1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 16ATEX2219X** Issue: **9**

4 Equipment: **Proline Promass 300/500, Proline Cubemass 300/500 and Proline Promag 300/500**

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

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

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

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

EN IEC 60079-0:2018	EN 60079-1:2014	EN 60079-11:2012
EN 60079-26:2015	EN 60079-31:2014	EN 60079-7:2015+A1:2018
IEC TS 60079-47:2021		

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

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

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

Signed:

Title:

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 16ATEX2219X**
Issue 9

13 **DESCRIPTION OF EQUIPMENT**

The Proline 300 / 500 is a platform used for flowmeters of type Proline Promag 300, Proline Promag 500, Proline Promass 300, Proline Promass 500, Proline Cubemass 300, Proline Cubemass 500, Proline Prosonic Flow G 300, Proline Prosonic Flow G 500, Proline Prosonic Flow P 500, 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 (Intelligent Sensor Electronics Module) electronics integrated in transmitter (i.e. Proline 500 analog) where the sensor sends analog signals to the transmitter and a version with ISEM integrated in sensor where the sensor is connected by a digital circuit to the transmitter (i.e. Proline 500 digital) 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 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 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, Proline Promass 300/500, Proline Prosonic Flow G 300/500 and 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.

In addition, the version of the sensor of Proline Promass F/X/Q 500 with ISEM electronic in transmitter is available also for -60°C to +60°C ambient. 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.

An antenna bushing at cable entry for transmitter enclosures in type of protection Ex "ia", Ex "eb", and Ex "tb" 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 EN 60079-11:2011 and IEC TS 60079-47:2021.

Variation 1 - This variation introduced the following changes:

i. Minor changes to product order codes of Promag W500.
ii. Minor corrections to product markings.
iii. Introduction of remote display as part of the flowmeter.
iv. Minor corrections to the product drawings

Variation 2 - This variation introduced the following changes:

i. The addition of model code for replacement transmitter OEM version and new assignment table of replacement transmitter to product of flowmeter.
ii. The addition of a new, certified sensor" Promass A" sensor with changes to model code.

iii. Update in the ambient temperature reduced optionally to -60°C for sensors of Promass F/Q/X 500 with code for integrated ISEM electronic k = "B" as described in the technical description document
iv. All the corresponding drawings were updated to recognise minor administrative amendments.
v. The introduction of the Proline Promass 300/500 and Proline Cubemass 300/500 flowmeters. These devices were previously covered by certificate Sira 16ATEX2177X using EN 60079-26:2015 as an assessment standard; therefore, this document needs to be recognised in the list of supporting documents. (Note: As a result of this change, Sira 16ATEX2177X is no longer required and will therefore be suspended.) Previously, EN 60079-15 was specified as a supporting document, this was an error and therefore this standard was removed.

Variation 3 – This variation introduced the following changes:

i. The recognition of minor drawings amendments, none of which affect compliance with the applicable standards.
ii. Minor correction of ATEX marking nameplate to separate the ATEX markings from IECEx.

Variation 4 – This variation introduced the following changes:

i. Introduction of new model version Proline Prosonic Flow G 300/500
ii. Introduction of new model version Proline t-mass 300/500
iii. Introduction of new Antenna bushing model H337 for external antenna connection with the Proline 300/500 transmitter
iv. Addition of new order codes for IO1 current output (active) with I/O code dd = "CC" and "CD"
v. 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 output non Ex i
vi. Addition of new product order codes to include for Promag W300 and Promag W500
vii. Revised standard IEC 60079-0, Edition 6 to IEC60079-0, Edition 7.0
viii. The recognition of drawings amendments, none of which affect compliance with the applicable standards

Variation 5 – This variation introduced the following changes:

i. Addition of product order code "ww = A2" for model Proline Promag 300/500, Proline Prosonic 300/500 and Proline t-mass 300/500. See Certificate Annexe for order code details
ii. Correction of entity parameter for IO1 order codes: CA, CB (Ci= 0, changed to Ci =6nF) in the applicable drawings
iii. The recognition of drawings amendments, none of which affect compliance with the applicable standards.

Variation 6 – This variation introduced the following changes:

i. Changes in nomenclature ("Digital" is now referred as ISEM integrated in sensor, "Analog" is now referred to as ISEM integrated in transmitter)
ii. Introduction of new flange sizes for Proline Promass 300/500 for High Temperature (HT) flowmeters.
iii. Update of related product documentation
iv. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012/A11:2013 was replaced by EN IEC 60079-0:2018.
v. The description was amended to reflect the above changes

vi. Addition of two manufacturing locations in China as shown on TÜV QAN, TÜV 98 ATEX 1348Q

Variation 7 – This variation introduced the following changes:

i. Introduction of additional sensor sizes DN150/200/250 for Proline Promass Q
ii. Introduction of additional sensor type CH-050-A, CH-100-A for Proline Prosonic Flow P500 with process temperature up to 435°C
iii. Introduction of additional IO's with IO-1 order code ff = MB, MC for Modbus and ff = RB, RC for Profinet
iv. Revision to order codes for Proline Prosonic Flow G300/500 and P500 replacement transmitter
v. Introduction of new type of liner ETFE for Proline Promag sensors
vi. Proline Promag P500/W500, when used with sensor enclosure G300, is now available with rating IP68 in addition to IP67
vii. Update of related product documentation
viii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-7:2015 is replaced by EN IEC 60079-7:2015/A1:2018.
ix. Introduction of new technical specification standard IEC TS 60079-47 for 2-WISE concept, with technical assessment based on the compliance requirements of intrinsic safety standard EN 60079-11:2012

Variation 8 – This variation introduced the following changes:

i. Correction to product order code and marking of Proline Promag 500 and Proline Prosonic Flow 500
ii. Update references of component certificates as applicable.
iii. Introduction of additional combination of existing certified enclosures for Proline Promag 300, Proline Promag 500, Proline Promass 500, Proline Flow G 500 and Proline t-mass 500.
iv. Introduction of additional temperature table for Proline Promass 300 (Ex d version) for use with Tmed < -50°C and for Proline Promass 300/500 with sensor Promass F DN 25/40 for use with Tmed at +170°C based on previous calculation and tests.
v. Introduction of additional sensor size DN15 for Promag W.
vi. Revision of technical documentation for the above changes.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Issue 0: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/00 for a full list of drawings covered by this issue.
Issue 1: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/01 for a full list of drawings covered by this issue.
Issue 2: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/02 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issues 0 and 1
Issue 3: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/03 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issue 2 and earlier.
Issue 4: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/04 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issue 3 and earlier.

Issue 5: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/05 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issue 4 and earlier.
Issue 6: No new drawings were introduced.
Issue 7: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/06 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issue 5 and earlier.
Issue 8: See Cover Sheet of IECEx Test Report CA/CSA/ExTR16.0031/08 for a full list of drawings covered by this issue. These drawings were rationalised and supersede those detailed in Issue 7 and earlier.
Issue 9: Refer to Certificate Annexe. These drawings are rationalised and supersede those detailed in Issue 8 and earlier.

14.2 **Associated CSA Group Reports and Certificate History**

Issue	Date	Report number	Comment
0	19 July 2016	R70084415A	The release of the prime certificate.
1	23 February 2017	R70110427A	The introduction of Variation 1.
2	26 September 2017	R70140398A	The introduction of Variation 2.
3	12 January 2018	R70162908A	The introduction of Variation 3
4	25 March 2019	R70214610A	The introduction of Variation 4
5	23 August 2019	R80012315A	The introduction of Variation 5
6	15 October 2019	0626	Transfer of certificate Sira 16ATEX2219X from Sira Certification Service to CSA Group Netherlands B.V.
7	11 August 2020	R80036352A	The introduction of Variation 6.
8	18 May 2022	R80114022A	The introduction of Variation 7.
9	17 October 2023	R80174205A	The introduction of Variation 8.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

Applicable to Proline Promag 300/500, Proline Promass 300/500 and Proline Cubemass 300/500, Proline Prosonic Flow G 300/500, Proline Prosonic Flow P 500 and Proline t-mass 300/500:

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

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

15.3 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.

15.4 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, Proline Promag 300, Proline Prosonic Flow G 300 and Proline t-mass 300	Approval code 'bb' of remote display DKX001/ODKX001 as covered by IECEx DEK 15.0024
BA, BB, BC, BD, B7 or B8	BE, BF or BG

15.5 The equipment has non-conductive surfaces which are a potential electrostatic charging hazard - see instructions for guidance.

15.6 Only use battery Renata type lithium CR1632, 3V.

15.7 The flameproof joints are not intended to be repaired.

15.8 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.

15.9 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:

15.10 Antenna supplied by Endress+Hauser shall be used only. As an alternate, any passive omni-directional RF antenna with or without cable is permitted to be connected when meeting the following parameters:

a) The antenna shall have an impedance of at least 50Ω
b) The rated frequency range of the antenna shall not exceed 1710MHz ... 6000MHz
c) The RF antenna or the RF antenna cable shall be fitted with a Type N connector plug (MIL-STD-348)

15.11 The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure.

15.12 The coupling nut of the Type N plug connector shall be hand tightened only.

15.13 The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

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

1.1. Marking

Proline Promass 300, Proline Cubemass 300			
Order Code: 8*3*** – dd*ff**********+#**# O8*3*** – dd*ff**********+#**#			
dd = approval	ff = I/O	ATEX marking	Marking of Ex protection
BA	CA, CB, CC, CD, HA, TA, MC, RC	II1/2(1)G II2(1)G II2(1)D	Ex db eb ia [ia Ga] IIB T6...T1 Ga/Gb [1)] Ex db eb ia [ia Ga] IIB T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II1/2G II2G II2D	Ex db eb ia IIB T6...T1 Ga/Gb [1)] Ex db eb ia IIB T6...T1 Gb Ex tb IIIC T** °C Db
BB	CA, CB, CC, CD, HA, TA, MC, RC	II1/2(1)G II2(1)G II2(1)D	Ex db eb ia [ia Ga] IIC T6...T1 Ga/Gb [1)] Ex db eb ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II1/2G II2G II2D	Ex db eb ia IIC T6...T1 Ga/Gb [1)] Ex db eb ia IIC T6...T1 Gb [1)] Ex tb IIIC T** °C Db
BC	CA, CB, CC, CD, HA, TA, MC, RC	II1/2(1)G II2(1)G II2(1)D	Ex db ia [ia Ga] IIB T6...T1 Ga/Gb [1)] Ex db ia [ia Ga] IIB T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II1/2G II2G II2D	Ex db ia IIB T6...T1 Ga/Gb [1)] Ex db ia IIB T6...T1 Gb Ex tb IIIC T** °C Db
BD	CA, CB, CC, CD, HA, TA, MC, RC	II1/2(1)G II2(1)G II2(1)D	Ex db ia [ia Ga] IIC T6...T1 Ga/Gb [1)] Ex db ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II1/2G II2G II2D	Ex db ia IIC T6...T1 Ga/Gb [1)] Ex db ia IIC T6...T1 Gb Ex tb IIIC T** °C Db

Information: Marking of protection representative for		
db	->	electronic compartment
eb	->	terminal compartment
ia	->	sensor, display
tb	->	transmitter enclosure, sensor
[ia Ga]	->	electronic with input/output Ex ia
[ia Da]	->	electronic with input/output Ex ia

Information: Marking of protection representative for		
db	->	electronic and terminal compartments
ia	->	sensor, display
tb	->	transmitter enclosure, sensor
[ia Ga]	->	electronic with input/output Ex ia
[ia Da]	->	electronic with input/output Ex ia

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

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

Proline Promass 500 Analog (with ISEM integrated in transmitter), Proline Cubemass 500 Analog (with ISEM integrated in transmitter)					
Order Code: 8*5*** – dd*ff****B**********+#**# O8*5*** – dd*ff****B**********+#**#					
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection	Information: Marking of protection representative for
BA	CA, CB, CC, CD, HA, TA,	Transmitter	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db eb ia [ia Ga] IIB T6...T5 Gb Ex tb [ia Da] IIIC T85°C Db	db -> electronic compartment
	BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Sensor	Ⓔ II1/2G Ⓔ II2G Ⓔ II2D	Ex ia IIB T6...T1 Ga/Gb [1)] Ex ia IIB T6...T1 Gb Ex ia tb IIIC T** °C Db	eb -> terminal compartment, wall mounted terminal box ia -> sensor, display
BB	CA, CB, CC, CD, HA, TA,	Transmitter	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db eb ia [ia Ga] IIC T6... T5 Gb Ex tb [ia Da] IIIC T85°C Db	tb -> transmitter enclosure, sensor terminal box, sensor
	BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Sensor	Ⓔ II1/2G Ⓔ II2G Ⓔ II2D	Ex ia IIC T6...T1 Ga/Gb [1)] Ex ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	[ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
BC	CA, CB, CC, CD, HA, TA,	Transmitter	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db ia [ia Ga] IIB T6... T5 Gb Ex tb [ia Da] IIIC T85°C Db	db -> electronic and terminal compartments, wall mounted terminal box
	BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Sensor	Ⓔ II1/2G Ⓔ II2G Ⓔ II2D	Ex ia IIB T6...T1 Ga/Gb [1)] Ex ia IIB T6...T1 Gb Ex ia tb IIIC T** °C Db	ia -> sensor, display tb -> transmitter enclosure, sensor terminal box, sensor
BD	CA, CB, CC, CD, HA, TA,	Transmitter	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db ia [ia Ga] IIC T6... T5 Gb Ex tb [ia Da] IIIC T85°C Db	[ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
	BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Sensor	Ⓔ II1/2G Ⓔ II2G II2D	Ex ia IIC T6...T1 Ga/Gb [1)] Ex ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	

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

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

Proline Promass 500 Digital (with ISEM integrated in sensor), Proline Cubemass 500 Digital (with ISEM integrated in sensor)					
Order Code: 8*5*** – dd*ff****A************+#**# O8*5*** – dd*ff****A**************+#**#					
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection	Information: Marking of protection representative for
BI	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	[Ex ia] -> electronic with input/output Ex ia and output for sensor circuit ia -> sensor tb -> sensor, sensor terminal box
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIB T6...T1 Ga/Gb [1)] Ex ia IIB T6...T1 Gb Ex ia tb IIIC T** °C Db	
BJ	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	[Ex ia] -> electronic with output for sensor circuit ia -> sensor tb -> sensor, sensor terminal box
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIC T6...T1 Ga/Gb [1)] Ex ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	
BM	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	[Ex ia] -> electronic with output for sensor circuit ia -> sensor tb -> sensor terminal box
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIB T6...T1 Ga/Gb [1)] Ex ia IIB T6...T1 Gb Ex ia tb IIIC T** °C Db	
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIB T6...T1 Ga/Gb [1)] Ex ia IIB T6...T1 Gb Ex ia tb IIIC T** °C Db	
BN	CA, CB, CC, CD, HA, TA, MC, RC	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	[Ex ia] -> electronic with output for sensor circuit ia -> sensor tb -> sensor terminal box
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIC T6...T1 Ga/Gb [1)] Ex ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC	
		Sensor	Ex II1/2G Ex II2G Ex II2D	Ex ia IIC T6...T1 Ga/Gb [1)] Ex ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	

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

1.2. Order Code

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 – ddeffghijkmnopssttvww + ##**
O8a5bcc – ddeffghijkmnopssttvwwyy + ##** 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

Proline Promass 500 :

BA	=	Ex db eb [ia] IIB T6...T5 Gb	(transmitter)
		Ex ia IIB T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BB	=	Ex db eb [ia] IIC T6...T5 Gb	(transmitter)
		Ex ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BC	=	Ex db [ia] IIB T6...T5 Gb	(transmitter)
		Ex ia IIB T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BD	=	Ex db [ia] IIC T6...T5 Gb	(transmitter)
		Ex ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BI	=	[Ex ia] IIC	(transmitter)
		Ex ia IIB T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BJ	=	[Ex ia] IIC	(transmitter)
		Ex ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BM	=	[Ex ia] IIC	(transmitter)
		Ex ia IIB T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)
BN	=	[Ex ia] IIC	(transmitter)
		Ex ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(sensor)

e = Power Supply

D	=	24Vdc
E	=	100-230Vac
I	=	100-230Vac / 24Vdc
X	=	sensor only

ff = Input / Output 1

- BA = 4-20mA HART
- BB = 4-20mA WHART
- CA = 4-20mA HART Ex i (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 = 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 = 4-20mA
- 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

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
- B = Transmitter

l = 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

qq = Upgrade Kid
any double digits with combination of number or letter

rr = Existing Product (refer to assignment of flowmeter to replacement transmitter)
any double digits with combination of number or letter

ss = Measuring tube material
any double digits with combination of number or letter

ttt = Process connection
any triple digits with combination of number or letter

v = Calibration
any single number or letter

ww = Device model (two digit) (refer to assignment 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

1.3. 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**			
Order code	**Generation code b =**	**device model code ww =**	**Order code**	**Generation code b =**	**existing product rr =**	**device model code ww =**
8A***b****-...**ww**, O8A***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	AA (all sizes)	A1 / A2
8A***b****-...**ww**, O8A***b****-...**ww**	C	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	AB (all sizes)	A1 / A2
8C***b****-...**ww**, O8C***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr** ...**ww**	B	CA (all sizes)	A1 / A2
8E***b****-...**ww**, O8E***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	EA (DN8...15) EB (DN25...50) EC (DN80)	A1 / A2 A1 / A2 A1 / A2
8F***b****-...**ww**, O8F***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	FA (DN8...15) FB (DN25...50) FC (DN80...250)	A1 / A2 A1 / A2 A1 / A2
8H***b****-...**ww**, O8H***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	HA (DN8...40) HB (DN50)	A1 / A2 A1 / A2
8I***b****-...**ww**, O8I***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	IA (DN8...40) IB (DN40FB...80)	A1 / A2 A1 / A2
8O***b****-...**ww**, O8O***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	OA (all sizes)	A1 / A2
8P***b****-...**ww**, O8P***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	PA (DN8...40) PB (DN50)	A1 / A2 A1 / A2
8Q***b****-...**ww**, O8Q***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	QA (DN25...50) QB (DN80...100) QC (DN150...250)	A1 / A2 A1 / A2 A1 / A2
8S***b****-...**ww**, O8S***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	SA (DN8...40) SB (DN50)	A1 / A2 A1 / A2
8X***b****-...**ww**, O8X***b****-...**ww**	B	A1 / A2	8x***b***xx-...**rr**...**ww**, O8x***b***xx-...**rr**...**ww**	B	XA (all sizes)	A1 / A2

1.4. Sensor Group

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 Group	Type of sensor	Size of sensor	Group	$T_{Med,min}$
A1	A (type 8A*B**)	01(DN1), 02, 04	IIC	-50°C
	C	01, 02, 04, 06	IIC	-50°C
	E	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
	I	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 *)
	I	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
	H	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
	H	50	IIC	-200°C
	Q	80, 100, 150, 200, 250	IIC	-200°C
E1	E	80	IIB	-50°C
	F, F(HT), O	80, 100, 150, 250	IIB	-50°C / -60°C *)
	H, S, P	50	IIB	-50°C
	I	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
	H	50	IIB	-200°C
	Q	80, 100, 150, 200, 250	IIB	-200°C

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

Note: All sensors of Proline Promass 300 and Proline 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.

1.5. Parameters

1.5.1. Electrical Parameters

Power Supply		
Order Code e =	**terminal no.**	**values**
D [1)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} U_M = 250V_{AC}
E [1)]	No. 1(L+/L), 2(L-/N)	U_N = 85...264V_{AC}

		U_M = 250V_{AC}
I [2)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} /85...264V_{AC} U_M = 250V_{AC}

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

Input/Output 1		
Order Code ff =	**terminal no.**	**values**
BA, BB, MA	No. 26, 27	U_N = 30V_{DC} U_M = 250V_{AC}
LA, GA, SA	No. 26, 27	U_N = 32V_{DC} U_M = 250V_{AC}
CA, CB	No. 26, 27	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 6nF
CC, CD	No. 26, 27	1) U_O = 21.8V I_O = 90mA P_O = 491mW L_O = 4.1mH (IIC) / 15mH (IIB) C_O = 160nF (IIC) / 1160nF (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 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	1), 2) 2-WISE power load APL port profile SLAA U_i = 17.5V I_i = 380mA P_i = 5.32W L_i ≤ 10µH C_i ≤ 5nF

NA, RA	IO1 / RJ45	U_N = 30V_{DC} U_M = 250Vac

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

2) no additional internal capacitances are effective to the output value (refer to note 1 of drawing "Ethernet-APL Installation Drawing - Device Vendors v1.0, March 8th 2022")

Input/Output 2		
Order Code g =	**terminal no.**	**values**
C, G, K	No. 24, 25	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 0
B, D, E, F, I, J, L	No. 24, 25	U_N = 30V_{DC} U_M = 250V_{AC}
H	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	U_i = 30V I_i = 100mA 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}
H	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	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 = 250Vac
H	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 = n.a., Ci = 200nF, Li = 0
BC, BD	Service Interface	Service Interface shall only be installed • to a 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 = n.a., Ci = 200nF, Li = 0
BI, BJ, BM, BN	Service Interface	U_N = 3.3V

Antenna bushing		
Order Code dd =	**terminal no.**	**values**
BA, BB, BI, BJ, BM, BN	Type N connector	See conditions of safe use

Remote Display		
Order Code dd =	**terminal no.**	**values**
BA, BB, BC, BD	No. 81, 82, 83, 84	Uo = 3.9V Io = 1.5A (spark) 200mA (power) Po = 600mW Ri = 2.6Ω Co = 670µF Lo = 0

Notes:

- 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 = ≤ 0.024 mH/Ω applies.
- Remote display type DKX001 or ODKX001 is not intended to be connected to the transmitter electronics with approval code dd = BI, BJ, BM, BN

Proline Promass and Proline Cubemass Remote Transmitter and Remote Sensor:

8*****-... and O8*****-... with order code dd = BA, BB, BC, BD in combination with k = B (ISEM in transmitter):

Transmitter terminal board:

Terminals 41, 42 -> exciter coil circuit:
Uo = 15V, Io = 129mA, Po = 484mW (sensor group A1/C1/E1)
or
Uo = 15V, Io = 46mA, Po = 173mW (sensor group B1/D1/H1)

Terminals 9, 10, 11, 12, X3, X4 -> temperature circuit:
Uo = 15V, Io = 18.2mA, Po = 68.3mW

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

Only for Promass Q DN ≥150 (Dual ISEM):

Terminals 41, 42, X1, X2 -> exciter coil circuit:
Uo = 15V, Io = 129mA, Po = 484mW (sensor group E1)
or
Uo = 15V, Io = 46mA, Po = 173mW (sensor group B1/D1/H1)

Terminals 9, 10, 11, 12, X3, X4 -> temperature circuit:
Uo = 15V, Io = 18.2mA, Po = 68.3mW

Terminals 4, 5, 6, 7, X5, X6, X7, X8 -> sensor coil circuit:
Uo = 15V, Io = 15.2mA, Po = 57mW

Sensor terminal board:

Terminals 41, 42 -> exciter coil circuit:
Ui = 15V, Ii = 129mA, Pi = 484mW (sensor group A1/C1/E1)
or
Ui = 15V, Ii = 46mA, Pi = 173mW (sensor group B1/D1/H1)

Terminals 9, 10, 11, 12, X3, X4 -> temperature circuit:
Ui = 15V, Ii = 18.2mA, Pi = 68.3mW

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

Only for Promass Q DN ≥150 (Dual ISEM):

Terminals 41, 42, X1, X2 -> exciter coil circuit:
Ui = 15V, Ii = 129mA, Pi = 484mW (sensor group E1)
or
Ui = 15V, Ii = 46mA, Pi = 173mW (sensor group B1/D1/H1)

Terminals 9, 10, 11, 12, X3, X4 -> temperature circuit:
Ui = 15V, Ii = 18.2mA, Pi = 68.3mW

Terminals 4, 5, 6, 7, X5, X6, X7, X8 -> 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 O8*****-... with order code dd = BI, BJ, BM, BN in combination with k = A (ISEM in sensor):

Transmitter terminal board:
Terminals 61, 62, 63, 64 -> Uo = 13.8V, Io = 1.156A, Po = 3.3W

Sensor terminal board:
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 ≤ 0.0089 mH/Ω and C_{cable} ≤ 760nF for group IIC, L/R ≤ 0.0356 mH/Ω and C_{cable} ≤ 4.2µF for group IIB

or

- L_{cable} ≤ 26µH and C_{cable} ≤ 760nF for group IIC, L_{cable} ≤ 104µH and C_{cable} ≤ 4.2µF for group IIB

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

1.5.2. 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 / ATEX: dd = BA, BB, BC, BD

Temperature table for versions with sensor not insulated

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01…04	-50	205	50	50	95	130	150	205	205
				60	---	95	130	150	205	205
Cubemass C	01…06	-50	205	50	50	95	130	150	205	205
				60	---	95	130	150	205	205
Promass E	08…50	-50	205	50	50	100	130	130	205	205
				55	---	80	100	130	205	205
				60	---	(80)	(100)	(130)	(205)	(205)
	80	-50	205	50	50	75	110	170	205	205
				55	---	75	110	170	205	205
				60	---	(75)	(110)	(170)	(205)	(205)
Promass F	08…15	-50	150	50	50	95	130	150	150	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	50	95	100	160	240	240
				60	---	95	100	160	(240)	(240)
	15…25	-50 / -200	350	50	45	95	130	175	275	350
				60	---	95	130	175	275	350
	25…40	-50	150	50	50	95	130	150	150	150
				60	---	95	130	150	150	150
		-50	240	50	50	95	130	170	240	240
				60	---	95	130	170	(240)	(240)
		-200	240	50	50	95	100	170	240	240
				60	---	95	100	170	(240)	(240)
	50	-50	150	50	50	95	130	150	150	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	50	95	100	160	240	240
				60	---	95	100	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
				60	---	75	110	170	(240)	(240)
		-200	240	50	50	75	110	170	240	240
				60	---	75	110	170	(240)	(240)
	50…250	-50 / -200	350	50	45	85	120	175	275	350
				60	---	85	120	175	275	350
Promass H	8	-50 / -200	205	50	50	65	100	160	205	205
				60	---	65	100	160	205	205
	15…50	-50 / -200	205	50	50	75	115	180	205	205
				60	---	75	115	180	205	205
Promass S, P	8	-50	150	45	45	65	100	150	150	150
				60	---	65	100	150	150	150
		-50	205	45	45	65	100	160	205	205
				60	---	65	100	160	205	205
	15…50	-50	150	50	50	75	115	150	150	150
				60	---	75	115	150	150	150
		-50	205	50	50	75	115	180	205	205
				60	---	75	115	180	205	205

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass I	8, 15 15FB, 25	-50	150	50	50	95	130	150	150	150
				60	---	95	120	(150)	(150)	(150)
	25FB, 40 40FB, 50	-50	150	50	50	85	120	150	150	150
				60	---	85	120	(150)	(150)	(150)
	50FB, 80	-50	150	50	50	85	120	150	150	150
				60	---	85	120	(150)	(150)	(150)
Promass O	80…250	-50	205	50	50	75	110	170	205	205
				55	---	75	110	170	205	205
				60	---	75	110	170	(205)	(205)
Promass X	350	-50	205	50	50	90	120	170	205	205
				55	---	90	120	170	205	205
				60	---	(90)	(120)	(170)	(205)	(205)
Promass Q	25…250	-50 / -200	240	50	50	75	110	160	240	240
				60	---	75	110	160	240	240

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

Restriction of Ta,min for versions (Promass sensor F, H, Q) used at Tmed,min < -50°C

Tmed,min	-50°C	-75°C	-100°C	-125°C	-150°C	-175°C	-200°C
Ta,min	-50°C	-47°C	-45°C	-43°C	-41°C	-39°C	-37°C

Notes: (1) This table is applicable only for the Proline Promass 300 with Ex db or XP rated enclosures and for a period when the flowmeter is in non-operating condition, until the transmitter is heated up

Aenderungen:					
	A	10.05.2016 / Bn	F	09.06.2021 / Bn	
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI	
	C	03.05.2017 / Bn	H		
	D	04.07.2018 / Bn	J		
	E	22.10.2019 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0263\GFES0263G.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 Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G 1/6

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

Continued of previous page

Temperature table for versions with sensor insulated (for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01 ... 04	-50	205	50	50	95	130	150	205	205
				55	---	(95)	(130)	(150)	(205)	(205)
Cubemass C	01 ... 06	-50	205	50	---	95	130	150	205	205
				55	---	(95)	(130)	(150)	(205)	(205)
Promass E	08 ...50	-50	205	50	50	100	130	130	205	205
				55	---	(100)	(130)	(130)	(205)	(205)
	80	-50	205	45	50	75	110	170	205	205
				50	---	75	110	170	205	205
				55	---	(75)	(110)	(170)	(205)	(205)
Promass F	08 ... 15	-50	150	50	50	95	130	150	150	150
				60	---	95	110	(150)	(150)	(150)
		-50 / -200	240	50	50	95	130	160	240	240
				55	---	95	(130)	(160)	(240)	(240)
				60	---	95	110	110	110	110
	15 ... 25	-50 / -200	350	50	45	95	130	175	275	350
				60	---	95	130	175	275	350
	25 ... 40	-50	150	50	50	95	130	150	150	150
				60	---	95	110	(150)	(150)	(150)
		-50 / -200	240	50	50	95	130	170	240	240
				55	---	95	(130)	(170)	(240)	(240)
				60	---	95	110	110	110	110
	50	-50	150	50	50	95	130	150	150	150
				60	---	95	110	(150)	(150)	(150)
		-50 / -200	240	50	50	95	130	160	240	240
				55	---	95	(130)	(160)	(240)	(240)
				60	---	95	110	110	110	110
	80 ... 250	-50	150	50	50	75	110	150	150	150
				60	---	75	110	(150)	(150)	(150)
		-50 / -200	240	50	50	75	110	170	240	240
				55	---	75	110	(170)	(240)	(240)
				60	---	75	110	110	110	110
	50 ... 250	-50 / -200	350	50	45	85	120	175	275	350
				60	---	85	120	175	275	350
Promass H	8	-50 / -200	205	50	50	65	100	160	205	205
				55	---	65	100	(160)	(205)	(205)
				60	---	65	100	100	100	100
	15 ... 50	-50 / -200	205	50	50	75	115	180	205	205
				55	---	75	115	(180)	(205)	(205)
				60	---	75	115	115	115	115
Promass S, P	8	-50	150	45	45	65	100	150	150	150
				50	---	65	100	150	150	150
				60	---	65	100	125	(150)	(150)
		-50	205	45	45	65	100	160	205	205
				50	---	65	100	160	205	205
				60	---	65	100	115	(205)	(205)
	15 ... 50	-50	150	50	50	75	115	150	150	150
				60	---	75	115	125	(150)	(150)
		-50	205	50	50	75	115	180	205	205
				60	---	75	115	(150)	(150)	(150)
Promass I	8, 15 15FB, 25	-50	150	50	50	95	130	150	150	150
				60	---	95	120	(150)	(150)	(150)
	25FB, 40 40FB, 50	-50	150	50	50	85	120	150	150	150
				60	---	85	120	(150)	(150)	(150)
	50FB, 80	-50	150	50	50	85	120	150	150	150
				60	---	85	120	(150)	(150)	(150)

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass O	80 ... 250	-50	205	50	50	75	110	170	205	205
				55	—	(75)	(110)	(170)	(205)	(205)
Promass X	350	-50	205	50	50	90	120	170	205	205
				55	—	(90)	(120)	(170)	(205)	(205)
Promass Q	25 ... 250	-50 / -200	240	50	50	75	110	160	240	240
				55	—	(75)	(110)	(160)	(240)	(240)

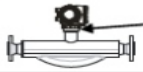
Notes:
(1) $T_{a,min}$ = -40°C, -50°C respectively (see nameplate)
(2) values in brackets are applicable for installation where the transmitter is not installed above the sensor
(3) for applicable version with maximum medium temperatue and minimum medium temperature see nameplate

Temperature table for versions 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 (85C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	all	59	72	75	76	77	77

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
- $T_{a,min}$ = -40°C, -50°C respectively (see nameplate)
- for maximum medium temperatue and minimum medium temperature see nameplate

(2) location of reference point



Restriction of $T_{a,min}$ for versions (Promass sensor F, H, Q) used at $T_{med,min}$ < -50°C

$T_{med,min}$	-50°C	-75°C	-100°C	-125°C	-150°C	-175°C	-200°C
$T_{a,min}$	-50°C	-47°C	-45°C	-43°C	-41°C	-39°C	-37°C

Notes: (1) This table is applicable only for the Proline Promass 300 with Ex db or XP rated enclosures and for a period when the flowmeter is in non-operating condition, until the transmitter is heated up

Aenderungen:					
	A	10.05.2016 / Bn	F	09.06.2021 / Bn	Alle gesetzlichen Urheberrechte. vorbehalten. Diese Zeichnung darf ohne unsere Genehmigung weder vervielfältigt werden noch dritten Personen und Konkurrenzfirmen zugänglg gemacht werden.
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI	
	C	03.05.2017 / Bn	H		
	D	04.07.2018 / Bn	J		
	E	22.10.2019 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0263\G\FES0263G.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 Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G **2/6**

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

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

Notes: Pages 3 and 4 apply 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
IECEx / ATEX: dd = BA, BB, BC, BD

Temperature table for versions with sensor not insulated

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A (type 8A5B)	01 … 04	-50	205	60	60	95	130	150	205	205
Promass A (type 8A5C)	01 … 04	-50	205	55	55	95	130	150	205	205
				60	---	95	130	150	205	205
Cubemass C	01 … 06	-50	205	50	50	95	130	150	205	205
				60	---	95	130	150	205	205
Promass E	08 …50	-50	205	50	50	100	130	130	205	205
				60	---	100	130	130	205	205
	80	-50	205	60	60	75	110	170	205	205
Promass F	08 … 15	-50 / -60	150	55	50	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 / -60 / -200	240	55	50	95	130	160	240	240
				60	---	95	130	160	240	240
	15 … 25	-50 / -200	350	60	70	95	130	175	265	350
	25 … 40	-50 / -60	150	55	55	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 / -60 / -200	240	55	55	95	130	170	240	240
				60	---	95	130	170	240	240
	50	-50 / -60	150	55	55	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 / -60 / -200	240	60	60	95	130	170	240	240
	80 … 250	-50 / -60	150	55	55	75	110	150	150	150
				60	---	75	110	150	150	150
		-50 / -60 / -200	240	60	60	75	110	170	240	240
	50 … 250	-50 / -200	350	60	70	85	120	175	265	350
Promass H	8	-50 / -200	205	50	50	65	100	160	205	205
				60	---	65	100	160	205	205
	15 … 50	-50 / -200	205	60	60	75	115	180	205	205
Promass S, P	8	-50	150	45	45	65	100	150	150	150
				60	---	65	100	150	150	150
		-50	205	45	45	65	100	160	205	205
				60	---	65	100	160	205	205
	15 … 40	-50	150	50	50	75	115	150	150	150
				60	---	75	115	150	150	150
		-50	205	50	50	75	115	180	205	205
				60	---	75	115	180	205	205
	50	-50	150	60	60	75	115	150	150	150
		-50	205	60	60	75	115	180	205	205

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass I	8, 15 15FB, 25	-50	150	60	60	95	130	150	150	150
	25FB, 40, 40FB, 50, 50FB, 80	-50	150	60	70	85	120	150	150	150
Promass O	80 … 250	-50	205	60	60	75	110	170	205	205
Promass X	350	-50 / -60	205	60	70	90	120	170	205	205
Promass Q	25 … 250	-50 / -60 / -200	240	60	55	75	110	160	240	240

Notes: (1) Ta,min = -40°C, -50°C / -60°C respectively (see nameplate)
(2) for applicable version with maximum medium temperatue and minimum medium temperature see nameplate

Transmitter for all versions:

$T_{a,max}$ (°C)	
T6 (85°C)	T5 (100°C)
55	60

Notes: (1) Ta,min = -50°C (for limitation see name plate)

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	A	10.05.2016 / Bn	F	09.06.2021 / Bn			Ersatz für:
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI			Ersteller: FES / Bn
	C	03.05.2017 / Bn	H				FILE: M:\Zeichng\FES0263\G\FES0263G.doc
	D	04.07.2018 / Bn	J				
	E	22.10.2019 / Bn	K				

Control Drawing IECEx, ATEX, CSA, cCSAus
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1
Thermal Parameter
Proline Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G **3/6**

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

Continued of previous page

Temperature table for versions with sensor insulated (for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A (type 8A5B)	01 … 04	-50	205	50	60	95	130	150	(180)	(180)
				60	60	95	130	150	150	150
Promass A (type 8A5C)	01 … 04	-50	205	50	60	95	130	150	(180)	(180)
				55	55	95	130	150	150	150
				60	---	95	130	150	150	150
Cubemass C	01 … 06	-50	205	50	60	95	130	150	(180)	(180)
				60	---	95	130	150	150	150
Promass E	08 …50	-50	205	50	50	100	130	130	205	205
				60	---	100	130	130	205	205
	80	-50	205	60	60	75	110	170	205	205
Promass F	08 … 15	-50 / -60	150	55	50	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 /-60 / -200	240	55	50	95	130	160	240	240
				60	---	95	130	160	240	240
	15 … 25	-50 / -200	350	60	70	95	130	175	265	350
	25 … 40	-50 / -60	150	55	55	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 / -60 / -200	240	55	55	95	130	170	240	240
				60	---	95	130	170	240	240
	50	-50 / -60	150	55	55	95	130	150	150	150
				60	---	95	130	150	150	150
		-50 / -60 / -200	240	60	60	95	130	170	240	240
	80 … 250	-50 / -60	150	55	55	75	110	150	150	150
				60	---	75	110	150	150	150
		-50 / -60 / -200	240	60	60	75	110	170	240	240
	50 … 250	-50 / -200	350	60	70	85	120	175	265	350
Promass H	8	-50 / -200	205	50	50	65	100	160	205	205
				60	---	65	100	160	205	205
	15 … 50	-50 / -200	205	60	60	75	115	180	205	205
Promass S, P	8	-50	150	45	45	65	100	150	150	150
				60	---	65	100	150	150	150
		-50	205	45	45	65	100	160	205	205
				60	---	65	100	160	205	205
	15 … 40	-50	150	50	50	75	115	150	150	150
				60	---	75	115	150	150	150
		-50	205	50	50	75	115	180	205	205
				60	---	75	115	180	205	205
	50	-50	150	60	60	75	115	150	150	150
		-50	205	60	60	75	115	180	205	205
Promass I	8, 15 15FB, 25	-50	150	60	60	95	130	150	150	150
	25FB, 40, … 80	-50	150	60	70	85	120	150	150	150
Promass O	80 … 250	-50	205	60	60	75	110	170	205	205

Sensor	Size / DN	T_{med} min (°C)	$T_{a,max}$ max (°C)	$T_{med,max}$ (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass X	350	-50 / -60	205	60	70	90	120	170	205	205
Promass Q	25 … 250	-50 / -60 / -200	240	60	55	75	110	160	240	240

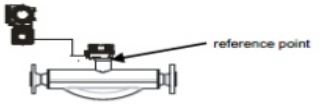
Notes: (1) Ta,min = -40°C, -50°C / -60°C respectively (see nameplate)
(2) values in brackets are applicable for installation where the sensor enclosure is not installed above the sensor
(3) for applicable version with max. medium temperatue and min. medium temperature see nameplate

Temperature table for versions 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	63	72	84	91	91	91

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

(2) location of reference point



Transmitter for all versions:

$T_{a,max}$ (°C) T6 (85°C)	T5 (100°C)
55	60

Notes: (1) Ta,min = -50°C (for limitation see name plate)

Aenderungen:					
	A	10.05.2016 / Bn	F	09.06.2021 / Bn	
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI	
	C	03.05.2017 / Bn	H		
	D	04.07.2018 / Bn	J		
	E	22.10.2019 / Bn	K		

Ersetzt durch:

Ersatz für:

Ersteller: FES / Bn

FILE: M:\Zeichng\FES\0263\G\FES0263G.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 Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G **4/6**

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

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

Notes: Pages 5 and 6 apply to versions with extended order code covering: 8*5*** – dd*******A... O8*5*** – dd*******A... with approval option cCSAus / CSA: IECEx / ATEX: 8x5Bxx – dd*******A... dd = CM, CN, C5, C6 dd = BI, BJ, BM, BN O8x5Bxx – dd*******A...

Temperature table for versions with sensor not insulated

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A (type 8A5B)	01...04	-50	205	35	60	95	130	150	205	205
				50	---	95	130	150	205	205
				60	---	---	130	150	205	205
Promass A (type 8A5C)	01...04	-50	205	35	55	95	130	150	205	205
				50	---	95	130	150	205	205
				55	---	---	130	150	205	205
				60	---	---	130	150	190	190
Cubemass C	01...06	-50	205	35	40	75	130	150	205	205
				50	---	75	130	150	205	205
				55	---	---	130	150	205	205
				60	---	---	130	150	160	160
Promass E	08...50	-50	205	35	40	60	130	130	205	205
				50	---	60	130	130	205	205
				60	---	---	130	130	205	205
	80	-50	205	35	40	60	110	170	205	205
				50	---	60	110	170	205	205
				60	---	---	110	170	205	205
Promass F	08...40	-50	150	35	40	65	130	150	150	150
				50	---	65	130	150	150	150
				60	---	---	130	130	130	130
		-50 / -200	240	35	40	65	130	170	240	240
				50	---	65	130	170	240	240
				60	---	---	130	170	240	240
	50	-50	150	35	40	65	130	150	150	150
				50	---	65	130	150	150	150
				60	---	---	130	130	130	130
		-50 / -200	240	35	40	65	130	160	240	240
				50	---	65	130	160	240	240
				60	---	---	130	160	240	240
	15...25	-50 / -200	350	35	40	80	130	175	275	350
				50	---	80	130	175	275	350
				60	---	---	130	175	240 (275)	240 (350)
	80...250	-50	150	35	40	65	110	150	150	150
				50	---	65	110	150	150	150
				60	---	---	110	130	130	130
		-50 / -200	240	35	40	65	110	170	240	240
				50	---	65	110	170	240	240
				60	---	---	110	170	240	240
	50...250	-50 / -200	350	35	40	80	120	175	275	350
				50	---	80	120	175	275	350
				60	---	---	120	175	240 (275)	240 (350)
Promass S, P	8	-50	150	35	45	65	100	150	150	150
				50	---	65	100	150	150	150
				60	---	---	100	150	150	150
		-50	205	35	45	65	100	160	205	205
				50	---	65	100	160	205	205
				60	---	---	100	160	205	205
	15...50	-50	150	35	45	65	110	150	150	150
				50	---	65	110	150	150	150
				60	---	---	110	150	150	150

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass S, P	15...50	-50	205	35	45	65	110	180	205	205
				50	---	65	110	180	205	205
				60	---	---	110	180	205	205
Promass H	8	-50 / -200	205	35	40	65	100	160	205	205
				50	---	65	100	160	205	205
				60	---	---	100	160	205	205
	15...50	-50 / -200	205	35	40	65	115	180	205	205
				50	---	65	115	180	205	205
				60	---	---	115	180	205	205
Promass I	8, 80	-50	150	35	45	70	115	140	140	150
				50	---	70	115	140	140	150
				55	---	---	115	140	140	150
				60	---	---	115	140	140	140
Promass O	80 ... 250	-50	205	35	45	65	110	170	205	205
				50	---	65	110	170	205	205
				60	---	---	110	170	205	205
Promass X	350	-50	205	35	45	65	110	170	205	205
				50	---	65	110	170	205	205
				60	---	---	110	170	205	205
Promass Q	25 ... 250	-50 / -200	240	35	45	65	100	160	240	240
				50	---	65	100	160	240	240
				60	---	---	100	160	240	240

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

Transmitter for all versions:

Type of enclosure	$T_{a,max}$ (°C) Ordinary location	T6 (85°C)	T5 (100°C)	T4 (135°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: (1) aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
plastic enclosure: Ta,min = -40°C

Aenderungen:					
	A	10.05.2016 / Bn	F	09.06.2021 / Bn	
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI	
	C	03.05.2017 / Bn	H		
	D	04.07.2018 / Bn	J		
	E	22.10.2019 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES\0263\G\FES0263G.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 Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G **5/6**

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

Temperature table for versions with sensor insulated (for insulation refer to manual of Endress+Hauser Flowtec)

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01 … 04	-50	205	35	40	90	90	150	150	150
				40	---	90	90	150	150	150
				45	---	---	90	150	150	150
				50	---	---	90	120	120	120
Cubemass C	01 … 06	-50	205	35	40	90	100	150	150	150
				40	---	90	100	150	150	150
				45	---	---	100	150	150	150
				50	---	---	100	120	120	120
Promass E	08 …50	-50	205	35	40	55	130	160	205	205
				50	---	55	130	160	205	205
	80	-50	205	35	40	55	110	170	205	205
				50	---	55	110	170	205	205
Promass F	08…40	-50	150	35	40	60	130	130	130	130
				45	---	60	130	130	130	130
				50	---	---	130	130	130	130
		-50 / -200	240	35	40	60	130	170	240	240
				45	---	60	130	170	240	240
				50	---	---	130	170	240	240
	50	-50	150	35	40	60	130	130	130	130
				45	---	60	130	130	130	130
				50	---	---	130	130	130	130
		-50 / -200	240	35	40	60	130	160	240	240
				45	---	60	130	160	240	240
				50	---	---	130	160	240	240
	15 … 25	-50 / -200	350	35	40	80	130	175	275	350
				50	---	80	130	175	275	350
				60	---	---	130	175	240 (275)	240 (350)
	80 … 250	-50	150	35	40	60	110	130	130	130
				45	---	60	110	130	130	130
				50	---	---	110	130	130	130
		-50 / -200	240	35	40	60	110	170	240	240
				45	---	60	110	170	240	240
				50	---	---	110	170	240	240
	50 … 250	-50 / -200	350	35	40	80	120	175	275	350
				50	---	80	120	175	275	350
				60	---	---	120	175	240 (275)	240 (350)
Promass S, P	8	-50	150	35	40	55	100	150	150	150
				45	---	55	100	150	150	150
				50	---	---	100	120	120	120
		-50	205	35	40	55	100	160	205	205
				50	---	55	100	160	205	205
				55	---	---	100	160	205	205
	15 … 50	-50	150	35	40	55	110	150	150	150
				45	---	55	110	150	150	150
				50	---	---	110	120	120	120
		-50	205	35	40	55	100	180	205	205
				50	---	55	100	180	205	205
				55	---	---	100	180	205	205
Promass I	8, 80	-50	150	35	45	70	90	150	150	150
				45	---	70	90	150	150	150
				50	---	---	90	120	120	---
Promass O	80 … 250	-50	205	35	40	55	110	170	205	205
				50	---	55	110	170	205	205
Promass X	350	-50	205	35	40	55	120	170	205	205
				50	---	55	120	170	205	205
				55	---	---	120	170	205	205

Sensor	Size / DN	T_{med} min (°C)	T_{med} max (°C)	$T_{a,max}$ (°C)	$T_{med,max}$ (°C) T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass Q	25 … 250	-50 / -200	240	35	40	55	100	160	240	240
				50	---	55	100	160	240	240
Promass H	8	-50 / -200	205	35	40	65	100	160	205	205
				45	---	65	100	160	205	205
				55	---	---	100	160	205	205
	15 … 50	-50 / -200	205	35	40	65	115	180	205	205
				45	---	65	115	180	205	205
				55	---	---	115	180	205	205

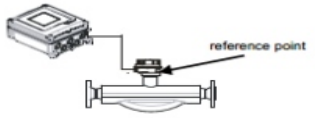
Notes: (1) Ta,min = -40°C, -50°C respectively (see nameplate)
(2) for applicable version with maximum medium temperatue and minimum medium temperature see nameplate

Temperature table for versions 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 (80°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	all	45	64	82	82	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 temperatue and minimum medium temperature see nameplate

(2) location of reference point



Transmitter for all versions:

Type of enclosure	$T_{a,max}$ (°C) Ordinary location	T6 (85°C)	T5 (100°C)	T4 (135°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: (1) aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
plastic enclosure: Ta,min = -40°C

Aenderungen:					
	A	10.05.2016 / Bn	F	09.06.2021 / Bn	
	B	24.10.2016 / Bn	G	15.07.2023 / DOMI	
	C	03.05.2017 / Bn	H		
	D	04.07.2018 / Bn	J		
	E	22.10.2019 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES\0263\G\FES0263G.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 Promass 300/500, Proline Cubemass 300/500

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	15.07.2023	DOMI
Gesehen		

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

FES0263G **6/6**

2. Proline Promag 300/500

2.1. Marking

Proline Promag 300			
Order Code: 5*3*** – dd*ff*************+#**# O5*3*** – dd*ff***************+#**#			
dd = approval	ff = I/O	ATEX marking	Marking of Ex protection
BB	CA, CB, CC, CD, HA, TA, MC, RC	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db eb ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ⓔ II2G Ⓔ II2D	Ex db eb ia IIC T6...T1 Gb Ex tb IIIC T** °C Db
BD	CA, CB, CC, CD, HA, TA, MC, RC	Ⓔ II2(1)G Ⓔ II2(1)D	Ex db eb ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ⓔ II2G Ⓔ II2D	Ex db eb ia IIC T6...T1 Gb Ex tb IIIC T** °C Db

Information: Marking of protection representative for		
db	->	electronic compartment
eb	->	terminal compartment, sensor, electronic for sensor circuit Ex eb
ia	->	sensor, display
tb	->	transmitter enclosure and sensor
[ia Ga]	->	electronic with input/output Ex ia
[ia Da]	->	electronic with input/output Ex ia

Information: Marking of protection representative for		
db	->	electronic and terminal compartments
eb	->	sensor, electronic for sensor circuit Ex eb
ia	->	sensor, display
tb	->	transmitter enclosure and sensor
[ia Ga]	->	electronic with input/output Ex ia
[ia Da]	->	electronic with input/output Ex ia

Proline Promag 500 Analog (with ISEM integrated in transmitter)				
Order Code: 5*5*** – dd*ff****B*************+#**# O5*5*** – dd*ff****B***************+#**#				
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection
BB	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA,	Transmitter	Ⓔ II2(1)G II2(1)D	Ex db eb [ia Ga] IIC T6...T5 Gb Ex tb [ia Da] IIIC T85°C Db

Information: Marking of protection representative for		
db	->	electronic compartment
eb	->	terminal compartment,

Proline Promag 500 Analog (with ISEM integrated in transmitter)					
Order Code: 5*5*** – dd*ff****B**********+#**# O5*5*** – dd*ff****B**********+#**#					
	RB, RC, SA, MA, MB, MC	Sensor	II2G II2D	Ex eb ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	sensor, wall mounted terminal box, sensor terminal box, electronic for sensor circuit Ex eb ia -> sensor, display tb -> transmitter enclosures, sensor, sensor terminal box [ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
BD	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	II2(1)G II2(1)D	Ex db eb [ia Ga] IIC T6...T5 Gb Ex tb [ia Da] IIIC T85°C Db	db -> electronic and terminal compartments eb -> sensor, wall mounted terminal box, electronic for sensor circuit Ex eb ia -> sensor, display tb -> transmitter enclosures, sensor, sensor terminal box [ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
		Sensor	II2G II2D	Ex eb ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db	
B7	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	II2(1)G	Ex db eb [ia Ga] IIC T6... T5 Gb	db -> electronic compartment eb -> terminal compartment,sensor, wall mounted terminal box, sensor terminal box, electronic for sensor circuit Ex eb ia -> sensor, display [ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit
		Sensor	II2G	Ex eb ia IIC T6...T1 Gb	

Proline Promag 500 Analog (with ISEM integrated in transmitter)				
Order Code: 5*5*** – dd*ff****B**********+#**# O5*5*** – dd*ff****B**********+#**#				
B8	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	II2(1)G	Ex db eb [ia Ga] IIC T6... T5 Gb
		Sensor	II2G	Ex eb ia IIC T6...T1 Gb

db	->	electronic and terminal compartments
eb	->	sensor, wall mounted terminal box, electronic for sensor circuit Ex eb
ia	->	sensor, display
[ia Ga]	->	electronic with input/output Ex ia and/or output for sensor circuit

Proline Promag 500 Digital (with ISEM integrated in sensor)				
Order Code: 5*5*** – dd*ff****A**********+#**# O5*5*** – dd*ff****A**********+#**#				
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection
BN and BJ	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	---	---
		Sensor	IIG IID	Ex db ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db

Information: Marking of protection representative for		
db	->	sensor terminal box
ia	->	sensor
tb	->	sensor, sensor terminal box

2.2. Order Code

Extended order code Proline Promag 300:

5a3bcc – ddzeffghjlpstttuvww + ##**

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

5x3bxx – ddeffghjlpww + ##** for replacement transmitter only

O5x3bxx – ddeffghjlpwwyy + ##** for replacement transmitter OEM

Extended order code Proline Promag 500:

5a5bcc – ddzeffghijkmnopstttuvww + ##**

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

5x5bxx – ddeffghijkmopqqww + ##** for replacement transmitter only

O5x5bxx – 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 [ia] IIC T6...T1 Gb	
		Ex tb IIIC T* Db	
BD	=	Ex db ia [ia] IIC T6...T1 Gb	
		Ex tb IIIC T* Db	

Proline Promag 500 :

BB	=	Ex db eb [ia] IIC T6...T5 Gb	(transmitter)
		Ex eb ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BD	=	Ex db [ia] IIC T6...T5 Gb	(transmitter)
		Ex eb ia IIC T6...T1 Gb	(sensor)
		Ex tb IIIC T** Db	(transmitter + sensor)
BJ	=	Ex db ia IIC T6...T1 Gb	(sensor)
		Ex ia tb IIIC T** Db	(sensor)
BN	=	Ex db ia IIC T5...T4 Gb	(sensor)
		Ex ia tb IIIC T* Db	(sensor)
B7	=	Ex db eb [ia] IIC T6...T5 Gb	(transmitter)
		Ex eb [ia] IIC T6...T1 Gb	(sensor)
B8	=	Ex db [ia] IIC T6...T5 Gb	(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	=	100-230Vac
I	=	100-230Vac / 24Vdc
X	=	sensor only

ff = Input / Output 1

BA	=	4-20mA HART
BB	=	4-20mA WHART
CA	=	4-20mA HART Ex i (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 = 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 = 4-20mA
- 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

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
- B = Transmitter

l = **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

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**
any single number or letter

ww = **Device Model (two digit)** (refer to assignment 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**

2.3. Assignment of Flowmeter to Replacement Transmitter

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

Product flowmeters			**Replacement transmitter type**		
Order code	**Generation code b =**	**device model code ww =**	**Order code**	**Generation code b =**	**device model code ww =**
5H*b**-...ww, O5H*b**-...ww 5P*b**-...ww, O5P*b**-...ww 5W*b**-...ww, O5W*b**-...ww	B	A1 / A2	5x*bxx-...ww, O5x*bxx-...ww	B	A1 / A2

2.4. Parameters

2.4.1. Electrical Parameters

Power Supply		
Order Code e =	**terminal no.**	**values**

D [1)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} U_M = 250V_{AC}
E [1)]	No. 1(L+/L), 2(L-/N)	U_N = 85...264V_{AC} U_M = 250V_{AC}
I [2)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} /85...264V_{AC} U_M = 250V_{AC}

1) applicable for products with approval code dd = BB, BD, B7, B8
2) applicable for products with approval code dd = BJ, BN

Input/Output 1		
Order Code ff =	**terminal no.**	**values**
BA, BB, MA	No. 26, 27	U_N = 30V_{DC} U_M = 250V_{AC}
LA, GA, SA	No. 26, 27	U_N = 32V_{DC} U_M = 250V_{AC}
CA, CB	No. 26, 27	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 6nF
CC, CD	No. 26, 27	1) U_O = 21.8V I_O = 90mA P_O = 491mW L_O = 4.1mH (IIC) / 15mH (IIB) C_O = 160nF (IIC) / 1160nF (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 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	1), 2) 2-WISE power load APL port profile SLAA U_i = 17.5V I_i = 380mA P_i = 5.32W L_i ≤ 10µH C_i ≤ 5nF
NA, RA	IO1 / RJ45	U_N = 30V_{DC} U_M = 250V_{AC}

1) applicable for products with approval code dd = BB, BD, B7, B8

2) no additional internal capacitances are effective to the output value (refer to note 1 of drawing "Ethernet-APL Installation Drawing - Device Vendors v1.0, March 8th 2022")

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

H	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**
B7, 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 = n.a., Ci = 200nF, Li = 0
B8, BD	Service Interface	Service Interface shall only be installed • to a 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
BJ, BN	Service Interface	U_N = 3.3V

Antenna bushing		
Order Code dd =	**terminal no.**	**values**
BB, BJ, BN, B7	Type N connector	See conditions of safe use

Remote Display		
Order Code dd =	**terminal no.**	**values**
BB, BD, B7, B8	No. 81, 82, 83, 84	Uo = 3.9V Io = 1.5A (spark) 200mA (power) Po = 600mW Ri = 2.6Ω Co = 670µF Lo = 0

Notes:

- 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 = ≤ 0.024 mH/Ω applies.
- Remote display type DKX001 or ODKX001 is not intended to be connected to the transmitter electronics with approval code dd = BJ, BN

Proline Promag Remote Transmitter and Remote Sensor:

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

Transmitter terminal board:

Terminals 4, 5, 6, 7, 8, 32, 33, 34, 35, 36, 37	->	Uo = 26.6V, Io = 19.2mA, Po = 128mW, 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 terminal board:

Terminals 4, 5, 6, 7, 8, 32, 33, 34, 35, 36, 37	->	Ui = 26.6V, Ii = n.a., Pi = n.a., Li = 0, Ci = 0
Terminals 41, 42	->	U_N = 60V, I_N = 90mA

Interconnection of circuit connected to terminals 4, 5, 6, 7, 8, 37, 36 for use of a cable with a maximum length of 200m is allowed when using a cable which has the following parameters:

Cable inductance ≤ 1 mH/km

Cable capacitance ≤ 0.42 µF/km

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

Transmitter terminal board:

Terminals 61, 62	->	U_N = 35V
Terminals 63, 64	->	U_N = 3.3V

Sensor terminal board:

Terminals 61, 62	->	U_N = 35V
Terminals 63, 64	->	U_N = 3.3V

2.4.2. Thermal Parameters (Zone 1)

Proline Promag H/P/W 300

Notes:

This page applies to versions with extended order code covering:

5(H/P)3B** - dd...
5W3B** - dd...
with approval option cCSAus : dd = CD, CE, C2, C4

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

5x3Bxx - dd...
5x3Bxx - dd...
IECEx / ATEX: dd = BB, BD

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

Standard version with sensor not insulated:

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P Promag W	15...600	PTFE	-40	45	80	90	130	130	130	130
				50	60	90	130	130	130	130
				55	---	---	130	130	130	130
				60	---	---	100	100	100	100
	25...200	PFA	-40	40	80	95	130	150	150	150
				45	80	95	130	130	130	130
				50	60	90	130	130	130	130
				60	---	---	100	100	100	100
	50...3000	HG	-20	50	60	80	80	80	80	80
				60	---	---	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (4)	-40	45	80	95	120	120	120	120
				55	---	95	120	120	120	120
				60	---	95	100	100	100	100
Promag H	2...150	PFA	-40	50	80 (3)	95	130	150	150	150
				55 (3)	65 (3)	80	130	150	150	150
				60 (3)	---	---	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
(4) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

High temperature version with sensor not insulated:

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P Promag W	15...600	PTFE	-40	50	60	95	130	130	130	130
				55	---	95	130	130	130	130
				60	---	---	100	100	100	100
	25...200	PFA	-40	45	80	95	130	150	150	150
				50	60	95	130	150	150	150
				60	---	---	100	100	100	100
	50...3000	HG	-20	50	60	80	80	80	80	80
				60	---	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (3)	-40	45	80	95	120	120	120	120
				55	---	95	120	120	120	120
				60	---	95	100	100	100	100

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P Promag W	15...600	PTFE	-40	50	60	95	130	130	130	130
				55	---	95	130	130	130	130
				60	---	---	100	100	100	100
	25...200	PFA	-40	45	80	95	130	150	150	150
				50	60	95	130	150	150	150
				60	---	---	100	100	100	100
	50...3000	HG	-20	50	60	80	80	80	80	80
				60	---	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (3)	-40	45	80	95	120	120	120	120
				55	---	95	120	120	120	120
				60	---	95	100	100	100	100

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ @T1 (°C)	Tmax 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)
Promag P Promag W	all	PTFE	-40	60	130	56.4	71.3	72.0	72.0	72.0	72.0
		PFA	-40	60	150	56.4	71.3	72.0	72.0	72.0	72.0
		HG	-20	60	80	56.4	71.3	72.0	72.0	72.0	72.0
		PU	-20	60	50	56.4	71.3	72.0	72.0	72.0	72.0
		ETFE	-40	60	120 (3)	56.3	71.3	72.0	72.0	72.0	72.0

Notes:
(1) Ta,min = -40°C (for limitation see name plate)
(2) Location of reference point
(3) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

(2) reference point

Aenderungen:					
	A	10.05.2016 / Bn	F	12.10.2022 / Bn	
	B	24.10.2016 / Bn	G		
	C	03.05.2017 / Bn	H		
	D	15.02.2018 / Bn	J		
	E	10.06.2021 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0260F\FES0260F.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

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	12.10.2022	Bn
Gesehen		

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

FES0260F 1/3

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:

This page applies to versions with extended order code covering:

5(H/P)5B** - dd*******B… O5(H/P)5B** - dd*******B… 5x5Bxx – dd*******B… O5x5Bxx - dd*******B…
5W5B** - dd*******B… O5W5B** - dd*******B… 5x5Bxx - dd*******B… O5x5Bxx - dd*******B…
with approval option cCSAus: dd = CD, CE, C2, C4, C7, C8 IECEx / ATEX: dd = BB, BD, B7, B8

Sensor of Standard version with sensor not insulated

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15…600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25…200	PFA	-40	50	80	95	130	150	150	150
				60	80	95	130	130	130	130
	50…3000	HG	-20	60	80	80	80	80	80	80
	25…1000	PU	-20	50	50	50	50	50	50	50
	25…3000	ETFE (4)	-40	60	80	95	120	120	120	120
Promag H	2…150	PFA	-40	45	80	95	130	150	150	150
				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) $T_{med,max}$ 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
(4) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor not insulated

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15…600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25…200	PFA	-40	60	80	95	130	150	150	150
	50…3000	HG	-20	60	80	80	80	80	80	80
	25…1000	PU	-20	50	50	50	50	50	50	50
	25…3000	ETFE (3)	-40	60	80	95	120	120	120	120

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15…600	PTFE	-40	60	75	95	130	130	130	130
Promag W	25…200	PFA	-40	60	80	95	130	150	150	150
	50…3000	HG	-20	60	75	80	80	80	80	80
	25…1000	PU	-20	50	50	50	50	50	50	50
	25…3000	ETFE (3)	-40	55	80	95	120	120	120	120
				60	75	95	120	120	120	120

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ @T1 (°C)	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)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	69	69	69
Promag W		PFA	-40	60	150	63.8	65.7	69	69	69	69
		HG	-20	60	80	63.8	65.7	69	69	69	69
		PU	-20	50	50	63.8	65.7	69	69	69	69
		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 $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

Transmitter for all versions:

$T_{a,max}$ (°C) (1)	
T6 (85°C)	T5 (100°C)
55	60

Notes: (1) Ta,min = -50°C (for limitation see name plate)

Aenderungen:					
	A	10.05.2016 / Bn	F	12.10.2022 / Bn	
	B	24.10.2016 / Bn	G		
	C	03.05.2017 / Bn	H		
	D	15.02.2018 / Bn	J		
	E	10.06.2021 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0260\F\FES0260F.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

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	12.10.2022	Bn
Gesehen		

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

FES0260F **2/3**

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

Proline Promag H/P/W 500

Notes:

This page applies to versions with extended order code covering:

5(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 Standard version with sensor not insulated

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25...200	PFA	-40	50	80	95	130	150	150	150
				60	80	95	130	130	130	130
	50...3000	HG	-20	60	80	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (4)	-40	60	80	95	120	120	120	120
Promag H	2...150	PFA	-40	35	80	95	130	150	150	150
				45	80	95	135	135	135	135
				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
(4) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

Sensor of High temperature version with sensor not insulated:

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15...600	PTFE	-40	60	80	95	130	130	130	130
Promag W	25...200	PFA	-40	60	80	95	130	150	150	150
	50...3000	HG	-20	60	80	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (3)	-40	60	80	95	120	120	120	120

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

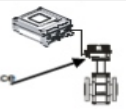
Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ (°C) (2) T6 (85°C)	T5 (100°C	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promag P	15...600	PTFE	-40	60	70	95	130	130	130	130
Promag W	25...200	PFA	-40	60	75	95	130	150	150	150
	50...3000	HG	-20	60	75	80	80	80	80	80
	25...1000	PU	-20	50	50	50	50	50	50	50
	25...3000	ETFE (3)	-40	60	70	95	120	120	120	120

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) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)

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

Sensor	Size / DN	Liner	$T_{med,min}$ (°C)	$T_{a,max}$ (°C) (1)	$T_{med,max}$ @T1 (°C)	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)
Promag P	all	PTFE	-40	60	130	63.8	65.7	69	70.9	70.9	70.9
Promag W		PFA	-40	60	150	63.8	65.7	69	70.9	70.9	70.9
		HG	-20	60	80	63.8	65.7	69	70.9	70.9	70.9
		PU	-20	50	50	63.8	65.7	69	70.9	70.9	70.9
		ETFE	-40	60	120 (3)						

Notes:
(1) Ta,min = -40°C (for limitation see name plate)
(2) Location of reference point
(3) Limitation of $T_{med,max}$ = 120°C depending on process pressure (see nameplate)



Transmitter for all versions:

Type of enclosure	$T_{a,max}$ (°C) (1) Ordinary location (°C)	T6 (85°C)	T5 (100°C	T4 (135°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: (1) aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
plastic enclosure: Ta,min = -40°C

Aenderungen:					
	A	10.05.2016 / Bn	F	12.10.2022 / Bn	
	B	24.10.2016 / Bn	G		
	C	03.05.2017 / Bn	H		
	D	15.02.2018 / Bn	J		
	E	10.06.2021 / Bn	K		

Ersetzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0260\F\FES0260F.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

Gezeichnet	10.05.2016	Bn
Geprüft		
Ex-geprüft	12.10.2022	Bn
Gesehen		

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

FES0260F 3/3

3. Proline Prosonic Flow G300/500 and Proline Prosonic Flow P 500

3.1. Marking

Proline Prosonic Flow G 300			
Order Code: 9*3*** – dd*ff**********+#**# O9*3*** – dd*ff**********+#**#			
dd = approval	ff = I/O	ATEX marking	Marking of Ex protection
BB	HA, TA, CA, CB, CC, CD, MC, RC	II2(1)G II2(1)D	Ex db eb ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II2G II2D	Ex db eb ia IIC T6...T1 Gb Ex tb IIIC T** °C Db
BD	HA, TA, CA, CB, CC, CD, MC, RC	II2(1)G II2(1)D	Ex db ia [ia Ga] IIC T6...T1 Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	II2G II2D	Ex db ia IIC T6...T1 Gb Ex tb IIIC T** °C Db

Information: Marking of protection representative for
db -> electronic compartment eb -> terminal compartment ia -> sensor, display tb -> transmitter enclosures [ia Ga] -> electronic with input/output Ex ia [ia Da] -> electronic with input/output Ex ia
db -> electronic and terminal compartments ia -> sensor, display tb -> transmitter enclosures [ia Ga] -> electronic with input/output Ex ia [ia Da] -> electronic with input/output Ex ia

Proline Prosonic Flow G 500 Digital (with ISEM integrated in sensor)				
Order Code: 9*5*** – dd*ff****A**********+#**# O9*5*** – dd*ff****A**********+#**#				
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection
BJ and BN	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	---	---
		Sensor	II2G II2D	Ex db ia IIC T6...T1 Gb Ex ia tb IIIC T** °C Db

Information: Marking of protection representative for
db -> sensor terminal box ia -> sensor tb -> sensor, sensor terminal box

Proline Prosonic Flow P 500 Analog (with ISEM integrated in transmitter)					
Order Code: 9P5*** – dd*ff***B**********+#**# O9P5*** – dd*ff***B**********+#**# DK9013 – dd******** ODK9013 – dd**********					
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection	Information: Marking of protection representative for
BB	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	Ⓔx II2(1)G Ⓔx II2(1)D	Ex db eb ia [ia Ga] IIC T6... T5 Gb Ex tb [ia Da] IIIC T85°C Db	db -> electronic compartment eb -> terminal compartment ia -> sensor, display tb -> transmitter enclosures [ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
		Sensor	Ⓔx II2G Ⓔx II2D	Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C Db	
BD	CA, CB, CC, CD, HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Transmitter	Ⓔx II2(1)G Ⓔx II2(1)D	Ex db ia [ia Ga] IIC T6... T5 Gb Ex tb [ia Da] IIIC T85°C Db	db -> electronic and terminal compartments ia -> sensor, display tb -> transmitter enclosures [ia Ga] -> electronic with input/output Ex ia and/or output for sensor circuit [ia Da] -> electronic with input/output Ex ia and/or output for sensor circuit
		Sensor	Ⓔx II2G II2D	Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C Db	

3.2. Order Code

Extended order code Proline Prosonic Flow G 300:

9G3bcc – ddeffghjlpsstuuuvww + ##**	
O9G3bcc – ddeffghjlpsstuuuvwwyy + ##**	for OEM-version
9x3bxx – ddeffghjlprrssww + ##**	for replacement transmitter
O9x3bxx – ddeffghjlprrsswwyy + ##**	for replacement transmitter OEM

Extended order code Proline Prosonic Flow G 500:

9G5bcc – ddeffghijkmnopsstuuuvww + ##**	
O9G5bcc – ddeffghijkmnopsstuuuvwwyy + ##**	for OEM-version
9x5bxx – ddeffghijkmopqqrrssww + ##**	for replacement transmitter
O9x5bxx – ddeffghijkmopqqrrsswwyy + ##**	for replacement transmitter OEM

b = Generation

B =Generation of Flowmeter

cc = Size

any double digits with combination of number or letter

dd = Approval

Proline Prosonic Flow G 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

Proline Prosonic Flow G 500:

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

e = Power Supply

D = 24Vdc
E = 100-230Vac
I = 100-230Vac / 24Vdc
X = sensor only

ff = Input / Output 1

- BA = 4-20mA HART
- BB = 4-20mA WHART
- CA = 4-20mA HART Ex i (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 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 = 4-20mA
- 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 = 4-20mA
- 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

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

l = **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

qq = **Upgrade Kid**
any double digits with combination of number or letter

rr = **Existing Product** (refer to assignment of flowmeter to replacement transmitter)
- GA = Prosonic Flow G
- 00 = not used

ss = **Measuring tube material, sensor version**
any double digits with combination of number or letter

t = **Process component**
any single number or letter

uuu = **Process connection**
any triple digits with combination of number or letter

v = **Calibration**
any single number or letter

ww = **Device model (two digit)** (refer to assignment 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

Extended order code Proline Prosonic Flow P 500:

9P5bcc – ddeffghjkmosstuuvvww + ##**
O9P5bcc – ddeffghjkmosstuuvvwwyy + ##** for OEM-version
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...T5 Gb	(transmitter)
		Ex tb IIIC T** Db	(transmitter)
		Ex ia IIC T6...T1 Gb	(Sensor)
		Ex ia IIIC T** Db	(Sensor)
BD	=	Ex db [ia] IIC T6...T5 Gb	(transmitter)
		Ex tb IIIC T** Db	(transmitter)
		Ex ia IIC T6...T1 Gb	(Sensor)
		Ex ia IIIC T** Db	(Sensor)

e = Power Supply

D = 24Vdc
E = 100-230Vac
I = 100-230Vac / 24Vdc

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 = 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
- 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 500
- 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
Proline Prosonic Flow P 500
BB = Ex ia IIC T6...T1 Gb
Ex ia IIIC T** Db
BD = Ex ia IIC T6...T1 Gb
Ex ia IIIC T** Db

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 extension of Prosonic Flow P500 types 9P5B and O9P5B from one sensor set to two sensor sets

3.3. Assignment of Flowmeter to Replacement Transmitter

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

Product flowmeters			**Replacement transmitter type**			
Order code	**Generation code b =**	**device model code ww =**	**Order code**	**Generation code b =**	**existing product rr =**	**device model code ww =**
9G***b****-...**ww**, O9G***b****-...**ww**	B	A1 / A2	9x***b**xx-...**rr**...**ww**, O9x***b**xx-...**rr** ...**ww**	B	GA	A1 / A2
9P***b****-...**ww**, O9P***b****-...**ww**	B	A1 / A2	9x***b**xx-...**rr** ...**ww**, O9x***b**xx-...**rr** ...**ww**	B	PA	A1 / A2

3.4. Parameters

3.4.1. Electrical Parameters

Power Supply		
Order Code e =	**terminal no.**	**values**
D [1)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} U_M = 250V_{AC}
E [1)]	No. 1(L+/L), 2(L-/N)	U_N = 85...264V_{AC} U_M = 250V_{AC}
I [2)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} /85...264V_{AC} U_M = 250V_{AC}

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

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

Input/Output 1		
Order Code ff =	**terminal no.**	**values**
BA, BB, MA	No. 26, 27	U_N = 30V_{DC} U_M = 250V_{AC}
LA, GA, SA	No. 26, 27	U_N = 32V_{DC} U_M = 250V_{AC}
CA, CB	No. 26, 27	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 6nF

CC, CD	No. 26, 27	1) U_O = 21.8V I_O = 90mA P_O = 491mW L_O = 4.1mH (IIC) / 15mH (IIB) C_O = 160nF (IIC) / 1160nF (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 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	1), 2) 2-WISE power load APL port profile SLAA U_i = 17.5V I_i = 380mA P_i = 5.32W L_i ≤ 10µH C_i ≤ 5nF
NA, RA	IO1 / RJ45	U_N = $30V_{DC}$ U_M = $250V_{AC}$

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

2) no additional internal capacitances are effective to the output value (refer to note 1 of drawing "Ethernet-APL Installation Drawing - Device Vendors v1.0, March 8th 2022")

Input/Output 2		
Order Code g =	**terminal no.**	**values**
C, G, K	No. 24, 25	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 0
B, D, E, F, I, J, L	No. 24, 25	U_N = $30V_{DC}$ U_M = $250V_{AC}$
H	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	U_i = 30V I_i = 100mA 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 = $250V_{AC}$
H	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	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 = $250V_{AC}$
H	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**
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 = n.a., Ci = 200nF, Li = 0
BD	Service Interface	Service Interface shall only be installed • to a 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 = n.a., Ci = 200nF, Li = 0
BJ, BN	Service Interface	U_N = 3.3V

Antenna bushing		
Order Code dd =	**terminal no.**	**values**
BB, BJ, BN	Type N connector	See conditions of safe use

Remote Display		
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

Notes:

- 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 = ≤ 0.024 mH/Ω applies.
- Remote display type DKX001 or ODKX001 is not intended to be connected to the transmitter electronics with approval code dd = BJ, BN

Prosonic Flow G Remote Transmitter and Remote Sensor:

9G*****-... and O9G*****-... with order code dd = BJ, BN in combination with k = A (ISEM in sensor):
Transmitter terminal board:
Terminals 61, 62 -> U_N = 35V
Terminals 63, 64 -> U_N = 3.3V

Sensor terminal board:
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 (ISEM in transmitter):
Transmitter terminal board:
CH1, CH2 -> Uo = 40V, Io = 36.7mA, Po =459mW, Li = n.a., Ci = n.a.

Sensor terminal board:
Connector -> Ui = 40V, Ii = n.a., Pi =n.a., Li = n.a., Ci = n.a.

3.4.2. Thermal Parameters (Zone 1)

3.4.2.1. Proline Prosonic Flow G 300/500

Proline Prosonic Flow G 300

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

9*3B** – dd… with approval option
O9*3B** – dd… cCSAus / CSA: dd = CD, CE, C2, C4 IECEx / ATEX: dd = BB, BD
9x3Bxx – dd…
O9x3Bxx – dd…

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

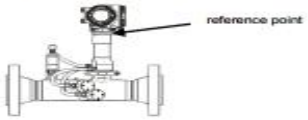
Size / DN	T_{med} min [°C]	T_{med} max [°C]	$T_{a,max}$ [°C]	$T_{med,max}$ [°C] T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
25 … 300	-50	90	40	40	40	90	90	90	90
			55	---	40	90	90	90	90
			60	---	---	90	90	90	90
		150 (1)	45 (1)	70	85	120	150	150	150
			55 (1)	---	85	120	150	150	150
			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)
(3) values in brackets are applicable for installation where the transmitter is not installed above the sensor

Temperature table for versions with sensor insulated
(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Size / DN	T_{med} 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

Notes:
(1) for versions with pressure sensor, the pressure sensor shall not be insulated
(2) 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
(3) versions with pressure sensor shall not exceed temperatures as listed in table beside for insulated and not insulated sensor
(4) location of reference point



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	A	22.02.2018 / Bn	F				Ersatz für:
	B		G				Ersteller: FES / Bn
	C		H				FILE: M:\Zeichng\FES0321\A\FES0321A.doc
	D		J				
	E		K				

Control Drawing IECEx, ATEX, CSA, $_{C}CSA_{US}$
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1
Thermal Parameter
Proline Prosonic Flow G 300/500

Gezeichnet	07.02.2018	Bn
Geprüft		
Ex-geprüft	22.02.2018	Bn
Gesehen		

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

FES0321A 1/2

Certificate Annexe

Certificate Number: Sira 16ATEX2219X

Equipment: Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Applicant: Endress+Hauser Flowtec AG

Proline Prosonic Flow G 500

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

9*5*** – dd*******A… O9*5*** – dd*******A… 9x5Bxx – dd*******A… O9x5Bxx – 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)

Size / DN	T_{amb} min [°C]	T_{amb} max [°C]	$T_{a,max}$ [°C]	T_{medium} [°C] T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (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

Transmitter for all versions

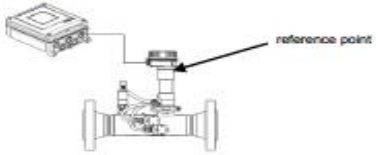
Type of enclosure	$T_{a,max}$ Ordinary location (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)
aluminium	60	---	45	60
plastic	60	---	---	---

Notes: (1) aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
plastic enclosure: Ta,min = -40°C

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

Size / DN	T_{max} to be measured at reference point at sensor neck [°C] T6 (80°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	69	71	75	77	77	77

Notes:
(1) for versions with pressure sensor, the pressure sensor shall not be insulated
(2) 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
(3) versions with pressure sensor shall not exceed temperatures as listed in table beside for insulated and not insulated sensor
(4) location of reference point



Aenderungen:					Ersatzt durch:
	A	22.02.2018 / Bn	F		
	B		G		Ersatz für:
	C		H		Ersteller: FES / Bn
	D		J		FILE: M:\Zeichng\FES0321\A\FES0321A.dcc
	E		K		

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Control Drawing IECEx, ATEX, CSA, $_{C}CSA_{US}$
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1
Thermal Parameter
Proline Prosonic Flow G 300/500

Gezeichnet	07.02.2018	Bn
Geprüft		
Ex-geprüft	22.02.2018	Bn
Gesehen		

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

FES0321A 2/2

3.4.2.2. Proline Prosonic Flow P 500

Proline Prosonic Flow P 500

Notes:

This page applies to versions with extended order code covering: 9*5*** – dd******B… DK9013-dd… with approval option; O9*5*** – dd******B… ODK9013-dd… cCSAus / CSA: dd = CD, C2, C4 IECEx / ATEX: dd = BB, BD; 9x5Bxx – dd*******B…; O9x5Bxx – dd*******B…

Transmitter: Temperature table for all versions

$T_{a,max}$	
T6 (85°C)	T5 (100°C)
55	60

Notes: (1) Ta,min = -50°C (for limitation see name plate)

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

Type of sensor	T_{med} min [°C]	T_{med} max [°C]	T_a min [°C]	T_a max [°C]	$T_{med,max}$ [°C] T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (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

Notes: (1) for type of sensor, temperature range and applicable Group see name plate

Aenderungen:				
	A	07.08.2019 / Bn	F	
	B	30.07.2020 / Bn	G	
	C	30.09.2021 / Bn	H	
	D		J	
	E		K	

Ersetzt durch:

Ersatz für:

Ersteller: FES / Bn

FILE: M:\Zeichng\FES0351C\FES0351C.doc

Control Drawing IECEx, ATEX, CSA, $_{C}CSA_{US}$

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

Thermal Parameter

Proline Prosonic Flow P 500

Gezeichnet	07.08.2019	Bn
Geprüft		
Ex-geprüft	30.09.2021	Bn
Gesehen		

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

FES0351C 1/1

4. Proline t-mass 300/500

4.1. Marking

Proline t-mass F/I 300			
Order Code: 6F3*** – dd*ff**********+#**# O6F3*** – dd*ff**********+#**# 6I3*** – dd*ff**********+#**# O6I3*** – dd*ff**********+#**#			
dd = approval	ff = I/O	ATEX marking	Marking of Ex protection
BB	CA, CB, CC, CD, HA, TA, MC, RC	Ex II2(1)G Ex II1/2(1)G Ex II2(1)D	Ex db eb ia [ia Ga] IIC T4...T1 Gb Ex db eb ia [ia Ga] IIC T4...T1 Ga/Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ex II2G Ex II1/2G Ex II2D	Ex db eb ia IIC T4...T1 Gb Ex db eb ia IIC T4...T1 Ga/Gb Ex tb IIIC T** °C Db
BD	CA, CB, CC, CD, HA, TA, MC, RC	Ex II2(1)G Ex II1/2(1)G Ex II2(1)D	Ex db ia [ia Ga] IIC T4...T1 Gb Ex db ia [ia Ga] IIC T4...T1 Ga/Gb Ex tb [ia Da] IIIC T** °C Db
	BA, BB, GA, LA, NA, RA, SA, MA, MB, RB	Ex II2G Ex II1/2G Ex II2D	Ex db ia IIC T4...T1 Gb Ex db ia IIC T4...T1 Ga/Gb Ex tb IIIC T** °C Db

Information: Marking of protection representative for		
db	->	electronic compartment
eb	->	terminal compartment
ia	->	sensor, display
tb	->	transmitter enclosures, sensor
[ia Ga]	->	electronic with input/output Ex ia
[ia Da]	->	electronic with input/output Ex ia

Information: Marking of protection representative for		
db	->	transmitter electronic and terminal compartment
ia	->	sensor
tb	->	enclosures
[ia Ga]	->	input/output Ex ia
[ia Da]	->	input/output Ex ia

Proline t-mass F/I 500 Digital (with ISEM integrated in sensor)				
Order Code: 6F5*** – dd*ff****A**********+#**# O6F5*** – dd*ff****A**********+#**# 6I5*** – dd*ff****A**********+#**# O6I5*** – d*ff****A**********+#**#				
dd = approval	ff = I/O	Device	ATEX marking	Marking of Ex protection
BJ and BN	CA, CB, CC, CD,	Transmitter	Ex II(1)G Ex II(1)D	[Ex ia] IIC [Ex ia] IIIC
	HA, TA, BA, BB, GA, LA, NA, RA, RB, RC, SA, MA, MB, MC	Sensor	Ex II2G Ex II1/2G II2D	Ex db ia IIC T4...T1 Gb Ex db ia IIC T4...T1 Ga/Gb Ex ia tb IIIC T** °C Db

Information: Marking of protection representative for		
[Ex ia]	->	electronic with outpu for sensor circuit
db	->	sensor terminal box
ia	->	sensor
tb	->	sensor terminal box

4.2. Order Code

Extended order code Proline t-mass 300:

6F3bcc – ddeffghjlpsstttvww + ##**	
6I3bcc – ddeffghjlpsstttuuvww + ##**	
O6F3bcc – ddeffghjlpsstttvwwyy + ##**	for OEM-version
O6I3bcc – ddeffghjlpsstttuuvwwyy + ##**	for OEM-version
6x3bxx – ddeffghjlpssww + ##**	for replacement transmitter
O6x3bxx – ddeffghjlpsswwyy + ##**	for replacement transmitter OEM

Extended order code Proline t-mass 500:

6F5bcc – ddeffghijkmnopsstttvww + ##**	
6I5bcc – ddeffghijkmnopsstttuuvww + ##**	
O6F5cc – ddeffghijkmnopsstttvwwyy + ##**	for OEM-version
O6I5cc – ddeffghijkmnopsstttuuvwwyy + ##**	for OEM-version
6x5bxx – ddeffghijkmopssww + ##**	for replacement transmitter
O6x5bxx – ddeffghijkmopsswwyy + ##**	for replacement transmitter OEM

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

Proline t-mass 500:

BJ =	[Ex ia] IIC	(transmitter)
	Ex ia IIC T4...T1 Gb	(sensor)
	Ex tb IIIC T** Db	(sensor)
BN =	[Ex ia] IIC	(transmitter)
	Ex ia IIC T4...T1 Gb	(sensor)
	Ex tb IIIC T** Db	(sensor)

e = Power Supply

D = 24Vdc
E = 100-230Vac
I = 100-230Vac / 24Vdc
X = sensor only

ff = Input / Output 1

- BA = 4-20mA HART
- BB = 4-20mA WHART
- CA = 4-20mA HART Ex i (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 = 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 = 4-20mA
- 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

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

l = **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 assignment 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**

4.3. Assignment of Flowmeter to Replacement Transmitter

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

Product flowmeters			**Replacement transmitter type**		
Order code	**Generation code b =**	**device model code ww =**	**Order code**	**Generation code b =**	**device model code ww =**
6F***b****-...**ww**, O6F***b****-...**ww**	B	A1 / A2	6x***b**xx...**ww**, O6x***b**xx-...**ww**	B	A1 / A2
6I***b****-...**ww**, O6I***b****-...**ww**	B	A1 / A2	6x***b**xx-...**ww**, O6x***b**xx-...**ww**	B	A1 / A2

4.4. Parameters

4.4.1. Electrical Parameters

Power Supply		
Order Code e =	**terminal no.**	**values**
D [1)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} U_M = 250V_{AC}
E [1)]	No. 1(L+/L), 2(L-/N)	U_N = 85...264V_{AC} U_M = 250V_{AC}
I [2)]	No. 1(L+/L), 2(L-/N)	U_N = 19.2...28.8V_{DC} /85...264V_{AC} U_M = 250V_{AC}

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

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

Input/Output 1		
Order Code ff =	**terminal no.**	**values**
BA, BB, MA	No. 26, 27	U_N = 30V_{DC} U_M = 250V_{AC}
LA, GA, SA	No. 26, 27	U_N = 32V_{DC} U_M = 250V_{AC}
CA, CB	No. 26, 27	U_i = 30V I_i = 100mA P_i = 1.25W L_i = 0 C_i = 6nF

CC, CD	No. 26, 27	1) U_O = 21.8V I_O = 90mA P_O = 491mW L_O = 4.1mH (IIC) / 15mH (IIB) C_O = 160nF (IIC) / 1160nF (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 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	1), 2) 2-WISE power load APL port profile SLAA U_i = 17.5V I_i = 380mA P_i = 5.32W L_i ≤ 10µH C_i ≤ 5nF
NA, RA	IO1 / RJ45	U_N = $30V_{DC}$ U_M = $250V_{AC}$

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

2) no additional internal capacitances are effective to the output value (refer to note 1 of drawing "Ethernet-APL Installation Drawing - Device Vendors v1.0, March 8th 2022")

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

H	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	U_i = 30V I_i = 100mA 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 = $250V_{AC}$
H	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	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 = $250V_{AC}$
H	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**
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 = n.a., Ci = 200nF, Li = 0
BD	Service Interface	Service Interface shall only be installed • to a 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 = n.a., Ci = 200nF, Li = 0
BJ, BN	Service Interface	U_N = 3.3V

Antenna bushing		
Order Code dd =	**terminal no.**	**values**
BB, BJ, BN	Type N connector	See conditions of safe use

Remote Display		
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

Notes:

- 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 = ≤ 0.024 mH/Ω applies.
- Remote display type DKX001 or ODKX001 is not intended to be connected to the transmitter electronics with approval code dd = BJ, BN

t-mass Remote Transmitter and Remote Sensor:

6*****-... and O6*****-... with order code dd = BJ, BN in combination with k = A (ISEM in sensor):

Transmitter terminal board:
Terminals 61, 62, 63, 64 -> Uo = 13.8V, Io = 1.156A, Po = 3.3W

Sensor terminal board:
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 ≤ 0.0089 mH/Ω and C_{cable} ≤ 760nF for group IIC, L/R ≤ 0.0356 mH/Ω and C_{cable} ≤ 4.2µF for group IIB

or

- L_{cable} ≤ 26µH and C_{cable} ≤ 760nF for group IIC, L_{cable} ≤ 104µH and C_{cable} ≤ 4.2µF for group IIB

4.4.2. Thermal Parameters (Zone 1)

Proline t-mass 300

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

6*3B** – dd...
with approval option

O6*3B** – dd...
cCSAus / CSA:
IECEx / ATEX:

6x3Bxx – dd...
dd = CD, CE, C2, C4
dd = BB, BD

O6x3Bxx – dd...

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

Size / DN	T_{med} min [°C]	T_{med} max [°C]	$T_{a,max}$ [°C]	$T_{med,max}$ [°C] T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	-50	180	50	---	---	115	150	180	180
			55	---	---	115	155	160 (180)	160 (180)
			60	---	---	100 (115)	100 (130)	100 (130)	100 (130)

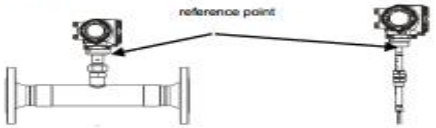
Notes: (1) Ta,min = -40°C, -50°C respectively (see nameplate)
(2) values in brackets are applicable for installation where the transmitter is not installed above the sensor

Temperature table for versions with sensor insulated
(for insulation not in compliance to manual of Endress+Hauser Flowtec)

Size / DN	T_{med} 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	---	---	73	76	77	77

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

(2) location of reference point



Aenderungen:					
	A	19.07.2018 / Bn	F		
	B		G		
	C		H		
	D		J		
	E		K		

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Ersatzt durch:
Ersatz für:
Ersteller: FES / Bn
FILE: M:\Zeichng\FES0331\A\FES0331A.dcc

Control Drawing IECEx, ATEX, CSA, $_{C}CSA_{US}$
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1
Thermal Parameter
Proline t-mass 300/500

Gezeichnet	19.07.2018	Bn
Geprüft		
Ex-geprüft	19.07.2018	Bn
Gesehen		

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

FES0331A **1/2**

Certificate Annexe

Certificate Number: **Sira 16ATEX2219X**

Equipment: **Proline Promag 300/500, Proline Promass 300/500, Proline Cubemass 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500**

Applicant: **Endress+Hauser Flowtec AG**

Proline t-mass 500

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

6*5*** – dd*******A… O6*5*** – dd*******A… 6x5Bxx – dd*******A… O6x5Bxx – 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)

Size / DN	T_{med} min [°C]	T_{med} max [°C]	$T_{a,max}$ [°C]	$T_{med,max}$ [°C] T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	-50	180	55	---	---	115	155	180	180
			60	---	---	115	130	130	130

Notes: (1) Ta,min = -40°C, -50°C respectively (see nameplate)

Transmitter for all versions

Type of enclosure	$T_{a,max}$ Ordinary location (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)
aluminium	60	---	45	60
plastic	60	---	---	---

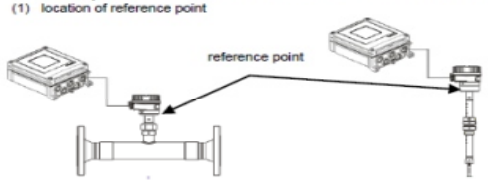
Notes: (1) aluminium enclosure: Ta,min = -50°C (for limitation see name plate)
plastic enclosure: Ta,min = -40°C

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

Size / DN	T_{max} to be measured at reference point at sensor neck [°C] T6 (80°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
all	---	---	76	78	82	82

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

(1) location of reference point



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	A	19.07.2018 / Bn	F			
	B		G			
	C		H			
	D		J			
	E		K			

Control Drawing IECEx, ATEX, CSA, cCSAus
Zone 1, Zone 21, Cl.I Div. 1, Cl.II, Cl.III, Cl.I Zone 1
Thermal Parameter
Proline t-mass 300/500

Gezeichnet	19.07.2018	Bn
Geprüft		
Ex-geprüft	19.07.2018	Bn
Gesehen		

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

FES0331A **2/2**

5. Descriptive Documents

Drawing	Sheets	Rev.	Date (Stamp)	Title
323518-0001ZAA	1 of 1	A	10 October 23	Assembly Drawing Promass sensors
323577-0000ZAD	1 to 2	D	10 October 23	Nameplate sensor Promass A,F,H,I,O,P,Q,S,X 500 analog/digital
323578-0000ZAD	1 to 2	D	10 October 23	Nameplate sensor Promass E 500 analog/digital
323579-0000ZAE	1 to 2	E	10 October 23	Nameplate sensor Cubemass sensor C 500 analog/digital
340884-0002ZHA	1 of 1	A	10 October 23	Assembly Drawing Connection Board L319 Ex Promag
340884-0003ZAA	1 of 1	A	10 October 23	Assembly Drawing Housing G350
340950-0000ZFA	1 of 1	A	10 October 23	Assembly Drawing Connector PL3 Promag
340950-0001ZFA	1 of 1	A	10 October 23	Socket housing 14Pin PL3 Promag
341017-0000ZEA	1 of 1	A	10 October 23	Assembly Drawing Connection Board L339
341211-0002ZAA	1 of 1	A	10 October 23	Assembly Drawing L308 Ex Promag
341475-0000ZAC	1 of 1	C	10 October 23	Assembly Drawing Connection Board L312
341541-0001ZAA	1 of 1	A	10 October 23	Assembly Drawing extended sensor neck Promag
341541-1000ZBB	1 of 1	B	10 October 23	Assembly Drawing Promag W/P Class I Division 1
341561-0001ZAA	1 of 1	A	10 October 23	Assembly Drawing transmitter G320 500 analog Alu Ex d
341562-0001ZAA	1 of 1	A	10 October 23	Assembly Drawing transmitter G321 500 analog SS Ex d
341568-0001ZAA	1 of 1	A	10 October 23	Assembly Drawing Promag H G04
341568-0002ZAA	1 of 1	A	10 October 23	Assembly Drawing Connection Board L349 Ex
341594-0000ZAD	1 to 2	D	10 October 23	Nameplate sensor Promag H 500 analog/digital
341595-0000ZAE	1 to 2	E	10 October 23	Nameplate sensor Promag P, W 500 analog/digital
370168-0001ZAA	1 of 1	A	10 October 23	Nameplate sensor Prosonic Flow P ATEX/IECEx
380308-0000ZAA	1 of 1	A	10 October 23	Nameplate sensor t-mass 300/500 digital
961001814-E	1 to 8	E	10 October 23	Assembly Drawing Sensor PL3 500 digital / analog

961001825-B	1 to 2	B	10 October 23	Assembly Drawing Transmitter enclosure G306
961002020-F	1 to 2	F	10 October 23	Assembly Drawing Transmitter PL3 300 enclosure G304
961002023-D	1 to 2	D	10 October 23	Assembly Drawing Transmitter enclosure G305/G307
961002082-B	1 to 2	B	10 October 23	Assembly Transmitter Aluminium Enclosure G324
961002895-A	1 of 1	A	10 October 23	Assembly Drawing Prosonic Flow G sensor
961003164-A	1 of 1	A	10 October 23	Assembly Drawing t-mass 300/500
961004078-A	1 of 1	A	10 October 23	Assembly Drawing Prosonic Flow P sensors
961004082-A	1 of 1	A	10 October 23	Assembly Drawing transmitter terminal box Prosonic Flow P500
961005648-A	1 of 1	A	10 October 23	Enclosure G300 IP68 / Type 6P
FEK3682-0003ZAE	1 of 1	E	10 October 23	Addendum to name plate DKX001
FEK3730-0001ZAH	1 to 4	H	10 October 23	Nameplate Electronic Proline 300 / 500 analog
FEK3731-0001ZAI	1 to 2	I	10 October 23	Nameplate Electronic Proline 500 digital
FEK3969-0000ZAB	1 of 1	B	10 October 23	Nameplate sensor Prosonic Flow G digital
FEK4020-0000ZAA	1 of 1	A	10 October 23	Warning label electrostatic
FES0256F	1 to 4	F	10 October 23	Installation Drawing IECEx / ATEX, Zone 1, 2, 21, General Requirements Proline Promag 300/500 and Proline Prosonic Flow 300/500
FES0257A	1 to 6	A	10 October 23	Temperature assessment Promag 300/500
FES0258F	1 to 3	F	10 October 23	Installation Drawing IECEx / ATEX, Zone 1, 2, 21, General Requirements Proline Promass 300/500, Proline t-mass 300/500 and Proline Teqwave M 300/500
FES0259F	1 to 3	F	10 October 23	Control Drawing CSA, IECEx, ATEX Electrical Parameter Transmitter Proline 300/500
FES0260F	1 to 3	F	10 October 23	Control Drawing CSA, IECEx, ATEX Zone1, Zone 21, Cl.I Div. 1, Cl. I Zone 1 Thermal Parameters Proline Promag 300/500
FES0262C	1 to 30	C	10 October 23	Temperature assessment for Proline Promass 300/500

FES0263G	1 to 6	G	10 October 23	Control Drawing CSA, IECEx, ATEX Zone 1, Zone 21, Cl.I Div. 1, Cl. I Zone 1 Thermal Parameters Proline Promass/Cubemass 300/500
FES0321A	1 to 2	A	10 October 23	Control Drawing CSA, IECEx, ATEX Zone 1, Zone 21, Cl.I Div. 1, Cl. I Zone 1 Thermal Parameters Proline Prosonic G 300/500
FES0324A	1 to 4	A	10 October 23	Temperature assessment Prosonic Flow 300/500
FES0331A	1 to 2	A	10 October 23	Control Drawing CSA, IECEx, ATEX Zone 1, Zone 21, Cl.I Div. 1, Cl. I Zone 1 Thermal Parameters Proline t-mass 300/500
FES0333A	1 to 4	A	10 October 23	Temperature assessment t-mass 300/500
FES0351C	1 of 1	C	10 October 23	Control Drawing CSA, IECEx, ATEX Zone 1, Zone 21, Cl.I Div. 1, Cl. I Zone 1 Thermal Parameters Proline Prosonic P 500