1), 02, 04	IIC	-50°C
	С	01, 02, 04, 06	IIC	-50°C
	Е	25, 40, 50	IIC	-50°C
	F	08, 15, 25, 40, 50	IIC	-50°C / -60°C *)
	F(HT)	15, 25, 50	IIC	-50°C
	H, S, P	08, 15, 25, 40	IIC	-50°C
	[08, 15, 16, 25, 26, 40	IIC	-50°C
	Q	25, 50	IIC	-50°C / -60°C *)
B1	A (type A*C**)	01(DN1), 02, 04	IIC	-50°C
	E	08, 15, 80	IIC	-50°C
	F	08, 15	IIC	-50°C / -60°C *)
	F, F(HT), O	80, 100, 150, 250	IIC	-50°C / -60°C *)
	1	41, 50, 51, 80	IIC	-50°C
	H, S, P	50	IIC	-50°C
	Q	80, 100, 150, 200, 250	IIC	-50°C / -60°C *)
	X	350	IIC	-50°C / -60°C *)
C1	F	15, 25, 40, 50	IIC	-200°C
	Н	8, 15, 25, 40, 50	IIC	-200°C
	Q	25, 50	IIC	-200°C
D1	F	08, 15, 80, 100, 150, 250	IIC	-200°C
	Н	50	IIC	-200°C
	Q	80, 100, 150, 200, 250	IIC	-200°C
E1	Е	80	IIB	-50°C
	F, F(HT), O	80, 100, 150, 250	IIB	-50°C / -60°C *)
	H, S, P	50	IIB	-50°C
	[41, 50, 51, 80	IIB	-50°C
	Q	80, 100, 150, 200, 250	IIB	-50°C / -60°C *)
	X	350	IIB	-50°C / -60°C *)
H1	F, F(HT)	80, 100, 150, 250	IIB	-200°C
	Н	50	IIB	-200°C
	Q	80, 100, 150, 200, 250	IIB	-200°C

^{*)} Tmed,min = -60°C only applicable for sensor of Promass F 500, Promass Q 500 and Promass X 500 version with ISEM integrated in transmitter.

<u>Note:</u> All sensors of Promass 300 and Promass 500 versions are available for EPL Ga/Gb except the versions "A" (size DN1), "H" (all sizes) and "I" (all sizes) which are only available for EPL Gb. For sensors with EPL Ga, Zone 0, the protection is only applicable for the interior of the measuring tube.





Assignment of Promass sensors and Cubemass sensors installed in Zone 2:

Sensor Group	Type of sensor	Size of sensor	T _{Med,min}
A2	С	01, 02, 04, 06	-50°C
/ 12	Ē	25, 40, 50, 80	-50°C
	F	25, 40, 50, 80, 100, 150, 250	-50°C / -60°C *)
	F(HT)	15, 25, 50, 80, 100, 150, 250	-50°C
	H, S, P	15, 25, 40, 50	-50°C
	I	08, 15, 16, 25, 26, 40, 41, 50, 51, 80	-50°C
	0	80, 100, 150, 250	-50°C
	Q	25, 50, 80, 100, 150, 200, 250	-50°C / -60°C *)
	X	350	-50°C / -60°C *)
B2	Α	01, 02, 04	-50°C
	(type 8A*B**)		
	F	08, 15	-50°C
	E	08, 15	-50°C
	H, S, P	08	-50°C
C2	F	25, 40, 50, 80, 100, 150, 250	-200°C
	F(HT)	15, 25, 50, 80, 100, 150, 250	-200°C
	Н	8, 25, 40, 50	-200°C
	Q	25, 50, 80, 100, 150, 200, 250	-200°C
D2	F	08, 15	-200°C
	Н	50	-200°C
E2	A (type 8A*C**)	01, 02, 04	-50°C

^{*)} Tmed,min = -60°C only applicable for sensor of Promass F 500, Promass Q 500 and Promass X 500 version with ISEM integrated in transmitter.

3. Parameters

3.1. Electrical Parameters

Power Supply		
Order Code	terminal no.	values
e =		
D 1)	No. 1(L+/L), 2(L-/N)	$U_N = 19.228.8V_{DC}$
		U _M = 250V _{AC}
E 1)	No. 1(L+/L), 2(L-/N)	U _N = 85264V _{AC}
		$U_{M} = 250V_{AC}$
[2]	No. 1(L+/L), 2(L-/N)	U _N = 19.228.8V _{DC} /85264V _{AC}
		$U_M = 250V_{AC}$

¹⁾ applicable for products with approval code dd = BA, BB, BC, BD

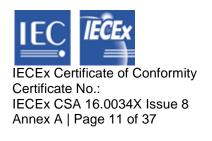
²⁾ applicable for products with approval code dd = BS, BI, BJ, BL, BM, BN





Input/Output 1			
Order Code	terminal no.	values	
ff =			
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	
		$I_i = 100 \text{mA}$	
		$P_i = 1.25W$	
		L _i = 0	
00.00	N. 00 05	$C_i = 6nF$	Lov
CC, CD	No. 26, 27	1)	2)
		U _O = 21.8V	U ₀ = 21.8V
		lo = 90mA	lo = 90mA
		$P_0 = 491 \text{mW}$	$P_0 = 491 \text{mW}$ $L_0 = 9 \text{mH (IIC)} /$
		$L_O = 4.1 \text{mH (IIC)} / 15 \text{mH (IIB)}$	$L_O = 9mH (IIC) / 39mH (IIB)$
		Co = 160nF (IIC) /	$C_0 = 600 nF (IIC) /$
		1160nF (IIB)	4000nF (IIB)
		` '	` '
		Ui = 30V	Ui = 30V
		li = 10mA	li = 10mA
		Pi = 0.3W	Pi = 0.3W
		Ci = 6nF	Ci = 6nF
110 = 70	NI 00 07	Li = 5µH	Li = 5µH
HA, TA	No. 26, 27	1)	2)
		Profibus PA (Fisco Field Device) /	Profibus PA (Fisco Field Device) /
		Foundation Fieldbus	Foundation Fieldbus
		$U_i = 30V$	$U_i = 32V$
		$l_i = 570 \text{mA}$	$I_i = 570 \text{mA}$
		P _i = 8.5W	P _i = 8.5W
		$L_i = 10\mu H$	$L_i = 10\mu H$
		$C_i = 5nF$	$C_i = 5nF$
MB, RB	No. 26, 27	APL port profile SLAX /	SPE PoDL classes 10,
		<u>11, 12</u>	
		$U_N = 30V_{DC}$	
		U _M = 250V _{AC}	
MC, RC	No. 26, 27	<u>1)</u>	<u>2)</u>
		2-WISE power load	2-WISE power load
		APL port profile SLAA	APL port profile SLAC
		$U_i = 17.5V$	U _i = 17.5V
		$I_i = 380 \text{mA}$	l _i = 380mA
		P _i = 5.32W	P _i = 5.32W
		L _i ≤ 10µH	L _i ≤ 10µH
NA DA	IO1 / D 145	C _i ≤ 5nF	C _i ≤ 5nF
NA, RA	IO1 / RJ45	$U_{N} = 30V_{DC}$	
		U _м = 250Vac	

¹⁾ applicable for products with approval code dd = BA, BB, BC, BD





2) applicable for products with approval code dd = BS, BM, BN

Input/Output 2		
Order Code	terminal no.	values
g =		
C, G, K	No. 24, 25	$ \begin{array}{lll} U_{i} &= 30V \\ I_{i} &= 100 mA \\ P_{i} &= 1.25W \\ L_{i} &= 0 \\ C_{i} &= 0 \end{array} $
B, D, E, F, I, J, L	No. 24, 25	U _N = 30V _{DC} U _M = 250V _{AC}
Н	No. 24, 25	U _N = 30V _{DC} I _N = 100mA _{DC} / 500mA _{AC} U _M = 250V _{AC}

Input/Output 3		
Order Code h =	terminal no.	values
C, G, K	No. 22, 23	$\begin{array}{lll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \\ C_i &= 0 \end{array}$
B, D, E, F, I, J, L	No. 22, 23	$\begin{array}{ll} U_N &= 30 V_{DC} \\ U_M &= 250 V_{AC} \end{array}$
Н	No. 22, 23	$U_{N} = 30V_{DC}$ $I_{N} = 100mA_{DC} / 500mA_{AC}$ $U_{M} = 250V_{AC}$

Input/Output 4	Input/Output 4			
Order Code i =	terminal no.	values		
C, G, K	No. 20, 21	$\begin{array}{lll} U_{i} &= 30V \\ I_{i} &= 100 mA \\ P_{i} &= 1.25W \\ L_{i} &= 0 \\ C_{i} &= 0 \end{array}$		
B, D, E, F, I, J, L	No. 20, 21	$U_N = 30V_{DC}$ $U_M = 250Vac$		
Н	No. 20, 21	$U_{N} = 30V_{DC}$ $I_{N} = 100mA_{DC} / 500mA_{AC}$ $U_{M} = 250V_{AC}$		





Service Interface		
Order Code dd =	terminal no.	values
BA, BB	Service Interface	 Service Interface shall only be installed in areas which are known to be non hazardous with a non intrinsically safe circuit U_N = 3.3 V, U_M = 250 V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0
BC, BD	Service Interface	 Service Interface shall only be installed to an non intrinsically safe circuit with U_N = 3.3V, U_M = 250V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0
not for: BA, BB, BC, BD	Service Interface	$U_N = 3.3V$

Antenna bushing		
Order Code dd =	terminal no.	values
BA, BB, BI, BJ, BL, BM, BN, BS	N connector	See conditions of certfication

Display remote		
Order Code dd =	terminal no.	values
BA, BB, BC, BD	No. 81, 82, 83, 84	Uo = 3.9V lo = 1.5A (spark) 200mA (power) Po = 600mW Ri = 2.6Ω Co = 670μF Lo = 0
not for: BA, BB, BC, BD	No. 81, 82, 83, 84	$\begin{array}{rcl} U_N &=& 3.3V \\ I_N &=& 150 \text{mA} \end{array}$

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

<u>Promass and Cubemass Remote Transmitter and Remote Sensor:</u>

 8^{*****} and 08^{*****} with order code dd = BA, BB, BC, BD in combination with k = B:

Transmitter:

Terminals 41, 42-> exciter coil circuit: Uo = 15V, Io = 129mA, Po = 484mW

(sensor group A1/C1/E1)

Uo = 15V, Io = 46mA, Po = 173mW

(sensor group B1/D1/H1)





Terminals 9, 10, 11, 12, X3, X4-> temperature circuit:

Uo = 15V, lo = 18.2mA, Po = 68.3mW Terminals 4, 5, 6, 7-> sensor coil circuit: Uo = 15V, lo = 15.2mA, Po = 57mW

Sensor:

Terminals 41, 42-> exciter coil circuit: Ui = 15V, Ii = 132mA, Pi = 494mW

(sensor group A1/C1/E1)

Ui = 15V, Ii = 48mA, Pi = 180mW

(sensor group B1/D1/H1)

Terminals 9, 10, 11, 12, X3, X4--> temperature circuit:

Ui = 15V, Ii = 60.6mA, Pi = 227.3mW

Terminals 4, 5, 6, 7-> sensor coil circuit: Ui = 15V, Ii = 15.2mA, Pi = 57mW

For interconnection using a cable with a maximum length of 120m is allowed when using a cable which has the following parameters:

Cable inductance ≤ 0.5 mH/km Cable capacitance ≤ 0.5 µF/km

 8^{*****} -... and 08^{*****} -... with order code dd = BS in combination with k = B:

Transmitter:

Terminals 41, 42-> exciter coil circuit: $U_N = 15 \text{ V}, I_N = 100 \text{mA}$ (sensor group A2/C2)

 $U_N = 15 \text{ V}, I_N = 72\text{mA} \text{ (sensor group B2/D2)}$

 $U_N = 15 \text{ V}$, $I_N = 25\text{mA}$ (sensor group E2)

Terminals 9, 10, 11, 12, X3, X4--> temperature circuit:

 $U_N = 15 \text{ V}, I_N = 18.2 \text{mA}$

Terminals 4, 5, 6, 7-> sensor coil circuit: $U_N = 15 \text{ V}$, $I_N = 15.2 \text{mA}$

Sensor:

Terminals 41, 42-> exciter coil circuit: $U_N = 15 \text{ V}$ Terminals 9, 10, 11, 12, X3, X4--> temperature circuit:

 $U_{N} = 15 \text{ V}$

Terminals 4, 5, 6, 7-> sensor coil circuit: $U_N = 15 \text{ V}$

 8^{*****} ... and 08^{*****} ... with order code dd = BI, BJ, BM, BN in combination with k = A:

Transmitter:

terminals 61, 62, 63, 64 -> Uo = 13.8V, lo = 1.156A, Po = 3.3W

Sensor:

terminals 61, 62, 63, 64 -> Ui = 14V, Ii = 1.2A, Pi = 3.4W

For interconnection of transmitter to sensor any cable may be used with the following requirements:

• L/R \leq 0.0089 mH/ Ω and C_{cable} \leq 760nF for group IIC, L/R \leq 0.0356 mH/ Ω and C_{cable} \leq 4.2 μ F for group IIB

Or





• $L_{cable} \le 26 \mu H$ and $C_{cable} \le 760 nF$ for group IIC, $L_{cable} \le 104 \mu H$ and $C_{cable} \le 4.2 \mu F$ for group IIB

 8^{*****} -... and 08^{*****} -... with order code dd = BL, BS in combination with k = A:

Transmitter:

terminals 61, 62-> $U_N = 32V$ terminals 63, 64-> $U_N = 3.3V$

Sensor:

 $\begin{array}{ll} \text{terminals 61, 62->} & U_N = 32V \\ \text{terminals 63, 64->} & U_N = 3.3V \\ \end{array}$



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3.2. Thermal Parameters (Zone 1)

Proline Promass A/E/F/H/I/O/P/Q/S/X 300 Proline Cubemass C 300

Notes: Pages 1 and 2 apply to versions with extended order code covering: 8*3B** - dd... O8*3B** - dd... 8x3Bxx - dd... O8x3Bxx - dd...

with approval option cCSAus / CSA: dd = CC, CD, CE, C1, C2, C3, C4

											IECEx / ATE	X: dd = BA	, BB, B	C, BD									
Tempera	ture table	e for v	ersion	s with	sensor	not ins	ulated															1	
Sensor	Size / DN		-		3011301	1101 1113		_ [°C]				Direct (DA)			-			-	0.01			-	
Selisor	OLE / DIV	min .	max	Tames	T6	T5	T4	T3	T2	T1	Sensor	Size / DN	min	max	Tame	T6	T5	T-=1,=	[*C]	T2	T1	┨	
		[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)			["C]	[,C]	["C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C))	
Promass	01 04	-50	205	50	50	95	130	150	205	205	Promass	8, 15	-50	150	50	50	95	130	150	150	150]	
Cubemass	01 06	-50	205	60 50	50	95 95	130	150 150	205 205	205 205	- 1	15FB, 25 25FB, 40	-50	150	60 50	50	95 85	120	(150) 150	(150) 150	(150) 150	4	
C	0100		200	60		95	130	150	205	205		40FB, 50	-50	150	60	50	85	120	(150)	(150)	(150)	┨	
Promass	0850	-50	205	50	50	100	130	130	205	205		50FB, 80	-50	150	50	50	85	120	150	150	150	1	
E				55	***	80	100	130	205	205					60	-	85	120	(150)	(150)	(150)		
	80	-50	205	60 50	50	(80) 75	(100)	(130) 170	(205)	(205)	Promass	80 250	-50	205	50 55	50	75 75	110	170 170	205 205	205 205	4	
	au	-50	205	55	50	75	110	170	205	205	10				60	_	75	110	170	(205)	(205)	4	
				60	***	(75)	(110)	(170)	(205)	(205)	Promass	350	-50	205	50	50	90	120	170	205	205	1	
Promass	08 15	-50	150	50	50	95	130	150	150	150	x				55		90	120	170	205	205]	
F		-50	240	60 50	50	95 95	130	150 160	150 240	150 240			-		60		(90)	(120)	(170)	(205)	(205)	4	
		-50	240	60	50	95	130	160	(240)	(240)	Promass	25 250	-50 / -200	240	50 60	50	75 75	110	160	240 240	240 240	4	
		-200	240	50	50	95	100	160	240	240	Notes:	(1) Ta,min =		50°C res		(see name		110	100	240	240	┨	
				60	***	95	100	160	(240)	(240)		(2) values in	bracket					the transm	itter is no	t installed a	bove		
	15 25	-50 /	350	50	45	95	130	175	275	350		the sense (3) for applic		elen with	n manufacture	m madium	tomoorat	us and mis	denum ma	dium tomos			
	25 50	-200 -50	150	60 50	50	95 95	130	175 150	275 150	350 150		see nam		SION WILL	maximu	m meaium	temperat	ue and me	imum me	dium empi	erature		
	25 50	-50	150	60		95	130	150	150	150												_	
		-50	240	50	50	95	130	160	240	240													
				60		95	130	160	(240)	(240)													
		-200	240	50 60	50	95 95	100	160 160	(240)	(240)													
	80 250	-50	150	50	50	75	110	150	150	150													
				60	***	75	110	150	150	150													
		-50	240	50	50	75	110	170	240	240													
		-200	240	60 50	50	75 75	110	170 170	(240)	(240) 240													
		-200	240	60	50	75	110	170	(240)	(240)													
	50 250	-50 /	350	50 45 85 120 175 275 350																			
		-200		60		85	120	175	275	350	Aenderungen:	A 10.05.2016	/Bn F	09.06	3.2021 / Bn	Alle ges	etrichen Urb	eberrechte, vo	behalten.	Ensetzt durc	th:		
Promass	8	-50 / -200	205	50 60	50	65 65	100	160 160	205 205	205		B 24.10.2016	$\overline{}$					chne unsere					
"	15 50	-50/	205	50	50	75	115	180	205	205	1	C 03.05.2017	/Bn h	1		Genehn	sigung weder	vervief.iltigt w	erden noch	Ersatz für:			
		-200		60		75	115	180	205	205	1	D 04.07.2018	/Bn J					Konkurrenzilin	nen	Ersteller: FE			
Promass	8	-50	150	45	45	65	100	150	150	150		E 22.10.2019		£ .			ig gemacht w	erden.		FILE: M1Zeich	hng/FESCO	EDIFFESE263FA	isc
S, P		-50	205	60 45	45	65 65	100	150 160	150 205	150 205	Control Dr	awing IEC	Ex, AT	EX, C	CSA, c	CSAus				Gezeichnet	10	0.05.2016	Bn
		-50	205	60	40	65	100	160	205	205	1										- 1"		
	15 50	-50	150	50	50	75	115	150	150	150	Zone 1, Zo	ne 21, Cl.	I Div.	1, CI.II	I, CI.III,	, Cl.I Zo	ne 1			Geprüft			İ
				60	_	75	115	150	150	150	Thermal P	aramata-									-		
		-50	205	50	50	75 75	115	180 180	205 205	205	rnemare	arameter								Ex-geprüft	0	9.06.2021	Bn
				60	_	/5	115	180	205	205	Proline Pro	omass 300	/500,	Proline	e Cube	emass 3	300/50	0		Gesehen			
											E	Flowte	c AG, K	(ägenst	trasse 7,	CH-4153	3 Reinac	h BL1, Po	ostfach	FES	S02	63F	1/6



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Continued of previous page

Sensor	Size / DN	T,	med	T _{a,max}			T _{met,m}	= [°C]			Sensor	Size / DN	
		min	max		T6	T5	T4	T3	T2	T1		1	min
Promass	01 04	[°C]	[°C]	[°C]	(85°C) 50	(100°C)	(135°C) 130	(200°C)	(300°C) 205	(450°C) 205	Promass	80 250	[°C]
Δ .	0104	-50	205	55	50	(95)	(130)	(150)	(205	(205)	O	80 250	-50
Cubemass	01 06	-50	205	50		95	130	150	205	205	Promass	350	-50
C				55		(95)	(130)	(150)	(205)	(205)	X		
Promass	0850	-50	205	50	50	100	130	130	205	205	Promass	25 250	-50
E				55		(100)	(130)	(130)	(205)	(205)	Q		-20
	80	-50	205	45 50	50	75 75	110	170	205 205	205 205	Notes:	(1) Ta,min = (2) values in	
	1	l		55		(75)	(110)	(170)	(205)	(205)		(2) values in the sens	
Promass	08 15	-50	150	50	50	95	130	150	150	150		(3) for applic	
F				60		95	110	(150)	(150)	(150)		see nam	
	1	-50/	240	50	50	95	130	160	240	240			
	1	-200		55	***	95	(130)	(160)	(240)	(240)			
				60	***	95	110	110	110	110	Tomas	rature table	a far
	15 25	-50 / -200	350	50 60	45	95 95	130	175 175	275 275	350 350		ulation not i	
	25 50	-50	150	50	50	95	130	150	150	150	(IOF IIIS	ulation not i	n cor
	25 50	-55		60		95	110	(150)	(150)	(150)	Sensor	Size / DN	Т
	1	-50/	240	50	50	95	130	160	240	240			<u></u>
	1	-200		55	***	95	(130)	(160)	(240)	(240)	ı	1	Ι,
				60		95	110	110	110	110	all	al	-
	80 250	-50	150	50 60	50	75 75	110	150 (150)	150 (150)	150	Notes:	(1) for safe	use to
	1	-50 /	240	50	50	75	110	170	240	(150) 240	Thomas.	- temper	
	1	-200	240	55	50	75	110	(170)	(240)	(240)	ı	- temper	
	1	200		60		75	110	110	110	110	ı	- Ta,min	
	50 250	-50/	350	50	45	85	120	175	275	350	ı	- for max (2) location	
		-200		60	***	85	120	175	275	350	ı	(2) location	OI FEE
Promass	8	-50 /	205	50	50	65	100	160	205	205	ı		
Н	1	-200		55 60		65 65	100	(160)	(205) 100	(205)	ı		
	15 50	-50/	205	50	50	75	115	180	205	205	ı		
	15 50	-200	205	55	50	75	115	(180)	(205)	(205)	ı		
	1			60		75	115	115	115	115	ı		
Promass	8	-50	150	45	45	65	100	150	150	150			
S,P		l		50		65	100	150	150	150			
	1		205	60		65	100	125	(150)	(150)	Aenderungen:	A 10.05.201	6 / Bn
	1	-50	205	45 50	45	65 65	100	160	205 205	205	1	B 24.10.201	6 / Bn
	1	l		60	-	65	100	115	(205)	(205)	1	C 03.05.201	7 / Bn
	15 50	-50	150	50	50	75	115	150	150	150	1	D 04.07.201	8 / Bn
				60		75	115	125	(150)	(150)	1	E 22.10.201	9 / Bn
	1	-50	205	50	50	75	115	180	205	205	Control D	rawing IEC	Ex
				60		75	115	(150)	(150)	(150)	00.11.01.0	.ag .z.c	
Promass	8, 15	-50	150	50	50	95	130	150	150	150	Zone 1, Z	one 21, Cl.	.I Dir
ı	15FB, 25			60		95	120	(150)	(150)	(150)			
	25FB, 40 40FB, 50	-50	150	50 60	50	85 85	120 120	150 (150)	150 (150)	150 (150)	Thermal F	Parameter	
	50FB, 80	-50	150	50	50	85	120	150)	150	150			
	201 21 20	-		60		85	120		(150)		Droline D	romass 300	O/E/O/

_											
	Sensor	Size / DN	T _e	ned	Tames			Teste	[°C]		
		l	min	max	1	T6	T5	T4	T3	T2	T1
			["C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
	Promass	80 250	-50	205	50	50	75	110	170	205	205
	0				55	-	(75)	(110)	(170)	(205)	(205)
	Promass	350	-50	205	50	50	90	120	170	205	205
	X				55	-	(90)	(120)	(170)	(205)	(205)
	Promass	25 250	-50 /	240	50	50	75	110	160	240	240
	Q		-200		55		(75)	(110)	(160)	(240)	(240)
	Motor: (4) To min =	4020	EOSC my	enactively.	lean name	Inteles				

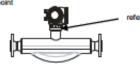
- - (2) values in brackets are applicable for installation where the transmitter is not installed above
 - (3) for applicable version with maximum medium temperatue and minimum medium temperature

Temperature table for versions with sensor insulated

(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Sensor	Size / DN		T 1	be measured sensorn		oint at	
		T6 (85C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	all	59	72	75	76	77	77

- (1) for safe use temperatures shall not exceed all of the following:
 - temperature table for versions with sensor not insulated (refer to table above)
 - temperature at reference point as listed in this table - Ta,min = -40°C, -50°C respectively (see nameplate)
 - for maximum medium temperatue and minimum medium temperature see nameplate
- (2) location of reference point



reference point

Aenderungen:	A.	10.05.2016 / Bn	F	09.06.2021 / Bn	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:
l	В	24.10.2016 / Bn	G		Diese Zeichnung darf ohne unsere	
l	C	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
l	D	04.07.2018 / Bn	J		dritten Personen und Konkurrenditmen	Ersteller: FES / Bn
l	E	22.10.2019 / Bn	ĸ		zuglingig gemacht werden.	FILE: MrZeichngFES0263FFES0263F.doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Вп
Geprüft		
Ex-geprüt	09.06.2021	Bn
Gesehen		





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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering: 8*5*** - dd*******B... O8*5*** - dd*******B... 8x5Bxx - dd*******B... O8x5Bxx - dd*******B...

with approval option cCSAus / CSA: dd = CC, CD, CE, C1, C2, C3, C4

									штаррго	vai optioi	IECEx / ATEX				2, 03, 0	-							
Temperat	ure table	for vers	ions v	with se	nsor n	ot insul	lated																
Sensor	Size / DN	Tme	4	Tana	Г		Tmeto	[,c]			Sensor	Size / DN	T	4	Tana			Tonto	- [°C]		$\neg \neg$		
		min	max	1	T6	T5	T4	T3	T2	T1			min	max	1	T6	T5	T4	T3	T2	T1		
		[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)			[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)		
Promass A	01 04	-50	205	60	60	95	130	150	205	205	Promass	8, 15 15FB, 25	-50	150	60	60	95	130	150	150	150		
(type 8A5B)												25FB, 40,											
Promass	01 04	-50	205	55 60	55	95 95	130	150 150	205	205 205		40FB, 50, 50FB, 80	-50	150	60	70	85	120	150	150	150		
(type				00		90	130	130	200	200	Promass	80 250	-50	205	60	60	75	110	170	205	205		
8A5C)											0												
Cubemass	01 06	-50	205	50 60	50	95 95	130	150 150	205 205	205 205	Promass	350	-50 / -60	205	60	70	90	120	170	205	205		
Promass	0850	-50	205	50	50	100	130	130	205	205	Promass	25 250	-50 / -60 /	240	60	55	75	110	160	240	240		
E				60		100	130	130	205	205	Q		-200										
	80	-50	205	60	60	75	110	170	205	205		 Ta,min = for applic 	-40°C, -50						mum med	kum tomos	mhura		
Promass	08 15	-50 / -60	150	55 60	50	95 95	130	150 150	150 150	150 150	•	 tor applications see name 		m with M	eximum r	nealum to	amperatue	rano mini	mum med	um tempe	aure		
-		-50/-60/	240	55	50	95	130	160	240	240													
		-200		60		95	130	160	240	240													
	15 25	-50 / -200	350	60	70	95	130	175	265	350													
	25 40	-50 /	150	55	55	95	130	150	150	150													
		-60		60	***	95	130	150	150	150													
		-50 / -60 /	240	55	55	95	130	160	240	240													
	50	-200 -50 /	150	60 55	55	95 95	130	160 150	240 150	240 150	Transmitte	r for all yes	reione:										
	30	-60		60		95	130	150	150	150	Transmitte.	TOT OIL VO	Tana				-						
		-50 / -60 /	240	60	60	95	130	170	240	240			la,mar				\dashv						
	80 250	-200 -50 /	150	55	55	75	110	150	150	150	-	6 (85°C)	\rightarrow		T5 (100°	C)	\dashv						
	ou 250	-60	150	60		75	110	150	150	150		55			60		_						
		-50 / -60 /	240	60	60	75	110	170	240	240	Notes: (1)	Ta,min = -50'	C (for limita	ation see	name pla	ate)							
		-200	200																				
	50 250	-50 / -200	350	60	70	85	120	175	265	350													
Promass	8	-50 /	205	50	50	65	100	160	205	205													
н	45 50	-200	205	60		65	100	160	205	205	Aenderungen:	A 10.05.201	6/Bn F	09.06.2	021 / Bn	Alle gess	etdichen Urbe	berrechte, von	behalten.	Ersetzt dun	ch:		
	15 50	-50 / -200	205	60	60	75	115	180	205	205		8 24.10.201				Diese Ze	eichnung darf	chine unsere					
Promass	8	-50	150	45	45	65	100	150	150	150	1	03.05.201	7/Bn H				igung weder i			Ersatz für:			
S, P				60		65	100	150	150	150	1	04.07.201				_	ersonen und k		en	Ersteller: Fl			
		-50	205	45	45	65 65	100	160	205	205		E 22.10.201					g gemacht we	eden.		FILE: M1Zeid	ting/FES0263/F	FESG263F.d	bc
	15 40	-50	150	60 50	50	75	115	160 150	205 150	205 150	Control Dra	wing IEC	Ex, ATI	EX, C	SA, cC	SAus				Gezeichnet	10.05	2016	Bn
				60		75	115	150	150	150	7000 1 70	24 (L Div. 4	CI II	CL III	0117-	4				_		
		-50	205	50	50	75	115	180	205	205	Zone 1, Zo	ne 21, Cl	.i Div. 1,	, CI.II,	Ci.iii,	CI.I Z0	ne 1			Geprüft			
	50	-50	150	60 60	60	75 75	115 115	180 150	205 150	205 150	Thermal Pa	rameter								Ex comit	00.00	2021	Bn
L		-50	205	60	60	75	115	180	205	205										Ex-geprüft	US/.06	2021	OH .
											Proline Pro	mass 30	0/500, P	roline	Cuber	nass 3	00/500)		Gesehen			
											田	Flowt	ec AG, Kä	igenstra	asse 7, C	CH-4153	Reinach	BL1, Po	estfach	FES	S0263	3F	3/6



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									С	ontinu	ed of previous page
Temperatu	re table fo	r version	s with	sensor	insulate	ed (for in	sulation	refer to n	manual o	f Endress	s+Hauser Flowtec)
Sensor	Size / DN	Tes		Tame			Teste	["C]			Sensor Size / DN Test Test Test Test (C)
		min	max		T6	T5	T4	Т3	T2	T1	min max T6 T5 T4 T3 T2 T1
Domman	01 04	[°C]	[°C]	[,C]	(85°C) 60	(100°C)	(135°C) 130	(200°C)	(300°C) (180)	(450°C)	[°C] [°C] [°C] (85°C) (100°C) (135°C) (200°C) (300°C) (450°C)
Promass	01 04	-50	205	50 60	60	95 95	130	150	150	(180) 150	Promass 350 -50 / 205 60 70 90 120 170 205 205
(type 8A5B)				-	~		155			130	X -60 Promass 25250 507-607 240 60 55 75 110 160 240 240
Promass	01 04	-50	205	50	60	95	130	150	(180)	(180)	Promiss 25250 -507 -507 240 60 55 75 110 160 240 240
A				55	55	95	130	150	150	150	Notes: (1) Ta,min = -40°C, -50°C / -60°C respectively (see nameplate)
(type 8A5C)				60		95	130	150	150	150	(2) values in brackets are applicable for installation where the sensor enclosure is not installed above
Cubemass	01 06	-50	205	50 60	60	95 95	130	150 150	(180) 150	(180) 150	the sensor
Promass	0850	-50	205	50	50	100	130	130	205	205	 (3) for applicable version with max. medium temperatue and min. medium temperature see nameplate
E	0650	-90	205	60	50	100	130	130	205	205	Traff re-protect
	80	-50	205	60	60	75	110	170	205	205	1
Promass	08 15	-50 /	150	55	50	95	130	150	150	150	Temperature table for versions with sensor insulated
F		-60		60		95	130	150	150	150	(for insulation not in compliance to manual of Endress-Hauser Flowtec)
		-50 /-60 /	240	55	50	95	130	160	240	240	(in installative in companies to manage of Endess-Finance)
	15 25	-200 -50 /	350	60	70	95 95	130	160 175	240 265	240 350	Sensor Size / DN T _{mm} to be measured at reference point at
	15 25	-200	330	60	10	90	130	175	200	300	
	25 40	-50/	150	55	55	95	130	150	150	150	(85°C) (100°C) (135°C) (200°C) (300°C) (450°C)
		-60		60		95	130	150	150	150	all all 63 72 84 91 91 91
		-50 / -60 /	240	55	55	95	130	160	240	240	Notes: (1) for safe use temperatures shall not exceed all of the following:
		-200		60		95	130	160	240	240	 temperature table for versions with sensor not insulated (refer to table above)
	50	-50 / -60	150	55 60	55	95 95	130	150 150	150 150	150 150	 temperature at reference point as listed in this table Ta,min = -40°C, -50°C respectively (see nameplate)
		-50 / -60 /	240	60	60	95	130	170	240	240	- Taymir - 40, -50 C respectively (see nameparatus - for maximum medium temperatus and minimum medium temperature see
		-200	240				130		240	240	nameplate
	80 250	-50 /	150	55	55	75	110	150	150	150	(2) location of reference point
		-60		60		75	110	150	150	150	reference point
		-50 / -60 /	240	60	60	75	110	170	240	240	-
	50 250	-200 -50 /	350		70	85	120	175	265	350	
	50 250	-200	350	60	70	85	120	1/5	265	350	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Promass	8	-50/	205	50	50	65	100	160	205	205	
н		-200		60		65	100	160	205	205	
	15 50	-50/	205	60	60	75	115	180	205	205	Transmitter for all versions:
	_	-200	455	4.5			400	450	455	450	Tana
Promass S. P	8	-50	150	45 60	45	65 65	100	150 150	150 150	150 150	T6 (85°C) T5 (100°C)
8, P		-50	205	45	45	65	100	160	205	205	55 60
				60		65	100	160	205	205	Notes: (1) Ta,min = -50°C (for limitation see name plate)
	15 40	-50	150	50	50	75	115	150	150	150	Aenderungen: A 10.05.2016 / Bn F 09.06.2021 / Bn Alle gesetzlichen Urbeberrechte, vorbehalten. Ersetzt durch:
				60		75	115	150	150	150	B 24.10.2016 / Bn G Diese Zeichnung darf ohne unasre
		-50	205	50	50	75	115	180	205	205	C 03.05.2017 / Bn H Genehmigung weder verwief likigt werden noch Ersantz für:
	50	-50	150	60	60	75 75	115	180	205 150	205 150	D 04.07.2018 / Bn J dritten Personen und Korkumendirmen Ersteller: FES / Bn
	50	-50	205	60	60	75	115	150 180	205	205	E 22.10.2019 / Bn K zuglingig gemacht werden. Fil.E: MtZeichngFES0003FFES0003Ffcsc
Promass	8, 15	-50	150	60	60	95	130	150	150	150	Control Drawing IECEx, ATEX, CSA, cCSAus Gezeichnet 10.05.2016 Bn
I	15FB, 25	-50	130				150				Control Drawing IECEX, ATEX, COA, COSAUS Gezeichnet 10.05:2016 Bn
	25FB, 40,	-50	150	60	70	85	120	150	150	150	Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.II, Cl.I Zone 1
_	80										ureprofit.
Promass O	80 250	-50	205	60	60	75	110	170	205	205	Thermal Parameter Ex-geprüt 09.06.2021 Bn
											Proline Promass 300/500, Proline Cubemass 300/500
											Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach



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				P/Q/S/					ubema		-	0015***				0.00	4.00			00.00	4400000	
Notes: This	page applie	s to ver	sions w	rith exten	ded orde	er code co	ovening:	8.	5*** – dd*	A	with approval	O6*5*** - o option	cCSA	"A us/CS/ c/ATE)		dd = Cf	dd*** И, CN, (, ВЈ, ВМ	C5, C6		OBX5BX	- dd******A.	
Temperatu	re table fo	r versio	ons wit	h senso	r not ins	ulated																
Sensor	Size / DN	Τ,	ed	Tame			Tnetn	[°C]			Sensor	Size / DN	T,	eni	Tamer			Testes				
		min [°C]	max I°Cl	rcı	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)			min	max		T6	T5	T4	T3		M M	
Promass	01 04	-50	205	35	60	95	130	150	205	205	Promass	15 50	[°C]	[°C]	[°C]	(85°C) (100°C)	(135°C) ((200°C)		0°C) 05	
A				50	-	95	130	150	205	205	S, P			200	50		65	110	180	205 2	05	
(type 8A5B) Promass	01 04	-50	205	60 35	55	95	130	150 150	205 205	205	_				60	***	-	110	180		05	
Promass A	01 04	-50	205	50	55	95	130	150	205	205	Promass	8,80	-50	150	35 50	45	70 70	115	140		50 50	
(type 8A5C)				55	_		130	150	205	205	Ι'				55		-	115	140		50	
				60	_		130	150	190	190					60		_	115	140		40	
Cubemass C	01 06	-50	205	35 50	40	75 75	130	150 150	205	205 205	Promass	80 250	-50	205	35	45	65	110	170		05	
				55	_	75	130	150	205	205	0				50 60	***	65	110 110	170 170		05 05	
				60	_		130	150	160	160	Promass	350	-50	205	35	45	65	110	170		05 05	
Promass	0850	-50	205	35	40	60	130	130	205	205	X	330	-30	200	50	45	65	110	170		05	
E				50 60	_	60	130	130 130	205 205	205 205		<u> </u>			60		-	110	170		05	
	80	-50	205	35	40	60	110	170	205	205	Promass	25 250	-50 /	240	35	45	65	100	160		40	
				50	_	60	110	170	205	205	Q		-200		50 60		65	100	160 160		40 40	
D	00 50		450	60			110	170	205	205	Notes: ((1) Ta,min =	-40°C -	50°C res			_	100	160	240 2	40	
Promass	08 50	-50	150	35 50	40	65 65	130	150 150	150 150	150 150								e transmitte	er is not i	nstalled above	.	
				60	_		130	130	130	130		the sens									_	
		-50/	240	35	40	65	130	160	240	240	,	(3) Tor applic see nam		rsion with	maximum	medium ter	nperatue	and minim	num mea	ium temperatu	re	
		-200		50 60	_	65	130	160 160	240 240	240 240		200 11011	- Paris									
	15 25	-50 /	350	35	40	80	130	175	275	350												
		-200		50	-	80	130	175	275	350	Transmitte	er for all ve	rsions:	:								
				60	-		130	175	240	240	Type of					T.					\neg	
	80 250	-50	150	35	40	65	110	150	(275) 150	(350) 150	enclosure	Ord	inary loca	ation	Т	6	Т	T5	-	T4	\dashv	
	255			50	_	65	110	150	150	150			(°C)		(85	°C)		(100°C)		(135°C)		
				60	-	***	110	130	130	130	aluminium		60		(00	,	_	45	-	60	_	
		-50 / -200	240	35 50	40	65 65	110	170 170	240 240	240 240	plastic	_	60	-	_	_		40	-			
		-200		60	_		110	170	240	240		aluminium er		. To min	50°C //o	e limitation	500 000	o olato)		-	_	
	50 250	-50 /	350	35	40	80	120	175	275	350		plastic enclo			= 40°C	i iiiiiacion	see man	re prate)				
		-200		50 60	_	80	120	175	275 240	350 240	Aenderungen:	A 10.05.20	10 / 0-	E 100	06.2021 / Bn	Alle const	nichan I ima	beredte vorb	ach alle a	Ersetzt durch:		
				60	_		120	175	(275)	(350)	Aenderungen:	B 24.10.20		e us.	06.2021 / BN			shne unsere		Erseun durch:		
Promass	8	-50 /	205	35	40	65	100	160	205	205		C 03.05.20		H		Genehmig	gung weder	verviefältigt wer	eden noch	Ersatz für:		
н		-200		50	_	65	100	160	205	205		D 04.07.201	18 / Bn	,		dritten Pe	reanen und i	Konkurrenafirme	en	Ersteller: FES	Bn	
	15 50	-50 /	205	60 35	40	65	100	160 180	205 205	205 205		E 22.10.201	19 / Bn	K		zuglingig	gemacht we	eden.		FILE: M1Zeichng	FESCURO/FFESCURO	doc
	.555	-200	200	50	-	65	115	180	205	205	Control Dra	awing IE(CEx, A	TEX.	CSA, cC	SAus				Gezeichnet	10.05.2016	Bn
				60	-		115	180	205	205		-								GAZEGI ME	10.03.2010	
Promass	8	-50	150	35	45	65 65	100	150 150	150	150	Zone 1, Zo	ne 21, C	I.I Div.	. 1, Cl	II, CI.III,	Cl.I Zor	ne 1			Geprüft	1	
S, P				50 60	_	65	100	150	150	150 150	Thermal Pa	aram alc-										-
		-50	205	35	45	65	100	160	205	205	Thermal Pa	arameter								Ex-geprüft	09.06.2021	Bn
				50	_	65	100	160	205	205	Proline Pro	mass 30	0/500	. Proli	ne Cube	mass 3	00/500)		Canadana	1	1
	15 50	-50	150	60 35	45	65	110	160 150	205 150	205 150				,						Gesehen		
	15 50	-00	150	50	45	65	110	150	150	150												
				60	-		110	150	150	150										FESC	1263F	5/
	l			60	-		110	150	150	150	15	Flow	tec AG,	Kägen	strasse 7,	CH-4153	Reinach	BL1, Pos	stfach	FES(263F	



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Service Sear Programs Sear Programs Program	Temperat	ure table fo	or versi	ions wi	th senso	or insulat	ted (for in	nsulation	refer to r	manual o	f Endress	ess+Hauser Flowtec)
Promass 1	Sensor	Size / DN	T.	eni .	Team							Sensor Size / DN T _{med} T _{A,max} T _{med,max} [*C]
Promass 01 04 00 200 35 40 00 100 150						-						
A												
Promass S -0 -0 -0 -0 -0 -0 -0		01 04	-50	205								1.
Cubernates D1 06 S0 D1 D1 D1 D1 D1 D1 D1 D	A											200 50 55 100 100 240 240
Columnase Colu												Trous. (1) Tajimi - 40 C, 50 C respectively (see management)
C	Cubamass	04 06	en.	205								
Promass 0850 .		0106	-00	205								
Promass Section Sect	C			1 1								
Promass Section Sect				1 1		_						
Formass Society Soci	Promass	0850	-50	205		40	55					
Promass 80												
Promass 0850 -5		80	-50	205	35	40	55					
Promass S						1	55	110	170	205	205	
Promass 8	Promass	08 50	-50	150	35	40	60	130	130			T6 T6 T4 T2 T2 T4
Solidar Soli	F			1 1		ı	60					(80°C) (100°C) (135°C) (200°C) (300°C) (450°C)
15 5												all all 45 64 82 82 85 85
## Promass 8 -50 150 150 150 150 150 240 2				240								Notes: (1) for safe use temperatures shall not exceed all of the following:
1525			-200									- temperature table for versions with sensor not insulated (refer to table above)
Promass 8 -50 150 35 40 65 115 180 205 205 205 150 55 100 150 205												- temperature at reference point as listed in this table
B0250		15 25		350								- injunit - in all an a respectively (see the second
B0250 50 150 35 40 60 110 130			-200									
B0 250 50 150 35 40 60 110 130 1					60	_	_	130	1/5			
So		80 250	-50	150	35	40	en	110	130			
So		60 250	-50	150								
Promass 8 -50 205 35 40 65 110 170 240				1 1								
Promass 8 -50 205 35 40 60 110 170 240			-50 /	240		40	60					
So												
Promass 8				1 1	50	_	_	110	170	240		
Promass 8 -50 205 35 40 65 100 160 205 205 205 45 65 100 160 205 205 205 45 65 100 160 205 20		50 250	-50 /	350	35	40	80	120	175	275	350	
Promass 8			-200			1	80					
Promass 8 -50 / 205 35 40 65 100 160 205					60	-	-	120	175			Type of
H				\vdash								nclosure
Promass S -50 -5		8		205								
1550	н		-200									
Promass S S Promass S S Promass S S S S S S S S S		45 50	E0.1	205								
Promass S, P		15 50		205								
Promass S			-200	1 1								
S, P	Pmmass	8	-50	150								Notes: (1) auminium endosdre: Ta,min = -50 C (for immation see name plate)
So		-	~~									pase violosite. Tajiiri - 40 C
Solution	-,-											Aenderungen: A 10.05.2016 / Bn F 09.06.2021 / Bn Ale gesetrichen Urbeberechte. vorbehalten. Ersetzt durch:
So			-50	205								B 24.10.2016 / Bn G Diese Zeichnung darf ohne unsere
15 50					50	_	55	100	160	205	205	C 03.05.2017 / Bn H Genehmigung weder verviell Bigt werden noch Ersantz für:
## 45 55 110 150 150 150 150 150 150 150 150					55	_	-	100	160	205	205	D 04.07.2018 / Bn J dritten Personen und Konkurrendirmen Eratseller: FES / Bn
45		15 50	-50	150		40	55	110				
-50 205 35 40 55 100 180 205 205 50 55 100 180 205 205 50 55 100 180 205 205 205 205 205 205 205 205 205 20												Control Descripe IECE: ATEX COA
Promass 8,80 -50 150 35 45 70 90 150												
Promass 8,80 -50 150 35 45 70 90 150 150 150 150 150 150 150 150 150 15			-50	205							205	Zone 1 Zone 21 CLI Div 1 CLI CLI CLI CLI Zone 1
Promass 8,80 -50 150 35 45 70 90 150 150 150 150 150 150 150 150 150 15												
1	_											Thermal December
Promass 80 250 -50 205 35 40 55 110 170 205 205 205 C S S S S S S S S S S S S S S S S S S	Promass	8,80	-50	150								
Promass 80 250 -50 205 35 40 55 110 170 205 205 205 C	•											
O	Dmm	00 250	.50	205								Proline Promass 300/500, Proline Cubemass 300/500 Gesehen
Promass 350 -50 205 35 40 55 120 170 205 205 X FESO263F		ou 290	-80	205								
× 50 55 120 170 205 205 FES0263F 6/		250	.50	205								
55 120 170 205 205 Flowtec AG, Kägenstrasse 7, CH-4153 Reinach BL1, Postfach		350	-80	205								
Flowlec Alg., Kagenstrasse 7, CH-4153 Keinach BL1, Postfach	^		l	l								FEOUZOSF C
					99		_	120	170	200	200	Flowled AG, Ragenstrasse 7, CH-4103 Reinach BL1, Postfach



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3.3. Thermal Parameters (Zone 2)

Proline Promass A/E/F/H/I/O/P/Q/S/X 300 Proline Cubemass C 300

Notes:

This page applies to versions with extended order code covering:

8x3Bxx - dd... O8x3Bxx - dd...

Sensor	Size /	type	T,	ned	T _{a,max}			Tmet	[°C]			Ser	sor	Siz		type	L
	DN	of	min	max		T6	T5	T4	Т3	T2	T1			DN		of	Γ
_		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)			-	250	protection	4
Promass	01 04	Ex ec	-50	205	50	****	90	130	170	205	205		mass	80.	250	Exec	1
Α .		/NI			60	***		130	170	205	205	0		- 1		/NI	1
Cubemass	01 06	Exec	-50	205	50 60	***	90	130	140 140	205 205	205 205			- 1			1
C Promass	0815	/NI Ex ec	-50	205	50		80	115	165	205	205	Dro	mass	350		Exec	+
E	0015	/NI	-50	200	55			115	165	205	205	x	110000	-	-	/NI	1
_		7.141			60			(115)	(140)	(205)	(205)	1.0		- 1		/	1
	25 80	Exec	-50	205	50		80	95	140	205	205	Pro	mass	25.	250	Exec	†
		/NI			55			95	140	205	205	a				/NI	1
					60			(95)	(140)	(205)	(205)	No	es:	(1) thi	s page	coveres se	ns
Promass	08 15	Exec	-50 /	150	50		80	115	150	150	150				e of pr	otection Ex	nC
F		/NI	-200		60			115	150	150	150					ure table se	
		1	-50 /	240	50		80	115	170	240	240					-40°C, -50°	
		1	-200		55	***		115	170	240	240					brackets ar	
					60			115	170	170	170			4 - 4		ium mediun with transm	
										(240)	(240)					wor transmi	
	25 80	Exec	-50 /	150	50		60	95	150	150	150					with transm	
		/NI	-200 -50 /	240	60			95 95	150	150	150 240					mbient temp	
				240	50		60		160	240							_
			-200		55 60	-	_	95 95	160	240 170	240 170						
					60	-	_	90	160	(240)	(240)						
	100250	Exec	-50 /	150	50		60	95	150	150	150						
		/NI	-200		60		-	95	150	150	150						
			-50 /	240	50	***	60	95	160	240	240						
		1	-200		55	***		95	160	240	240						
		1			60	***		95	160	170	170						
										(240)	(240)						
	15250	Ex ec	-50 /	350	50	***	85	120	185	280	350						
		/NI	-200		60	***		120	185	280	350						
Promass	8	Exec	-50 /	205	50		80	115	165	205	205						
н		/NI	-200		60			115	165	205	205	A 1	0.05.20	16/Bn	F	22.10.201	1
	15 50	Exec	-50 /	205	50		60	95	130	205	205	B 2	4.10.20	16 / Bn	G	09.06.202	1
Promass	8	/NI Ex ec	-200 -50	150	60	-	80	95 115	130	205 150	205 150	C 0	3.05.20	117 / Bn	н		_
S.P	8	/NI	-50	150	50 60	-	80	115	150 150	150	150	D 3	0.10.20	117 / Bn	J	+	_
0, F		7 190	-50	205	50	_	80	115	170	205	205	_		18 / Bn	K	_	_
		1	-50	200	60		00	115	170	205	205						-
	15 50	Exec	-50	150	50		60	95	150	150	150	Cor	ntrol	Draw	ving 1	ECEx, A	١I
	15 50	/NI	-50	130	60	_		95	150	150	150	-					
			-50	205	50	-	60	95	160	205	205	Zor	ie 2,	CI.I	DIV. 2	2, CLI Zo	m
			"		60	-		95	160	205	205						
Promass	8 80	Exec	-50	150	50	-	60	95	150	150	150	The	rma	l Par	amet	er	
I .		/NI			55			95	150	150	150	_		_			
	l	I	I	1	60			(95)	(150)	(150)	(150)	Pro	line	Pmm	nace '	300/500	. [

Sensor	Size /	type	T,	mi	Tana			T _{met,m}	_ [°C]		
1	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	80250	Exec	-50	205	50		60	95	160	205	205
0		/NI			55			95	160	205	205
					60	-	-	95	160	180 (205)	180 (205)
Promass	350	Exec	-50	205	50		60	95	160	205	205
x		/NI			55			95	160	205	205
					60			(95)	(160)	(205)	(205)
Promass	25250	Exec	-50 /	240	50		60	95	160	240	240
Q		/NI	-200		60			95	160	240	240

Notes: (1) this page coveres sensors with type of protection Ex ec, AEx ec and non-incendive. Sensors with type of protection Ex nC is applicable only for sensor versions without purge connection or rupture disk (temperature table see next page)

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
- (4) for maximum medium temperatue and minimum medium temperature see nameplate
- (5) versions with transmitter enclosure stainless steel (hygienic) only for installation where transmitter is not installed above the sensor
- (6) Versions with transmitter enclosure stainless steel (hygienic) installed in temperature class T5, a degree of 3°C for ambient temperature shall be taken into account

¥	10.05.2016 / Bn	F	22.10.2019 / Bn	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:				
В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere					
C	03.05.2017 / Bn	н		Ersatz für:					
D	30.10.2017 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES / Bn				
E	04.07.2018 / Bn	K		FILE: Mt/Zeiching/FES0264G/FES0264G doc					
С	ontrol Drawing	IE	CEx, ATEX, C	Gezeichnet	10.05.2016	Bn			
Z	one 2, Cl.I Div.	. 2,	, Cl.I Zone 2		Ceprüft				
TI	hermal Parame	ete	ır		Ex-geprüft	09.06.2021	Bn		
P	roline Promass	š 3	00/500, Prolin	Gesehen					
П									



FES0264G



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Proline Promass A/E/F/H/I/O/P/Q/S/X 300 Proline Cubemass C 300

Notes: This page applies to versions with extended order code covering: 8*3B** - dd... O8*3B** - dd... 8x3Bxx - dd... O8x3Bxx - dd...

with approval option cCSAus / CSA: dd = CZ IECEx / ATEX: dd = BS

Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor not insulated

Sensor	Size /	type	T,	and .	Tana			Tont	["C]		
	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C
Promass	01 04	ExecnC	-50	205	50	-	95	130	195	205	205
A					60	-	-	130	195	205	205
Cubemass	01 06	ExecnC	-50	205	50	ı	95	130	195	205	205
C					60	-		130	195	205	205
Promass	0815	ExecnC	-50	205	50	-	95	130	195	205	205
E					55	-	***	130	195	205	205
				205	60	-		(130)	(195)	(205)	(205
	25 80	Ex ec nC	-50	205	50		95	130	195	205	205
					55			130	195	205	205
D	00 45	E	E0.1	450	60	-		(130)	(195)	(205)	(205)
Promass	08 15	Ex ec nC	-50 / -200	150	50 60	-	95	130	150 150	150 150	150 150
F				240		-					
			-50 / -200	240	50 55	-	95	130	195 195	240 240	240 240
			-200		60	-	-		170		
					60	_	-	130	1/0	170 (240)	170 (240
	25 80	ExecnC	-50 /	150	50	_	95	130	150	150	150
	25 66	LX 60 IIO	-200		60	_		130	150	150	150
			-50/	240	50		95	130	195	240	240
			-200		55	-		130	195	240	240
			200		60	_	-	130	170	170	170
										(240)	(240
	100250	ExecnC	-50/	150	50	_	95	130	150	150	150
			-200		60	_		130	150	150	150
			-50/	240	50	-	95	130	195	240	240
			-200		55	_		130	195	240	240
					60	-		130	170	170	170
										(240)	(240
	15250	ExecnC	-50/	350	50	I	95	130	195	290	350
			-200		60		***	130	195	290	350
Promass	8	Ex ec nC	-50/	205	50		95	130	195	205	205
н			-200		60			130	195	205	205
	15 50	Ex ec nC	-50/	205	50	-	95	130	195	205	205
			-200		60			130	195	205	205
Promass	8	Ex ec nC	-50	150	50		95	130	150	150	150
S, P					60			130	150	150	150
			-50	205	50		95	130	195	205	205
					60	-	-	130	195	205	205
	15 50	Ex ec nC	-50	150	50	-	95	130	150	150	150
				205	60	-		130	150	150	150
			-50	205	50 60	-	95	130	195 195	205	205
D	0 00	Europe C		450		-				205	205
Promass	8 80	ExecnC	-50	150	50	***	95	130	150	150	150
					55			130	150	150	150

Sensor	Size /	type	T,	end	Tames	T _{mel,max} [°C]					
1	DN	of	min	max	1	T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	80250	Ex ec nC	-50	205	50		95	130	195	205	205
0	l				55	***	***	130	195	205	205
					60		-	130	180	180 (205)	180 (205)
Promass	350	Ex ec nC	-50	205	50	***	95	130	195	205	205
X	l				55	***	***	130	195	205	205
					60	***	***	(130)	(195)	(205)	(205)
Promass	25250	Ex ec nC	-50/	240	50	***	95	130	195	240	240
Q			-200		60	***	***	130	195	240	240

- Notes: (1) type of protection Ex ec nC and AEx ec nC is applicable only for sensor versions without purge connection or rupture disk
 - (2) Ta,min = -40°C, -50°C respectively (see nameplate)
 - (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
 - (4) for maximum medium temperatue and minimum medium temperature see nameplate
 - (5) versions with transmitter enclosure stainless steel (hygienic) only for installation where transmitter is not installed above the sensor
 - (6) Versions with transmitter enclosure stainless steel (hygienic) installed in temperature class T5, a degree of 3°C for ambient temperature shall be taken into account
 - (7) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see temperature table on page 1/12

ı	Control Drawing			CSA, cCSA _{us}	Gezeichnet	10.05.2016	Bn
E	04.07.2018 / Bn	ĸ		zugängig gemacht werden.	\$8264G/FES0264G	doc	
D	30.10.2017 / Bn	J		dritten Personen und Konkumenafilmen	Ersteller: FES /	Bn	
C	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden nach	Ersatz für:		
B	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere			
Α	10.05.2016 / Bn	F	22.10.2019 / Bn		Ersetzt durch:		

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	09.08.203	Bn
Gesehen)	



FES0264G



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Proline Promass A/E/F/H/I/O/P/Q/S/X 300

Proline Cubemass C 300

This page applies to versions with extended order code covering:

8*3B** - dd... O8*3B** - dd... with approval option cCSAus / CSA: dd = CS, CZ IECEx / ATEX: dd = BS

8x3Bxx - dd... O8x3Bxx - dd...

	IECEX/ATEX: 00 = BS																						
Tempera	Alta time to the control of the cont																						
Sensor	Size /	type	T,	med	Tana			Tme	~= [°C]			П	Sensor	Size /	type	T,		Tame			Tnetne	["C]	
	DN	of	min	max	1	T6	T5	T4	T3	T2	T1	ΙI		DN	of	min	max	1	T6	T5	T4	Т3	T:
		protection	[°C]	["C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)				protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	1 1
Promass	01 04	Exec	-50	205	50		90	130	170	205	205	ΙI	Promass	25250	Ex ec	-50 /	240	50	***	60	95	160	20
A		/NI		205	55			(130)	(170)	(205)	(205)		Q		/NI	-200		55		(40)	(95)	(160)	(24
Cubemass	01 06	Ex ec	-50	205	50		95	130	195	205	205	ΙI	Notes: (1		coveres sen								
С		/NI			55			(130)	(170)	(205)	(205)	ΙI			otection Ex r			my for se	nsor vers	ions withou	at purge co	nnecton	or rupt
Promass	0815	Exec	-50	205	50	-	80	115	165	205	205	ΙI			ure table ser -40°C, -50°C				nto)				
E		/NI			55			(115)	(140)	(205)	(205)	ΙI	(2	values in	brackets are	apolical	ble for ins	e namepi stallation	where the	transmitte	r is not inst	talled ab	ove the
	25 80	Ex ec	-50	205	50 55	-	60	95 (95)	(140)	(205)	(205)	ΙI	14		num medium								
B	00 45		en i	150	50	-			4	150	150	ΙI	(5		with transmit								alled wit
Promass	08 15	Ex ec	-50 / -200	150	55	_	80	115 (115)	150 (150)	(150)	(150)	١,	,-										
-		/ 190	-50 /	240	50	_	80	115	170	240	240												
		l	-200	240	55	_	80	(115)	(170)	(240)	(240)	Ιſ								_			
	25 80	Exec	-50 /	150 50 60 95 150 150 150 150 150 150 150 150 150 15																			
	25 60	/NI	-200	150	55	_		(95)	(150)	(150)	(150)	ΙI	Non-in	condiv	e with se		noulat.						
			-50 /	240	50		60	95	160	240	240	ΙI											
		l	-200	240	55	_		(95)	(160)	(240)	(240)	ΙI	(tor insu	lation not	in complia	ance to	manu	al of Er	aress+	Hauser	Flowtec)		
	100250	Exec	-50 /	150	50		60	95	150	150	150	lł	Sensor	Size / DN	_		Т	to be me	asured at	reference	noint at		
		/NI	-200	150	55	_		(95)	(150)	(150)	(150)	ΙI	54135	Date / Div	1				ensor nec		post at		
			-50 /	240	50	-	60	95	160	240	240	ΙI		l	T6	\neg	T5		4	T3	T2		T1
		l	-200		55	-		(95)	(160)	(240)	(240)	ΙI		l	(85°C)) (100°C)	(138	5°C)	(200°C)	(300°	C)	(450°C
	15250	Exec	-50 /	350	50	-	85	120	185	280	350	1	all	all	_		63 °C	72	*C	75°C	77°C	C C	77°C
		/NI	-200		60			120	185	280	350		Notes:	(1) for safe	e use temper	atures si	hall not e	xceed all	of the foll	lowing:			
Promass	8	Exec	-50 /	205	50	-	80	115	165	205	205	ΙI		- tempo	erature table	for versi	ons with	sensorn	ot insulate	id (refer to	table abov	e)	
н		/NI	-200		55	-		(115)	(165)	(205)	(205)	ΙI			erature at ref								
	15 50	Exec	-50 /	205	50	-	60	95	130	205	205	ΙI			n = -40°C, -5								
		/NI	-200		55	-		(95)	(130)	(205)	(205)	ΙI			iximum med		peratue a	and minim	ium medic	um tempen	ature see n	ameplat	e
Promass	8	Exec	-50	150	50	-	80	115	150	150	150	ΙI		(2) location	n of referenc	e point		-0.0					
S,P		/NI			55	-		(115)	(150)	(150)	(150)	ΙI							_	refere	nce point		
		l	-50	205	50	-	80	115	170	205	205	ΙI						-					
					55			(115)	(170)	(205)	(205)	ΙI					L-		-J.I.				
	15 50	Exec	-50	150	50		60	95	150	150	150	ΙI				- 1	Щ	_	= ↓				
		/NI	l	l	55			95	150	150	150	Ιl						=	<u> </u>				
		l		_	60			(95)	(150)	(150)	(150)										-		
			-50	205	50		60	95	160	205	205		A 10.05.201		22.10.2019				eberrechte, vo chne unsere	orbenation.	Ersetzt di	urch:	
		l		1	55	-		95	160	205	205		B 24.10.201			/ Bn							
_		_			60			(95)	(160)	(205)	(205)		C 03.05.201	7 / Bn F	1		Genehm	igung weder	verviefältigt v	werden noch	Ersatz für	r:	
Promass	8 80	Exec	-50	150	50		60	95	150	150	150		D 30.10.201	7/Bn J	1		dritten P	ersonen und	Kankumenafir	men	Ersteller:	FES / B	n
Dominion	00 000	/NI		205	60			(95)	(150)	(150)	(150)		E 04.07.201	8/Bn K	C		zuglingi	g gemacht w	erden.		FLE: M/Z	eichng/FES	8264IGIFE
Promass	80250	Exec	-50	205	50		60	95	160	205	205	ŀŀ	Control I	Trawing	IECEx, A	TEV	CSA	-024			_		
0	250	/NI		205	55			(95)	(160)	(205)	(205)		COMMON	Jiawing	ILUEX, A	HEA,	COM,	COOM	15		Gezeichn	net	10.05.20
Promass X	350	Ex ec	-50	205	50 55	_	60	95 (95)	(160)	(205)	(205)		Zone 2,	CLUDA	2 CH 70	no 2						\rightarrow	
^		/ NI		_	35	-		(95)	(160)	(205)	(205)	'	Z0110 Z, (CI.I DIV.	2, UI.I Z0	ne z					Geprüft		

	DN	of	min	max	1	T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	25250	Ex ec	-50/	240	50	***	60	95	160	205	205
q		/ NI	-200		55	***	(40)	(95)	(160)	(240)	(240)
Notes: (1) this page	coveres sen	sors with	type of	protection	n Ex ec, A	Ex ec and	non-incen	dive. Sens	sors with	
	type of pr	otection Ex n	C is app	licable o	nly for se	nsor versi	ons withou	it purge co	onnection	or rupture	disk
	(temperat	ure table sec	next pa	ge)							

- (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
- (4) for maximum medium temperatue and minimum medium temperature see nameplate
- (5) Versions with transmitter enclosure stainless steel (hygienic) are not allowed to be installed with insulation

Temperature table for versions in type of protection Ex ec, AEx ec or Non-incendive with sensor insulated

Sensor	Size / DN		T t	be measured sensor n		oint at	
		T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	all	-	63 °C	72 °C	75°C	77°C	77°C

- (1) for safe use temperatures shall not exceed all of the following:
 - temperature table for versions with sensor not insulated (refer to table above)
 - temperature at reference point as listed in this table - Ta,min = -40°C, -50°C respectively (see nameplate)
 - for maximum medium temperatue and minimum medium temperature see nameplate
- (2) location of reference point



ı	10.05.2016 / Bn	F	22.10.2019 / Bn	Alle gesetzlichen Urheberrechte, vortehalten.
	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere
	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch
	30.10.2017 / Bn	J		dritten Personen und Konkumenditmen
	04.07.2018 / Bn	ĸ		zuglingig gemacht werden.

Ersetzt durch: Ersatz für: Ersteller: FES / Bn FILE: M1Zeichng/FES0264G/FES0264G/doc

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Dn
Geprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen		

FES0264G

3/12

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



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Proline Promass A/E/F/H/I/O/P/Q/S/X 300

Proline Cubemass C 300

This page applies to versions with extended order code covering:

8*3B** - dd... O8*3B** - dd... with approval option cCSAus / CSA: dd = CZ

8x3Bxx - dd...

O8x3Bxx - dd...

IECEx / ATEX: dd = BS

Sensor	Size /	type	T	med	Tame				[°C]			Sense	OF.	Size /	type	_	med	Term			Ten
	DN	of protection	min ["C]	max [*C]	[°C]	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)			DN	of protection	min	max [°C]	[°C]	T6 (85°C)	T5 (100°C)	T4 (135°C
Promass A	01 04	ExecnC	-50	205	50 55	-	95	130 (130)	195	(205)	205 (205)	Prom	155	25250	Ex ec nC	-50 / -200	240	50 55		95	130 (95)
Cubemass	01 06	ExecnC	-50	205	50 55	_	95	130	195	205	205	Note	E (1)	type of pr	otection Ex e		d AEx ed		plicable o		
Promass	0815	ExecnC	-50	205	50	_	95	130	195	205	205		(2)	Ta,min =	-40°C, -50°C						
E	25 80	ExecnC	-50	205	55 50	_	95	(130) 130	(195) 195	(205) 205	(205) 205		(4)	for maxim	brackets are ium medium t	tempera	itue and	minimum	medium t	emperatur	re see n
Promass	08 15	ExecnC	-50 /	150	55 50	_	95	(130) 130	(195) 150	(205) 150	(205) 150		(5) (6)		with transmitt erature table						
F	00 15	Executo	-200		55	_	-	(130)	(150)	(150)	(150)			temperati	ire table on p	age 3/1	2				
			-50 / -200	240	50 55	-	95	130 (130)	195 (195)	240 (240)	240 (240)	_								F	
	25 80	ExecnC	-50 / -200	150	50 55	-	95	130 (130)	150 (150)	150 (150)	150 (150)			ature tab Isor insu	le for vers	sions	in type	e of pro	tection	Ex ec	nC,
			-50 / -200	240	50 55		95	130	195 (195)	240 (240)	240 (240)				in complia	ance to	manu	al of Er	ndress+	Hauser	Flowt
	100250	ExecnC	-50 /	150	50	_	95	130	150	150	150	Sens	or	Size / DN	T		Tne	to be me	asured at	reference	point a
			-200 -50 /	240	55 50	_	95	(130) 130	(150) 195	(150) 240	(150) 240				T6	$\overline{}$	T5		ensor ned	tk['C] T3	.
	15250	ExecnC	-200 -50 /	350	55 50	_	95	(130) 130	(195) 195	(240) 290	(240) 350	-10		all	(85°C)		(100°C)	(135		(200°C)	(
			-200		60	-	-	130	195	290	350	Notes	c	(1) for safe	use tempera	atures s	hall not e	exceed all	of the fol	lowing:	
Promass H	8	ExecnC	-50 / -200	205	50 55	_	95	(130)	195 (195)	(205)	(205)				erature table f erature at refe					ed (refer to	table i
	15 50	ExecnC	-50 / -200	205	50 55	-	95	130 (130)	195	(205)	(205)				n = -40°C, -5 ximum medi					um temper	rature s
Promass	8	ExecnC	-50	150	50	-	95	130	150	150	150			(2) location	of reference	e point					
S,P			-50	205	55 50	-	95	(130) 130	(150) 195	(150) 205	(150) 205							잍		refere	ence po
	15 50	ExecnC	-50	150	55 50	-	95	(130) 130	(195) 150	(205) 150	(205) 150					- 1	\ <u> </u>	<u> </u>			
					55 60	-	-	130	150 (150)	150 (150)	150 (150)					1	, E	2	; ⊒ 4¶		
			-50	205	50	_	95	130	195	205	205		15.2016		22.10.2019 /			trichen Urbe		rbehalten.	Erset
					55 60	_		(130)	195 (195)	(205)	(205)	-	0.2016 5.2017	-		Bn		ichnung daf i igung weder i		erden noch	Ersel
		ExecnC	-50	150	50		95	130	150	150	150 (150)	D 30.1	0.2017	/Bn J				ersonen und R		nen	Erste
Promass	8 80	Execuc												/ Don M	1		The annual reservoir	gemacht we			FILE
Promass I Promass	8 80 80250	ExecnC	-50	205	60 50	-	95	130	195	205	205		7.2018		FOE: 47						+
Promass I Promass O Promass			-50	205		_									ECEx, A	ΓEX, (Geze

Sensor	Size /	type	T.	i i	Tame	Test,ess [°C]					
	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	25250	Ex ec nC	-50/	240	50	***	95	130	195	205	205
q			-200		55	***	(40)	(95)	(160)	(240)	(240)

- Notes: (1) type of protection Ex ec nC and AEx ec nC is applicable only for sensor versions without purge connection or rupture disk
 - (2) Ta,min = -40°C, -50°C respectively (see nameplate)
 - (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
 - (4) for maximum medium temperatue and minimum medium temperature see nameplate
 - (5) Versions with transmitter enclosure stainless steel (hygienic) are not allowed to be installed with insulation
 - (6) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see

Temperature table for versions in type of protection Ex ec nC, AEx ec nC with sensor insulated

	Sensor	Size / DN		T _{max} to be measured at reference point at										
ı	l	l		sensor neck ["C]										
ı			T6	T5	T4	T3	T2	T1						
			(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)						
ı	all	all		63 °C	72 °C	75°C	77°C	77°C						

- (1) for safe use temperatures shall not exceed all of the following: Notes:
 - -temperature table for versions with sensor not insulated (refer to table above)
 - temperature at reference point as listed in this table
 - Ta,min = -40°C, -50°C respectively (see nameplate)
 - for maximum medium temperatue and minimum medium temperature see nameplate
 - (2) location of reference point



C	ontrol Drawing	IF	CEx ATEX (Consistent	10.06.2018	Be.	
E	04.07.2018 / Bn	K		zuglingig gemacht werden.	FILE: Mt/Zeichng/FE	9026HG/FES0264G	doc
D	30.10.2017 / Bn	7		dritten Personen und Konkumendfirmen	Ersteller: FES / 1	3n	
C	03.05.2017 / Bn	Ι		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere			
A	10.05.2016 / Bn	F	A	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen		





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Proline Promass A/E/F/H/I/O/P/Q/S/X 500

Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering:

8*5*** - dd******B... with approval option cCSAus / CSA: dd = CS, CZ

O8*5*** - dd******B...

8x5Bxx - dd*****B...

O8x5Bxx - dd******B...

IECEx / ATEX: dd = BS

Temperature table for versions in type of protection Ex ec, AEx ec or Non-incendive with sensor not insulated

Sensor	Size /	type	T,	ned .	Tana			Tmel	[°C]		
	DN	of	min	max	1	T6	T5	T4	T3	T2	T1
		protection	[°C]	°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	01 04	Exec	-50	205	50	50	95	130	170	205	205
A		/NI			60	***	95	130	170	205	205
Cubemass	01 06	Ex ec	-50	205	60	-	90	130	140	205	205
C		/NI									
Promass	0815	Exec	-50	205	45	45	80	115	165	205	205
E		/NI			60		80	115	165	205	205
	25 80	Ex ec /NI	-50	205	60	-	60	95	140	205	205
Promass	08 15	Exec	-50 /	150	50	50	80	115	150	150	150
F		/NI	-200		60	-		115	150	150	150
		l .	-50 /	240	50	50	80	115	170	240	240
		l .	-200		60		80	115	170	240	240
	25 80	Exec	-50 /	150	45	60	60	95	150	150	150
		/NI	-200		60		60	95	150	150	150
		l .	-50 /	240	45	60	60	95	160	240	240
		l .	-200		60		60	95	160	240	240
	100250	Exec	-50 /	150	45	60	60	95	150	150	150
		/NI	-200		60		60	95	150	150	150
		l .	-50 /	240	45	60	60	95	160	240	240
			-200		60	-	60	95	160	240	240
	15250	Ex ec	-50 / -200	350	60	70	85	120	185	280	350
Promass	8	Exec	-50 /	205	50	45	80	115	165	205	205
H	•	/NI	-200	200	60	40	80	115	165	205	205
	15 50	Exec	-50 /	205	60		60	95	130	205	205
	15 50	/NI	-200	200	- 00		00	33	130	203	200
Promass	8	Exec	-50	150	45	45	80	115	150	150	150
S.P		/NI			60	-	80	115	150	150	150
			-50	205	45	45	80	115	170	205	205
		l .			60	-	80	115	170	205	205
	15 50	Exec	-50	150	45	45	60	95	150	150	150
		/NI			60	-	60	95	150	150	150
			-50	205	45	45	60	95	160	205	205
					60	-	60	95	160	205	205
Promass	8 80	Exec	-50	150	45	45	60	95	150	150	150
1		/NI			60	-	60	95	150	150	150

П	Sensor	Size /	type	T,	Tmel		T_==(*C]					
		DN	of	min	max		T6	T5	T4	T3	T2	T1
			protection	"C	"C	(°C)	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
	Promass	80250	Exec	-50	205	45	45	60	95	160	205	205
	0		/ NI			60	***	60	95	160	205	205
	Promass	350	Exec	-50	205	45	45	60	95	160	205	205
	X		/ NI			60	***	60	95	160	205	205
	Promass	25250	Exec	-50 /	240	45	45	60	95	160	240	240
	Q		/ NI	-200		60	***	60	95	160	240	240

Notes: (1) this page coveres sensors with type of protection Ex ec, AEx ec and non-incendive. Sensors type of protection Ex nC applicable only for versions without purge connection or rupture disk (temperature tables see next page)

(2) Ta,min = -40°C, -50°C respectively (see nameplate)

(3) for maximum medium temperatue and minimum medium temperature see nameplate

Tame		
T6	T5	T4
(85°C)	(100°C)	(135°C)
	45	60

A	10.05.2016 / Bn	F	EE. 10-E0 10 1 MI	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:
В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
C	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
D	30.10.2017 / Bn	J		dritten Personen und Konkumenditmen	Ersteller: FES / Bn
E	04.07.2018 / Bn	ĸ		zugängig gemacht werden.	FILE: Mt/Zeichng/FES0264/G/FES0264/G/doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Ceprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen		

FES0264G



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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering: 8*5*** - dd******B... 8x5Bxx - dd******B... O8*5*** - dd******B... O8x5Bxx - dd******B...

with approval option cCSAus / CSA: dd = CZ IECEx / ATEX: dd = BS

Sensor	Size /	type	T _e	_	Tame				[°C]				Notes:	(1)	type of	
	DN	of	min	max		T6	T5	T4	T3	T2	T1				connec	
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)			(2)	Ta,min	
Promass	01 04	Ex ec nC	-50	205	60	80	95	130	195	205	205			(3)	for max	
A	04 00	F		205			95	420	195	205	205			(4)	this tem temper	
Cubemass C	01 06	Ex ec nC	-50	205	60	80	95	130	195	205	205				an pun	_
Promass	0815	Ex ec nC	-50	205	60	80	95	130	195	205	205					
E	25 80	Ex ec nC	-50	205	60	80	95	130	195	205	205					
Promass	08 15	ExecnC	-50 /	150	60	80	95	130	150	150	150					
F			-200 -50 /	240	60	80	95	130	195	240	240					
	25 80	ExecnC	-200 -50 /	150	60	80	95	130	150	150	150					
			-200 -50 /	240	60	80	95	130	195	240	240					
			-200													
	100250	Ex ec nC	-50 / -200	150	60	80	95	130	150	150	150					
			-50 / -200	240	60	80	95	130	195	240	240					
	15250	Ex ec nC	-50 / -200	350	60	80	95	130	195	290	350					
Promass H	8	Ex ec nC	-50 / -200	205	60	80	95	130	195	205	205	1	ransm	itter	for all	٧
	15 50	ExecnC	-50 / -200	205	60	80	95	130	195	205	205	F		TE		1
Promass	8	ExecnC	-50	150	60	80	95	130	150	150	150			(85)		
S.P	_	Ex ec.iio	-50	205	60	80	95	130	195	205	205	⊢⊢		-	_	_
-1.	15 50	ExecnC	-50	150	60	80	95	130	150	150	150	H				_
			-50	205	60	80	95	130	195	205	205	1	iotes: (1) T	a,min =	-4
Promass	8 80	Ex ec nC	-50	150	60	80	95	130	150	150	150					
Promass O	80250	Ex ec nC	-50	205	60	80	95	130	195	205	205		10.05	2010	- P-	f
Promass	350	ExecnC	-50	205	60	80	95	130	195	205	205	В	_			G
Promass	25250	ExecnC	-50 /	240	60	80	95	130	195	240	240	C	_			Н
Q			-200									D	_			ŀ
												E	04.07.	2018	Bn	ľ

Notes:	(1)	type of protection Ex ec nC and AEx ec nC is applicable only for sensor versions without purge
		connection or rupture disk

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) for maximum medium temperatue and minimum medium temperature see nameplate
- (4) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see temperature table on page 5/12

Transmitter for all versions:						
Terre						
T6 (85°C)	T5 (100°C)	T4 (135°C)				
-	45	60				
Notes: (1) Ta,min = -40°C, -50°C respectively (see name plate)						

F 22.10.2019 / Bn

G 09.06.2021 / Bn

٠.	U3.U5.2017 / BH	п			LI MAZINI.				
)	30.10.2017 / Bn J			dritten Personen und Konkurrendfirmen	Ersteller: FES / 1				
	04.07.2018 / Bn	K		zuglingig gemacht werden.	FILE: Mt/Zeichng/FES0364G/FES0364G.doc				
C	ontrol Drawing	IE	CEx, ATEX, C	Gezeichnet	10.05.2016	Bn			
Z	one 2, Cl.I Div.	2	CI.I Zone 2	Geprüft					
Π	hermal Parame	ete	r	Ex-geprüft	09.06.2021	Bn			
P	roline Promas:	3	00/500, Prolin	Gesehen					

Diese Zeichnung darf ohne unsere



FES0264G

Ersetzt durch:



IECEx Certificate of Conformity Certificate No.: IECEx CSA 16.0034X Issue 8 Annex A | Page 27 of 37



Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

8x5Bxx - dd******B... Notes: This page applies to versions with extended order code covering: 8*5*** - dd******B... O8*5*** - dd******B... O8x5Bxx - dd******B... with approval option cCSAus / CSA: dd = CS, CZ

IECEx / ATEX: dd = BS

Temperature table for versions in type of protection Ex ec, AEx ec or Non-incendive with sensor insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size /	type	T,	and .	Tame			Tmet	"C]		
	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C
Promass	01 04	Exec	-50	205	50	50	95	130	150	150	150
A		/NI								(180)	(180)
					60		95	130	150	150	150
Cubemass	01 06	Exec	-50	205	50	-	90	130	140	(180)	(180)
C		/NI			60		90	130	140	150	150
Promass	0815	Exec	-50	205	45	45	80	115	165	205	205
E		/NI			60		80	115	165	205	205
	25 80	Ex ec /NI	-50	205	60	_	60	95	140	205	205
Promass	08 15	Exec	-50 /	150	50	50	80	115	150	150	150
F		/NI	-200		60		80	115	150	150	150
			-50 /	240	50	50	80	115	170	240	240
		l .	-200		60	-	80	115	170	240	240
	25 80	Exec	-50 /	150	45	60	60	95	150	150	150
		/NI	-200		60	-	60	95	150	150	150
			-50 /	240	45	60	60	95	160	240	240
		l .	-200		60		60	95	160	240	240
	100250	Exec	-50 /	150	45	60	60	95	150	150	150
		/NI	-200		60		60	95	150	150	150
			-50 /	240	45	60	60	95	160	240	240
		l .	-200		60		60	95	160	240	240
	15250	Exec	-50 /	350	60	70	85	120	185	280	350
		/NI	-200								
Promass	8	Exec	-50 /	205	50	45	80	115	165	205	205
н	_	/NI	-200		60	_	80	115	165	205	205
	15 50	Exec	-50 /	205	60	-	60	95	130	205	205
		/NI	-200							200	
Promass	8	Exec	-50	150	45	45	80	115	150	150	150
S.P	_	/NI			60		80	115	150	150	150
-1.			-50	205	45	45	80	115	170	205	205
		l .			60		80	115	170	205	205
	15 50	Exico	-50	150	45	45	60	95	150	150	150
		/NI	-50		60	-	60	95	150	150	150
			-50	205	45	45	60	95	160	205	205
		l .	-50	200	60		60	95	160	205	205
Promass	8 80	Exec	-50	150	45	45	60	95	150	150	150
L	0 00	/NI	-30	130	60	40	60	95	150	150	150
Promass	80250	Exec	-50	205	45	45	60	95	160	205	205
O	00200	/NI	-30	200	60	40	60	95	160	205	205
Promass	350	Exec	-50	205	45	45	60	95	160	205	205
Y X	300	/NI	-00	205	60	45	60	95	160	205	205
	25250		en :	240	45	45	60	95	160	240	240
Promass	25250	Exec	-50 /	240	45 60		60	95 95	160		
Q		/NI	-200		60		90	95	160	240	240

Notes: (1) this page coveres sensors with type of protection Ex ec, AEx ec and non-incendive. Sensors with type of protection Ex nC applicable only for versions without purge connection or rupture disk (temperature tables see next page)

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
- (4) for maximum medium temperatue and minimum medium temperature see nameplate

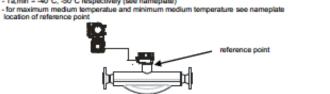
Temperature table for versions in type of protection Ex ec, AEx ec or or Non-incendive with sensor insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size / DN		T-= to	be measured sensor r	at reference p reck ["C]	oint at	
		T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	all	69	72	84	91	91	91

(1) for safe use temperatures shall not exceed all of the following:

- temperature table for versions with sensor not insulated (refer to table above)
- temperature at reference point as listed in this table
- Ta,min = -40°C, -50°C respectively (see nameplate)
- (2) location of reference point



Transmitter for all versions:						
Tana						
T6	T5	T4				
(85°C)	(100°C)	(135°C)				
	45	60				
Notes: (1) Ta min = -40°C -50°C respectively (see name plate)						

_						
Į	4	10.05.2016 / Bn	F	Mar. 10-May 10 1 Mar.	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:
ı		24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
Ī	c	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
Ī	b	30.10.2017 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES / Bn
I	E	04.07.2018 / Bn	K		zugängig gemacht werden.	FILE: M1Zeiching/FES0264/G/FES0264/G/doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

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

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen		



FES0264G



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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

O8x5Bxx - dd*****B... Notes: This page applies to versions with extended order code covering: 8*5*** - dd******B... O8*5*** - dd******B... 8x5Bxx - dd*****B... with approval option cCSAus / CSA: dd = CZ IECEx / ATEX: dd = BS

Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size /	type	-	ned .	Tana Tomos [°C]						
Sensor	DN DN	of	min	max	14,000	T6	T5	T4	T3	T2	T1
	DN	protection	[,C]	["C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	01 04	ExecnC	-50	205	50	80	95	130	150	150	150
A										(180)	(180)
					60		95	130	150	150	150
Cubemass	01 06	ExecnC	-50	205	50	80	95	130	150	(180)	(180)
С					60	80	95	130	150	150	150
Promass	0815	ExecnC	-50	205	60	80	95	130	195	205	205
E	25 80	ExecnC	-50	205	60	80	95	130	195	205	205
Promass F	08 15	ExecnC	-50 / -200	150	60	80	95	130	150	150	150
			-50 / -200	240	60	80	95	130	195	240	240
	25 80	ExecnC	-50 / -200	150	60	80	95	130	150	150	150
			-50 / -200	240	60	80	95	130	195	240	240
	100250	ExecnC	-50 / -200	150	60	80	95	130	150	150	150
			-50 / -200	240	60	80	95	130	195	240	240
	15250	ExecnC	-50 / -200	350	60	80	95	130	195	290	350
Promass	8	ExecnC	-50 / -200	205	60	80	95	130	195	205	205
н	15 50	ExecnC	-50 / -200	205	60	80	95	130	195	205	205
Promass	8	ExecnC	-50	150	60	80	95	130	150	150	150
S,P			-50	205	60	80	95	130	195	205	205
	15 50	ExecnC	-50	150	60	80	95	130	150	150	150
			-50	205	60	80	95	130	195	205	205
Promass I	8 80	ExecnC	-50	150	60	80	95	130	150	150	150
Promass O	80250	ExecnC	-50	205	60	80	95	130	195	205	205
Promass X	350	ExecnC	-50	205	60	80	95	130	195	205	205
Promass Q	25250	ExecnC	-50 / -200	240	60	80	95	130	195	240	240

- Notes: (1) type of protection Ex ec nC and AEx ec nC is applicable only for sensor versions without purge connection or rupture disk
 - (2) Ta,min = -40°C, -50°C respectively (see nameplate)
 - (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
 - (4) for maximum medium temperatue and minimum medium temperature see nameplate
 - (5) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see temperature table on page 7/12

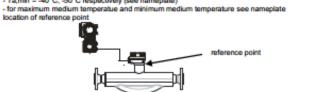
Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor insulated

(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Sensor	Size / DN		T to	be measured sensor n	at reference p leck [°C]	oint at	
		T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
al	all	69	72	84	91	91	91

- (1) for safe use temperatures shall not exceed all of the following:
 - temperature table for versions with sensor not insulated (refer to table above)
 - temperature at reference point as listed in this table
 - Ta,min = -40°C, -50°C respectively (see nameplate)

 - (2) location of reference point



Time						
T6 (85°C)	T5 (100°C)	T4 (135°C)				
	45	60				

A.	10.05.2016 / Bn	F	A-8-10-20-10-1-20-1		Ersetzt durch:
В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
C	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
D	30.10.2017 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES / Bn
E	04.07.2018 / Bn	K		zugängig gemacht werden.	FILE: Mt/Zeichng/FES0264/G/FES0264/G doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen	·	·





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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

lotes:

This page applies to versions with extended order code covering: 8*5*** - dd*******A...

8*5*** - dd*******A...

8x5Bxx - dd******A...

8x5Bxx - dd*******A...

8x5Bxx - dd*******A...

8x

IECEx / ATEX: dd = BS, BL

Temperature table for versions in type of protection Ex ec, AEx ec or

Non-incendive with sensor not insulated

Sensor	Size /	type	Total		Tames	T _{meton} [°C]					
	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	["C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass	01 04	Exec	-50	205	60		95	130	170	205	205
A		/NI									
(type 8A5B)											
Promass	01 04	Exec	-50	205	55		95	130	170	205	205
A		/NI			60		95	130	170	190	190
(type											
8A5C)											
Cubemass	01 06	Exec	-50	205	55		95	130	140	205	205
С		/NI			60		95	130	140	160	160
Promass	0815	Exec	-50	205	60	-	75	115	165	205	205
E		/NI									
	25 80	Exec	-50	205	60		60	95	140	205	205
		/NI									
Promass	08 15	Exec	-50 /	150	55	-	80	115	130	150	150
F		/NI	-200		60		80	115	130	130	130
			-50 /	240	60		80	115	170	240	240
			-200								
	25 80	Exec	-50 /	150	55		60	95	150	150	150
		/NI	-200		60	-	60	95	130	130	130
			-50 /	240	60	-	60	95	160	240	240
			-200								
	100250	Exec	-50 /	150	55	-	60	95	150	150	150
		/NI	-200		60	-	60	95	130	130	130
			-50 /	240	60		60	95	160	240	240
			-200								
	15250	Exec	-50 /	350	50		85	120	185	280	350
		/NI	-200		60		85	120	185	240	240
										(280)	(350)
Promass	8	Exec	-50 /	205	60		80	115	165	205	205
H		/NI	-200								
	15 50	Exec	-50 /	205	60		60	95	130	205	205
		/NI	-200								
Promass	8	Exec	-50	150	60	-	80	115	150	150	150
S,P		/NI	-50	205	60	-	80	115	170	205	205
	15 50	Exec	-50	150	60		60	95	150	150	150
		/ NI	-50	205	60		60	95	160	205	205
Promass	8 80	Exec	-50	150	55		60	95	150	150	150
1		/NI			60		60	95	140	140	140
Promass	80250	Exec	-50	205	60		60	95	160	205	205
0		/NI									

П	Sensor	Size /	type	Trees		Tames	Testess [°C]					
- 1		DN	of	min	max		T6	T5	T4	T3	T2	T1
ı			protection	[°C]	["C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
- [Promass	350	Ex ec	-50	205	60		60	95	160	205	205
ı	X		/NI									
-[Promass	25250	Ex ec	-50 /	240	60		60	95	160	240	240
- [Q		/NI	-200								

Notes: (1) this page coveres sensors with type of protection Ex ec, AEx ec and non-incendive. Sensors with type of protection Ex nC applicable only for versions without purge connection or rupture disk (temperature tables see next page).

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) values in brackets are applicable for installation where the transmitter is not installed above the sensor
- (4) for maximum medium temperatue and minimum medium temperature see nameplate

Transmitter for all versions:											
Type of	Tanas										
enclosure	Ordinary location	T6	T5	T4							
	(°C)	(85°C)	(100°C	(135°C)							
aluminium	60		45	60							
plastic	60										
Notes: (1) alum	(1) aluminium enclosure: Ta,min = -40°C, -50°C respectively (for limitation see name plate)										
plast	ic enclosure: Ta,mi	n = -40°C		plastic enclosure: Ta.min = 40°C							

Ι.						
l	A.	10.05.2016 / Bn	F			Ersetzt durch:
l	В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
ı	С	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
ı	Ď	30.10.2017 / Bn	J		dritten Personen und Konkurrenzfirmen	Ersteller: FES / Bn
ł	Ε	04.07.2018 / Bn	ĸ		zugängig gemacht werden.	FILE: Mt/Zeichng/FES0264G/FES0264G/doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

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FES0264G



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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering: 8*5*** - dd******A... O8*5*** - dd******A... 8x5Bxx - dd******A... O8x5Bxx - dd******A...

with approval option cCSAus / CSA: dd = CZ IECEx / ATEX: dd = BS, BL

Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor not insulated

Sensor	Size /	type	T,	n mi	Tame			Tont	[°C]		
	DN	of protection	min (°C)	max (°C)	l,CI	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C
Promass A (type 8A5B)	01 04	Ex ec nC	-50	205	60		95	130	195	205	205
Promass	01 04	ExecnC	-50	205	55		95	130	195	205	205
A (type 8A5C)	0104	Execuc	30	205	60		95	130	190	190	190
Cubernass	01 06	Ex ecinC	-50	205	55	***	95	130	195	205	205
С					60	***	95	130	160	160	160
Promass E	0815	Ex ec nC	-50	205	60		95	130	195	205	205
	25 80	Ex ec nC	-50	205	60		95	130	195	205	205
Promass	08 15	Ex ec nC	-50 /	150	55	***	95	130	130	150	150
F			-200		60	***	95	130	130	130	130
			-50 / -200	240	60		95	130	195	240	240
	25 80	Ex ec nC	-50 /	150	55		95	130	150	150	150
			-200		60		95	130	130	130	130
			-50 / -200	240	60		95	130	195	240	240
	100250	Ex ec nC	-50 /	150	55	***	95	130	150	150	150
			-200		60	***	95	130	130	130	130
			-50 / -200	240	60		95	130	195	240	240
	15250	Ex ec nC	-50 /	350	50	***	95	130	195	290	350
			-200		60		95	130	195	240 (280)	240 (350)
Promass H	8	Ex ec nC	-50 / -200	205	60	-	95	130	195	205	205
	15 50	ExecnC	-50 / -200	205	60		95	130	195	205	205
Promass	8	Ex ec nC	-50	150	60		95	130	150	150	150
S, P			-50	205	60		95	130	195	205	205
	15 50	Ex ec nC	-50	150	60		95	130	150	150	150
		F	-50	205	60		95	130	195	205	205
Promass	8 80	Ex ec nC	-50	150	55 60		95 95	130	150	150	150
Promass O	80250	Ex ec nC	-50	205	60		95	130	195	205	205
Promass X	350	ExecnC	-50	205	60		95	130	195	205	205
Promass Q	25250	Ex ec nC	-50 / -200	240	60		95	130	195	240	240

Notes:	(1)	type of protection Ex ec nC and Ex ec nC is applicable only for sensor versions without purp
		connection or rupture disk

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) values in brackets are applicable for installation where the transmitter is not installed above the
- (4) for maximum medium temperatue and minimum medium temperature see nameplate
- (5) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see temperature table on page 9/12

Transmitter for all versions:								
Type of enclosure	Tanna							
enclosure	Ordinary location	T6	T5	T4				
	(°C)	(85°C)	(100°C	(135°C)				
aluminium	60	_	45	60				
plastic	60	_		_				
Notes: (1) aluminium enclosure: Ta,min = -40°C, -50°C respectively (for limitation see name plate)								

plastic enclosure: Ta,min = -40°C

ı	A	10.05.2016 / Bn	F	22.10.2019 / Bn		Ersetzt durch:
ı	80	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
ı	ü	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
ı	ā	30.10.2017 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES / Bn
ı	ш	04.07.2018 / Bn	ĸ		zugängig gemacht werden.	FILE: Mt/Zeichng/FES0264G/FES0264G.doc

Control Drawing IECEx, ATEX, CSA, cCSAus 10.05.2016 Zone 2, Cl.I Div. 2, Cl.I Zone 2 Therma

Thermal Parameter	Ex-geprüft	09.06.2021	Bn
Proline Promass 300/500, Proline Cubemass 300/500	Gesehen		



FES0264G 10/12



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Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering: 8*5*** - dd******A... 08*5*** - dd******A... 8x5Bxx - dd******A... O8x5Bxx - dd*****A... with approval option cCSAus / CSA: dd = CS, CZ IECEx / ATEX: dd = BS. BL

Temperature table for versions in type of protection Ex ec, AEx ec or Non-incendive with sensor insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size /	type	T,	ted.	Tages	Testera [°C]					
	DN	of	min	max		T6	T5	T4	T3	T2	T1
		protection	[°C]	[°C]	["C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
Promass A	01 04	Ex ec /NI	-50	205	50	-	95	130	130	130	130
Cubemass	01 06	Ex ec /NI	-50	205	50	-	90	130	130	130	130
Promass E	0815	Ex ec /NI	-50	205	50	-	75	115	165	205	205
	25 80	Ex ec / NI	-50	205	50	-	60	95	140	205	205
Promass	08 15	Exec	-50 /	150	45	-	80	115	150	150	150
F		/NI	-200		50		80	115	130	130	130
			-50 / -200	240	50	-	80	115	170	240	240
	25 80	Exec	-50 /	150	45	-	60	95	150	150	150
		/NI	-200		50	-	60	95	130	130	130
			-50 / -200	240	50	-	60	95	160	240	240
	100250	Exec	-50 /	150	45	-	60	95	150	150	150
		/NI	-200		50	-	60	95	130	130	130
			-50 / -200	240	50	-	60	95	160	240	240
	15250	Ex ec /NI	-50 / -200	350	50	-	85	120	185	280	350
Promass H	8	Ex ec /NI	-50 / -200	205	55	-	80	115	165	205	205
	15 50	Ex ec /NI	-50 / -200	205	55	-	60	95	130	205	205
Promass	8	Exico	-50	150	45	-	80	100	150	150	150
S.P		/NI			50	-	80	100	130	130	130
			-50	205	55	-	80	115	170	205	205
	15 50	Exec	-50	150	45	-	60	95	150	150	150
		/NI			50	-	60	95	130	130	130
1	l		-50	205	55	-	60	95	160	205	205
Promass	8 80	Ex ec	-50	150	45	-	60	95	150	150	150
1		/NI			50	-	60	95	130	130	130
Promass O	80250	Ex ec /NI	-50	205	55	-	60	95	160	205	205
Promass X	350	Ex ec / NI	-50	205	55	-	60	95	160	205	205
Promass Q	25250	Ex ec / NI	-50 / -200	240	50	-	60	95	160	240	240

Notes: (1) this page coveres sensors with type of protection Ex ec, AEx ec and non-incendive. Sensors with type of protection Ex ec nC applicable only for versions without purge connection or rupture disk (temperature tables see next page)

- (2) Ta,min = -40°C, -50°C respectively (see nameplate)
- (3) for maximum medium temperatue and minimum medium temperature see nameplate

Temperature table for versions in type of protection Ex ec, AEx ec or Non-incendive with sensor insulated

(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Sensor	Size / DN	T _{max} to be measured at reference point at sensor neck [°C]						
1		T6	T5	T4	T3	T2	T1	
		(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)	
all	all	***	72	82	85	85	85	

- (1) for safe use temperatures shall not exceed all of the following:
 - temperature table for versions with sensor not insulated (refer to table above)
 - temperature at reference point as listed in this table
 - Ta,min = -40°C, -50°C respectively (see nameplate)
 - for maximum medium temperatue and minimum medium temperature see nameplate
 - (2) location of reference point



Transmitter for all versions:								
Type of enclosure	Тали							
enciosure	Ordinary location	T6	T5	T4				
	(°C)	(85°C)	(100C	(135°C)				
aluminium	60	-	45	60				
plastic	60	-		_				
Notes: (1) aluminium enclosure: Ta,min = -40°C, -50°C respectively (for limitation see name plate)								

A.	10.05.2016 / Bn	F			Ersetzt durch:
В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	

С	ontrol Drawing	IE	CEx, ATEX, (Gezeichnet	10.05.2016	Bn	
E	04.07.2018 / Bn	K		zuglingig gemacht werden.	FILE: Mt/Zeichng/FE	S026HG/FES0264G	dac
	30.10.2017 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES /		
C	03.05.2017 / Bn	H		Genehmigung weder vervielfältigt werden nach	Ersatz für:		
		G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere			
		_					

plastic enclosure: Ta,min = -40°C

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	09.06.2021	Bn
Gesehen		





IECEx Certificate of Conformity Certificate No.: IECEx CSA 16.0034X Issue 8 Annex A | Page 32 of 37



Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Proline Cubemass C 500

Notes: This page applies to versions with extended order code covering:

8*5*** - dd*******A...

8x5Bxx - dd******A...

8x5Bxx - dd******A...

CCSAus / CSA: dd = CZ

IECEx / ATEX: dd = BS. BL

Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size /	type	Т.	100	T	T _{meton} [°C]					
	DN	of	min	max	12,02	T6					T1
		protection	[°C]	[°C]	[°C]	(85°C)		(135°C)	(200°C)	(300°C)	(450°C)
Promass A	01 04	ExecnC	-50	205	50	-	95	130	130	130	130
Cubemass C	01 06	ExecnC	-50	205	50	-	95	130	130	130	130
Promass E	0815	ExecnC	-50	205	50	-	95	130	195	205	205
	25 80	ExecnC	-50	205	50	-	95	130	195	205	205
Promass	08 15	Ex ec nC	-50 /	150	45	-	95	130	150	150	150
F		l	-200		50	-	95	130	130	130	130
			-50 / -200	240	50	-	95	130	195	240	240
1	25 80	ExecnC	-50 /	150	45	-	95	130	150	150	150
1		l .	-200		50	-	95	130	130	130	130
			-50 / -200	240	50	-	95	130	195	240	240
1	100250	ExecnC	-50 /	150	45		95	130	150	150	150
1			-200		50	-	95	130	130	130	130
			-50 / -200	240	50	_	95	130	195	240	240
	15250	ExecnC	-50 / -200	350	50	-	95	130	195	280	350
Promass H	8	ExecnC	-50 / -200	205	55	-	95	130	195	205	205
	15 50	ExecnC	-50 / -200	205	55	-	95	130	195	205	205
Promass	8	ExecnC	-50	150	45	-	95	130	150	150	150
S,P					50	-	95	130	130	130	130
			-50	205	55	***	95	130	195	205	205
1	15 50	ExecnC	-50	150	45	-	95	130	150	150	150
1		l			50		95	130	130	130	130
			-50	205	55	-	95	130	195	205	205
Promass	8 80	Ex ec nC	-50	150	45	-	95	130	150	150	150
1					50	-	95	130	130	130	130
Promass O	80250	ExecnC	-50	205	55	-	95	130	195	205	205
Promass X	350	ExecnC	-50	205	55	-	95	130	195	205	205
Promass	25250	ExecnC	-50 / -200	240	50	-	95	130	195	240	240

- Notes: (1) type of protection Ex ec nC and AEx ec nC is applicable only for sensor versions without purge
 - connection or rupture disk
 - (2) Ta,min = -40°C, -50°C respectively (see nameplate)
 - (3) for maximum medium temperatue and minimum medium temperature see nameplate
 - (4) this temperature table is not applicable for Class I Division 2 versions. For Class I Division 2 versions see temperature table on page 11/12

Temperature table for versions in type of protection Ex ec nC or AEx ec nC with sensor insulated

(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Sensor	Size / DN	T _{max} to be measured at reference point at sensor neck ["C]						
		T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)	
all	all		72	82	85	85	85	

Notes: (1) for safe use temperatures shall not exceed all of the following:

- temperature table for versions with sensor not insulated (refer to table above)
- temperature at reference point as listed in this table
- Ta,min = -40°C, -50°C respectively (see nameplate)
 for maximum medium temperature and minimum medium temperature see nameplate.
- (2) location of reference point



Transmitter for all versions:								
Type of		Tanne						
enclosure	Ordinary location	T6	T5	T4				
	(°C)	(85°C)	(100C)	(135°C)				
aluminium	60	-	45	60				
plastic	60	-		_				
Notes: (1) aluminium enclosure: Ta,min = -40°C, -50°C respectively (for limitation see name plate)								

Į	A	10.05.2016 / Bn	F	22.10.2019 / Bn	Alle gesetzlichen Urheberrechte, vortehalten.	Ersetzt durch:
	В	24.10.2016 / Bn	G	09.06.2021 / Bn	Diese Zeichnung darf ohne unsere	
Ī	c	03.05.2017 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:
Ī	D	30.10.2017 / Bn	J			Ersteller: FES / Bn
ı	E	04.07.2018 / Bn	ĸ		zugängig gemacht werden.	FILE: Mt/Zeichng/FES0264/G/FES0264/G doc

Control Drawing IECEx, ATEX, CSA, cCSAus

plastic enclosure: Ta,min = -40°C

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn		
Geprüft				
Ex-geprüft	09.06.2021	Bn		
Gesehen				



FES0264G 12/12





4. Marking

Proline Pr	Proline Promass 300, Proline Cubemass 300							
Model Co								
	8*3*** – dd*ff***********+#**#							
	dd*ff*******							
dd =	ff =	Marking of Ex protection						
approval	I/O							
BA	CA, CB, CC,	Ex db eb ia [ia Ga] IIB T6T1 Ga/Gb 1)						
	CD, HA, TA,	Ex db eb ia [ia Ga] IIB T6T1 Gb						
	MC, RC	Ex tb [ia Da] IIIC T** °C Db						
	BA, BB, GA,	Ex db eb ia IIB T6T1 Ga/Gb 1)						
	LA, NA, RA,	Ex db eb ia IIB T6T1 Gb						
	SA, MA, MB,	Ex tb IIIC T** °C Db						
BB	RB CA CB CC	Evide objection Col IIC To T1 Co/Ch 1)						
DD	CA, CB, CC, CD, HA, TA,	Ex db eb ia [ia Ga] IIC T6T1 Ga/Gb 1) Ex db eb ia [ia Ga] IIC T6T1 Gb						
	MC, RC	Ex tb [ia Da] IIIC T** °C Db						
	BA, BB, GA,	Ex db eb ia IIC T6T1 Ga/Gb 1)						
	LA, NA, RA,	Ex db eb ia IIC T6T1 Ga/Gb ⁻⁷						
	SA, MA, MB,	Ex tb IIIC T** °C Db						
	RB	Ex to mo 1 0 bb						
ВС	CA, CB, CC,	Ex db ia [ia Ga] IIB T6T1 Ga/Gb 1)						
	CD, HA, TA,	Ex db ia [ia Ga] IIB T6T1 Gb						
	MC, RC	Ex tb [ia Da] IIIC T** °C Db						
	BA, BB, GA,	Ex db ia IIB T6T1 Ga/Gb 1)						
	LA, NA, RA,	Ex db ia IIB T6T1 Gb						
	SA, MA, MB,	Ex tb IIIC T** °C Db						
	RB							
BD	CA, CB, CC,	Ex db ia [ia Ga] IIC T6T1 Ga/Gb 1)						
	CD, HA, TA,	Ex db ia [ia Ga] IIC T6T1 Gb						
	MC, RC	Ex tb [ia Da] IIIC T** °C Db						
	BA, BB, GA,	Ex db ia IIC T6T1 Ga/Gb 1)						
	LA, NA, RA,	Ex db ia IIC T6T1 Gb						
	SA, MA, MB,	Ex tb IIIC T** °C Db						
	RB	Fy as a Clist HO TE TA Co						
BS	CA, CB, CC,	Ex ec nC [ic] IIC T5T1 Gc						
BS	CD, HA, TA,							
	MC, RC BA, BB, GA,	Ex ec nC IIC T5T1 Gc						
	LA, NA, RA,	EX 60 HO HO 1511 GC						
	SA, MA, MB,							
	RB							
L								

represer	ion: Marking of protection
_	ntative for
db -:	electronic compartment
eb -:	terminal compartment
a -:	> sensor
tb -:	enclosure
[ia Ga] -:	input/output Ex ia
[ia Da] -:	> input/output Ex ia
	> electronic compartment
eb -:	terminal compartment
	> sensor
	> enclosure
	input/output Ex ia
[ia Da] -:	> input/output Ex ia
	> electronic compartment
	> sensor
	> enclosure
[ia Ga] -:	input/output Ex ia
ia Daj -:	> input/output Ex ia
	 electronic compartment
a -:	> sensor
	> enclosure
[ia Ga] -:	input/output Ex iainput/output Ex ia
[ia Da] -:	> input/output Ex ia
ec -:	 transmitter and sensor enclosure
	> electronic
[ic] -:	input/output Ex ia

¹⁾ The following sensors are marked for EPL Gb and Cl.I Zone 1 only without zone separation: Promass A DN1, Promass H DN8...50, Promass I DN 8...80



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Proline Promass 500 with ISEM integrated in transmitter, Proline Cubemass 500 with ISEM integrated in transmitter						
	Model Code:					
	8*5*** – dd*ff****B************* O8*5*** – dd*ff****B**************#					
dd =	ff =	Device	Marking of Ex protection transmitter			
approval	I/O		5			
BA	CA, CB, CC,	Transmitter	Ex db eb ia [ia Ga] IIB T6T5 Gb			
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db			
	BA, BB, GA,	Sensor	Ex ia IIB T6T1 Ga/Gb 1)			
	LA, NA, RA, RB, RC, SA,		Ex ia IIB T6T1 Gb Ex ia tb IIIC T** °C Db			
	MA, MB, MC		Ex la la lilic i C Db			
	10.5 4, 10.5, 10.6					
BB	CA, CB, CC,	Transmitter	Ex db eb ia [ia Ga] IIC T6 T5 Gb			
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db			
	BA, BB, GA, LA, NA, RA,	Sensor	Ex ia IIC T6T1 Ga/Gb 1) Ex ia IIC T6T1 Gb			
	RB, RC, SA,		Ex ia the IIIC T** °C Db			
	MA, MB, MC		Ex la is ino 1			
ВС	CA, CB, CC,	Transmitter	Ex db ia [ia Ga] IIB T6 T5 Gb			
	CD, HA, TA, BA, BB, GA,	Sensor	Ex tb [ia Da] IIIC T85°C Db Ex ia IIB T6T1 Ga/Gb 1)			
	LA, NA, RA,	Sensor	Ex ia IIB T6T1 Ga/Gb			
	RB, RC, SA,		Ex ia tb IIIC T** °C Db			
	MA, MB, MC					
BD	CA CB CC	Transmitter	Fy db is lie Col IIC T6 T5 Cb			
טט	CA, CB, CC, CD, HA, TA,	Hansmiller	Ex db ia [ia Ga] IIC T6 T5 Gb Ex tb [ia Da] IIIC T85°C Db			
	BA, BB, GA,	Sensor	Ex ia IIC T6T1 Ga/Gb 1)			
	LA, NA, RA,		Ex ia IIC T6T1 Gb			
	RB, RC, SA,		Ex ia tb IIIC T** °C Db			
	MA, MB, MC					
BS	CA, CB, CC,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc			
	CD, HA, TA, MC, RC	Sensor	Ex ec IIC T6T1 Gc or			
		2311001	Ex ec nC IIC T6T1 Gc ²⁾			

		on: Marking of protection
repres		ative for
db		electronic compartment
eb	->	terminal compartment
ia	->	sensor
tb	->	enclosure
[ia Ga]	->	input/output Ex ia and
		sensor
[ia Da]	->	input/output Ex ia and
		sensor
db		electronic compartment
eb		terminal compartment
ia	->	sensor
tb		enclosure
[ia Ga]	->	input/output Ex ia and
		sensor
db	->	electronic compartment
ia		sensor
		enclosure
[ia Ga]	->	input/output Ex ia and
		sensor
[ia Da]	->	input/output Ex ia and
		sensor
db	->	electronic compartment
ia	->	
tb	->	enclosure
[ia Ga]	->	input/output Ex ia and
		sensor
[ia Da]	->	input/output Ex ia and
		sensor
ec	->	transmitter and sensor
		enclosure
nC		electronic
[ic]	->	input/output Ex ia

¹⁾ The following sensors are marked for EPL Gb and Cl.I Zone 1 only without zone separation: Promass A DN1, Promass H DN8...50, Promass I DN 8...80

²⁾ Marking Ex ec nC only applicable for sensors without purge connection or rupture disk



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Proline Promass 500 with ISEM integrated in sensor,						
	Proline Cubemass 500 with ISEM integrated in sensor					
Model Code: 8*5*** – dd*ff****A**********+#**# O8*5*** – dd*ff****A******************#						
dd = approval	ff = 1/O	f = Device Marking of Ex protection transmi				
BI	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	[Ex ia] IIC [Ex ia] IIIC			
		Sensor	Ex ia IIB T6T1 Ga/Gb ¹⁾ Ex ia IIB T6T1 Gb Ex ia tb IIIC T** °C Db			
BJ	BA, BB, GA, LA, NA, RA, SA, MA, MB,	Transmitter	[Ex ia] IIC [Ex ia] IIIC			
	RB		Ex ia IIC T6T1 Ga/Gb ¹⁾ Ex ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db			
BL	BL CA, CB, CC, CD, HA, TA, MC, RC		[Ex ic] IIC			
		Sensor	Ex ec ic IIC T5T1 Gc or Ex ec ic nC IIC T5T1 Gc 3)			
	BA, BB, GA, LA, NA, RA, SA, MA, MB,	Transmitter	n.a. (non-Ex)			
	RB	Sensor	Ex ec ic IIC T5T1 Gc or Ex ec ic nC IIC T5T1 Gc 3)			
ВМ	BM CA, CB, CC, CD, HA, TA, MC, RC		Ex ec nC [ic][ia Ga] IIC T5T4 Gc [Ex ia] IIIC			
		Sensor	Ex ia IIB T6T1 Ga/Gb ¹⁾ Ex ia IIB T6T1 Gb Ex ia tb IIIC T** °C Db			
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex ec nC [ia Ga] IIC T5T4 Gc [Ex ia] IIIC			
		Sensor	Ex ia IIB T6T1 Ga/Gb ¹⁾ Ex ia IIB T6T1 Gb Ex ia tb IIIC T** °C Db			

Informa	atio	n:Marking of protection
repres	ent	ative for
[Ex ia]	->	sensor circuit
ia	->	sensor
tb	->	enclosure
[Ex ia]	->	sensor circuit
ia	->	sensor
tb	->	enclosure
[Ex ic]	->	input/output Ex ic
ec	->	transmitter and sensor
		enclosure
nC	->	sensor
ес		transmitter and sensor
•		enclosure
nC	->	sensor
		sensor circuit
ia	->	sensor
tb	->	enclosure
[Ex ia]	->	sensor circuit
		sensor
tb	->	enclosure



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Proline Promass 500 with ISEM integrated in sensor,							
Proline Cu	Proline Cubemass 500 with ISEM integrated in sensor						
	Model Code:						
	d*ff****A******						
O8*5*** –	dd*ff****A*****	********					
dd =	ff =	Device	Marking of Ex protection transmitter				
approval	I/O						
BN	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex ec nC [ic][ia Ga] IIC T5T4 Gc [Ex ia] IIIC				
	Sensor Ex ia IIC T6T1 Ga/Gb 1) Ex ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db						
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	A, RA, [Ex ia] IIIC					
		Sensor	Ex ia IIC T6T1 Ga/Gb ¹⁾ Ex ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db				
BS	SS CA, CB, CC, Transmitter Ex ec nC [ic] IIC T5T4 Gc CD, HA, TA,		Ex ec nC [ic] IIC T5T4 Gc				
	MC, RC	Sensor	Ex ec IIC T5T1 Gc or Ex ec nC IIC T5T1 Gc ²⁾				
	BA, BB, GA, LA, NA, RA, Transmitter Ex ec nC IIC T5T4 Gc						
	SA, MA, MB, RB	Sensor	Ex ec IIC T5T1 Gc or Ex ec nC IIC T5T1 Gc ²⁾				

Information:Marking of protection representative for				
[Ex ia] -> sensor circuit				
ia	->	sensor		
tb	->	enclosure		
ec	->	transmitter and sensor		
~C		enclosure		
nC	->	sensor		

¹⁾ The following sensors are marked for EPL Gb and Cl.I Zone 1 only without zone separation: Promass A DN1, Promass H DN8...50, Promass I DN 8...80

5. Conditions of Certification

- All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe sensor circuits potential equalization must exist.
- The sensors may only be used for those process media, for which the wetted parts are known to be suitable
- Plastic transmitter enclosures for the order codes

```
Proline Promass 8*5***-(BI/BJ)*******A....,
Proline Promass O8*5***-(BI/BJ)*******A....,
Proline Promass 8X5* XX -(BI/BJ) *******A....
Proline Promass O8X5* XX -(BI/BJ) *******A....
```

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

²⁾ Marking Ex ec nC only applicable for sensors without purge connection or rupture disk





• If the flowmeter system is connected to remote display type DKX001, the approval codes 'dd' for the flowmeter shall be paired to the approval code "bb" of the remote display as follows:

Approval code 'dd' of Proline Promass 300	Approval code 'bb' of remote display DKX001/ODKX001 as covered by IECEx DEK 15.0024
BA, BB, BC or BD	BE, BF or BG
BS	BS

- The Proline 300/500 Flowmeter that may include, stainless steel label tag with rope, when not bonded to earth used on coated metallic transmitter and/or sensor enclosure, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- Only use battery Renata type lithium CR1632, 3V.
- The flameproof joints are not intended to be repaired.
- For Proline Promass 300_500 with order code 'dd' = BA, BB, BC, BD, BI, BJ, BM & BN:
 Zone 0 is only applicable to sensor with process medium in the measuring tube

Applicable to Antenna bushing H337 when used with Proline 300/500 transmitter enclosure:

- Antenna supplied by Endress+Hauser shall be used only. As an alternate, any passive omnidirectional RF antenna with or without cable is permitted to be connected when meeting the following parameters:
 - a) The antenna connected to the antenna bushing shall have an impedance of at least 50Ω
 - b) The rated frequency range of the antenna shall not exceed 1710MHz ... 6000MHz
 - c) The rated power of the antenna shall be at least 100mW
- The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure
- The RF antenna or the RF antenna cable shall be fitted with a Series N (MIL-STD-348) plug connector. The coupling nut of the Series N plug connector shall be hand tightened only
- The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected





Annex B:

This Annex is applicable for flowmeters type Proline Promag 300/500

Table of Contents

1.	Description	2
2.		
2.1.	Proline Promag 300/500	
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3.	Parameters	
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3.2.	Thermal Parameters (Zone 1)	11
3.3.	Thermal Parameters (Zone 2)	
4.	Marking	
5.		





1. Description

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 a version with ISEM electronic integrated in transmietter where the sensor sends analog signals to the transmitter and a version with ISEM electronic in sensor 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 or ODKX001, may be connected to the electronics. The remote display is available in two options for the user. Either it is ordered as a separate product or by the product of the flowmeter.

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.

All Proline Promag 300/500 flowmeters are available for an ambient temperature of -40°C to +60°C and optional -50°C to +60°C.

All versions of flowmeters Proline Promag 300 and Promag 500 are available for an enclosure protection of degree IP66, IP67. In addition versions of remote sensor Proline Promag 500 are available for enclosure protection of degree IP68 as an optional.





2. Order Code

2.1. Proline Promag 300/500

Extended order code Proline Promag 300:

5a3bcc - ddzeffghjlpstttuvww + #**#

O5a3bcc – ddzeffghjlpstttuvwwyy + #**# for OEM-version

5x3bxx – ddeffghjlpww + #**# for replacement transmitter only
05x3bxx – ddeffghjlpwwyy + #**# for replacement transmitter OEM

Extended order code Proline Promag 500:

5a5bcc - ddzeffghijkmnopstttuvww + #**#

O5a5bcc – ddzeffghijkmnopstttuvwwyy + #**# for OEM-version

5x5bxx – ddeffghijkmopqqww + #**# for replacement transmitter only
05x5bxx – ddeffghijkmopqqwwyy + #**# for replacement transmitter OEM

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:

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

BS = Ex ec IIC T5...T1 Gc





Proline Promag 500:

= Ex db eb [ia] IIC T6...T4 Gb (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) = Ex db [ia] IIC T6...T1 Gb BD (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) (transmitter + sensor) Ex tb IIIC T** Db ΒJ = non-Ex (transmitter) Ex db ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor) BL = non-Ex (transmitter) Ex ec ic IIC T6...T1 Gc (sensor) BN = Ex ec IIC T6...T1 Gc (transmitter) Ex db ia IIC T6...T1 Gb (sensor) Ex tb IIIC T* Db (sensor) = Ex ec IIC T5...T1 Gc BS (transmitter + sensor) = Ex db eb [ia] IIC T6...T1 Gb B7 (transmitter) Ex eb [ia] IIC T6...T1 Gb (sensor) = Ex db [ia] IIC T6...T1 Gb B8 (transmitter) Ex eb [ia] IIC T6...T1 Gb (sensor)

z = Design (Promag W 300 and Proline W 500 only) any single number or letter

e = Power Supply

D = 24Vdc

E = 100-230 Vac

I = 100-230 Vac / 24 Vdc

X = sensor only

ff = Input / Output 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive)

00 = 4-2011A WITAKI EXT (passive

CC = 4-20mA HART Ex i (active)

CD = 4-20mA WHART Ex i (active)

GA = Profibus PA

HA = Profibus PA Ex i

LA = Profibus DP

MA = Modbus RS485

MB = Modbus TCP

MC = Modbus TCP Ex i

NA = EtherNet/IP

RA = Profinet IO

RB = Profinet

RC = Profinet Ex i

SA = Foundation Fieldbus

TA = Foundation Fieldbus Ex i

XX = sensor only



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```
= Input / Output 2
                = without Input/Output 2
                = 4-20mA
                = 4-20mA Ex i (passive)
        С
                = Configurable ÎO
        D
        Ε
                = Pulse/Frequency/Switch output
        F
                = Pulse output phase-shifted
        G
                = Pulse/Frequency/Switch output Ex i
        Н
                = Relay
                = 4-20mA input
        I
        J
                = Status input
        Κ
                = Pulse output Ex i
        L
                = Pulse output
        Χ
                = sensor only
h
       Input / Output 3
                = without Input/Output 3
        Α
        В
                = 4-20mA
        С
                = 4-20mA Ex i (passive)
        D
                = Configurable IO
         Ε
                = Pulse/Frequency/Switch output
        F
                = Pulse output phase-shifted
        G
                = Pulse/Frequency/Switch output Ex i
        Н
                = Relay
        1
                = 4-20mA input
        J
                = Status input
        Κ
                = Pulse output Ex i
        L
                = Pulse output
        Χ
                = sensor only
i
     = Input / Output 4 (Proline 500 only)
                = without Input/Output 4
        В
                = 4-20mA
        С
                = 4-20mA Ex i (passive)
        D
                = Configurable IO
        Е
                = Pulse/Frequency/Switch output
        F
                = Pulse output phase-shifted
        G
                = Pulse/Frequency/Switch output Ex i
        Н
                = Relay
                = 4-20mA input
        1
         J
                = Status input
        Κ
                = Pulse output Ex i
        L
                = Pulse output
                = sensor only
j
     = Display / Operation
        with remote Display
                              : O
```

without remote Display : any single number or letter except O

= Integrated ISEM electronic (Proline 500 only)

= Sensor

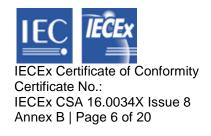
= Housing (Proline 300 only) any single number or letter

= Transmitter

k

ı

A B





m = Transmitter Housing (Proline 500 only)

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 Kid

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

уу

any single number or letter

ww = Device Model (two digit) (refer to section 1.2 for assignment table of flowmeter to replacement

transmitter)

A1 = product version 1

A2 = product version 2 = Customer version (two digits)

any double digits with combination of number or letter

** = Option in two digits (none, two or multiple of two digits)

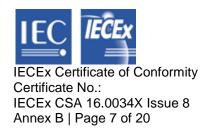
any combination of number and/or letter

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

2.2. Assignment of Flowmeter to Replacement Transmitter

The replacement transmitters are assigned to the flowmeter Proline Promag 300/500 as follows:

Product flowme	eters			Replacement tran	smitter type	
model code		Generation code	device model code	model code	Generation code	device model code
		b =	ww =		b =	ww =
5H*b**ww,	O5H*b**ww	В	A1 / A2	5x*bxxww,	В	A1 / A2
5P*b**ww,	O5P*b**ww			O5x*bxxww		
5W*b**ww,	O5W*b**ww					





3. Parameters

3.1. Electrical Parameters

Power Supply		
Order Code	terminal no.	values
e =		
D 1)	No. 1(L+/L), 2(L-/N)	U _N = 19.228.8V _{DC}
		$U_{M} = 250V_{AC}$
E 1)	No. 1(L+/L), 2(L-/N)	$U_N = 85264V_{AC}$
		$U_{M} = 250V_{AC}$
[2]	No. 1(L+/L), 2(L-/N)	U _N = 19.228.8V _{DC} /85264V _{AC}
		U _M = 250V _{AC}

- 1) applicable for products with approval code dd = BB, BD, B7, B8
- 2) applicable for products with approval code dd = BS, BI, BJ, BL, 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	$\begin{array}{ll} U_{i} &= 30V \\ I_{i} &= 100 \text{mA} \\ P_{i} &= 1.25W \\ L_{i} &= 0 \\ C_{i} &= 6 \text{nF} \end{array}$	
CC, CD	No. 26, 27	1) Uo = 21.8V Io = 90mA Po = 491mW Lo = 4.1mH (IIC) / 15mH (IIB) Co = 160nF (IIC) / 1160nF (IIB) Ui = 30V Ii = 10mA Pi = 0.3W Ci = 6nF Li = 5µH	2) Uo = 21.8V Io = 90mA Po = 491mW Lo = 9mH (IIC) / 39mH (IIB) Co = 600nF (IIC) / 4000nF (IIB) Ui = 30V Ii = 10mA Pi = 0.3W Ci = 6nF Li = 5µH
HA, TA	No. 26, 27	1) Profibus PA (Fisco Field Device) / Foundation Fieldbus U _i = 30V I _i = 570mA P _i = 8.5W L _i = 10µH	Profibus PA (Fisco Field Device) / Foundation Fieldbus Ui = 32V Ii = 570mA Pi = 8.5W Li = 10µH





		C _i = 5nF
MB, RB	No. 26, 27	APL port profile SLAX / SPE PoDL classes 10, 11, 12 U _N = 30V _{DC} U _M = 250V _{AC}
MC, RC	No. 26, 27	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
NA, RA	IO1 / RJ45	$U_{N} = 30V_{DC}$ $U_{M} = 250V_{AC}$

- applicable for products with approval code dd = BB, BD, B7, B8
 applicable for products with approval code dd = BS, BM, BN

Input/Output 2									
Order Code	terminal no.	values							
g =									
C, G, K	No. 24, 25	$ \begin{array}{lll} U_{i} & = 30V \\ I_{i} & = 100 mA \\ P_{i} & = 1.25W \\ L_{i} & = 0 \\ C_{i} & = 0 \end{array} $							
B, D, E, F, I, J, L	No. 24, 25	$U_N = 30V_{DC}$ $U_M = 250V_{AC}$							
Н	No. 24, 25	$\begin{array}{ll} U_N &= 30 V_{DC} \\ I_N &= 100 m A_{DC} / 500 m A_{AC} \\ U_M &= 250 V_{AC} \end{array}$							

Input/Output 3		
Order Code h =	terminal no.	values
C, G, K	No. 22, 23	$\begin{array}{lll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \\ C_i &= 0 \end{array}$
B, D, E, F, I, J, L	No. 22, 23	$\begin{array}{ll} U_N &= 30 V_{DC} \\ U_M &= 250 V_{AC} \end{array}$
Н	No. 22, 23	U _N = 30V _{DC} I _N = 100mA _{DC} / 500mA _{AC} U _M = 250V _{AC}





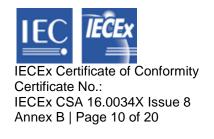
Input/Output 4		
Order Code i =	terminal no.	values
C, G, K	No. 20, 21	$ \begin{array}{lll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \\ C_i &= 0 \end{array} $
B, D, E, F, I, J, L	No. 20, 21	$\begin{array}{c} U_N = 30V_{DC} \\ U_M = 250V_{AC} \end{array}$
Н	No. 20, 21	U _N = 30V _{DC} I _N = 100mA _{DC} / 500mA _{AC} U _M = 250V _{AC}

Service Interface		
Order Code	terminal no.	values
dd =		
BA, BB	Service Interface	 Service Interface shall only be installed in areas which are known to be non hazardous with a non intrinsically safe circuit
		$U_N = 3.3 \text{ V}, U_M = 250 \text{ V}_{AC} \text{ or}$
		 to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0
BC, BD	Service Interface	 Service Interface shall only be installed to an non intrinsically safe circuit with U_N = 3.3V, U_M = 250V_{AC} or to an intrinsically safe circuit with Ui = 10V,
		li = n.a., Pi = na., Ci = 200nF, Li = 0
not for: BB, BD, B7, B8	Service Interface	$U_N = 3.3V$

Antenna bushing		
Order Code dd =	terminal no.	values
BB, BJ, BL, BN, BS, B7	N connector	See conditions of certfication

Display remote		
Order Code dd =	terminal no.	values
BB, BD, B7, B8	No. 81, 82, 83, 84	$\begin{array}{lll} \text{Uo} &= 3.9 \text{V} \\ \text{Io} &= 1.5 \text{A (spark)} \\ &= 200 \text{mA (power)} \\ \text{Po} &= 600 \text{mW} \\ \text{Ri} &= 2.6 \Omega \\ \text{Co} &= 670 \mu \text{F} \\ \text{Lo} &= 0 \end{array}$
not for: BB, BD, B7, B8	No. 81, 82, 83, 84	$U_N = 3.3V$ $I_N = 150 \text{mA}$

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





Promag Remote Transmitter and Remote Sensor:

 5^{*****} and 05^{*****} with order code dd = BB, BD, B7, B8 in combination with k = B:

Transmitter:

terminals 4, 5, 6, 7, 8, 32, 33, -> Uo = 26.6V, Io = 19.2mA, Po = 128mW,

34, 35, 36, 37 Lo = 20mH, Co = 94nF

and

Uo = 13.3V, Io = 39.2mA, Po = 131mW,

Lo = 20mH, Co = 94nF

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

Sensor:

terminals 4, 5, 6, 7, 8, 32, 33, \rightarrow Ui = 26.6V, Ii = n.a., Pi = n.a., Li = 0, Ci = 0

34, 35, 36, 37

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 200m is allowed when using a cable which has the following parameters: Cable inductance $\leq 1 \text{ mH/km}$

Cable capacitance ≤ 0.42 µF/km

 5^{*****} -... and 05^{*****} -... with order code dd = BS in combination with k = B:

Transmitter:

terminals 4, 5, 6, 7, 8, 32, 33, -> Uo = 26.6V, Io = 19.2mA, Po = 128mW,

34, 35, 36, 37 Lo = 50mH, Co = 325nF

and

Uo = 13.3V, Io = 39.2mA, Po = 131mW,

Lo = 50mH, Co = 325nF

terminals 41, 42 \rightarrow U_N = 60V

Sensor:

terminals 4, 5, 6, 7, 8, 32, 33, = 26.6 V, Ii = 19.2 mA, Pi = n.a.,

34, 35, 36, 37 Li = 0, Ci = 0 (+13.3V to -13.3V)

or

Ui = 13.3V, Ii = 39.2mA, Pi = n.a.,

Li = 0, Ci = 0 (to ground)

terminals 41, 42 \rightarrow U_N = 60V

Interconnection of circuit connected to terminals 4, 5, 6, 7, 8, 37, 36 for use of a cable with a maximum length of 200m is allowed when using a cable which has the following parameters: Cable inductance $\leq 1 \text{ mH/km}$

Cable capacitance ≤ 1 µF/km

 5^{*****} -... and 05^{*****} -... with order code dd = BJ, BL, BN, BS 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 -> $U_N = 3.3V$



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3.2. Thermal Parameters (Zone 1)

Proline P	romag H	P/W 3	300																				
Notes: This page ap	oplies to ven	sions w	ith exten	ded ord	er code o	covering:		5V	-t/P)3B** - do th approve	i	cCSAus:		/P)3B** - dd 3B** - dd E, C2, C4		CEx / AT	5x3Bx	x - dd x - dd = BB, BD)		O5x3Bxx O5x3Bxx			
Standard version with sensor not insulated:															ith senso of E+H F	r insulate iowtec):	d						
Sensor	Size / DN	Liner	T _{med,min}	Tames				[°C]				Sensor	Size / DN	Liner		Tame			Testes				
			[,c]	[,C]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)					[,c]	[,c]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)	
Promag P	15600	PTFE	-40	45	80	90	130	130	130	130		Promag P	15600	PTFE	-40	50	60	95	130	130	130	130	
Promag W				50 55	60	90	130	130	130	130		Promag W			H	55 60		95	130	130	130	130	
				60	-		100	100	100	100			25200	PFA	-40	45	80	95	130	150	150	150	
	25200	PFA	-40	40	80	95	130	150 130	150	150					F	50 60	60	95	130	150	150	150 100	
				45 50	80 60	95 90	130	130	130	130			503000	HG	-20	50	60	80	80	80	80	80	
				60		***	100	100	100	100						60		80	80	80	80	80	
	503000	HG	-20	50 60	60	80	80 80	80 80	80 80	80 80			251000 253000	PU	-20 -40	50 45	50 80	50 95	50 120	50 120	50 120	50 120	
	251000	PU	-20	50	50	50	50	50	50	50			20	(4)		55		95	120	120	120	120	
	253000	ETFE	-40	45 55	80	95 95	120 120	120 120	120 120	120 120		Motor: (1)	Ta,min = -40	PC Hor lie	nitation see	60	ato)	95	100	100	100	100	
		(4)		60	-	95	100	100	100	100		(2)	T _{mel,me} may	be reduc	ed by versi	ons. For	limitation				te	- 1	
Promag H	2150	PFA	-40	50	80 (3)	95	130	150	150	150		(3)	Limitation of	T _{net,net} :	85°C depe	ending or	process	pressure	(see name	plate)			
				55 (3) 60 (3)	65 (3)	80	130	150 115	150 115	150 115										nsor insul			
	Ta,min = -40			ee name												(insula	tion not in	complian	ce to man	ual of E+H	Flowtec):	
	Promag H lin									ional		Sensor	Size / DN	Liner	Test,es	Tame	Test,es		Tmax to		ed at refe r neck (°C	erence poin	tat
	versions ava	ilable wi	th medium	tempera	ture meas	surement			16 Idi opu	Onai					[°C]	[°C]	@T1	T6	T5	T4	T3	T2	T1
(4)	Limitation of	Tonion	= 85°C de	pending	on proces	s pressure	(see nam	eplate)							-40			(85°C					
				High te	mperatur	e version	with sens	or not in:	sulated:		1	Promag P Promag W	all	PTFE	-40	60	130	56.4 56.4	71.3	72.0 72.0	72.0		72.0 72.0
														HG	-20	60	80	56.4	71.3	72.0	72.0		72.0
Sensor	Size / DN	Liner	T _{med,min}	T _{a,max}	***	**		- [,c]	***]			PU ETFE	-20 -40	60	50 120 (3	56.4) 56.3	71.3 71.3	72.0 72.0	72.0 72.0		72.0 72.0
			["C]	[,C]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	(300°C)	T1 (450°C)		Notes:						,					XOX
Promag P	15600	PTFE	-40	50	60	95	130	130	130	130	1		-40°C (for lin		ee name pla	ate)					(2) ref	erence >	-
Promag W				55 60		95	130	130	130	130	1		n of Tanana		pending on	process	pressure	(see name	eplate)		point		i i i
	25200	PFA	-40	45	80	95	130	150	150	150	1										<u> </u>		
				50 60	60	95	130 100	150	150	150 100	Aenderunge	-	5.2016 / Bn	F				eberrechte. vo	rbehalten.	Ersetzt dur	ch:		
	503000	HG	-20	50	60	80	80	80	80	80	i		0.2016 / Bn	G				ohne unsere vervielfältigt w		Essets C			
				60		80	80	80	80	80	1		5.2017 / Bn 2.2018 / Bn	н .				vervietangs v Konkumengfin		Ersatz für: Ersteller: Fi	E0 / B-		
	251000 253000	PU	-20 -40	50 45	50 80	50 95	50 120	50 120	50 120	50 120	ł		8.2021 / Bn	K			g gemucht w					OFFESOME	dac
		(3)		55		95	120	120	120	120	Control	Drawing		TEX (CSA cC	SAure						.05.2016	Bn
Notes: (1)	To min = 40	10 March	m bating -	60	olate)	95	100	100	100	100					,					Gezeichnet	11	1.03.2016	Dri
Notes: (1) Ta_min = -40°C (for limitation see name plate) (2) T _{mat_mm} may be reduced by versions. For limitation of range for T _{mat_mm} see name plate (3) Limitation of T _{mat_mm} = 85°C depending on process pressure (see nameplate)							, Zone 21		1, CI.I	I, CI.III,	CI.I Zo	ne 1			Geprüft								
												al Parame								Ex-geprüft	10	0.06.2021	Bn
											Proline	Promag 3	300/500							Gesehen			
GI)													lowtec AG,	Kägenst	trasse 7, 0	CH-4153	Reinad	h BL1, P	ostfach	FES	S02(60E	1/3



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Proline Promag H/P/W 500

Notes: This page applies to versions with extended order code covering:

O5(H/P)5B** - dd******B... 5(H/P)5B** - dd*****B... 5W5B** - dd******B.... O5W5B** - dd*****B... with approval option cCSAus: dd = CD, CE, C2, C4, C7, C8

5x5Bxx - dd*****B... O5x5Bxx - dd******B... 5x5Bxx - dd******B... O5x5Bxx - dd******B...

IECEx / ATEX: dd = BB, BD, B7, B8

				Sensor	of Standa	ira versio	n with Ser	isor not ii	nsulated	
Sensor	Size / DN	Liner	Teet,ein	Tame			Teste	[°C]		
	l	l	[°C]	["C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	50	80	95	130	150	150	150
_				60	80	95	130	130	130	130
l	503000	HG	-20	60	80	80	80	80	80	80
	251000	PU	-20	50	50	50	50	50	50	50
	253000	ETFE (4)	-40	60	80	95	120	120	120	120
Promag H	2150	PFA	-40	45	80	95	130	150	150	150
		l		55 (3)	80 (3)	95	130	130	130	130
				60 (3)	80 (3)	95	110	110	110	110

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) T_{mel max} may be reduced by versions. For limitation of range for T_{med} see name plate
 - (3) Promag H limited to Ta,max = 50°C @ class T6 and Tmed,max = 50°C @ class T6 for optional versions available with medium temperature measurement
 - (4) Limitation of T_{mat max} = 85°C depending on process pressure (see nameplate)

Sensor	of High temperature	version v	vith sensor not insulated

Sensor	Size / DN	Liner	T _{mel,min}	Tame	T _{met,max} [°C]					
1	l	l	[°C]	["C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	60	80	95	130	150	150	150
	503000	HG	-20	60	80	80	80	80	80	80
1	251000	PU	-20	50	50	50	50	50	50	50
1	253000	ETFE	-40	60	80	95	120	120	120	120
1		(3)			l		l			

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) T_{mal,max} may be reduced by versions. For limitation of range for T_{mal} see name plate
 - (3) Limitation of T_{met,max} = 85°C depending on process pressure (see nameplate)

	Sensor of High				insulat
ı	(for insulation re-	er to manual	of E+H Flow	tec)	

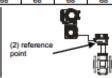
Sensor	Size / DN	Liner	T _{med,min}	T _{a,max}			T _{mat,n}	_ [°C]		
	l		["C]	["C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	75	95	130	130	130	130
Promag W	25200	PFA	-40	60	80	95	130	150	150	150
_	503000	HG	-20	60	75	80	80	80	80	80
	251000	PU	-20	50	50	50	50	50	50	50
	253000	ETFE	-40	55	80	95	120	120	120	120
		(4)		60	75	95	120	120	120	120

- Notes: (1) Ta,min = 40°C (for limitation see name plate)
 - (2) Testers may be reduced by versions. For limitation of range for Test see name plate
 - (3) Limitation of T---- = 85°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor insulated

		(insulation not in compliance to manual of E+H Flowtec)									
Sensor	Size / DN	Liner	Testan	Tana	T-nt,ne @T1						t
			[,c]	[,c]	[c]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	al	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
		ETFE	-40	60	120 (3)	63.8	65.7	68	68	68	68

- (1) Ta,min = -40°C (for limitation see name plate)
- (2) location of reference point
- (3) Limitation of T==1,== = 85°C depending on process pressure (see nameplate)



Transmitter for all versions:							
Tame							
T6	T5						
(85°C)	(100°C)						
55	60						
Notes: (1) Ta.min = -50°C (for limitation see name plate)							

Aenderungen:	A B	10.05.2016 / Bn 24.10.2016 / Bn	F G		Alle gesetzlichen Urheberrechte, vorbehalten. Diese Zeichnung darf ohne unsere	Ersetzt durch:		
	Ċ	03.05.2017 / Bn	н			Ematz für:		
l	D	15.02.2018 / Bn	J		dritten Personen und Konkumendfirmen	Ersteller: FES / Bn		
	Ε	10.06.2021 / Bn	ĸ		zuglingig gemacht werden.	FILE: MrZeidingFE	S0200/E/FES0200E	doc
Control Drawing IECEx, ATEX, CSA, cCSAus					Aus	Gezeichnet	10.05.2016	Bn

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

_	_	
_		

10.06.2021

Ceprüft

Ex-geprüft

Gesehen



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Proline Promag H/P/W 500

This page applies to versions with extended order code covering:

5(H/P)5B** - dd******A... 5W5B** - dd******A... with approval option

O5(H/P)5B** - dd******A... O5W5B** - dd******A... cCSAus: dd = CN, C6

5x5Bxx - dd******A... 5x5Bxx - dd******A... IECEx / ATEX: dd = BJ, BN

O5x5Bxx - dd******A... O5x5Bxx - dd******A...

Sensor	of Standa	rd version w	rith sensor n	ot insulated

Sensor	Size / DN	Liner	T _{met,min}	Tana			Teste	" [.c]		
	1	l	[C]	[°C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	50	80	95	130	150	150	150
-	1	l		60	80	95	130	130	130	130
	503000	HG	-20	60	80	80	80	80	80	80
	251000	PU	-20	50	50	50	50	50	50	50
	253000	ETFE (3)	-40	60	80	95	120	120	120	120
Promag H	2150	PFA	-40	35	80	95	130	150	150	150
		l		45	80	95	135	135	135	135
l	I	l	I	60	80	95	115	115	115	115

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 (2) T_{med,max} may be reduced by versions. For limitation of range for T_{med} see name plate
 - (3) Promag H limited to Ta,max = 50°C @ class T6 and Tmed,max = 50°C @ class T6 for optional versions available with medium temperature measurement
 - (3) Limitation of T_{mel,max} = 85°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor not insulated:

Sensor	Size / DN	Liner	Tmet,min	Tame	T [°C]					
		l	[°C]	["C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	60	80	95	130	150	150	150
	503000	HG	-20	60	80	80	80	80	80	80
	251000	PU	-20	50	50	50	50	50	50	50
l	253000	ETFE	-40	60	80	95	120	120	120	120
l	1	(3)	l .	ı		ı	ı	l	I .	l

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) Tantan may be reduced by versions. For limitation of range for Tant see name plate
 - (3) Limitation of Tmelmes = 85°C depending on process pressure (see nameplate)

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

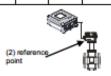
Sensor	Size / DN	Liner	Tester	Tames			Tnet,m	- [°C]		
l			[,C]	[°C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	40	60	70	95	130	130	130	130
Promag W	25200	PFA	40	60	75	95	130	150	150	150
	503000	HG	-20	60	75	80	80	80	80	80
l	251000	PU	-20	50	50	50	50	50	50	50
l	253000	ETFE	-40	60	70	95	120	120	120	120
		(3)								

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) Test are may be reduced by versions. For limitation of range for Test see name plate
 - (3) Limitation of T==== = 85°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor insulated

				(insulati	on not in c	ompliance	to manua	I OT E+H F	lowtec):		
Sensor	Size / DN	Liner	Testen	Ta,man	Tnet,net @T1						
			[,c]	[,c]	[,c]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	70.9	70.9	70.9
Promag W	l	PFA	-40	60	150	63.8	65.7	69	70.9	70.9	70.9
	l	HG	-20	60	80	63.8	65.7	69	70.9	70.9	70.9
	l	PU	-20	50	50	63.8	65.7	69	70.9	70.9	70.9
	l	ETEE	-40	60	120 (3)						

- (1) Ta,min = -40°C (for limitation see name plate)
- (2) location of reference point
- (3) Limitation of T-=1,== 85°C depending on process pressure (see nameplate)



10.05.2016

10.06.2021

Transmitte	r for all versions:										
Type of	Талы										
enclosure	Ordinary location	T6	T5	T4							
	(°C)	(85°C)	(100°C	(135°C)							
aluminium	60		45	60							
plastic	60			-							
Notes: (1)	aluminium enclosur plastic enclosure: T	re: Ta,min = -50°C ('a,min = -40°C	(for limitation see r	name plate)							

I	Aenderungen:	A	10.05.2016 / Bn	F	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:
ı		В	24.10.2016 / Bn	G	Diese Zeichnung darf ohne unsere	
ı		C	03.05.2017 / Bn	н	Genehmigung weder vervielfältigt werden nach	Erastz für:
ı		D	15.02.2018 / Bn	J	dritten Personen und Konkumerafilmen	Ersteller: FES / Bn
ı		E	10.06.2021 / Bn	ĸ	zugängig gemacht werden.	FILE: Mt/Zeichng/FES0200/E/FES0200E.doc

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



FES0260E

Cepruit

Ex-geprüft



IECEx Certificate of Conformity Certificate No.: IECEx CSA 16.0034X Issue 8 Annex B | Page 14 of 20



Thermal Parameters (Zone 2) 3.3.

Proline Promag H/P/W 300 Notes: 5(H/P)3B** - dd... This page applies to versions with extended order code covering: 5W3B** - dd... with approval option Standard version with sensor not insulated .. [°C] Size / DN Liner ["C] [°C] T4 T2 (85°C) (100°C (135°C) (200°C (300°C) (450°C) 15....600 PTFE -40 90 130 130 130 130 55 130 130 100 100 100 100 25...200 45 130 50 130 90 130 130 130 100 100 50 80 50...3000 HG 80 80 80 80 60 80 80 25...1000 50 PU 50 50 50 50 50 25...3000 ETFE 90 60 100 100 50 2...150 130 150 150 95 (4) (5), (6) 55 (4) 80 (4) 130 150 150 60 (4) 100 100 100 Notes: (1) Ta,min = -40°C (for limitation see name plate) (2) Tamelines and/or Tameline may be limited by versions. For limitation of range for Tamelines name plate (3) 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.) (4) Promag H limited to Ta,max = 50°C @ class T6 and Tmed,max = 50°C @ class T6 for optional versions available with medium temperature measurement (5) versions with transmitter enclosure stainless steel (hygienic) only for installation where transmitter is not installed above the sensor (6) Versions with transmitter enclosure stainless steel (hygienic) installed in temperature class T5, a degree of 3°C for ambient temperature shall be taken into account (7) Limitation of Taxana = 85°C depending on process pressure (see nameplate) High temperature version with sensor not insulated

Sensor	Size / DN	Liner	T _{med,min}	Tames			Torrin	["C]		
		1 /	[°C]	[°C]	T6	T5	T4	T3	T2	T1
		\perp			(85°C)	(100°C		(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	50	***	90	130	130	130	130
Promag W		1 /	1	55	***	***	130	130	130	130
				60	***	***	100	100	100	100
	25200	PFA	-40	45	***	95	130	180	180	180
. l		1 /		50	***	90	130	160	160	160
al '				60		***	100	100	100	100
al '	503000	HG	-20	50	***	80	80	80	80	80
al '				60	***	***	80	80	80	80
	251000	PU	-20	50		50	50	50	50	50
. l	253000	ETFE	-40	50	***	90	120	120	120	120
		(3)		60		***	100	100	100	100
Notes: (1)	Ta,min = -40	I'C (for I	mitation s	ee name	plate)					
(2)	T and/	or T	may be?	limited by	versions.	For limital	tion of rane	ge for T	see name	e plate

(3) Limitation of T_{metous} = 85°C depending on process pressure (see nameplate)

O5(H/P)3B** - dd... O5W3B** - dd...

5x3Bxx - dd... 5x3Bxx - dd...

O5x3Bxx - dd... O5x3Bxx - dd...

cCSAus: dd = CS, CZ

IECEx / ATEX: dd = BS

High temperature version with sensor insulated

				(for insu	lation refe	r to manu	al of E+H I	Flowtec)			
Sensor	Size / DN	Liner	Tester	Taren							
			[,c]	[,c]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)	
Promag P	15600	PTFE	-40	50	***	90	130	130	130	130	
Promag W				55	***	***	130	130	130	130	
				60	***	***	100	100	100	100	
	25200	PFA	-40	45	***	95	130	170	170	170	
	l			50	***	90	130	160	160	160	
				60	***	***	100	100	100	100	
	503000	HG	-20	50	***	80	80	80	80	80	
				60	***	***	80	80	80	80	
	251000	PU	-20	50	***	50	50	50	50	50	
	253000	ETFE	-40	50	***	90	120	120	120	120	
		(4)		60	***	***	100	100	100	100	

(2) Tantan and/or Tantan may be limited by versions. For limitation of range for Tant see name plate

(3) Limitation of Tmestmas = 85°C depending on process pressure (see nameplate)

					on not in o		to manua				
Sensor	Size / DN	Liner	Teetenin	Tames Testines Test to be measured at reference point at			t				
	l	l			@T1	sensor neck ["C]					
	l	l	[°C]	[°C]	[°C]	T6	T5	T4	T3	T2	T1
						(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	all	PTFE	-40	55	130	***	62.2	74.0	75.6	75.6	75.6
Promag W	l	PFA	-40	50	150	***	62.2	74.0	75.6	75.6	75.6
	l	HG	-20	60	80	***	62.2	74.0	75.6	75.6	75.6
	l	PU	-20	50	50	***	62.2	74.0	75.6	75.6	75.6
	l	ETFE	-40	60	120 (3)		62.2	74.0	74.0	74.0	74.0

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

(2) location of reference point

(3) Limitation of T==t=== 85°C depending on process pressure (see nameplate)

(2) reference

c	30.10.2017 / Bn	н		Genehmigung weder vervieitlitigt werden noch	Ersatz für:	Ersatz für:				
D	15.02.2018 / Bn	j		dritten Personen und Konkurrenzfirmen	Ersteller: FES / 6	3n				
E	10.06.2021 / Bn	K		zuglingig gemacht werden.	90201E/FE90201E/	doc				
Control Draw	ing IECEx, A	Gezeichnet	10.05.2016	Bn						
Zone 2, Cl.I [Div. 2, Cl.I Zo	ne	2		Geprüft					
Thermal Para	ameter	Ex-geprüft	10.06.2021	Bn						
Proline Prom	ag 300/500	Gesehen								



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

FES0261E

1/3



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Proline Promag H/P/W 500

Notes: This page applies to versions with extended order code covering:

5(H/P)5B** - dd******B... 5W5B** - dd******B... O6(H/P)5B** - dd******B... O6W5B** - dd******B... 5x5Bxx - dd******B... 5x5Bxx - dd*******B... O5x5Bxx - dd******B... O5x5Bxx - dd******B...

with approval option cCSAus: dd = CS, CZ

dd = CS, CZ IECEx / ATEX: dd = BS

Sensor	Of	Standard	version	with	sensor	not insulated	

Sensor	Size / DN	Liner	T _{med,min}	Tames	T _{med.max} [°C]					
1	l		[°C]	["C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	50	80	95	130	180	180	180
				60	80	95	130	130	130	130
1	503000	HG	-20	60	80	80	80	80	80	80
1	251000	PU	-20	50	50	50	50	50	50	50
1	253000	ETFE	-40	60	80	95	120	120	120	120
		(4)								
Promag H	2150	PFA	-40	45	80 (3)	95	130	150	150	150
1	l	l		55 (3)	80 (3)	95	130	130	130	130
				60 (3)	80 (3)	95	110	110	110	110

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) T_{met,max} and/or T_{met,mix} may be limited by versions. For limitation of range for T_{met} see name plate
 - (3) Promag H limited to Ta,max = 50°C @ class T6 and Tmed,max = 50°C @ class T6 for optional versions available with medium temperature measurement
 - (4) Limitation of T_{met.max} = 85°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor not insulated

Sensor	Size / DN	Liner	Tmedmin	Tanas [°C]						
	l		[°C]	[°C]	T6	T5	T4	T3	T2	T1
					(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	40	60	80	95	130	130	130	130
Promag W	25200	PFA	-40	50	80	95	130	180	180	180
_				60	80	95	130	150	150	150
	503000	HG	-20	60	80	80	80	80	80	80
	251000	PU	-20	50	50	50	50	50	50	50
	253000	ETFE	-40	60	80	95	120	120	120	120
		(3)		l				l	I	

- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) Testers and/or Testers may be limited by versions. For limitation of range for Test see name plate
 - (3) Limitation of T_{met,max} = 85°C depending on process pressure (see nameplate)

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

			*						
Size / DN	Liner	Teestmin	Tames			Tester	[°C]		
		["C]	[°C]	T6	T5	T4	T3	T2	T1
				(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
15600	PTFE	-40	60	75	95	130	130	130	130
25200	PFA	-40	35	60	95	130	180	180	180
			40	80	95	130	170	170	170
			60	75	95	130	150	150	150
503000	HG	-20	60	75	80	80	80	80	80
251000	PU	-20	50	50	50	50	50	50	50
253000	ETFE	-40	55	80	95	120	120	120	120
	(4)		60	75	95	120	120	120	120
	15600 25200 503000 251000 253000	15600 PTFE 25200 PFA 503000 HG 251000 PU 253000 ETFE (4)	[°C] 15600 PTFE -40 25200 PFA -40 503000 HG -20 251000 PU -20 253000 ETFE -40	C C C C	C C T6 (85°C) T6 (85°C) T5 (85°C) T5 T6 (85°C) T5 T6 T6 T6 T6 T6 T6 T6	Size / DN Liner T T T T T T T T T	Size / DN Liner T T T T T T T T T	C C T6 T5 T4 T3	Size / DN Liner T T T T T T T T T

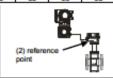
- Notes: (1) Ta,min = -40°C (for limitation see name plate)
 - (2) Tastas and/or Tastas may be limited by versions. For limitation of range for Tast see name plate
 - (3) Limitation of T_milms = 85°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	T _{med,min}	Tana	T(@T1	Tno to be measured at reference point at sensor neck ["C]				t	
			[,c]	[,c]	[c]	T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	70.9	70.9	70.9
Promag W	1	PFA	-40	60	150	63.8	65.7	69	70.9	70.9	70.9
	1	HG	-20	60	80	63.8	65.7	69	70.9	70.9	70.9
1	1	PU	-20	50	50	63.8	65.7	69	70.9	70.9	70.9
1	I	ETFE	-40	60	120 (3)	63.8	65.7	68	68	68	68

Notes:

- (1) Ta,min = -40°C (for limitation see name plate)
- (2) location of reference point
- (3) Limitation of T_mai.max = 85°C depending on process pressure (see nameplate)



10.05.2016

10.06.2021

Transmitter for all versions										
Tamas										
T6	T5	T4								
(85°C)	(100°C)	(135°C)								
	45	60								
Motor: (4) To min =	Notes: (4) To min = 5000 (for limitation one name plate)									

ı	Aenderungen:	A	10.05.2016 / Bn	۴	Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:
ı		В	03.05.2017 / Bn	G	Diese Zeichnung darf ohne unsere	
ı		С	30.10.2017 / Bn	H	Genehmigung weder vervieitältigt werden noch	Ersatz für:
ı		0	15.02.2018 / Bn	ı	dritten Personen und Konkurrenzfirmen	Ersteller: FES / Bn
ı		Ε	10.06.2021 / Bn	ĸ	zuglingig gemacht werden.	FLE: MtZeichrg/FES0201E/FES0201E.doc

Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

Thermal Parameter

Proline Promag 300/500



FES0261E

Gezeichnet

Geprüft

Ex-geprüft

Geseben



Sensor

Promag F

Promag W

Promag H

Sensor

Promag P

Promag W

IECEx Certificate of Conformity Certificate No.: IECEx CSA 16.0034X Issue 8 Annex B | Page 16 of 20



Proline Promag H/P/W 500

Size / DN

25...200

50...3000

25...1000

25...3000

Size / DN

15...600

25...200

50...3000 25...1000

25...3000

Liner

HG

Notes: (1) Ta,min = -40°C (for limitation see name plate)

PTFE

PFA

Notes: This page applies to versions with extended order code covering:

[°C]

-40

[°C]

50

60

50

50

50

40

45

55 (4)

Tred=180°C@Ta=50°C for a short period of time (max. 10 min.)

[°C]

45

50

versions available with medium temperature measurement (5) Limitation of T_{met.max} = 85°C depending on process pressure (see nameplate)

["C]

-40

60 (4)

T6

40

50

50 (4)

(3) sensor Promag P with liner type PFA may be used for condition of process with

(3) sensor Promag P with liner type PFA may be used for condition of process with

(4) Promag H limited to Ta,max = 50°C @ class T6 and Tmed,max = 50°C @ class T6 for optional

(85°C)

70

40

5(H/P)5B** - dd******A... 5W5B** - dd******A...

O5(H/P)5B** - dd******A... O5W5B** - dd*******A...

5x5Bxx - dd******A... 5x5Bxx - dd******A...

O5x5Bxx - dd******A... O5x5Bxx - dd******A...

with approval option

130

130

150 (3)

130

50

120

150

(450°C)

130

130

180

145

130

130

150 (3)

130

80

80

50

120

150

145

T2

(300°C)

130

130

180 180

cCSA: dd = CS, CZ

IECEx / ATEX: dd = BL, BS

Sensor	of High te	mperature	version	with sensor
(for insu	lation refer	to manual	of E+H F	lowtec)

Sensor	Size / DN	Liner	Teeten	Tames			Teste	** [,C]		
	l		["C]	[,C]	T6	T5	T4	T3	T2	T1
	l				(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	15600	PTFE	-40	45	70	95	130	130	130	130
Promag W				60	***	95	130	130	130	130
	25200	PFA	-40	35	40	95	130	180	180	180
	l			50	40	95	130	175	175	175
				60	***	95	130	150	150	150
50300	503000	HG	-20	45	45	80	80	80	80	80
				60	***	80	80	80	80	80
	251000	PU	-20	45	50	50	50	50	50	50
				50	***	50	50	50	50	50
	253000	ETFE	-40	50	40	95	120	120	120	120
		(3)		60	***	95	120	120	120	120

Notes: (1) Ta.min = -40°C (for limitation see name plate)

- (2) Testans and/or Testans may be limited by versions. For limitation of range for Test see name plate
- (3) Limitation of T_{met,max} = 85°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor insulat

				(insulab	on not in c	omphance	to manua	II OF ETH F	nownec)		
Sensor	Size / DN	Liner	Testes	Tamas	T @T1		T _{max} to be	measured sensor n		ce point a	
1	I	l	[°C]	[°C]	[°C]	T6	T5	T4	T3	T2	T1
						(85°C)	(100°C	(135°C)	(200°C)	(300°C)	(450°C)
Promag P	all	PTFE	-40	60	130	51.4	65.7	69	70.9	70.9	70.9
Promag W	l	PFA	-40	60	150	51.4	65.7	69	70.9	70.9	70.9
	l	HG	-20	60	80	51.4	65.7	69	70.9	70.9	70.9
	1	PU	-20	50	50	51.4	65.7	69	70.9	70.9	70.9
I	I	ETEE	-40	60	120 (3)	49.6	65.7	69	70.9	70.9	70.9

liese Zeichnung darf ohne unsere

Genehmigung weder vervielfältigt werden noch

- (1) Ta,min = -40°C (for limitation see name plate)
- (2) location of reference point
- (3) Limitation of Testimes = 85°C depending on process pressure (see nameplate)

(2) reference point	→

		-		20	100	100	100	100	
ŧG.	-20	45	50	80	80	80	80	80	
		60	***	80	80	80	80	80	
2U	-20	45	50	50	50	50	50	50	
		50	***	50	50	50	50	50	^
ΓFE	-40	50	40	95	120	120	120	120	ı
3)		60	***	95	120	120	120	120	
(for li	mitation s	ee name	plate)						1
med,m	- may be l	limited by	versions.	For limitat	tion of rang	ge for Test	see name	e plate	

Sensor of Standard version with sensor not insulated

80

95

95

(100°C

T4

130

130

80

80

50

120

130

115

Sensor of High temperature version with sensor not insulated

T4

130

130

Т3

130

130

150 (3)

130

120

150

145

115

(200°C)

130

130

115 115 115 115

	Ta,min = -40°C (for limitation see name plate)	
(2)	Testers and/or Testers may be limited by versions. For limitation of range for Test see name plat	e

Type of	r for all versions	-				
enclosure	Ordinary location	Te,==	T5	T4		
	(°C)	(85°C)	(100°C	(135°C)		
aluminium	60	-	45	60		
plastic	60	***	***	***		
Notes: (1)	aluminium enclosur	e: Ta,min = -50°C	(for limitation see	name plate)		
	plastic enclosure: Ta.min = -40°C					

tritten Personen und Konkurrenzfirmen 15.02.2018 / Bn zuglingig gemacht werden E 10.06.2021 / Bn Control Drawing IECEx, ATEX, CSA, cCSAus

Zone 2, Cl.I Div. 2, Cl.I Zone 2

A 10.05.2016 / Bn

03.05.2017 / Bn

30.10.2017 / Bn

Thermal Parameter

Proline Promag 300/500



FES0261E

FILE: MIZWHAWIEES000HEEES000HE dog

10.05.2016

10.08.2021

Ersetzt durch

Geprüft

3/3

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





4. Marking

Proline Pr	omag 300				
Model Code:					
	d*ff******+				
O5*3*** -	dd*ff*******	***+#**#			
dd =	ff =	Marking of Ex protection			
approval	I/O				
BB	CA, CB, CC,	Ex db eb ia [ia Ga] IIC T6T1 Gb			
	CD, HA, TA,	Ex tb [ia Da] IIIC T** °C Db			
	MC, RC				
	BA, BB, GA,	Ex db eb ia IIC T6T1 Gb			
	LA, NA, RA,	Ex tb IIIC T** °C Db			
	SA, MA, MB,				
	RB				
BD	CA, CB, CC,	Ex db ia [ia Ga] IIC T6T1 Gb			
	CD, HA, TA,	Ex tb [ia Da] IIIC T** °C Db			
	MC, RC				
	BA, BB, GA,	Ex db ia IIC T6T1 Gb			
	LA, NA, RA,	Ex tb IIIC T** °C Db			
	SA, MA, MB,				
	RB				
BS	CA, CB, CC,	Ex ec nC ic [ic] IIC T5T1 Gc			
	CD, HA, TA,				
	MC, RC				
	BA, BB, GA,	Ex ec nC ic IIC T5T1 Gc			
	LA, NA, RA,				
	SA, MA, MB,				
	RB				

Inform	natio	on: Marking of protection
repres	sen	tative for
db	->	electronic compartment
eb	->	terminal compartment
		and sensor
ia	->	sensor
tb	->	enclosure and sensor
[ia Ga]	->	input/output Ex ia
[ia Da]	->	input/output Ex ia
db	->	electronic and terminal
		compartment
ia	->	sensor
tb	->	enclosure and sensor
[ia Ga]	->	input/output Ex ia
[ia Da]	->	input/output Ex ia
ec	->	transmitter and sensor
		enclosure
nC	->	electronic
ic	->	sensor
[ic]	->	input/output Ex ia

Proline Pr	Proline Promag 500 with ISEM integrated in transmitter						
Model Code:							
5*5*** – de	d*ff****B******	*****					
O5*5*** -	dd*ff****B******	********					
dd =	ff =	Device	Marking of Ex protection transmitter				
approval	I/O						
BB	CA, CB, CC,	Transmitter	Ex db eb [ia Ga] IIC T6T5 Gb				
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db				
	BA, BB, GA,						
	LA, NA, RA,	Sensor	Ex eb ia IIC T6T1 Gb				
	RB, RC, SA,		Ex ia tb IIIC T** °C Db				
	MA, MB, MC						

Infor	matio	n: Marking of protection
repre	esent	ative for
db	->	electronic compartment
eb	->	terminal compartment
		and sensor
ia	->	sensor
tb	->	enclosure and sensor
[ia G	a] <i>-</i> >	input/output Ex ia and
		sensor
[ia D	a] ->	input/output Ex ia and
		sensor



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Proline Promag 500 with ISEM integrated in transmitter						
Model Code:						
5*5*** - dd*ff****B*********+#**#						
O5*5*** – dd*ff****B**********+#**#						
dd =	ff =	Device	Marking of Ex protection transmitter			
approval	I/O					
BD	CA, CB, CC,	Transmitter	Ex db [ia Ga] IIC T6T5 Gb			
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db			
	BA, BB, GA,					
	LA, NA, RA,	Sensor	Ex eb ia IIC T6T1 Gb			
	RB, RC, SA,		Ex ia tb IIIC T** °C Db			
	MA, MB, MC					
BS	CA, CB, CC,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc			
	CD, HA, TA,	Transmitter				
	BA, BB, GA,					
	LA, NA, RA,	Sensor	Ex ec ic IIC T6T1 Gc			
	RB, RC, SA,					
	MA, MB, MC					
B7	CA, CB, CC,	Transmitter	Ex db eb [ia Ga] IIC T6 T5 Gb			
	CD, HA, TA,					
	BA, BB, GA,					
	LA, NA, RA,	Sensor	Ex eb ia IIC T6T1 Gb			
	RB, RC, SA,					
	MA, MB, MC					
B8	CA, CB, CC,	Transmitter	Ex db [ia Ga] IIC T6 T5 Gb			
	CD, HA, TA,					
	BA, BB, GA,					
	LA, NA, RA,					
	RB, RC, SA,					
	MA, MB, MC					

		n: Marking of protection ative for		
db -> electronic and terminal				
ub		compartment		
eb	_	sensor		
ia				
.~		sensor		
		enclosure and sensor		
[ia Ga]	->	input/output Ex ia and		
		sensor		
[ia Da]	->	input/output Ex ia and		
		sensor		
ec	->	transmitter and sensor		
		enclosure		
nC	->	electronic		
ic	->	sensor		
[ic]	->	input/output Ex ic and		
		sensor circuit		
db	->	electronic compartment		
eb		terminal compartment		
		and sensor		
ia	->	sensor		
[ia Ga]	->	input/output Ex ia and		
		sensor		
db	->	electronic and terminal		
		compartment		
eb	->	sensor		
ia	->	sensor		
lia Gal	->	input/output Ex ia and		
[]		sensor		

-						
Proline Promag 500 with ISEM integrated in sensor						
Model Code:						
5*5*** - dd*ff****A************+#**#						
O5*5*** - dd*ff****A************+#**#						
dd = ff = Device Marking of Ex protection transm						
approval	I/O					
BJ	CA, CB, CC,	Transmitter	n.a.			
	CD, HA, TA,		(non-Ex)			
	BA, BB, GA,	Sensor	Ex db ia IIC T6T1 Gb			
	LA, NA, RA,		Ex ia tb IIIC T** °C Db			
	RB, RC, SA,					
	MA, MB, MC					
BL	HA, TA, CA,	Transmitter	[Ex ic] IIC			
	CB, CC, CD,					
	MC, RC	Sensor	Ex ec ic IIC T6T1 Gc			
	BA, BB, GA,	Transmitter	n.a.			
	LA, NA, RA,		(non-Ex)			
	SA, MA,	Sensor	Ex ec ic IIC T6T1 Gc			
	MB, RB					

Information:Marking of protection					
representative for					
db	->	sensor electronic			
		enclosure			
tb		enclosure and sensor			
ia		sensor			
ıa		Serisoi			
ec	->	transmitter and sensor			
		enclosure			
ic	->	sensor			
[Ex ic]	->	input/output Ex ic			





Proline Pr	romag 500 with	ISEM integrate	ed in sensor	
Model Co	de:]
5*5*** – d	ld*ff****A******	*****		
O5*5*** -	dd*ff****A*****	*******		
dd = approval	ff = I/O	Device	Marking of Ex protection transmitter	Information:Marking of protection representative for
BN	HA, TA, CA, CB, CC, CD,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc	ec -> transmitter enclosure db -> sensor terminal box
	MC, RC	Sensor	Ex db ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db	ia -> sensor tb -> sensor enclosure
	BA, BB, GA, LA, NA, RA,	Transmitter	Ex ec nC IIC T5T4 Gc	[ic] -> input/output Ex ic
	SA, MA, MB, RB	Sensor	Ex db ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db	
BS	HA, TA, CA, CB, CC, CD,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc	ec -> transmitter and sensor enclosure
	MC, RC	Sensor	Ex ec ic IIC T6T1 Gc	nC -> electronic ic -> sensor
	BA, BB, GA, LA, NA, RA,	Transmitter	Ex ec nC IIC T5T4 Gc	[ic] -> input/output Ex ic
	SA, MA, MB BB	Sensor	Ex ec ic IIC T6T1 Gc]

5. Conditions of Certification

- All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe sensor circuits potential equalization must exist.
- The sensors may only be used for those process media, for which the wetted parts are known to be suitable
- Plastic transmitter enclosures for the order codes

```
Proline Promag 5*5***-(BJ)******A....,
Proline Promag O5*5***-(BJ)******A....,
Proline Promag 5*5*xx-(BJ) *******A....
Proline Promag O5*5*xx-(BJ) *******A....
```

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

- 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.
- If the flowmeter system is connected to remote display type DKX001, the approval codes 'dd' for the flowmeter shall be paired to the approval code "bb" of the remote display as follows:





Approval code 'dd' of Proline Promag 300	Approval code 'bb' of remote display DKX001/ODKX001 as covered by IECEx DEK 15.0024
BB, BD, B7 or B8	BE, BF or BG
BS	BS

- The Proline 300/500 Flowmeter that may include, stainless steel label tag with rope, when not bonded to earth used on coated metallic transmitter and/or sensor enclosure or polymeric sensor enclosure, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- Only use battery Renata type lithium CR1632, 3V.
- The flameproof joints are not intended to be repaired.

Applicable to Antenna bushing H337 when used with Proline 300/500 transmitter enclosure:

- Antenna supplied by Endress+Hauser shall be used only. As an alternate, any passive omnidirectional RF antenna with or without cable is permitted to be connected when meeting the following parameters:
 - a) The antenna connected to the antenna bushing shall have an impedance of at least 50Ω
 - b) The rated frequency range of the antenna shall not exceed 1710MHz ... 6000MHz
 - c) The rated power of the antenna shall be at least 100mW
- The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure
- The RF antenna or the RF antenna cable shall be fitted with a Series N (MIL-STD-348) plug connector. The coupling nut of the Series N plug connector shall be hand tightened only
- The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected





Annex C:

This Annex is applicable for flowmeters type Proline Prosonic Flow 300/500

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1. Description

Proline 300 / 500 is a platform used for flowmeters type Proline Prosonic Flow G 300, Proline Prosonic Flow G 500, and Proline Prosonic Flow P 500. All flowmeters are available in two versions, a compact version (Proline 300) and a remote version (Proline 500). The remote version of Proline Prosonic Flow G 500 is available as a version with ISEM electronic integrated in sensor only 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. The remote version of Proline Prosonic Flow P 500 is available as a version with ISEM integrated in transmitter.

For all versions of the Proline 300, an additional remote Display, e.g. DKX001 or ODKX001, may be connected to the electronics. The remote display is available in two options for the user. Either it is ordered as a separate product or by the product of the flowmeter.

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.

All Proline Prosonic Flow G 300/500 flowmeters are available for an ambient temperature of -40°C to +60°C and optional -50°C to +60°C. Proline Prosonic Flow P 500 sensors are available for an ambient temperature of -20/-40/-50°C to +80°C and Proline Prosonic Flow P 500 transmitters are available for an ambient temperature of -40°C to +60°C and optional -50°C to +60°C.

All versions of flowmeters Proline Prosonic Flow G 300/500 are available for an enclosure protection of degree IP66, IP67 and Proline Prosonic Flow P 500 are available for an enclosure protection of degree IP66, IP67 (transmitter) and IP66, IP68 (sensor).





2. **Order Code**

2.1. **Proline Prosonic Flow G 300/500**

Extended order code Proline Prosonic Flow G 300:

9G3bcc - ddeffghjlpsstuuuvww + #**#

O9G3bcc - ddeffghjlpsstuuuvwwyy + #**# for OEM-version

Extended order code Proline Prosonic Flow G 500:

9G5bcc - ddeffghijkmnopsstuuuvww + #**#

O9G5bcc - ddeffghijkmnopsstuuuvwwyy + #**# for OEM-version

Extended order code for replacement transmitter of

Proline Prosonic Flow G 300 Proline Prosonic Flow G 500

9x3bxx - ddeffghjlprrssww + #**# O9x3bxx - ddeffghjlprrsswwyy + #**# 9x5bxx - ddeffghijkmopggrrssww + #**# O9x5bxx - ddeffghijkmopggrrsswwyy + #**#

for replacement transmitter OEM for replacement transmitter for replacement transmitter OEM

for replacement transmitter

b Generation

B =Generation of Flowmeter

CC

any double digits with combination of number or letter

dd **Approval**

Proline Prosonic Flow 300:

BB = Ex db eb [ia] IIC T6...T1 Gb

Ex tb IIIC T** Db

= Ex db [ia] IIC T6...T1 Gb BD

Ex tb IIIC T** Db

= Ex ec IIC T6...T1 Gc BS

Proline Prosonic Flow 500:

BJ = Non-Ex

(transmitter) Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor) = non-Ex (transmitter)

Ex ec IIC T6...T1 Gc (sensor) BN = Ex ec [ia Ga] IIC T6...T1 Gc (transmitter)

Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)

= Ex ec IIC T6...T1 Gc BS (transmitter + sensor)

Power Supply e

BL

= 24VdcD

Ε = 100-230 Vac

= 100-230Vac / 24Vdc 1

Χ = sensor only



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ff = Input / Output 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive)

CC = 4-20mA HART Ex i (active)

CD = 4-20mA WHART Ex i (active)

GA = Profibus PA

HA = Profibus PA Ex i

LA = Profibus DP

MA = Modbus RS485

MB = Modbus

MC = Modbus Ex i

NA = EtherNet/IP

RA = Profinet IO

RB = Profinet

RC = Profinet Ex i

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 (passive)

D = Configurable ÎO

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

K = Pulse output Ex i

L = Pulse output

X = sensor only

h = Input / Output 3

A = without Input/Output 3

B = 4-20 mA

C = 4-20mA Ex i (passive)

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

K = Pulse output Ex i

L = Pulse output

X = sensor only



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i Input / Output 4 (Proline 500 only)

= without Input/Output 4

В = 4-20mA

С = 4-20mA Ex i (passive)

D = Configurable IO

Ε = Pulse/Frequency/Switch output F = Pulse output phase-shifted

G = Pulse/Frequency/Switch output Ex i

Н = Relay

= 4-20mA input ı = Status input J Κ = Pulse output Ex i L = Pulse output

Χ = sensor only

Display / Operation j

> with remote Display : 0

without remote Display : any single number or letter except O

Integrated ISEM electronic (Proline 500 only) k =

= Sensor

ı Housing (Proline 300 only)

any single number or letter

Transmitter Housing (Proline 500 only) m

any single number or letter

Sensor Housing (Proline 500 only) n =

any single number or letter

= Cable Sensor Connection (Proline 500 only) 0

any single number or letter

Cable Entry р

any single number or letter

Upgrade Kid qq =

any double digits with combination of number or letter

Existing Product (refer to section 1.2 for assignment table of flowmeter to replacement transmitter) rr =

Prosonic Flow G GA =

Measuring tube material, sensor version SS

any double digits with combination of number or letter

Process component t =

any single number or letter

Process connection uuu =

any triple digits with combination of number or letter

Calibration

any single number or letter

Device model (two digit) (refer to section 1.2 for assignment table of flowmeter to replacement transmitter) ww

> A1 = product version 1 A2 = product version 2

Customer version (two digits) уу

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 #, +





2.2. Proline Prosonic Flow P 500

Extended order code Proline Prosonic Flow P 500:

9P5bcc - ddeffghjkmotuuvvww + #**#

O9P5bcc – ddeffghjkmotuuvvwwyy + #**# for OEM-version

Extended order code for replacement transmitter of Proline Prosonic Flow P 500:

9x5bxx – ddeffghijkmnopprrssww + #**# for replacement transmitter
O9x5bxx – ddeffghijkmnopprrsswwyy + #**# for replacement transmitter OEM

b = Generation

B = Generation of Flowmeter

cc = Mounting Type

any double digits with combination of number and/or letter

dd = Approval Transmitter

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

Ex ia IIC T6...T1 Gb (Sensor)
Ex ia IIIC T** Db (Sensor)
= Ex db [ia] IIC T6...T1 Gb (transmitter)

Ex tb IIIC T** Db (transmitter)
Ex ia IIC T6...T1 Gb (Sensor)
Ex ia IIIC T** Db (Sensor)

Ex ec IIC T5...T1 Gc (transmitter)
Ex ic IIC T6...T1 Gc (Sensor)

e = Power Supply

BD

BS

 $\begin{array}{lll} \mathsf{D} & = & 24\mathsf{Vdc} \\ \mathsf{E} & = & 100\text{-}230\mathsf{Vac} \end{array}$

I = 100-230 Vac / 24 Vdc



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ff = Input / Output 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (passive)

CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active)

CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active)

GA = Profibus PA

HA = Profibus PA Ex i

LA = Profibus DP

MA = Modbus RS485

MB = Modbus TCP

MC = Modbus TCP Ex i

NA = EtherNet/IP

RA = Profinet IO

RB = Profinet

RC = Profinet Ex i

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 (passive)

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

K = Pulse output Ex i

L = Pulse output

X = Sensor only

h = Input / Output 3

A = without Input/Output 3

B = 4-20 mA

C = 4-20mA Ex i (passive)

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

K = Pulse output Ex i

L = Pulse output

X = Sensor only



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i = Input / Output 4

A = without Input/Output 4

X = Sensor only

j = Display / Operation

any single number or letter

k = Integrated ISEM electronic

A = Sensor B = Transmitter

m = Transmitter Housing

any single number or letter

n = Cable Sensor Connection

any single number or letter

o = Cable Entry

any single number or letter

pp = Upgrade Kit

AA = not used

rr = **Existing Product** (see assignment of flowmeter to replacement transmitter)

PA = Prosonic Flow P

00 = not used

ss = Sensor type

any double digits with combination of number and/or letter

t = Process Temperature

any single number or letter

uu = Cable

any double digits with combination of number and/or letter

vv = Installation set

any double digits with combination of number and/or letter

ww = Device model (two digit) (see assignment of flowmeter to replacement transmitter)

A2 = product version 2

yy = Customer version (two digits)

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

Extended order code Proline Prosonic Flow P 500 Clamp-On sensor:

DK9013 - ddqqrww + #**#

ODK9013 – ddqqrwwyy + #**#

for OEM-version

dd = Approval

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

BS = Ex ec IIC T5...T1 Gc





qq = Sensor type

any double digits with combination of number and/or letter

r = Process Temperature

any single number or letter

ww = Device model (two digit) (see assignment of flowmeter to replacement transmitter)

00 = not used

yy = Customer version (two digits)

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

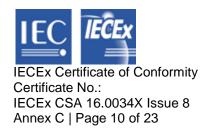
#, + = Signs used as indicator for optional abbreviation of extended order code

Note: Clamp-On sensors types DK9013 and ODK9013 are intended for use as replacement of sensors for product Prosonic Flow P500 types 9P5B and O9P5B or for extention of Prosonic Flow P500 types 9P5B and O9P5B from one sensor set to two sensor sets

2.3. Assignment of Flowmeter to Replacement Transmitter

The replacement transmitters are assigned to the flowmeter Proline Prosonic Flow G 300/500 as follows:

Product flowm	eters			Replacement transmitter type			
model code		Generation code b =	device model code ww =	model code	Generation code b =	existing product rr =	device model code ww =
9G* b ** ww ,	O9G* b ** ww	В	A1 / A2	9x*bxxrrww, O9x*bxxrrww	В	GA	A1 / A2
9P* b ** ww ,	O9P* b ** ww	В	A1 / A2	9x*bxxrrww, O9x*bxxrrww	В	PA	A1 / A2





3. **Parameters**

3.1. **Electrical Parameters**

Power Supply		
Order Code	terminal no.	values
e =		
D 1)	No. 1(L+/L), 2(L-/N)	$U_N = 19.228.8V_{DC}$
		$U_M = 250V_{AC}$
E 1)	No. 1(L+/L), 2(L-/N)	U _N = 85264V _{AC}
		$U_{M} = 250V_{AC}$
[2]	No. 1(L+/L), 2(L-/N)	$U_N = 19.228.8 V_{DC} / 85264 V_{AC}$
		$U_M = 250V_{AC}$

¹⁾ applicable for products with approval code dd = BB, BD 2) applicable for products with approval code dd = BS, BJ, BL, 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	$\begin{array}{ll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \\ C_i &= 6nF \end{array}$	
CC, CD	No. 26, 27	1) Uo = 21.8V Io = 90mA Po = 491mW Lo = 4.1mH (IIC) / 15mH (IIB) Co = 160nF (IIC) / 1160nF (IIB) Ui = 30V Ii = 10mA Pi = 0.3W Ci = 6nF Li = 5µH	2) Uo = 21.8V Io = 90mA Po = 491mW Lo = 9mH (IIC) / 39mH (IIB) Co = 600nF (IIC) / 4000nF (IIB) Ui = 30V Ii = 10mA Pi = 0.3W Ci = 6nF Li = 5µH
НА, ТА	No. 26, 27	1) Profibus PA (Fisco Field Device) / Foundation Fieldbus Ui = 30V Ii = 570mA Pi = 8.5W Li = 10µH Ci = 5nF	2) Profibus PA (Fisco Field Device) / Foundation Fieldbus U _i = 32V I _i = 570mA P _i = 8.5W L _i = 10µH C _i = 5nF





MB, RB	No. 26, 27	APL port profile SLAX / 11, 12 UN = 30VDC UM = 250VAC	$ \overline{U}_{N} = 30V_{DC} \overline{U}_{M} = 250V_{AC} $				
MC, RC	No. 26, 27	$\begin{array}{l} \underline{1)} \\ \underline{2\text{-WISE power load}} \\ \underline{APL \ port \ profile \ SLAA} \\ U_i &= 17.5V \\ I_i &= 380\text{mA} \\ P_i &= 5.32W \\ L_i &\leq 10\mu\text{H} \\ C_i &\leq 5\text{nF} \end{array}$	$ \begin{array}{c c} \underline{2)} \\ \underline{2\text{-WISE power load}} \\ \underline{APL \ port \ profile \ SLAC} \\ U_i &= 17.5V \\ I_i &= 380\text{mA} \\ P_i &= 5.32W \\ L_i &\leq 10\mu\text{H} \\ C_i &\leq 5\text{nF} \end{array} $				
NA, RA	IO1 / RJ45	$U_N = 30V_{DC}$ $U_M = 250V_{AC}$					

applicable for products with approval code dd = BB, BD
 applicable for products with approval code dd = BS, BL, BN

Input/Output 2		
Order Code	terminal no.	values
g =		
C, G, K	No. 24, 25	$U_i = 30V$
		$I_i = 100 \text{mA}$
		$P_i = 1.25W$
		$L_i = 0$
		$C_i = 0$
B, D, E, F, I, J, L	No. 24, 25	$U_N = 30V_{DC}$
		$U_{M} = 250 V_{AC}$
Н	No. 24, 25	$U_N = 30V_{DC}$
		$I_N = 100 \text{mA}_{DC} / 500 \text{mA}_{AC}$
		$U_{M} = 250V_{AC}$

Input/Output 3		
Order Code	terminal no.	values
h =		
C, G, K	No. 22, 23	$U_i = 30V$
		$I_i = 100 \text{mA}$
		$P_i = 1.25W$
		$L_i = 0$
		$C_i = 0$
B, D, E, F, I, J, L	No. 22, 23	$U_N = 30V_{DC}$
		U _M = 250V _{AC}
Н	No. 22, 23	$U_N = 30V_{DC}$
		$I_N = 100 \text{mA}_{DC} / 500 \text{mA}_{AC}$
		U _M = 250V _{AC}





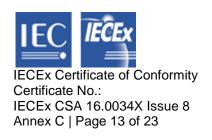
Input/Output 4		
Order Code	terminal no.	values
i =		
C, G, K	No. 20, 21	U _i = 30V
		$I_i = 100 \text{mA}$
		$P_i = 1.25W$
		$L_i = 0$
		$C_i = 0$
B, D, E, F, I, J, L	No. 20, 21	$U_N = 30V_{DC}$
		$U_{M} = 250 V_{AC}$
Н	No. 20, 21	$U_N = 30V_{DC}$
		$I_N = 100 \text{mA}_{DC} / 500 \text{mA}_{AC}$
		U _M = 250V _{AC}

Service Interface		
Order Code dd =	terminal no.	values
BB	Service Interface	 Service Interface shall only be installed in areas which are known to be non hazardous with a non intrinsically safe circuit U_N = 3.3 V, U_M = 250 V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0
BD	Service Interface	 Service Interface shall only be installed to an non intrinsically safe circuit with U_N = 3.3V, U_M = 250V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0
not for: BB, BD	Service Interface	U _N = 3.3V

Antenna bushing		
Order Code dd =	terminal no.	values
BB, BJ, BL, BN, BS	N connector	See conditions of certfication

Display remote		
Order Code dd =	terminal no.	values
BB, BD	No. 81, 82, 83, 84	Uo = 3.9V Io = 1.5A (spark) 200mA (power) Po = 600mW Ri = 2.6Ω Co = 670μF Lo = 0
not for: BB, BD	No. 81, 82, 83, 84	$U_N = 3.3V$ $I_N = 150mA$

For Transmitter with approval code dd = BB and BD connected to the Remote Display of Endress+Hauser, Type DKX001 or ODKX001, the cable parameter with ration $L/R = \le 0.024 \text{ mH}/\Omega$ applies.





Prosonic Flow G Remote Transmitter and Remote Sensor:

 $9G^{*****}$ -... and $O9G^{*****}$ -... 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 $-> U_N = 3.3V$

 $9G^{*****}$ -... and $O9G^{*****}$ -... with order code dd = BL, BS 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 $-> U_N = 3.3V$

Prosonic Flow P Remote Transmitter and Remote Sensor:

 $9P^{****}$ -... and $O9P^{****}$ -... with order code dd = BB, BD, in combination with k = B:

Transmitter:

CH1, CH2 -> Uo = 40V, Io = 36.7mA, Po =459mW, Li = n.a., Ci = n.a.

Sensor:

Connector \rightarrow Ui = 40V, Ii = n.a., Pi = n.a., Li = n.a., Ci = n.a.

 $9P^{****}$ -... and $O9P^{****}$ -... with order code dd = BS in combination with k = B:

Transmitter:

CH1, CH2 -> Uo = 50V, Io = 45.9mA, Po = 459mW, Li = n.a., Ci = n.a.

Sensor:

Connector \rightarrow Ui = 50V, Ii = n.a., Pi = n.a., Li = n.a., Ci = n.a.



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3.2. **Thermal Parameters (Zone 1)**

Proline Prosonic Flow G 300/500 3.2.1.

Proline Prosonic Flow G 300

Notes: This page applies to versions with extended order code covering:

O9x3Bxx - dd...

9x3Bxx - dd...

(for insulation refer to manual of Endress+Hauser Flowtec)									
Size / DN T _{med} T _{med,max} [°C]									
	min	max		T6	T5	T4	T3	T2	T1
	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
25 300	-50	90	40	40	40	90	90	90	90
			55	***	40	90	90	90	90
	1	1 1	60	***	***	90	90	90	90
	1	150 (1)	45 (1)	70	85	120	150	150	150
	1		55 (1)		85	120	150	150	150
	1		60 (1)		(85)	(120)	(150)	(150)	(150)
Notes: (1) temperatures not applicable for versions with pressure sensor (2) Ta,min = -40°C, -50°C respectively (see nameplate)									

Size / DN	T _{min} to be measured at reference point at sensor neck [*C]								
	T6 (85C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)			
all	55	69	72	74	74	74			
	- for maxir namepli (3) versions v	mum medium to ate with pressure so insulated and	not insulated se	minimum med exceed temper ensor					

						FF00	224 4	410
Proline Prosonic Flow G 300/500					Gesehen			
Thermal P	ara	ameter				Ex-geprüft 22.02.2018 Bn		
Zone 1, Zo	1, Zone 21, Cl.I Div. 1, Cl.II, Cl.II, Cl.I Zone 1							
Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet 07.02.2018 Bn		
	Ε		ĸ		zuglingig gemacht werden.	FILE: M1Zeichng/FE	90321/AIFE90321A	doc
l	D		J		dritten Personen und Konkurrenzfirmen	Ersteller: FES / E	3n	
l	С		н		Genehmigung weder vervielfältigt werden nach	Ersatz für:		
	В		G		Diese Zeichnung darf ohne unsere			
Aenderungen:	Α	22.02.2018 / Bn	F		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		



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O9x5Bxx - dd******A...

Proline Prosonic Flow G 500

Notes: This page applies to versions with extended order code covering:

9*5*** - dd******A... O9*5*** - dd******A... with approval option cCSAus / CSA: dd = CN, C6

IECEx / ATEX: dd = BJ. BN

Sensor: Temperature table for versions with sensor insulated and not insulated (for insulation refer to manual of Endress+Hauser Flowtec)

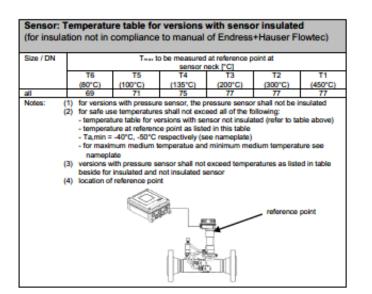
	min	max		T6	T5	T4	T3	T2	T1
	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
25 300	-50	90	40	40	40	90	90	90	90
			55	***	40	90	90	90	90
			60	***	***	90	90	90	90
		150 (1)	60 (1)	70	85	120	150	150	150

Notes: (1) temperatures not applicable for versions with pressure sensor

(2) Ta,min = -40°C, -50°C respectively (see nameplate)

(3) for applicable version with maximum medium temperatue and minimum medium temperature see nameplate

Transmit	ter f	or all versions			
Type of			Tay		
enclosure		Ordinary location	T6	T5	T4
		(°C)	(85°C)	(100°C)	(135°C)
aluminium		60		45	60
plastic		60			***
			,min = -50°C (for limi ,min = -40°C	itation see name pla	te)



9x5Bxx - dd******A...

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	В		G		Diese Zeichnung darf ohne unsere			
1	C		н		Genehmigung weder vervielfältigt werden nach	Ersatz für:		
1	D		J		dritten Personen und Konkurrerufirmen	Ersteller: FES / E	in .	
1	Ε		κ		zuglingig gemacht werden.	FILE: M1/Zeichng/FE	90321WFE90321A	doc
Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet	07.02.2018	Bn
Zone 1, Zo	ne	21, Cl.I Div.	1,	CI.II, CI.III, C	I.I Zone 1	Geprüft		
Thermal P	ara	ameter				Ex-geprüft	22.02.2018	Bn
Proline Pro	osc	nic Flow G 3	00	/500		Gesehen		







Proline Prosonic Flow P500 3.2.2.

Proline Prosonic Flow P 500

This page applies to versions with extended order code covering:

9*5*** - dd******B... O9*5*** - dd******B... DK9013-dd...

9x5Bxx - dd*****B... O9x5Bxx - dd******B...

ODK9013-dd... with approval option

cCSAus / CSA: dd = CD, C2, C4 IECEx / ATEX: dd = BB, BD

Transmitter: Temperature table for all versions						
T,	.Fax					
T6 (85°C)	T5 (100°C)					
55	60					
Notes: (1) Ta,min = -50°C (for	limitation see name plate)					

Type of	T _n	T _{med}		Ta		T _{med.max} ["C]						
sensor	min	max	min	max	T6	T5	T4	T3	T2	T1		
	[°C]	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)		
C-030-A	-50	120	-50	80	80	95	120	120	120	120		
C-100-B	-40	80	-40	50	50	80	80	80	80	80		
				80	***	80	80	80	80	80		
C-100-C	0	170	-40	50	50	95	130	170	170	170		
				80	***	95	130	170	170	170		
C-200-B	-40	80	-40	65	65	80	80	80	80	80		
				80	***	80	80	80	80	80		
C-200-C	0	170	-40	65	65	95	130	170	170	170		
				80	***	95	130	170	170	170		
C-500-A	-40	150	-40	75	75	95	130	150	150	150		
				80	***	95	130	150	150	150		
CH-050-A	-50	435	-50	75	75	95	130	190	285	435		
				80		95	130	190	285	435		
CH-100-A	-50	435	-50	75	75	95	130	190	285	435		
				80	***	95	130	190	285	435		

Aenderungen:	A	07.08.2019 / Bn	۴		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		
	В	30.07.2020 / Bn	G		Diese Zeichnung darf ohne unsere			
	C	30.09.2021 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
	Ď		,		dritten Personen und Konkurrenzfirmen	Ersteller: FES / 6	in	
	E		ĸ		zuglingig gemacht werden.	FILE: Mt/Zeichng/FES	eastic/FESeastic	doc
Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet	07.08.2019	Bn
Zone 1, Zo	one	21, Cl.I Div.	1,	CI.II, CI.III, C	I.I Zone 1	Geprüft		
Thermal P	ara	ameter				Ex-geprüft	30.09.2021	Bn
Proline Pro	osc	nic Flow P 5	00	,		Gesehen		

FES0351C



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Thermal Parameters (Zone 2) 3.3.

Proline Prosonic Flow G 300/500 3.3.1.

Proline Prosonic Flow G 300

This page applies to versions with extended order code covering:

9*3B** - dd... O9*3B** - dd... with approval option cCSAus / CSA: dd = CS, CZ

9x3Bxx - dd...

O9x3Bxx - dd...

IECEx / ATEX: dd = BS

not insula (for insula	ated								
Size / DN	T	nei .	Tame			Tmelo	_ ['C]		
	min	max		T6	T5	T4	T3	T2	T1
	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C
25 300	-50	90	55		40	90	90	90	90
	1		60	***	***	90	90	90	90
	1	150 (1)	50 (1)		85	120	150	150	150
	1		55 (1)			120	150	150	150
	1	1 1	60 (1)			(120)	(150)	(150)	(150)

- temperatures not applicable for versions with pressure sensor
 Ta,min = 40°C, 50°C respectively (see nameplate)
 values in brackets are applicable for installation where the transmitter is not
- installed above the sensor (4) versions with transmitter enclosure stainless steel (metal sheet) only for
- installation where transmitter is not installed above the sensor
- (5) Versions with transmitter enclosure stainless steel (metal sheet) installed in temperature class T5, a degree of 3°C for ambient temperature shall be taken into account

Size / DN	T _{max} to be measured at reference point at sensor neck [*C]										
	T6	T5	T4	Т3	T2	T1					
all	(85C)	(100°C)	(135°C) 72	(200°C)	(300°C)	(450°C)					
	- Ta,min = -for maxin namepi (3) versions v	: -40°C, -50°C mum medium t ate with pressure s r insulated and	ce point as liste respectively (se emperatue and ensor shall not not insulated so nt	ee nameplate) minimum med exceed tempe							
		ſ	Q	~	ference point						

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1	C		н		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
1	D		J		dritten Personen und Korkumenzfirmen	Ersteller: FES / 8	Bn	
	E		K		zugängig gemacht werden.	FILE: M1Zeichng/FES	S00211BIFE S0022B	dac
Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet	07.02.2018	Bn
Zone 2, Cl	.I C	Div. 2, Cl.I Zo	ne	2		Geprüft		
Thermal P	ara	ameter				Ex-geprüft	06.12.2021	Bn
Proline Pro	oso	onic Flow G 3	00	/500		Gesehen		



FES0322B



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Proline Prosonic Flow G 500

Notes: This page applies to versions with extended order code covering:

9*5*** - dd******A... O9*5*** - dd******A... with approval option cCSAus / CSA: dd = CS, CZ

IECEx / ATEX: dd = BL, BS

9x5Bxx - dd*****A... O9x5Bxx - dd******A...

Sensor: Temperature table for versions with sensor insulated and not insulated

(for insulation refer to manual of Endress+Hauser Flowtec)

Size / DN	T.	i i	Tame		T-st-ss [°C]				
	min [°C]	max [°C]	[°C]	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
25 300	-50	90	55		40	90	90	90	90
			60		***	90	90	90	90
		150 (1)	60 (1)		85	120	150	150	150

(1) temperatures not applicable for versions with pressure sensor Notes: (2) Ta,min = 40°C, -50°C respectively (see nameplate)

Transmitte	er f	or all versions								
Type of enclosure		Tanas								
enciosure		Ordinary location	T6	T5	T4					
		(°C)	(85°C)	(100°C)	(135°C)					
aluminium		60		45	60					
plastic		60		-						
			i,min = -50°C (for lim i,min = -40°C	itation see name pla	te)					

Size / DN	1	T _{me} to be measured at reference point at sensor neck [*C]										
	\vdash	T6	T5	sensor n	T3	T2	T1					
		(80°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)					
al	\top	-	71	75	77	77	77					
		 for maxing nameplations wersions we beside for 	num medium t ate vith pressure s	respectively (semperatue and ensor shall not not insulated so t	d minimum mei exceed tempe	dium tempera	ed in table					

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	B C	06.12.2021 / Bn	G H		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
1	D		J		dritten Personen und Konkurrenzfirmen	Ersteller: FES / 8	Bn	
	E		K		zugängig gemacht werden.	FILE: Mt/Zeichng/FES	S00211BIFES0022B	Soc
Control Dr	Control Drawing IECEx, ATEX, CSA, cCSAus					Gezeichnet	07.02.2018	Bn
Zone 2, C	Zone 2, Cl.I Div. 2, Cl.I Zone 2							
Thermal F	Thermal Parameter					Ex-geprüft	06.12.2021	Bn
Proline Pr	Proline Prosonic Flow G 300/500					Gesehen		





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3.3.2. **Proline Prosonic Flow P500**

Proline Prosonic Flow P 500

Notes: This page applies to versions with extended order code covering:

Transmitter: Temperature table for all versions Tayrax T5 T4 (85°C) (100°C) (135°C) 45 Notes: (1) Ta,min = -50°C (for limitation see name plate)

9*5*** - dd*****B... O9*5*** - dd*****B... 9x5Bxx - dd******B... O9x5Bxx - dd*****B...

DK9013-dd... ODK9013-dd...

cCSAus / CSA: dd = CS, CZ with approval option IECEx / ATEX: dd = BS

Sensor: Temperature table for versions with sensor Insulated and not insulated									
T,	ned	T		T _{med.max} ["C]					
min	max	min	max	T6	T5	T4	T3	T2	T1
[°C]	[°C]	[°C]	[°C]	(85°C)		1.00	(200°C)		(450°C)
-50	120	-50	80	80	95	120	120	120	120
-20	80	-20	75	80	80	80	80	80	80
			80	***	80	80	80	80	80
-20	80	-20	75	75	80	80	80	80	80
			80	***	80	80	80	80	80
-40	80	-40	70	70	80	80	80	80	80
			80	***	80	80	80	80	80
0	170	-40	70	70	95	130	170	170	170
			80	***	95	130	170	170	170
-40	80	-40	75	75	80	80	80	80	80
			80	***	80	80	80	80	80
-40	80	-40	75	75	80	80	80	80	80
			80	***	80	80	80	80	80
0	170	-40	75	75	95	130	170	170	170
			80	***	95	130	170	170	170
-40	150	-40	75	75	95	130	150	150	150
			80	***	95	130	150	150	150
-40	80	-40	75	75	80	80	80	80	80
			80	***	80	80	80	80	80
-50	435	-50	75	75	95	130	190	285	435
			80	***	95	130	190	285	435
-50	435	-50	75	75	95	130	190	285	435
			80	***	95	130	190	285	435
	min [°C] -50 -20 -40 -40 -40 -40 -50 -50 -50	-20 80 -20 80 -20 80 -40 80 -40 80 -40 80 -40 80 -40 80 -40 80 -40 80 -40 80 -40 150 -40 80 -50 435	min max min min min max min min max min max min min max min	min max min max rc rc rc rc rc rc rc r	min max min min max min min	min max min min max min min max min max min max min min max min min max max min max max	min	Min	min

- 1	Aenderungen:	A.	07.08.2019 / Bn	۴.		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		
- 1		В	30.07.2020 / Bn	G		Diese Zeichnung darf ohne unsere			
- 1		C	30.09.2021 / Bn	н		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
- 1		D		,		dritten Personen und Konkurrenzfirmen	Ersteller: FES / 6	3n	
ı		E		ĸ		zuglingig gemacht werden.	FILE: Mt/Zeichng/FES	90352/C/FE90352C	doc
	Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet	07.08.2019	Bn
ı	Zone 2, Cl.I Div. 2, Cl.I Zone 2				Geprüft				
ı	Thermal Parameter				Ex-geprüft	30.09.2021	Bn		
ı	Proline Prosonic Flow P 500			Gesehen					
ſ			_						

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

FES0352C





4. Marking

Proline Pr	osonic Flow G	300				
	Model Code: 9*3*** – dd*ff************+#**#					
	d 11 dd*ff*********	• • • • • • • • • • • • • • • • • • • •				
dd =	ff =					
approval	II = I/O	Marking of Ex protection transmitter				
BB	HA, TA, CA, CB, CC, CD, MC, RC	Ex db eb ia [ia Ga] IIC T6T1 Gb Ex tb [ia Da] IIIC T** °C Db				
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ex db eb ia IIC T6T1 Gb Ex tb IIIC T** °C Db				
BD	HA, TA, CA, CB, CC, CD, MC, RC	Ex db ia [ia Ga] IIC T6T1 Gb Ex tb [ia Da] IIIC T** °C Db				
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ex db ia IIC T6T1 Gb Ex tb IIIC T** °C Db				
BS	HA, TA, CA, CB, CC, CD, MC, RC	Ex ec nC ic [ic] IIC T5T1 Gc				
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ex ec nC ic IIC T5T1 Gc				

1 6	4:	and Mandrian of markanting		
Information: Marking of protection				
representative for				
db	->	transmitter electronic		
		compartment and sensor		
		enclosure		
eb	->	transmitter terminal		
		compartment		
ia		sensor		
tb		enclosures		
		input/output Ex ia		
[ia Da]	->	input/output Ex ia		
db	->	transmitter enclosure and		
		sensor enclosure		
ia	->	sensor		
tb	->	enclosures		
[ia Ga]	->	input/output Ex ia		
[ia Da]	->	input/output Ex ia		
ес	->	transmitter and sensor		
		enclosure		
nC	->	electronic		
ic	->	sensor		
[ic]	->	input/output Ex ia		

Proline Pr	Proline Prosonic Flow G 500 with ISEM integrated in sensor						
Model Co	Model Code:						
	9*5*** - dd*ff****A**********+#**#						
O9*5*** -	dd*ff****A*****	*******					
dd =	ff =	Device	Marking of Ex protection transmitter				
approval	I/O						
BJ	BA, BB, GA,	Transmitter	n.a.				
	LA, NA, RA,		(non-Ex)				
	SA, MA,	Sensor	Ex db ia IIC T6T1 Gb				
	MB, RB		Ex ia tb IIIC T** °C Db				
BL	HA, TA, CA,	Transmitter	[Ex ic] IIC				
DL DL	CB, CC, CD,						
	MC, RC	Sensor	Ex ec ic IIC T5T1 Gc				
	BA, BB, GA,	Transmitter	n.a.				
	LA, NA, RA,		(non-Ex)				
	SA, MA,	Sensor	Ex ec ic IIC T5T1 Gc				
	MB, RB						

Information: Marking of protection representative for					
db		sensor enclosure			
ia	->	sensor			
tb	->	sensor enclosure			
ec	->	sensor enclosure			
ic	->	sensor			
[Ex ic]	->	input/output Ex ic			



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Proline Pr	Proline Prosonic Flow G 500 with ISEM integrated in sensor					
Model Code:						
9*5*** – d	d*ff****A******	*****+#**#				
O9*5*** -	dd*ff****A*****	********				
BN	HA, TA, CA, CB, CC, CD,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc			
	MC, RC	Sensor	Ex db ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db			
	BA, BB, GA, LA, NA, RA,	Transmitter	Ex ec nC IIC T5T4 Gc			
	SA, MA, MB, RB	Sensor	Ex db ia IIC T6T1 Gb Ex ia tb IIIC T** °C Db			
BS	HA, TA, CA, CB, CC, CD,	Transmitter	Ex ec nC [ic] IIC T5T4 Gc			
	MC, RC	Sensor	Ex ec ic IIC T5T1 Gc			
	BA, BB, GA, LA, NA, RA,	Transmitter	Ex ec nC IIC T5T4 Gc			
	SA, MA, MB, RB	Sensor	Ex ec ic IIC T5T1 Gc			

db	->	sensor enclosure
ia	->	sensor
tb	->	sensor enclosure
ec	->	sensor enclosure
nC	->	electronic
ic	->	sensor
[ic]	->	input/output Ex ia

Proline Pr	Proline Prosonic Flow P 500 with ISEM integrated in transmitter				
Model Code:					
	d*ff***B*******				
• • •	- dd*ff***B******	******+#**#			
	· dd******				
ODK9013	- dd******				
dd =	ff =	Device	Marking of Ex protection transmitter		
approval	I/O				
BB	CA, CB, CC,	Transmitter	Ex db eb ia [ia Ga] IIC T6 T5 Gb		
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db		
	BA, BB, GA,				
	LA, NA, RA,	Sensor	Ex ia IIC T6T1 Gb		
	RB, RC, SA,		Ex ia IIIC T** °C Db		
	MA, MB, MC				
	04 05 00	- ···	5 H : E O 1 HO TO TO O		
BD	CA, CB, CC,	Transmitter	Ex db ia [ia Ga] IIC T6 T5 Gb		
	CD, HA, TA,		Ex tb [ia Da] IIIC T85°C Db		
	BA, BB, GA,	Canaan	Evia IIO TO TA Ob		
	LA, NA, RA,	Sensor	Ex ia IIC T6T1 Gb Ex ia IIIC T** °C Db		
	RB, RC, SA,				
	MA, MB, MC				

Inform	atio	on: Marking of protection
repres	ent	ative for
db	->	transmitter electronic
		compartment and sensor
		enclosure
eb	->	transmitter terminal
		compartment
ia	->	sensor
tb	->	enclosures
[ia Ga]	->	input/output Ex ia and
		sensor
[ia Da]	->	input/output Ex ia and
		sensor
db	->	transmitter electronic
		compartment and sensor
		enclosure
ia	->	sensor
tb	->	enclosures
[ia Ga]	->	input/output Ex ia and
		sensor
[ia Da]	->	input/output Ex ia and
		sensor



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Proline Prosonic Flow P 500 with ISEM integrated in transmitter Model Code: 9P5*** - dd*ff***B********+#**# O9P5*** - dd*ff***B**********+#**# DK9013 - dd****** ODK9013 - dd******* ff = Marking of Ex protection transmitter dd =Device approval I/O BS HA, TA, CA, Transmitter Ex ec nC ic [ic] IIC T5...T4 Gc CB, CC, CD, MC, RC Ex ic IIC T6...T1 Gc or Sensor Ex ic IIB T6...T1 Gc 1) BA, BB, GA, Transmitter Ex ec nC ic [ic] IIC T5...T4 Gc LA, NA, RA, SA, MA, Sensor Ex ic IIC T6...T1 Gc or MB, RB Ex ic IIB T6...T1 Gc 1)

Information: Marking of protection							
representative for							
ec	->	transmitter enclosure					
nC	->	electronic					
ic	->	sensor					
[ic]	->	input/output Ex ia and					
		sensor circuit					

¹⁾ Sensors type C-200-A and I-100-A are available only for group IIB

5. Conditions of Certification

- All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe sensor circuits potential equalization must exist.
- The sensors may only be used for those process media, for which the wetted parts are known to be suitable
- Plastic transmitter enclosures for the order codes

Proline Prosonic Flow G 9*5***-(BJ)..., Proline Prosonic Flow G O9*5***-(BJ) ..., Proline Prosonic Flow G 9X5*XX-(BJ)..., Proline Prosonic Flow G O9X5*XX-(BJ)...

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

• If the flowmeter system is connected to remote display type DKX001, the approval codes 'dd' for the flowmeter shall be paired to the approval code "bb" of the remote display as follows:

Approval code 'dd' of Proline Prosonic Flow G 300	Approval code 'bb' of remote display DKX001/ODKX001 as covered by IECEx DEK 15.0024
BB, BD	BE, BF or BG
BS	BS

 The Proline 300/500 Flowmeter that may include, stainless steel label tag with rope, when not bonded to earth used on coated metallic transmitter and/or sensor enclosure, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS





- Only use battery Renata type lithium CR1632, 3V.
- The flameproof joints are not intended to be repaired.

Applicable to Antenna bushing H337 when used with Proline 300/500 transmitter enclosure:

- Antenna suppled by Endress+Hauser shall be used only. As an alternate, any passive omnidirectional RF antenna with or without cable is permitted to be connected when meeting the following parameters:
 - a) The antenna connected to the antenna bushing shall have an impedance of at least 50Ω
 - b) The rated frequency range of the antenna shall not exceed 1710MHz ... 6000MHz
 - c) The rated power of the antenna shall be at least 100mW
- The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure
- The RF antenna or the RF antenna cable shall be fitted with a Series N (MIL-STD-348) plug connector. The coupling nut of the Series N plug connector shall be hand tightened only
- The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected



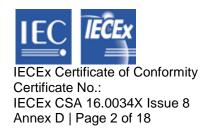


Annex D:

This Annex is applicable for flowmeters type Proline t-mass 300/500

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1. Description

Proline 300 / 500 is a platform used for flowmeters type Proline t-mass 300, Proline t-mass 500. All flowmeters are available in two versions, a compact version (Proline 300) and a remote version (Proline 500). The remote version of Proline 500 is available as a version with ISEM electronic in sensor only 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 or ODKX001, may be connected to the electronics. The remote display is available in two options for the user. Either it is ordered as a separate product or by the product of the flowmeter.

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.

All Proline t-mass 300/500 flowmeters are available for an ambient temperature of -40°C to +60°C and optional -50°C to +60°C.

All versions of flowmeters Proline t-mass 300 and Proline t-mass 500 are available for an enclosure protection of degree IP66, IP67. In addition versions of remote sensor Proline t-mass 500 are available for enclosure protection of degree IP68 as an optional.





2. Order Code

2.1. Proline t-mass 300/500

Extended order code Proline t-mass 300:

6F3bcc – ddeffghjlpsstttvww + #**#
6l3bcc – ddeffghjlpsstttuuvww + #**#
O6F3bcc – ddeffghjlpsstttvwwyy + #**#
for OEM-version
O6l3bcc – ddeffghjlpsstttuuvwwyy + #**#
for OEM-version
for OEM-version
for replacement transmitter
O6x3bxx – ddeffghjlpsswwy + #**#
for replacement transmitter
O6x3bxx – ddeffghjlpsswwyy + #**#

Extended order code Proline t-mass 500:

6F5bcc – ddeffghijkmnopsstttvww + #**#
6I5bcc – ddeffghijkmnopsstttuuvww + #**#
O6F5cc – ddeffghijkmnopsstttvwwyy + #**#
6I5bcc – ddeffghijkmnopsstttvwwyy + #**#
for OEM-version
for OEM-version
for replacement transmitter
for replacement transmitter
O6x5bxx – ddeffghijkmopsswwyy + #**#
for replacement transmitter

b = Generation

B =Generation of Flowmeter

cc = Size

any combination of number and/or letter up to size = DN100 (t-mass F) / 1500mm (t-mass I)

dd = Approval

Proline t-mass 300:

BB = Ex db eb [ia] IIC T4...T1 Gb
Ex tb IIIC T** Db

BD = Ex db [ia] IIC T4...T1 Gb
Ex tb IIIC T** Db

BS = Ex ec IIC T4...T1 Gc

Proline t-mass 500:

BJ = [Ex ia] IIC (transmitter) Ex ia IIC T4...T1 Gb (sensor) Ex tb IIIC T** Db (sensor) BL= non-Ex (transmitter) Ex ec IIC T4...T1 Gc (sensor) = Ex ec [ia Ga] IIC T5...T4 Gc ΒN (transmitter) Ex ia IIC T4...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)

BS = Ex ec IIC T4...T1 Gc (transmitter + sensor)



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Power Supply е

= 24Vdc D

Ε = 100-230Vac

= 100-230Vac / 24Vdc 1

Χ = sensor only

ff Input / Output 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (passive)

СВ = 4-20mA WHART Ex i (passive)

CC = 4-20mA HART Ex i (active)

CD = 4-20mA WHART Ex i (active)

GΑ = Profibus PA

HA = Profibus PA Ex i

LA = Profibus DP

= Modbus RS485 MA

MB = Modbus

MC = Modbus Ex i

= EtherNet/IP NA

RA = Profinet IO

= Profinet RB

= Profinet Ex i RC

= Foundation Fieldbus SA

TΑ = Foundation Fieldbus Ex i

XX = sensor only

Input / Output 2 g

Α = without Input/Output 2

В = 4-20mA

С = 4-20mA Ex i (passive)

D = Configurable IO

= Pulse/Frequency/Switch output

E F = Pulse output phase-shifted

G = Pulse/Frequency/Switch output Ex i

Н = Relay

1 = 4-20mA input

J = Status input

Κ = Pulse output Ex i

L = Pulse output

Χ = sensor only



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h = Input / Output 3

A = without Input/Output 3

B = 4-20mA

C = 4-20mA Ex i (passive)

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 K = Pulse output Ex i L = Pulse output

X = sensor only

i = Input / Output 4 (Proline 500 only)

A = without Input/Output 4

B = 4-20 mA

C = 4-20mA Ex i (passive)

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
K = Pulse output Ex i
L = Pulse output
X = sensor only

j = Display / Operation

with remote Display : O

without remote Display: any single number or letter except O

k = Integrated ISEM electronic (Proline 500 only)

A = Sensor

Housing (Proline 300 only) any single number or letter

m = Transmitter Housing (Proline 500 only)

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

ss = Material sensor

any double digits with combination of number or letter

ttt = Process connection

any triple digits with combination of number or letter

uu = Gasket

any double number or letter





v = Calibration

any single number or letter

ww = Device model (two digit) (refer to section 1.2 for assignment table of flowmeter to replacement transmitter)

A1 = product version 1 A2 = product version 2

yy = Customer version (two digits)

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





2.2. Assignment of Flowmeter to Replacement Transmitter

The replacement transmitters are assigned to the flowmeter Proline t-mass 300/500 as follows:

Product flowm	eters			Replacement transmitter type			
model code		Generation code b =	device model code ww =	model code	Generation code b =	existing product rr =	device model code ww =
6F* b ** ww ,	O6F* b ** ww	В	A1 / A2	6x*bxxww, O6x*bxxww	В	n.a.	A1 / A2
6l* b ** ww ,	O6I* b ** ww	В	A1 / A2	6x*bxxww, O6x*bxxww	В	n.a.	A1 / A2

3. Parameters

3.1. Electrical Parameters

Power Supply				
Order Code	terminal no.	values		
e =				
D 1)	No. 1(L+/L), 2(L-/N)	$U_N = 19.228.8V_{DC}$		
		$U_{M} = 250V_{AC}$		
E 1)	No. 1(L+/L), 2(L-/N)	$U_N = 85264V_{AC}$		
		U _M = 250V _{AC}		
[2]	No. 1(L+/L), 2(L-/N)	U _N = 19.228.8V _{DC} /85264V _{AC}		
		U _M = 250V _{AC}		

¹⁾ applicable for products with approval code dd = BB, BD

²⁾ applicable for products with approval code dd = BS, BJ, BL, 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	$\begin{array}{rcl} U_{i} & = 30V \\ I_{i} & = 100 mA \\ P_{i} & = 1.25W \\ L_{i} & = 0 \\ C_{i} & = 6nF \end{array}$	
CC, CD	No. 26, 27	1) Uo = 21.8V Io = 90mA Po = 491mW Lo = 4.1mH (IIC) / 15mH (IIB) Co = 160nF (IIC) / 1160nF (IIB)	2) Uo = 21.8V Io = 90mA Po = 491mW Lo = 9mH (IIC) / 39mH (IIB) Co = 600nF (IIC) / 4000nF (IIB)
		Ui = 30V Ii = 10mA Pi = 0.3W Ci = 6nF Li = 5µH	Ui = 30V li = 10mA Pi = 0.3W Ci = 6nF Li = 5µH
HA, TA	No. 26, 27	1) Profibus PA (Fisco Field Device) / Foundation Fieldbus U _i = 30V I _i = 570mA P _i = 8.5W L _i = 10µH C _i = 5nF	2) Profibus PA (Fisco Field Device) / Foundation Fieldbus U _i = 32V I _i = 570mA P _i = 8.5W L _i = 10µH C _i = 5nF
MB, RB	No. 26, 27	APL port profile SLAX / 11, 12 U _N = 30V _{DC} U _M = 250V _{AC}	SPE PoDL classes 10,
MC, RC	No. 26, 27	$\begin{array}{l} \underline{1)} \\ \underline{2\text{-WISE power load}} \\ \underline{APL \ port \ profile \ SLAA} \\ U_i &= 17.5V \\ I_i &= 380\text{mA} \\ P_i &= 5.32W \\ L_i &\leq 10\mu\text{H} \\ C_i &\leq 5\text{nF} \end{array}$	$\begin{array}{l} \underline{2)} \\ \underline{2\text{-WISE power load}} \\ \underline{APL \ port \ profile \ SLAC} \\ U_i &= 17.5V \\ I_i &= 380\text{mA} \\ P_i &= 5.32W \\ L_i &\leq 10\mu\text{H} \\ C_i &\leq 5\text{nF} \end{array}$
NA, RA	IO1 / RJ45	U _N = 30V _{DC} U _M = 250V _{AC}	

applicable for products with approval code dd = BB, BD
 applicable for products with approval code dd = BS, BL, BN





Input/Output 2			
Order Code	terminal no.	values	
g =			
C, G, K	No. 24, 25	$ \begin{array}{ll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \end{array} $	
		$C_i = 0$	
B, D, E, F, I, J, L	No. 24, 25	$\begin{array}{ll} U_N &= 30 V_{DC} \\ U_M &= 250 V_{AC} \end{array}$	
Н	No. 24, 25	U _N = 30V _{DC} I _N = 100mA _{DC} / 500mA _{AC} U _M = 250V _{AC}	

Input/Output 3	Input/Output 3				
Order Code	terminal no.	values			
h =					
C, G, K	No. 22, 23	$\begin{array}{ll} U_i &= 30V \\ I_i &= 100 mA \\ P_i &= 1.25W \\ L_i &= 0 \\ C_i &= 0 \end{array}$			
B, D, E, F, I, J, L	No. 22, 23	U _N = 30V _{DC} U _M = 250V _{AC}			
Н	No. 22, 23	$U_{N} = 30V_{DC}$ $I_{N} = 100mA_{DC} / 500mA_{AC}$ $U_{M} = 250V_{AC}$			

Input/Output 4			
Order Code	terminal no.	values	
i =			
C, G, K	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, L	No. 20, 21	$U_{N} = 30V_{DC}$ $U_{M} = 250V_{AC}$	
Н	No. 20, 21	$U_{N} = 30V_{DC}$ $I_{N} = 100 \text{mA}_{DC} / 500 \text{mA}_{AC}$ $U_{M} = 250V_{AC}$	



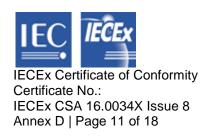


Service Interface				
Order Code dd =	terminal no.	values		
BA, BB	Service Interface	 Service Interface shall only be installed in areas which are known to be non hazardous with a non intrinsically safe circuit U_N = 3.3 V, U_M = 250 V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0 		
BC, BD	Service Interface	 Service Interface shall only be installed to an non intrinsically safe circuit with U_N = 3.3V, U_M = 250V_{AC} or to an intrinsically safe circuit with Ui = 10V, Ii = n.a., Pi = na., Ci = 200nF, Li = 0 		
not for: BB, BD	Service Interface	$U_N = 3.3V$		

Antenna bushing		
Order Code dd =	terminal no.	values
BB, BJ, BL, BN, BS	N connector	See conditions of certfication

Display remote	Display remote			
Order Code dd =	terminal no.	values		
BB, BD	No. 81, 82, 83, 84	Uo = 3.9V lo = 1.5A (spark)		
not for: BB, BD	No. 81, 82, 83, 84	$U_N = 3.3V$ $I_N = 150mA$		

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





t-mass Remote Transmitter and Remote Sensor:

6*****-... and O6*****-... with order code dd = BJ, BN in combination with k = A: Transmitter:

terminals 61, 62, 63, 64 -> Uo = 13.8V, Io = 1.156A, Po = 3.3W

Sensor:

terminals 61, 62, 63, 64 -> Ui = 14V, Ii = 1.2A, Pi = 3.4W

For interconnection of transmitter to sensor any cable may be used with the following requirements:

• L/R \leq 0.0089 mH/ Ω and C_{cable} \leq 760nF for group IIC, L/R \leq 0.0356 mH/ Ω and C_{cable} \leq 4.2 μ F for group IIB

• L_{cable} \leq 26 μ H and C_{cable} \leq 760nF for group IIC, L_{cable} \leq 104 μ H and C_{cable} \leq 4.2 μ F for group IIB

 6^{*****} -... and 06^{*****} -... with order code dd = BL, BS in combination with k = A:

Transmitter:

terminals 61, 62 $-> U_N = 32V$ terminals 63, 64 $-> U_N = 3.3V$

Sensor:

terminals 61, 62 $-> U_N = 32V$ terminals 63, 64 $-> U_N = 3.3V$



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3.2. Thermal Parameters (Zone 1)

above the sensor

Proline t-mass 300

Notes:

This page applies to versions with extended order code covering:

IECEx / ATEX: dd = BB, BD

Temperature table for versions with sensor insulated and not insulated (for insulation refer to manual of Endress+Hauser Flowtec) Size / DN T3 min T4 (100°C) (200°C) [°C] (85°C) (135°C) (300°C) (450°C) -50 180 115 150 160 (180) 115 (180)Notes: (1) Ta,min = -40°C, -50°C respectively (see nameplate) (2) values in brackets are applicable for installation where the transmitter is not installed

Size / DN		T== X	T== to be measured at reference point at sensor neck I*C1						
	T6 (85C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C			
all			73	76	77	77			
	for maximum medium temperatue and minimum medium temperature see nameplate (2) location of reference point								
		A)	reference poi	nt					
	3	<u> 2</u>							
		F							

O6x3Bxx - dd...

Aenderungen:	A	19.07.2018 / Bn	4		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		
	В		9		Diese Zeichnung darf ohne unsere			
	C		н		Genehmigung weder vervielfältigt werden noch	Ersatz für:		
	D		J		dritten Personen und Konkurrenzfirmen	Ersteller: FES / 8	Bn .	
	E		ĸ		zugängig gemacht werden.	FLE: M1Zeichng/FES	90301/A/FE90301A	doc
Control Dr	aw	ing IECEx, A	TE	X, CSA, cCS	Aus	Gezeichnet	19.07.2018	Bn
Zone 1, Zo	21, Cl.I Div.	Geprüft						
Thermal P	ara	ameter				Ex-geprüft	19.07.2018	Bn
Proline t-m	nas	s 300/500				Gesehen		
		_						



FES0331A



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Proline t-mass 500

Notes: This page applies to versions with extended order code covering:

6*5*** - dd******A... O6*5*** - dd*******A... with approval option cCSAus / CSA: dd = CN, C6 IECEx / ATEX: dd = BJ, BN 6x5Bxx - dd******A... O6x5Bxx - dd******A...

Sensor: Temperature table for versions with sensor insulated and not insulated (for insulation refer to manual of Endress+Hauser Flowtec)

Size / DN	T _n	ned	T _{a,max}			T _{med,m}	ax [°C]		
	min	max		T6	T5	T4	T3	T2	T1
	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)
all	-50	180	55			115	155	180	180
			60	-		115	130	130	130
Notes:	(1) Ta	,min = -4	0°C, -50°0	C respecti	vely (see n	ameplate)			

Type of		Ta	,max		
enclosure	Ordinary location	T6	T5	T4	
	(°C)	(85°C)	(100°C)	(135°C)	
aluminium	60		45	60	
plastic	60				

Size / DN	T _{max} to be measured at reference point at sensor neck [°C]									
	T6	T5	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)				
all	(80°C)	(100°C)	76	(200 C) 78	(300 C) 82	(450 C) 82				
ı	- for maxin nameple (1) location of	ate	reference poi		dum temperal	ure see				

Aenderungen:	Α	19.07.2018 / Bn	F		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:		
	В		Diese Zeichnung darf ohne unsere					
	С		Ersatz für:					
	D		J		dritten Personen und Konkurrenzfirmen	Ersteller: FES / Bn		
	Е		K		zugängig gemacht werden.	FILE: M:\Zelchng\FE	S0331\A\FES0331A	.doc
Control Dr	aw	ing IECEx, A	ΤE	X, CSA, cCS	Aus	Gezeichnet	19.07.2018	Bn
Zone 1, Zo	Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1							
Thermal F	ara	ameter				Ex-geprüft	19.07.2018	Bn
Proline t-n	nas	s 300/500				Gesehen		





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3.3. **Thermal Parameters (Zone 2)**

Proline t-mass 300

Notes:
This page applies to versions with extended order code covering:

6*3B** - dd... O6*3B** - dd... 6x3Bxx - dd... with approval option cCSAus / CSA: dd = CS, CZ IECEx / ATEX: dd = BS

O6x3Bxx - dd...

Temperat insulated (for insula	and n	ot insu	ılated				wtec)			
Size / DN	T,	ned	T _{a,max}			T _{med,m}	ax [°C]			
	min	max	1	T6	T5	T4	T3	T2	T1	
	[°C]	[°C]	[°C]	(85°C)	(100°C)	(135°C)	(200°C)	(300°C)	(450°C)	
all	-50 180 50 115 155 180 180									
	55 115 155 160 160									
	55 115 155 160 160 (180)									
			60			100	100	100	100	
						(115)	(130)	(130)	(130)	
(2) v a (3) v	alues in bove the ersions v	brackets sensor vith trans	are appli mitter en	cable for it	ee namepl nstallation ainless ste	where the el (metal s				

 versions with transmitter enclosure stainless steel (metal sheet) installed in temperature class T5, a degree of 3°C for ambient temperature shall be taken into

T6 T5 T4 T3 T2 T (85C) (100°C) (135°C) (200°C) (300°C) (450			e / DN T _{max} to be measured at reference point at sensor neck [°C]							
all — 73 76 77 77 7 Notes: (1) for safe use temperatures shall not exceed all of the following: - temperature table for versions with sensor not insulated (refer to table above temperature at reference point as listed in this table - Ta_min = +40°C, -50°C respectively (see nameplate) - for maximum medium temperature and minimum medium temperature see nameplate	T1		T3	T4						
Notes: (1) for safe use temperatures shall not exceed all of the following: - temperature table for versions with sensor not insulated (refer to table above temperature at reference point as listed in this table - Ta,min = -40°C, -50°C respectively (see nameplate) - for maximum medium temperatue and minimum medium temperature see nameplate	50°C)				(100°C)	(85C)				
- temperature table for versions with sensor not insulated (refer to table above - temperature at reference point as listed in this table - Ta, min = +40°C, -50°C respectively (see nameplate) - for maximum medium temperatue and minimum medium temperature see nameplate)	77									
				nt						
reference point			nt	reference poi						
		- F				'				

Aenderungen:	A	19.07.2018 / Bn	F		Alle gesetzlichen Urheberrechte, vorbehalten. Diese Zeichnung darf ohne unsere	Ersetzt durch:		
	C D		H J K		Genehmigung weder vervielfältigt werden noch dirtten Personen und Konkurrenzfirmen zugängig gemacht werden.	Ersatz für: Ersteller: FES / E FILE: M:\Zelchng\FE		doc
Control D	raw	ing IECEx, A	ATE)	K, CSA, cCS	Aus	Gezeichnet	19.07.2018	Bn
Zone 2, Cl.I Div. 2, Cl.I Zone 2								
Thermal F	Thermal Parameter						19.07.2018	Bn
Proline t-r	nas	s 300/500				Gesehen		



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

FES0332A



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Proline t-mass 500

Notes: This page applies to versions with extended order code covering:

6*5*** - dd******A... O6*5*** - dd*******A... with approval option cCSAus / CSA: dd = CS, CZ IECEx / ATEX: dd = BL, BS 6x5Bxx - dd******A... O6x5Bxx - dd******A...

Sensor: Temperature table for versions with sensor insulated and not insulated (for insulation refer to manual of Endress+Hauser Flowtec)

Size / DN T_{med}
min max T_{med,max} [°C] T4 T3 T2 T1 |35°C) (200°C) (300°C) (450°C) [°C] (85°C) (100°C) (135°C) 55 115 155 180 60 --- 115 Notes: (1) Ta,min = -40°C, -50°C respectively (see nameplate

Transmit	tter f	or all versions			
Type of			Ta,	max	
enclosure		Ordinary location	T6	T5	T4
		(°C)	(85°C)	(100°C)	(135°C)
aluminium		60		45	60
plastic		60	_	-	_
Notes: (1)		inium enclosure: Ta c enclosure: Ta	,min = -50°C (for lim ,min = -40°C	itation see name pla	te)

Size / DN		T _{max} to	be measured sensor n		oint at				
	T6 (80°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)			
all			76	78	82	82			
	for maximum medium temperature and minimum medium temperature see nameplate (1) location of reference point								
f	Sales.	- 	reference poi	nt					

E	!	5, , , , ,	FES0	332A		2/2				
Proline t-r	nas	s 300/500		Gesehen						
Thermal F	Thermal Parameter						19.07.2018	Bn		
Zone 2, Cl.I Div. 2, Cl.I Zone 2						Geprüft				
Control D	raw	ing IECEx, A	\TE	X, CSA, cCS	Aus	Gezeichnet	19.07.2018	Bn		
	E		K		zugängig gemacht werden.	FILE: M:\Zelchng\FE	S0332\A\FES0332A	.doc		
	С		H		Genehmigung weder vervielfältigt werden noch dritten Personen und Konkurrenzfirmen	Ersatz für: Ersteller: FES / Bn				
	В		G		Diese Zeichnung darf ohne unsere					
Aenderungen:	Α	19.07.2018 / Bn	F		Alle gesetzlichen Urheberrechte, vorbehalten.	Ersetzt durch:				





4. Marking

Proline t-r	nass 300				
Model Code:					
6F3*** – dd*ff**********+#**#					
6I3*** - dd*ff************+#**#					
	O6F3*** - dd*ff************+#**#				
	dd*ff*******				
dd =	ff = I/O	Marking of Ex protection			
approval					
BB	CA, CB, CC,	Ex db eb ia [ia Ga] IIC T4T1 Gb			
	CD, HA, TA,	Ex db eb ia [ia Ga] IIC T4T1 Ga/Gb			
	MC, RC	Ex tb [ia Da] IIIC T** °C Db			
	BA, BB, GA,	Ex db eb ia IIC T4T1 Gb			
	LA, NA, RA,	Ex db eb ia IIC T4T1 Ga/Gb			
	SA, MA,	Ex tb IIIC T** °C Db			
	MB, RB				
BD	CA, CB, CC,	Ex db ia [ia Ga] IIC T4T1 Gb			
	CD, HA, TA,	Ex db ia [ia Ga] IIC T4T1 Gb			
	MC, RC	Ex tb [ia Da] IIIC T** °C Db			
	BA, BB, GA,	Ex db ia IIC T4T1 Gb			
	LA, NA, RA,	Ex db ia IIC T4T1 Ga/Gb			
	SA. MA.	Ex tb IIIC T** °C Db			
	MB, RB				
	,				
BS	CA, CB, CC,	Ex ec nC [ic] IIC T4T1 Gc			
	CD, HA, TA,				
	MC, RC				
	BA, BB, GA,	Ex ec nC IIC T4T1 Gc			
	LA, NA, RA,				
	SA, MA,				
	MB, RB				

natio	on: Marking of protection
	tative for
->	transmitter electronic
	compartment
->	transmitter terminal
	compartment
->	sensor
->	enclosures
->	input/output Ex ia
->	input/output Ex ia
->	transmitter electronic
	compartment
->	transmitter terminal
	compartment
->	sensor
->	enclosures
->	input/output Ex ia
->	input/output Ex ia
->	transmitter and sensor
	enclosure
->	electronic
->	input/output Ex ic
	-> -> -> -> -> -> -> -> -> -> -> -> -> -

Draling t many 500 with ICFM integrated in concer				
Proline t-r	Proline t-mass 500 with ISEM integrated in sensor			
Model Code:				
6F5*** – c	6F5*** - dd*ff****A*********+#**#			
6I5*** - dd*ff****A***********+#**#				
O6F5*** – dd*ff****A*************+#**#				
O6I5*** - dd*ff****A******************				
dd =	ff =	Device	Marking of Ex protection transmitter	
approval	I/O		- '	
BJ	CA, CB, CC,	Transmitter	[Ex ia] IIC	
	CD, HA, TA,		[Ex ia] IIIC	
	BA, BB, GA,	Sensor	Ex db ia IIC T4T1 Gb	
	LA, NA, RA,		Ex db ia IIC T4T1 Ga/Gb	
	RB, RC, SA,		Ex ia tb IIIC T** °C Db	
	MA, MB, MC			

Information: Marking of protection		
representative for		
[Ex ia	a] ->	sensor circuit
db	->	sensor enclosure
ia	->	sensor
tb	->	sensor enclosure
ia	->	sensor



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Proline t-mass 500 with ISEM integrated in sensor					
Model Code:					
6F5*** – dd*ff****A*********+#**#					
6I5*** - dd*ff****A***************##**#					
	O6F5*** – dd*ff****A************+#**# O6I5*** – dd*ff****A************+#**#				
	,		Lag is de la seconda		
dd = approval	ff = I/O	Device	Marking of Ex protection transmitter		
BL	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	[Ex ic] IIC		
		Sensor	Ex ec IIC T4T1 Gc		
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	n.a. (non-Ex)		
		Sensor	Ex ec IIC T4T1 Gc		
BN	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex ec nC [ic][ia Ga] IIC T5T4 Gc [Ex ia] IIIC		
		Sensor	Ex db ia IIC T4T1 Gb or Ex db ia IIC T4T1 Ga/Gb Ex ia tb IIIC T** °C Db		
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex ec nC [ia Ga] IIC T5T4 Gc [Ex ia] IIIC		
		Sensor	Ex db ia IIC T4T1 Gb or Ex db ia IIC T4T1 Ga/Gb Ex ia tb IIIC T** °C Db		
BS	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex ec nC [ic] IIC T5T4 Gc		
		Sensor	Ex ec IIC T4T1 Gc		
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex ec nC IIC T5T4 Gc		
		Sensor	Ex ec IIC T4T1 Gc		

Information: Marking of protection		
		tative for
		sensor enclosure
[Ex ic] -	·>	input/output Ex ic
db -	_	sensor enclosure
		sensor
		sensor circuit
[[a Ga] -	.>	sensor circuit
		transmitter enclosure
		electronic
		input/output Ex ic
[]		
db -	·>	sensor enclosure
ia -	·>	sensor
[ia Ga] -	·>	sensor circuit
[Ex ia] -	·>	sensor circuit
	·>	transmitter enclosure
_		electronic
[ic] -	·>	input/output Ex ic
ec -		transmitter and sensor
0		enclosure
		electronic
[ic] -	·>	input/output Ex ic

5. Conditions of Certification

- All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe sensor circuits potential equalization must exist.
- The sensors may only be used for those process media, for which the wetted parts are known to be suitable
- Plastic transmitter enclosures for the order codes





Proline t-mass 6*5***-(BJ)..., Proline t-mass O6*5***-(BJ) ..., Proline t-mass 6X5*XX-(BJ)..., Proline t-mass O6X5*XX-(BJ)...

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

• If the flowmeter system is connected to remote display type DKX001, the approval codes 'dd' for the flowmeter shall be paired to the approval code "bb" of the remote display as follows:

Approval code 'dd' of Proline t-mass 300	Approval code 'bb' of remote display DKX001/ODKX001 as covered by IECEx DEK 15.0024
BB, BD	BE, BF or BG
BS	BS

- The Proline 300/500 Flowmeter that may include, stainless steel label tag with rope, when not bonded to earth used on coated metallic transmitter and/or sensor enclosure, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- Only use battery Renata type lithium CR1632, 3V.
- The flameproof joints are not intended to be repaired.
- For Proline t-mass 300_500 with order code 'dd' = BB, BD, BJ & BN:
 Zone 0 is only applicable to sensor with process medium in the measuring tube

Applicable to Antenna bushing H337 when used with Proline 300/500 transmitter enclosure:

- Antenna suppled by Endress+Hauser shall be used only. As an alternate, any passive omnidirectional RF antenna with or without cable is permitted to be connected when meeting the following parameters:
 - a) The antenna connected to the antenna bushing shall have an impedance of at least 50Ω
 - b) The rated frequency range of the antenna shall not exceed 1710MHz ... 6000MHz
 - c) The rated power of the antenna shall be at least 100mW
- The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure
- The RF antenna or the RF antenna cable shall be fitted with a Series N (MIL-STD-348) plug connector. The coupling nut of the Series N plug connector shall be hand tightened only
- The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected