



Certificate of Compliance

Certificate:	70087366	Master Contract:	160686
Project:	80267439	Date Issued:	2026-01-28
Issued to:	Endress+Hauser Flowtec AG Kagenstrasse 7 Reinach, Basel-Country 4153 Switzerland	Issued by:	<i>Anil Sodhi</i> Anil Sodhi, P. Eng.

Attention: Minh Do

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



PRODUCTS

Class 2258 02 PROCESS CONTROL EQUIPMENT - For Hazardous Locations
Class 2258 03 PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations
Class 2258 04 PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations
Class 2258 82 PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards
Class 2258 83 PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - Certified to US Standards
Class 2258 84 PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations - Certified to US Standards

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - Certified to US Standards

Model(s)

Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500, Proline Teqwave M 300/500



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Class I, Division 1, Group A, B, C, D T6...T1;

Class I, Division 2, Group A, B, C, D T6...T1;

Class II, Division 1, Groups E, F, G; Class III;

Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500 and Proline Teqwave M 300/500 Flowmeter system available as compact and remote versions; product electrical ratings as listed under order code 'e'; hazardous locations designations as listed under order code 'dd'; ambient temperature as listed in the applicable control drawings. The product order codes are defined as shown below.

Part A - Proline Promass 300/500, Proline Cubemass 300/500

Extended order code Proline Promass 300 and Cubemass 300:

8a3bcc – ddefghjlpssstttvww + ###	
O8a3bcc – ddefghjlpssstttvwwy + ###	for OEM-version
8x3bxx – ddefghjlprrssww + ###	for replacement transmitter
O8x3bxx – ddefghjlprrsswwy + ###	for replacement transmitter OEM

Extended order code Proline Promass 500 and Cubemass 500:

8a5bcc – ddefghijkmnopsstttvww + ###	
O8a5bcc – ddefghijkmnopsstttvwwy + ###	for OEM-version
8x5bxx – ddefghijkmopqrrssww + ###	for replacement transmitter
O8x5bxx – ddefghijkmopqrrsswwy + ###	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



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dd	=	Approval <u>Proline Promass/Cubemass 300 (compact version):</u> CC = CL.I Div.1, CL.II,III, GP C-G CD = CL.I Div.1, CL.II,III, GP A-G CE = CL.I Div.1, GP A-D CS = CL.I Div. 2, GP A-D <u>Proline Promass/Cubemass 500 (remote version, ISEM in transmitter):</u> CC = CL.I Div.1, CL.II,III, GP C-G (transmitter + sensor) CD = CL.I Div.1, CL.II,III, GP A-G (transmitter + sensor) CE = CL.I Div.1, GP A-D (transmitter + sensor) CS = CL.I Div. 2, GP A-D (transmitter + sensor) <u>Proline Promass/Cubemass 500 Digital (remote version, ISEM in sensor):</u> CM = CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP C-G (sensor) CN = CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP A-G (sensor) CS = CL.I Div. 2, GP A-D (transmitter + 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



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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 L = Pulse output Ex i K = 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 L = Pulse output Ex i K = 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 L = Pulse output Ex i K = 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



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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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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 table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code

Part B - Proline Promag 300/500

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 – ddeffghijkmopqww + ###	for replacement transmitter only
O5x5bxx – ddeffghijkmopqwwyy + ###	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



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cc	=	Size any combination of number and/or letter up to size = DN3000
dd	=	Approval <u>Proline Promag 300 (compact version):</u> CD = CL.I Div.1, CL.II, III, GP A-G CE = CL.I Div.1, GP A-D CS = CL.I Div.2, GP A-D <u>Proline Promag 500 (remote version, ISEM in transmitter):</u> CD = CL.I Div.1, CL.II, III, GP A-G (transmitter + sensor) CE = CL.I Div.1, GP A-D (transmitter + sensor) CS = CL.I Div.2, GP A-D (transmitter + sensor) - <u>Proline Promag 500 Digital (remote version, ISEM in sensor):</u> CN = CL.I Div.2, GP A-D (transmitter) CL.I Div.1, CL.II, III, GP A-G (sensor) CS = CL.I Div.2, GP A-D (transmitter + sensor)
z	=	Design (Promag W 300 and Promag 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



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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 L = Pulse output Ex i K = 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 L = Pulse output Ex i K = 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 L = Pulse output Ex i K = 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



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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 Kit any double digits with combination of number or letter
s	=	Liner material any single number or letter
ttt	=	Process connection any triple digits with combination of number or letter
u	=	Electrode any number or letter
v	=	Calibration any single number or letter
ww	=	Device Model (two digit) (refer to table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code

Part C - Proline Prosonic Flow 300/500

Part C1 - Proline Prosonic Flow G 300/500

Extended order code Proline Prosonic Flow G 300:

9G3bcc – ddefghjlpssuuuww + ###	
O9G3bcc – ddefghjlpssuuuwwyy + ###	for OEM-version
9x3bxx – ddefghjlprrssww + ###	for replacement transmitter
O9x3bxx – ddefghjlprrsswwyy + ###	for replacement transmitter OEM

Extended order code Proline Prosonic Flow G 500:

9G5bcc – ddefghjkmnopssuuuww + ###	
O9G5bcc – ddefghjkmnopssuuuwwyy + ###	for OEM-version
9x5bxx – ddefghjkmopqrrssww + ###	for replacement transmitter
O9x5bxx – ddefghjkmopqrrsswwyy + ###	for replacement transmitter OEM

b	=	Generation B = Generation of Flowmeter
cc	=	Size any double digits with combination of number or letter



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dd	=	Approval <u>Proline Prosonic Flow G 300 (compact version):</u> CD = CL.I Div.1, CL.II, III, GP A-G CE = CL.I Div.1, GP A-D CS = CL.I Div.2, GP A-D <u>Proline Prosonic Flow G 500 Digital (remote version, ISEM in sensor):</u> CN = CL.I Div.2, GP A-D (transmitter) CL.I Div.1, CL.II, III, GP A-G (sensor) CS = CL.I Div.2, GP A-D (transmitter + 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



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h	=	Input / Output 3 A = without Input/Output 3 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = sensor only
i	=	Input / Output 4 (Proline 500 only) A = without Input/Output 4 B = 4-20mA 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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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



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t	=	Pressure 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) 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

Part C2 - Proline Prosonic Flow P 500

Extended order code Proline Prosonic Flow P 500:

9P5bcc – ddefghjkmossuuuvvww + ###

O9P5bcc – ddefghjkmossuuuvvwwyy + ###

for OEM-version

9x5bxx – ddefghjkmnopprssww + ###

for replacement transmitter

O9x5bxx – ddefghjkmnopprsswwyy + ###

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 CD = Cl.I Div.1, Cl.II, III, GP A-G CS = Cl.I Div.2, GP A-D
e	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = Sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = Sensor only
h	=	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



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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 – ddqqrwwy + ### for OEM-version

dd	=	Approval CD = Cl.I Div.1, Cl.II, III, GP A-G CS = Cl.I Div.2, GP A-D
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



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#, + =	Signs used as indicator for optional abbreviation of extended order code
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Note: Clamp-On sensor types DK9013 and ODK9013 are intended for use as replacement of sensors for Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B or as extension of Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B from one sensor set to two sensor sets.

Part D - Proline t-mass 300/500

Extended order code Proline t-mass 300:

6F3bcc – ddeffghjlpssstttvww + ###	
6I3bcc – ddeffghjlpssstttuuvww + ###	
O6F3bcc – ddeffghjlpssstttvwwyy + ###	for OEM-version
O6I3bcc – ddeffghjlpssstttuuvwwyy + ###	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 + ###	
O6F5bcc – ddeffghijkmnopsstttvwwyy + ###	for OEM-version
O6I5bcc – 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 <u>Proline t-mass 300:</u> CD = Cl.I Div.1, Cl.II, III, GP A-G CE = Cl.I Div.1, GP A-D CS = Cl.I Div.2, GP A-D <u>Proline t-mass 500 Digital:</u> CN = Cl.I Div.2, GP A-D (transmitter) Cl.I Div.1, Cl.II, III, GP A-G (sensor) CS = Cl.I Div.2, GP A-D (transmitter + sensor)
e	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc X = sensor only



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ff	=	Input / Output 1
		BA = 4-20mA HART
		BB = 4-20mA WHART
		CA = 4-20mA HART Ex i (passive)
		CB = 4-20mA WHART Ex i (passive)
		CC = 4-20mA HART Ex i (active)
		CD = 4-20mA WHART Ex i (active)
		GA = Profibus PA
		HA = Profibus PA Ex i
		LA = Profibus DP
		MA = Modbus RS485
		MB = Modbus TCP
		MC = Modbus TCP Ex i
		NA = EtherNet/IP
		RA = Profinet IO
		RB = Profinet
		RC = Profinet Ex i
		SA = Foundation Fieldbus
		TA = Foundation Fieldbus Ex i
		XX = sensor only
g	=	Input / Output 2
		A = without Input/Output 2
		B = 4-20mA
		C = 4-20mA Ex i (passive)
		D = Configurable IO
		E = Pulse/Frequency/Switch output
		F = Pulse output phase-shifted
		G = Pulse/Frequency/Switch output Ex i
		H = Relay
		I = 4-20mA input
		J = Status input
		K = Pulse output Ex i
		L = Pulse output
		X = sensor only
h	=	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



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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) 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

Part E - Proline Teqwave M 300/500

Extended order code Proline Teqwave M 300:

4a3bcc – ddefghijlpstttww + ##**



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O4a3bcc – ddefghjlpstttwwy + ### for OEM-version
4x3bxx – ddefghjlpww + ### for replacement transmitter
O4x3bxx – ddefghjlpwwy + ### for replacement transmitter OEM

Extended order code Proline Teqwave M 500:

4a5bcc – ddefghijkmnopsittww + ###
O4a5bcc – ddefghijkmnopsittwwy + ### for OEM-version
4x5bxx – ddefghijkmopww + ### for replacement transmitter
O4x5bxx – ddefghijkmopwwy + ### for replacement transmitter OEM

a	=	Type of sensor W = Teqwave MW
b	=	Generation B = Generation of Flowmeter
cc	=	Size any combination of number and/or letter up to size = DN300
dd	=	<u>Proline Teqwave M 300:</u> CS = CLI Div.2, GP A-D <u>Proline Teqwave M 500:</u> CS = CLI Div.2, GP A-D (transmitter + sensor)
e	=	Power Supply 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



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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 ISEMelectronic (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



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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
s	=	Design any single number or letter
ttt	=	Process connection any triple digits with combination of number or letter
ww	=	Device Model (two digits) (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

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

CLASS 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

Model(s)
Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500, Proline Teqwave M 300/500

Class I, Division 2, Group A, B, C, D T6...T1; NI
 Class I, Zone 1, AEx/Ex db eb [ia Ga] IIC T6... T1 Gb;
 Class I, Zone 1, AEx/Ex db [ia Ga] IIC T6... T1 Gb;
 Class I, Zone 2, AEx/Ex ec nC IIC T5... T1 Gc;
 Class I, Zone 2, AEx/Ex ec nC [ic] IIC T5... T1 Gc;
 Class I, Zone 2, AEx/Ex ec nC [ic] [ia Ga] IIC T5... T4 Gc;
 Class I, Zone 2, AEx/Ex ec IIC T6... T1 Gc;
 Class I, Zone 2, AEx/Ex ec nC IIC T6... T1 Gc;
 Zone 21, AEx/Ex tb IIIC T** °C Db;
 Zone 21, AEx/Ex tb [ia Da] IIIC T** °C Db;
 Zone 21, AEx/Ex tb [ia Da] IIIC T85 °C Db;

Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500 and Proline Teqwave M 300/500 Flowmeter system available as compact and remote versions; product electrical ratings as listed under order code 'e'; hazardous locations designations as listed under order code 'dd'; ambient temperature as listed in the applicable control drawings. The product order codes are defined as shown below.

Part A - Proline Promass 300/500, Proline Cubemass 300/500

Extended order code Proline Promass 300 and Cubemass 300:

8a3bcc – ddeffghijlpssstttvww + *#**



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O8a3bcc – ddefghjlpsssttvwwyy + ###	for OEM-version
8x3bxx – ddefghjlprrssww + ###	for replacement transmitter
O8x3bxx – ddefghjlprrsswwyy + ###	for replacement transmitter OEM

Extended order code Proline Promass 500 and Cubemass 500:

8a5bcc – ddefghijkmnopssttvww + ###	
O8a5bcc – ddefghijkmnopssttvwwyy + ###	for OEM-version
8x5bxx – ddefghijkmopqrrssww + ###	for replacement transmitter
O8x5bxx – ddefghijkmopqrrsswwyy + ###	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
		<u>Proline Promass/Cubemass 300 (compact version):</u>
CC	=	CL.I Div.1, CL.II,III, GP C-G
CD	=	CL.I Div.1, CL.II,III, GP A-G
CE	=	CL.I Div.1, GP A-D
CS	=	CL.I Div. 2, GP A-D
CZ	=	Ex ec IIC T5...T1 Gc
C1	=	Ex db eb [ia] IIB T6...T1 Gb Ex tb IIIC T** Db
C2	=	Ex db eb [ia] IIC T6...T1 Gb Ex tb IIIC T** Db
C3	=	Ex db [ia] IIB T6...T1 Gb Ex tb IIIC T** Db
C4	=	Ex db [ia] IIC T6...T1 Gb Ex tb IIIC T** Db
		<u>Proline Promass/Cubemass 500 (remote version, ISEM in transmitter):</u>
CC	=	CL.I Div.1, CL.II,III, GP C-G (transmitter + sensor)
CD	=	CL.I Div.1, CL.II,III, GP A-G (transmitter + sensor)
CE	=	CL.I Div.1, GP A-D (transmitter + sensor)
CS	=	CL.I Div. 2, GP A-D (transmitter + sensor)
CZ	=	Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T5...T1 Gc (sensor)
C1	=	Ex db eb [ia] IIB T6...T5 Gb (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor)
C2	=	Ex db eb [ia] IIC T6...T5 Gb (transmitter) Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor)
C3	=	Ex db [ia] IIB T6...T5 Gb (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor)
C4	=	Ex db [ia] IIC T6...T5 Gb (transmitter) Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor)
		<u>Proline Promass/Cubemass 500 Digital (remote version, ISEM in sensor):</u>
CM	=	CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP C-G (sensor)
CN	=	CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP A-G (sensor)
CS	=	CL.I Div. 2, GP A-D (transmitter + sensor)
CZ	=	Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T5...T1 Gc (sensor)
C5	=	Ex ec IIC T5...T4 Gc (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)
C6	=	Ex ec IIC T5...T4 Gc (transmitter) Ex ia IIC T5...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)



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



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h	=	Input / Output 3 A = without Input/Output 3 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input L = Pulse output Ex i K = 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 L = Pulse output Ex i K = 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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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



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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 table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code

Part B - Proline Promag 300/500

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 – ddzeffghjkmnopstttuvww + ###	
O5a5bcc – ddzeffghjkmnopstttuvwwyy + ###	for OEM-version
5x5bxx – ddeffghjkmopqww + ###	for replacement transmitter only
O5x5bxx – ddeffghjkmopqwwyy + ###	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



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dd	=	Approval <u>Proline Promag 300 (compact version):</u> CD = Cl.I Div.1, Cl.II, III, GP A-G CE = Cl.I Div.1, GP A-D CS = Cl.I Div.2, GP A-D CZ = Ex ec IIC T5...T1 Gb C2 = Ex db eb [ia] IIC T6...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T6...T1 Gb Ex tb IIIC T** Db <u>Proline Promag 500 (remote version, ISEM in transmitter):</u> CD = Cl.I Div.1, Cl.II, III, GP A-G (transmitter + sensor) CE = Cl.I Div.1, GP A-D (transmitter + sensor) CS = Cl.I Div.2, GP A-D (transmitter + sensor) CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T5...T1 Gc (sensor) C2 = Ex db eb [ia] IIC T6...T5 Gb (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) C4 = Ex db [ia] IIC T6...T5 Gb (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) C7 = Ex db eb [ia] IIC T6...T5 Gb (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) C8 = Ex db [ia] IIC T6...T5 Gb (transmitter) Ex eb ia IIC T6...T1 Gb (sensor) <u>Proline Promag 500 Digital (remote version, ISEM in sensor):</u> CN = Cl.I Div.2, GP A-D (transmitter) Cl.I Div.1, Cl.II, III, GP A-G (sensor) CS = Cl.I Div.2, GP A-D (transmitter + sensor) CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T5...T1 Gc (sensor) C6 = Ex ec IIC T5...T1 Gc (transmitter) Ex db ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)
z	=	Design (Promag W 300 and Promag W 500 only) any single number or letter
e	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc X = sensor only



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ff	=	Input / Output 1
		BA = 4-20mA HART
		BB = 4-20mA WHART
		CA = 4-20mA HART Ex i (passive)
		CB = 4-20mA WHART Ex i (passive)
		CC = 4-20mA HART Ex i (active)
		CD = 4-20mA WHART Ex i (active)
		GA = Profibus PA
		HA = Profibus PA Ex i
		LA = Profibus DP
		MA = Modbus RS485
		MB = Modbus TCP
		MC = Modbus TCP Ex i
		NA = EtherNet/IP
		RA = Profinet IO
		RB = Profinet
		RC = Profinet Ex i
		SA = Foundation Fieldbus
		TA = Foundation Fieldbus Ex i
		XX = sensor only
g	=	Input / Output 2
		A = without Input/Output 2
		B = 4-20mA
		C = 4-20mA Ex i (passive)
		D = Configurable IO
		E = Pulse/Frequency/Switch output
		F = Pulse output phase-shifted
		G = Pulse/Frequency/Switch output Ex i
		H = Relay
		I = 4-20mA input
		J = Status input
		L = Pulse output Ex i
		K = 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
		L = Pulse output Ex i
		K = Pulse output
		X = sensor only



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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 L = Pulse output Ex i K = 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 Kit any double digits with combination of number or letter
s	=	Liner material any single number or letter
ttt	=	Process connection any triple digits with combination of number or letter
u	=	Electrode any number or letter
v	=	Calibration any single number or letter
ww	=	Device Model (two digit) (refer to table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code



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Part C - Proline Prosonic Flow 300/500

Part C1 - Proline Prosonic Flow G 300/500

Extended order code Proline Prosonic Flow G 300:

9G3bcc – ddefghjlpssuuuvww + ###	
O9G3bcc – ddefghjlpssuuuvwwyy + ###	for OEM-version
9x3bxx – ddefghjlprrssww + ###	for replacement transmitter
O9x3bxx – ddefghjlprrsswwyy + ###	for replacement transmitter OEM

Extended order code Proline Prosonic Flow G 500:

9G5bcc – ddefghijkmnopssuuuvww + ###	
O9G5bcc – ddefghijkmnopssuuuvwwyy + ###	for OEM-version
9x5bxx – ddefghijkmopqrrssww + ###	for replacement transmitter
O9x5bxx – ddefghijkmopqrrsswwyy + ###	for replacement transmitter OEM

b	=	Generation B = Generation of Flowmeter
cc	=	Size any double digits with combination of number or letter
dd	=	Approval <u>Proline Prosonic Flow G 300 (compact version):</u> CD = CL.I Div.1, CL.II, III, GP A-G CE = CL.I Div.1, GP A-D CS = CL.I Div.2, GP A-D CZ = Ex ec IIC T5...T1 Gc C2 = Ex db eb [ia] IIC T6...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T6...T1 Gb Ex tb IIIC T** Db <u>Proline Prosonic Flow G 500 Digital (remote version, ISEM in sensor):</u> CN = CL.I Div.2, GP A-D (transmitter) CL.I Div.1, CL.II, III, GP A-G (sensor) CS = CL.I Div.2, GP A-D (transmitter + sensor) CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T5...T1 Gc (sensor) C6 = Ex ec IIC T5...T4 Gc (transmitter) Ex db ia IIC T5...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)
e	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc X = sensor only



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = sensor only
h	=	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



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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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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	=	Pressure 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) 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



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Part C2 - Proline Prosonic Flow P 500

Extended order code Proline Prosonic Flow P 500:

9P5bcc – ddeffghjkmossuuuvvww + ###
09P5bcc – ddeffghjkmossuuuvvwwyy + ### for OEM-version
9x5bxx – ddeffghjkmnoprrssww + ### for replacement transmitter
09x5bxx – ddeffghjkmnoprrsswwyy + ### 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 CD = CL.I Div.1, CL.II, III, GP A-G CS = CL.I Div.2, GP A-D CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ic IIC T6...T1 Gc (sensor) C2 = 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) C4 = 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



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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



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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 – ddqqrwwy + ###

for OEM-version

dd	=	Approval CD = Cl.I Div.1, Cl.II, III, GP A-G CS = Cl.I Div.2, GP A-D CZ = Ex ic IIC T6...T1 Gc C2 = Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C Db C4 = Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C 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 sensor types DK9013 and ODK9013 are intended for use as replacement of sensors for Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B or as extension of Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B from one sensor set to two sensor sets.

Part D - Proline t-mass 300/500

Extended order code Proline t-mass 300:

6F3bcc – ddeffghjlpstttvww + ###

6I3bcc – ddeffghjlpstttuuvww + ###

O6F3bcc – ddeffghjlpstttvwwyy + ###

for OEM-version

O6I3bcc – ddeffghjlpstttuuvwwyy + ###

for OEM-version

6x3bxx – ddeffghjlpssww + ###

for replacement transmitter

O6x3bxx – ddeffghjlpsswwy + ###

for replacement transmitter OEM



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Extended order code Proline t-mass 500:

6F5bcc – ddeffghijkmnopstttvww + ###	
6I5bcc – ddeffghijkmnopstttuuvww + ###	
O6F5bcc – ddeffghijkmnopstttvwwyy + ###	for OEM-version
O6I5bcc – ddeffghijkmnopstttuuvwwyy + ###	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 <u>Proline t-mass 300:</u> CD = Cl.I Div.1, Cl.II, III, GP A-G CE = Cl.I Div.1, GP A-D CS = Cl.I Div.2, GP A-D CZ = Ex ec IIC T4...T1 Gc C2 = Ex db eb [ia] IIC T4...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T4...T1 Gb Ex tb IIIC T** Db <u>Proline t-mass 500 Digital:</u> CN = Cl.I Div.2, GP A-D (transmitter) Cl.I Div.1, Cl.II, III, GP A-G (sensor) CS = Cl.I Div.2, GP A-D (transmitter + sensor) CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T4...T1 Gc (sensor) C6 = Ex ec IIC T5...T4 Gc (transmitter) Ex db 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



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = sensor only
h	=	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



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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) 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

Part E - Proline Teqwave M 300/500

Extended order code Proline Teqwave M 300:

4a3bcc – ddefghjlpstttww + ####



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O4a3bcc – ddeffghjlpstttwwyy + ### for OEM-version
4x3bxx – ddeffghjlpww + ### for replacement transmitter
O4x3bxx – ddeffghjlpwwyy + ### for replacement transmitter OEM

Extended order code Proline Teqwave M 500:

4a5bcc – ddeffghijkmnops tttww + ###
O4a5bcc – ddeffghijkmnops tttwwyy + ### for OEM-version
4x5bxx – ddeffghijkmopww + ### for replacement transmitter
O4x5bxx – ddeffghijkmopwwyy + ### for replacement transmitter OEM

a	=	Type of sensor W = Teqwave MW
b	=	Generation B = Generation of Flowmeter
cc	=	Size any combination of number and/or letter up to size = DN300
dd	=	<u>Proline Teqwave M 300:</u> CS = CLI Div.2, GP A-D CZ = Ex ec IIC T5...T1 Gc <u>Proline Teqwave M 500:</u> CS = CLI Div.2, GP A-D (transmitter + sensor) CZ = Ex ec IIC T5...T4 Gc (transmitter) Ex ec IIC T6...T1 Gc (sensor)
e	=	Power Supply 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



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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



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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
s	=	Design any single number or letter
ttt	=	Process connection any triple digits with combination of number or letter
ww	=	Device Model (two digits) (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

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations

CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations – CERTIFIED TO U.S. STANDARDS

Model(s)
Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500

Class I, Division 1, Group A, B, C, D T6...T1;
 Class II, Division 1, Groups E, F, G; Class III;
 Class I, Zone 1, AEx/Ex db eb ia [ia Ga] IIC T6... T1 Gb;
 Class I, Zone 1, AEx/Ex db ia [ia Ga] IIC T6... T1 Gb;
 Class I, Zone 1, AEx/Ex ia IIC T6... T1 Gb;
 Class I, Zone 1, AEx/Ex db ia IIC T6... T1 Gb;
 Class I, Zone 0/1, AEx/Ex db eb ia [ia Ga] IIC T6... T1 Ga/Gb;
 Class I, Zone 0/1, AEx/Ex db ia [ia Ga] IIC T6... T1 Ga/Gb;
 Class I, Zone 0/1, AEx/Ex ia IIC T6... T1 Ga/Gb;
 Zone 21, AEx/Ex ia tb IIIC T** °C Db;
 Zone 21, AEx/Ex ia IIIC T** °C Db;

Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, and Proline t-mass 300/500 Flowmeter system available as compact and remote versions; product electrical ratings as listed under order code 'e'; hazardous locations designations as listed under order code 'dd'; ambient temperature as listed in the applicable control drawings. The product order codes are defined as shown below.

Part A - Proline Promass 300/500, Proline Cubemass 300/500

Extended order code Proline Promass 300 and Cubemass 300:

8a3bcc – ddeffghjlpssstttvww + *#**
08a3bcc – ddeffghjlpssstttvwwyy + *#** for OEM-version
8x3bxx – ddeffghjlprrssww + *#** for replacement transmitter



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O8x3bxx – ddefghjlprrsswwyy + ### for replacement transmitter OEM

Extended order code Proline Promass 500 and Cubemass 500:

8a5bcc – ddefghjklmnopstttvww + ###

O8a5bcc – ddefghjklmnopstttvwwyy + ### for OEM-version

8x5bxx – ddefghjkmopqrrssww + ### for replacement transmitter

O8x5bxx – ddefghjkmopqrrsswwyy + ### 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



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dd	=	Approval <u>Proline Promass/Cubemass 300 (compact version):</u> CC = CL.I Div.1, CL.II,III, GP C-G CD = CL.I Div.1, CL.II,III, GP A-G CE = CL.I Div.1, GP A-D C1 = Ex db eb [ia] IIB T6...T1 Gb Ex tb IIIC T** Db C2 = Ex db eb [ia] IIC T6...T1 Gb Ex tb IIIC T** Db C3 = Ex db [ia] IIB T6...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T6...T1 Gb Ex tb IIIC T** Db <u>Proline Promass/Cubemass 500 (remote version, ISEM in transmitter):</u> CC = CL.I Div.1, CL.II,III, GP C-G (transmitter + sensor) CD = CL.I Div.1, CL.II,III, GP A-G (transmitter + sensor) CE = CL.I Div.1, GP A-D (transmitter + sensor) C1 = Ex db eb [ia] IIB T6...T5 Gb (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) C2 = Ex db eb [ia] IIC T6...T5 Gb (transmitter) Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) C3 = Ex db [ia] IIB T6...T5 Gb (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) C4 = Ex db [ia] IIC T6...T5 Gb (transmitter) Ex ia IIC T6...T1 Gb (sensor) Ex tb IIIC T** Db (transmitter + sensor) <u>Proline Promass/Cubemass 500 Digital (remote version, ISEM in sensor):</u> CM = CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP C-G (sensor) CN = CL.I Div. 2, GP A-D (transmitter) CL.I Div.1, CL.II,III, GP A-G (sensor) C5 = Ex ec IIC T5...T4 Gc (transmitter) Ex ia IIB T6...T1 Gb (sensor) Ex tb IIIC T** Db (sensor) C6 = Ex ec IIC T5...T4 Gc (transmitter) Ex ia IIC T5...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)
	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc X = sensor only



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ff	=	Input / Output 1
		BA = 4-20mA HART
		BB = 4-20mA WHART
		CA = 4-20mA HART Ex i (passive)
		CB = 4-20mA WHART Ex i (passive)
		CC = 4-20mA HART Ex i (active)
		CD = 4-20mA WHART Ex i (active)
		GA = Profibus PA
		HA = Profibus PA Ex i
		LA = Profibus DP
		MA = Modbus RS485
		MB = Modbus TCP
		MC = Modbus TCP Ex i
		NA = EtherNet/IP
		RA = Profinet IO
		RB = Profinet
		RC = Profinet Ex i
		SA = Foundation Fieldbus
		TA = Foundation Fieldbus Ex i
		XX = sensor only
g	=	Input / Output 2
		A = without Input/Output 2
		B = 4-20mA
		C = 4-20mA Ex i (passive)
		D = Configurable IO
		E = Pulse/Frequency/Switch output
		F = Pulse output phase-shifted
		G = Pulse/Frequency/Switch output Ex i
		H = Relay
		I = 4-20mA input
		J = Status input
		L = Pulse output Ex i
		K = 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
		L = Pulse output Ex i
		K = Pulse output
		X = sensor only



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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 L = Pulse output Ex i K = 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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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 table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code



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Part B - Proline Promag 300/500

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 – ddzeffghjklmnopstttuvww + ###	
O5a5bcc – ddzeffghjklmnopstttuvwwyy + ###	for OEM-version
5x5bxx – ddeffghjklmopqww + ###	for replacement transmitter only
O5x5bxx – ddeffghjklmopqwwyy + ###	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



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dd	=	Approval
		<u>Proline Promag 300 (compact version):</u>
		CD = CL.I Div.1, CL.II, III, GP A-G
		CE = CL.I Div.1, GP A-D
		C2 = Ex db eb [ia] IIC T6...T1 Gb
		Ex tb IIIC T** Db
		C4 = Ex db [ia] IIC T6...T1 Gb
		Ex tb IIIC T** Db
		<u>Proline Promag 500 (remote version, ISEM in transmitter):</u>
		CD = CL.I Div.1, CL.II, III, GP A-G (transmitter + sensor)
		CE = CL.I Div.1, GP A-D (transmitter + sensor)
		C2 = Ex db eb [ia] IIC T6...T5 Gb (transmitter)
		Ex eb ia IIC T6...T1 Gb (sensor)
		Ex tb IIIC T** Db (transmitter + sensor)
		C4 = Ex db [ia] IIC T6...T5 Gb (transmitter)
		Ex eb ia IIC T6...T1 Gb (sensor)
		Ex tb IIIC T** Db (transmitter + sensor)
		C7 = Ex db eb [ia] IIC T6...T5 Gb (transmitter)
		Ex eb ia IIC T6...T1 Gb (sensor)
		C8 = Ex db [ia] IIC T6...T5 Gb (transmitter)
		Ex eb ia IIC T6...T1 Gb (sensor)
		<u>Proline Promag 500 Digital (remote version, ISEM in sensor):</u>
		CN = CL.I Div.2, GP A-D (transmitter)
		CL.I Div.1, CL.II, III, GP A-G (sensor)
		C6 = Ex ec IIC T5...T1 Gc (transmitter)
		Ex db ia IIC T6...T1 Gb (sensor)
		Ex tb IIIC T** Db (sensor)
z	=	Design (Promag W 300 and Promag W 500 only)
		any single number or letter
e	=	Power Supply
		D = 24Vdc
		E = 100-230Vac
		I = 100-230Vac / 24Vdc
		X = sensor only



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input L = Pulse output Ex i K = 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 L = Pulse output Ex i K = Pulse output X = sensor only



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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 L = Pulse output Ex i K = 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 Kit any double digits with combination of number or letter
s	=	Liner material any single number or letter
ttt	=	Process connection any triple digits with combination of number or letter
u	=	Electrode any number or letter
v	=	Calibration any single number or letter
ww	=	Device Model (two digit) (refer to table below for assignment of flowmeter to replacement of transmitter) A1 = product version 1 A2 = product version 2
yy	=	Customer version (two digit) any double digits with combination of number or letter
**	=	Option in two digits (none, two or multiple of two digits) any combination of number and/or letter
#, +	=	Signs used as indicator for optional abbreviation of extended order code



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Part C - Proline Prosonic Flow 300/500

Part C1 - Proline Prosonic Flow G 300/500

Extended order code Proline Prosonic Flow G 300:

9G3bcc – ddefghjlpssuuuuvw + ###	
O9G3bcc – ddefghjlpssuuuuvwyy + ###	for OEM-version
9x3bxx – ddefghjlprrssww + ###	for replacement transmitter
O9x3bxx – ddefghjlprrsswwyy + ###	for replacement transmitter OEM

Extended order code Proline Prosonic Flow G 500:

9G5bcc – ddefghjkmnopssuuuuvw + ###	
O9G5bcc – ddefghjkmnopssuuuuvwyy + ###	for OEM-version
9x5bxx – ddefghjkmopqrrssww + ###	for replacement transmitter
O9x5bxx – ddefghjkmopqrrsswwyy + ###	for replacement transmitter OEM

b	=	Generation B = Generation of Flowmeter
cc	=	Size any double digits with combination of number or letter
dd	=	Approval <u>Proline Prosonic Flow G 300 (compact version):</u> CD = CL.I Div.1, CL.II, III, GP A-G CE = CL.I Div.1, GP A-D C2 = Ex db eb [ia] IIC T6...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T6...T1 Gb Ex tb IIIC T** Db <u>Proline Prosonic Flow G 500 Digital (remote version, ISEM in sensor):</u> CN = CL.I Div.2, GP A-D (transmitter) CL.I Div.1, CL.II, III, GP A-G (sensor) C6 = Ex ec IIC T5...T4 Gc (transmitter) Ex db ia IIC T5...T1 Gb (sensor) Ex tb IIIC T** Db (sensor)
e	=	Power Supply D = 24Vdc E = 100-230Vac I = 100-230Vac / 24Vdc X = sensor only



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = sensor only
h	=	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



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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 Kit any double digits with combination of number or letter
rr	=	Existing Product (see 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	=	Pressure 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) 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



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Part C2 - Proline Prosonic Flow P 500

Extended order code Proline Prosonic Flow P 500:

9P5bcc – ddefghjkmossuuuvvww + ###
09P5bcc – ddefghjkmossuuuvvwwyy + ### for OEM-version
9x5bxx – ddefghjkmnoprrssww + ### for replacement transmitter
09x5bxx – ddefghjkmnoprrsswwyy + ### 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 CD = CL.I Div.1, CL.II, III, GP A-G C2 = 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) C4 = 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



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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



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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 – ddqqrwwy + ### for OEM-version

dd	=	Approval CD = CL I Div.1, CL II, III, GP A-G CZ = Ex ic IIC T6...T1 Gc C2 = Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C Db C4 = Ex ia IIC T6...T1 Gb Ex ia IIIC T** °C 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 sensor types DK9013 and ODK9013 are intended for use as replacement of sensors for Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B or as extension of Proline Prosonic Flow P 500 (ISEM in transmitter) types 9P5B and O9P5B from one sensor set to two sensor sets.

Part D - Proline t-mass 300/500

Extended order code Proline t-mass 300:

6F3bcc – ddefghjlpsssttvww + ###

6I3bcc – ddefghjlpsssttuuvww + ###

O6F3bcc – ddefghjlpsssttvwwy + ### for OEM-version

O6I3bcc – ddefghjlpsssttuuvwwy + ### for OEM-version

6x3bxx – ddefghjlpssww + ### for replacement transmitter

O6x3bxx – ddefghjlpsswwy + ### for replacement transmitter OEM



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Extended order code Proline t-mass 500:

6F5bcc – ddeffghijkmnopstttvww + ###	
6I5bcc – ddeffghijkmnopstttuuvww + ###	
O6F5bcc – ddeffghijkmnopstttvwwyy + ###	for OEM-version
O6I5bcc – ddeffghijkmnopstttuuvwwyy + ###	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 <u>Proline t-mass 300:</u> CD = Cl.I Div.1, Cl.II, III, GP A-G CE = Cl.I Div.1, GP A-D C2 = Ex db eb [ia] IIC T4...T1 Gb Ex tb IIIC T** Db C4 = Ex db [ia] IIC T4...T1 Gb Ex tb IIIC T** Db <u>Proline t-mass 500 Digital:</u> CN = Cl.I Div.2, GP A-D (transmitter) Cl.I Div.1, Cl.II, III, GP A-G (sensor) C6 = Ex ec IIC T5...T4 Gc (transmitter) Ex db 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



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ff	=	Input / Output 1 BA = 4-20mA HART BB = 4-20mA WHART CA = 4-20mA HART Ex i (passive) CB = 4-20mA WHART Ex i (passive) CC = 4-20mA HART Ex i (active) CD = 4-20mA WHART Ex i (active) GA = Profibus PA HA = Profibus PA Ex i LA = Profibus DP MA = Modbus RS485 MB = Modbus TCP MC = Modbus TCP Ex i NA = EtherNet/IP RA = Profinet IO RB = Profinet RC = Profinet Ex i SA = Foundation Fieldbus TA = Foundation Fieldbus Ex i XX = sensor only
g	=	Input / Output 2 A = without Input/Output 2 B = 4-20mA C = 4-20mA Ex i (passive) D = Configurable IO E = Pulse/Frequency/Switch output F = Pulse output phase-shifted G = Pulse/Frequency/Switch output Ex i H = Relay I = 4-20mA input J = Status input K = Pulse output Ex i L = Pulse output X = sensor only
h	=	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



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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) 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

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 61010-1-12, UPD1:2015, UPD2:2016, AMD1:2018 - Safety requirements for electrical equipment for



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measurement, control, and laboratory use — Part 1: General requirements

CAN/CSA-C22.2 No. 213-17 + UPD 1 (2018) + UPD 2 (2019) + UPD 3 (2021) (R2022) - Non-incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

CSA C22.2 No. 25:17 - Fourth Edition - Enclosures for use in Class II, Division 1, Groups E, F, and G hazardous locations

CSA C22.2 No. 30-20 - Fourth edition - Explosion-proof equipment

CAN/CSA C22.2 No. 60079-0:19 - Explosive atmospheres - Part 0: Equipment - General requirements

CSA C22.2 No. 60079-1:16 - Third Edition - Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

CAN/CSA C22.2 No. 60079-7:16 - Second Edition - Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

CAN/CSA-C22.2 No 60079-11:14 - Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"

CAN/CSA -C22.2 No. 60079-15:18 - Third Edition - Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

CAN/CSA C22.2 No. 60079-26:16 - Explosive Atmospheres - Part 26: Equipment with Equipment Protection Level (EPL) Ga

CSA C22.2 No. 60079-31:15 - Second Edition - Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

CAN/CSA C22.2 No. 60079-47:22 - Explosive atmospheres - Part 47: Non-electrical equipment for explosive atmospheres - Non-electrical Type of Protection Constructional Safety 'c', Control of ignition sources 'b', Liquid immersion 'k'

CSA C22.2 No. 94.2:15 - Second Edition - Enclosures for electrical equipment, environmental considerations

UL 61010-1:2012 - Third Edition - Including revisions through November 21, 2018 - Electrical Equipment For Measurement, Control, and Laboratory Use; Part 1: General Requirements

ANSI/UL 121201:2017 - Ninth Edition - Including Revisions Through April 1, 2021 - UL Standard for Safety Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

FM 3600:2022 - Electrical Equipment for Use in Hazardous (Classified) Locations – General Requirements

FM 3615:2022 - Explosionproof Electrical Equipment – General Requirements

FM 3610:2021 - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations

FM 3616:2022 - Dust-Ignitionproof Electrical Equipment – General Requirements

ANSI/UL 60079-0:2019 - Seventh Edition - Including revisions through APRIL 15, 2020 - UL Standard for Safety Explosive atmospheres – Part 0: Equipment – General requirements

ANSI/UL 60079-1:2015 - Seventh Edition - Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures “d”

ANSI/UL 60079-7:2017 - Fifth Edition - Including revisions through June 3, 2021 - Explosive Atmospheres – Part 7: Equipment protection by increased safety "e"

ANSI/UL 60079-11 (Sixth Edition; Reprint with Revisions Through and Including September 14, 2018) - Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i"



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ANSI/UL 60079-15-2020; Fifth Edition - Explosive Atmospheres - Part 15: Equipment protection by type of protection 'n'

UL 60079-26:2017 - Third Edition - UL Standard for Safety Explosive Atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga

UL 60079-31:2015 - Second Edition - Standard for Safety Explosive Atmospheres – Part 31: Equipment Dust Ignition Protection by Enclosure ‘t’

UL 60079-47:2022 - First Edition - Safety Explosive Atmospheres – Part 47: Equipment Protection by 2-Wire Intrinsically Safe Ethernet Concept (2-WISE)

UL 50E:2015 - Second Edition - UL Standard for Safety Enclosures for Electrical Equipment, Environmental Considerations

ANSI/UL 122701 (Third Edition) - UL Standard for Safety Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids

Conditions Of Acceptability

Applicable to all Proline 300/500 Flowmeters:

- All equipment of the measurement system shall be included in the equipotential bonding. Along the intrinsically safe sensor circuits potential equalization must exist.
- The sensors may only be used for those process media, for which the wetted parts are known to be suitable.
- The equipment may have non-conductive surfaces which are a potential electrostatic charging hazard – see instructions for guidance.
- Antenna supplied by Endress+Hauser shall be used only. As an alternative, any passive omni-directional RF antenna with or without cable is permitted to be connected when meeting the following parameters:
 - The antenna shall have an impedance of at least 50 Ω
 - The rated frequency range of the antenna shall not exceed 1710 MHz ... 6000 MHz
 - The RF antenna or the RF antenna cable shall be fitted with a Type N connector plug (MIL-STD-348)
- The antenna bushing type H337 shall be mounted wrench tight to the transmitter enclosure to maintain the ingress protection of the enclosure.
- The coupling nut of the Type N plug connector shall be hand tightened only.
- The metal enclosure of the Antenna Bushing H337 shall be securely connected to local earth, typically via the enclosure to which it is connected.
- If the Proline 300 flowmeter is connected to a Remote Display type DKX001 or ODKX001, the order code “Approval dd” of the flowmeter shall be paired to the order code “Approval bb” of the Remote Display as follows:

Proline Promass 300, Proline Cubemass 300, Proline Promag 300, Proline Prosonic Flow G 300, Proline t-mass 300 and Proline Teqwave M 300 with order code “Approval dd” =	Remote Display DKX001 or ODKX001 (as covered by CSA 160686-70030937) with order code “Approval bb” =
CC, CD or CE	CE or CG
C1, C2, C3, C4, C7, C8	CI, CK or CL
CS	CS
CZ	CZ

- The flameproof joints are not intended to be repaired.
- For the Proline Promass/Cubemass 300, Proline Promass/Cubemass 500 (ISEM in transmitter) and Proline Promass/Cubemass 500 Digital (ISEM in sensor) flowmeters with order code “Approval dd” = C1, C2, C3, C4, C5 & C6, which are marked with zone separation Ga/Gb: EPL Ga (Zone 0) is only applicable to sensors with process medium in the measuring tube.



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- For Proline t-mass 300, Proline t-mass 500 (ISEM in transmitter) and Proline t-mass 500 Digital (ISEM in sensor) with order code 'dd' = C2, C4 & C6, which are marked with zone separation Ga/Gb: EPL Ga (Zone 0) is only applicable to sensors with process medium in the measuring tube.
- For the Proline 300 and Proline 500 (ISEM in transmitter) flowmeters with order code "Approval dd" = C1, C2, C7 in combination with "Power supply" code e = D (24 V version) and intrinsically safe input/outputs (I/O1, I/O2, I/O3): the Ex eb terminal compartment of the transmitter may be opened for a short period to access intrinsically safe terminals of the inputs/outputs. This option is limited to I/Os in gas application only.
- Do not operate the I/O1 (Terminal 26, 27 or Port 1 (RJ45)) and Service Interface (CDI) / Port 2 (RJ45) simultaneously in hazardous locations.

Additional conditions applicable to Proline Promass 300/500 and Proline Cubemass 300/500:

- All transmitters certified for Class I, Division 1 are factory sealed and do not require external seals. These factory seals are only valid when used in -40°C or higher ambient temperatures.
- All sensors for the Proline Promass/Cubemass 300/500 flowmeter systems are assessed as dual seal devices. Refer to the markings on the sensor for the maximum working pressures.
- For remote versions of Promass/Cubemass flowmeters with a flat gasket within the sensor terminal enclosure, 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.

Additional conditions applicable to Proline Promag 300/500:

- All transmitters certified for Class I, Division 1 are factory sealed and do not require external seals. These factory seals are only valid when used in -40°C or higher ambient temperatures. Remote enclosures assembled on the sensor certified for Class I, Division 1 are also factory sealed however they do not have an ambient temperature limitation.
- All sensors for the Proline Promag 300/500 flowmeter systems are assessed as single seal devices. Refer to the markings on the sensor for the maximum working pressures.
- For remote versions of Promag flowmeters with a flat gasket within the sensor terminal enclosure, 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.
- The Proline Promag 300/500 flowmeter that may include non-conductive surfaces of sensor enclosure housing, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. The equipment nameplate shall bear the following warning: WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

Additional conditions applicable to Proline Prosonic Flow 300/500:

- All transmitters certified for Class I, Division 1 are factory sealed and do not require external seals. These factory seals are only valid when used in -40°C or higher ambient temperatures. Remote enclosures assembled on the sensor certified for Class I, Division 1 are also factory sealed however they do not have an ambient temperature limitation.
- The sensor for the Proline Prosonic Flow G 300/500 flowmeter system is assessed as dual seal devices. Refer to the markings on the sensor for the maximum working pressures.

Additional conditions applicable to Proline t-mass 300/500:

- All transmitters certified for Class I, Division 1 are factory sealed and do not require external seals. These factory seals are only valid when used in -40°C or higher ambient temperatures. Remote enclosures assembled on the sensor certified for Class I, Division 1 are also factory sealed however they do not have an ambient temperature limitation.
- All sensors for the Proline t-mass 300/500 flowmeter systems are assessed as single seal devices. Refer to the markings on the sensor for the maximum working pressures.

Applicable for Proline transmitter hygienic SS enclosure housing G306:

- For the G306 enclosure when forming part of an Ex-Equipment, first the covers shall be made hand-tight and then an additional 45 degrees turn tightening shall be applied to them.
- The thread form of the threaded entries of the G306 enclosure when forming part of an Ex-Equipment shall be marked on the equipment or shall appear in the installation instructions.



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- Transmitter shall not be installed vertically above the sensor.

Markings

The applicable control drawings and level of protection applicable to each product are given in the following table:

Proline Promass 300, Proline Cubemass 300:

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
Cl, C2, C3, C4	Transmitter & Sensor	Cl. I Zone 1 or Zone 0/1, Zone 21	FES0268	FES0263	FES0259
CC, CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			
CE	Transmitter & Sensor	Cl. I Div. 1			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0269	FES0264	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Promass 500 (with ISEM in transmitter), Proline Cubemass 500 (with ISEM in transmitter):

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
Cl, C2, C3, C4	Transmitter	Cl. I Zone 1, Zone 21	FES0268	FES0263	FES0259
	Sensor	Cl. I Zone 1 or Zone 0/1, Zone 21			
CC, CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			
CE	Transmitter & Sensor	Cl. I Div. 1			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0269	FES0264	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Promass 500 Digital (with ISEM in sensor), Proline Cubemass 500 Digital (with ISEM in sensor):

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C5, C6	Transmitter	Cl. I Zone 2	FES0268	FES0263	FES0259
	Sensor	Cl. I Zone 1 or Zone 0/1, Zone 21			
CM, CN	Transmitter	Cl. I Div. 2			
	Sensor	Cl. I Div. 1, Cl. II, III	FES0269	FES0264	FES0259
CZ	Transmitter & Sensor	Cl. I Zone 2			
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Promag 300:

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C2, C4	Transmitter & Sensor	Cl. I Zone 1, Zone 21	FES0266	FES0260	FES0259
CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			



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CE	Transmitter & Sensor	Cl. I Div. 1			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0267	FES0261	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Promag 500 (with ISEM in transmitter):

Order code "Approval" dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C2, C4	Transmitter	Cl. I Zone 1, Zone 21	FES0266	FES0260	FES0259
	Sensor	Cl. I Zone 1, Zone 21			
C7, C8	Transmitter	Cl. I Zone 1			
	Sensor	Cl. I Zone 1			
CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			
CE	Transmitter & Sensor	Cl. I Div. 1	FES0267	FES0261	FES0259
CZ	Transmitter & Sensor	Cl. I Zone 2			
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Promag 500 Digital (with ISEM in sensor):

Order code "Approval" dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C6	Transmitter	Cl. I Zone 2	FES0266	FES0260	FES0259
	Sensor	Cl. I Zone 1, Zone 21			
CN	Transmitter	Cl. I Div. 2			
	Sensor	Cl. I Div. 1, Cl. II, III	FES0267	FES0261	FES0259
CZ	Transmitter & Sensor	Cl. I Zone 2			
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Prosonic Flow G 300:

Order code "Approval" dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C2, C4	Transmitter & Sensor	Cl. I Zone 1, Zone 21	FES0319	FES0321	FES0259
CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			
CE	Transmitter & Sensor	Cl. I Div. 1			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0320	FES0322	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Prosonic Flow P 500 (with ISEM in transmitter):

Order code "Approval" dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C2, C4	Transmitter	Cl. I Zone 1, Zone 21	FES0319	FES0351	FES0259
	Sensor	Cl. I Zone 1, Zone 21			
CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III	FES0320	FES0352	FES0259
CZ	Transmitter & Sensor	Cl. I Zone 2			



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Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Prosonic Flow G 500 Digital (with ISEM in sensor):

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C6	Transmitter	Cl. I Zone 2	FES0319	FES0321	FES0259
	Sensor	Cl. I Zone 1, Zone 21			
CN	Transmitter	Cl. I Div. 2			
	Sensor	Cl. I Div. 1, Cl. II, III			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0320	FES0322	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline t-mass 300:

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C2, C4	Transmitter & Sensor	Cl. I Zone 1 or Zone 0/1, Zone 21	FES0327	FES0331	FES0259
CD	Transmitter & Sensor	Cl. I Div. 1, Cl. II, III			
CE	Transmitter & Sensor	Cl. I Div. 1			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0328	FES0332	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline t-mass 500 Digital (with ISEM in sensor):

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
C6	Transmitter	Cl. I Zone 2	FES0327	FES0331	FES0259
	Sensor	Cl. I Zone 1 or Zone 0/1, Zone 21			
CN	Transmitter	Cl. I Div. 2			
	Sensor	Cl. I Div. 1, Cl. II, III			
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0328	FES0332	FES0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Proline Teqwave M 300:

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0421	FES0422	F0259
CS	Transmitter & Sensor	Cl. I Div. 2			



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Proline Teqwave M 500 Digital (with ISEM in sensor):

Order code “Approval” dd =	Parts of Device	Hazardous Locations	Control / Installation Drawings	Thermal Parameter Drawings	Electrical Parameter Drawings
CZ	Transmitter & Sensor	Cl. I Zone 2	FES0421	FES0422	F0259
CS	Transmitter & Sensor	Cl. I Div. 2			

Assignment of Replacement Transmitter

The replacement transmitters are assigned to the flowmeters Proline Promass 300/500, Proline Cubemass 300/500, Proline Promag 300/500, Proline Prosonic Flow 300/500, Proline t-mass 300/500 and Proline Teqwave M 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 =
4W*b**-...ww, O4W*b**-...ww	B	A2	4x*bxx-...ww, O4x*bxx-...ww	B	n.a.	A2
5H*b**-...ww, O5H*b**-...ww	B	A1 / A2	5x*bxx-...ww, O5x*bxx-...ww	B	n.a.	A1 / A2
5P*b**-...ww, O5P*b**-...ww	B	A1 / A2	5x*bxx-...ww, O5x*bxx-...ww	B	n.a.	A1 / A2
5W*b**-...ww, O5W*b**-...ww	B	A1 / A2	5x*bxx-...ww, O5x*bxx-...ww	B	n.a.	A1 / A2
6F*b**-...ww, O6F*b**-...ww	B	A1 / A2	6x*bxx-...ww, O6x*bxx-...ww	B	n.a.	A1 / A2
6I*b**-...ww, O6I*b**-...ww	B	A1 / A2	6x*bxx-...ww, O6x*bxx-...ww	B	n.a.	A1 / A2
8A*b**-...ww, O8A*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	AA (all sizes)	A1 / A2
8A*b**-...ww, O8A*b**-...ww	C	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	AB (all sizes)	A1 / A2
8C*b**-...ww, O8C*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-...rr ...ww	B	CA (all sizes)	A1 / A2
8E*b**-...ww, O8E*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	EA (DN8... 15)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	EB (DN25... 50)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	EC (DN80)	A1 / A2



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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 =
8F*b**-...ww, O8F*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	FA (DN8... 15)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	FB (DN25... 50)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	FC (DB80... 250)	A1 / A2
8H*b**-...ww, O8H*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	HA (DN8... 40)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	HB (DN50)	A1 / A2
8I*b**-...ww, O8I*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	IA (DN8...40)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	IB (DN40FB... 80)	A1 / A2
8O*b**-...ww, O8O*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	OA (all sizes)	A1 / A2
8P*b**-...ww, O8P*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	PA (DN8... 40)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	PB (DN50)	A1 / A2
8Q*b**-...ww, O8Q*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	QA (DN25... 50)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	QB (DN80... 100)	A1 / A2
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	QC (DN150... 250)	A1 / A2
8S*b**-...ww, O8S*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	SA (DN8... 40)	A1 / A2



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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 =
			8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	SB (DN50)	A1 / A2
8X*b**-...ww, O8X*b**-...ww	B	A1 / A2	8x*bxx-...rr... ww, O8x*bxx-... rr...ww	B	XA (all sizes)	A1 / A2
9G*b**-...ww, O9G*b**-...ww	B	A1 / A2	9x*bxx-...pp... ww, O9x*bxx-... pp...ww	B	GA (all sizes)	A1 / A2
9P*b**-...ww, O9P*b**-...ww	B	A1 / A2	9x*bxx-...pp... ww, O9x*bxx-... pp...ww	B	PA (all versions)	A1 / A2

The Proline 300/500 devices are rated IP66, IP67 and Type 4X protection. In addition, the remote sensors of the Proline Promag 500 Digital, Proline t-mass 500 Digital and Proline Prosonic Flow P 500 are available with IP68 and Type 6P protection.



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Notes:

Products certified under Class(es) C225802, C225803, C225804, C225882, C225883, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC).

www.scc.ca



Proline Promass 300, Proline Cubemass 300 (compact version)
Proline Promass 500, Proline Cubemass 500 (remote version)
Proline Promass 500 Digital, Proline Cubemass 500 Digital (remote version)

This Control Drawing applies to the Proline Promass 300/500 devices with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promass/Cubemass 300	8*3B** – ddeffgh...	O8*3B** – ddeffgh...	8x3Bxx – ddeffgh...	O8x3Bxx – ddeffgh...
Proline Promass/Cubemass 500 (ISEM in transmitter)	8*5B** – ddeffgh**B...	O8*5B** – ddeffgh**B...	8x5Bxx – ddeffgh**B...	O8x5Bxx – ddeffgh**B...
Proline Promass/Cubemass 500 Digital (ISEM in sensor)	8*5B** – ddeffghi*A...	O8*5B** – ddeffghi*A...	8x5Bxx – ddeffghi*A...	O8x5Bxx – ddeffghi*A...

where **dd** = "Approval" code, **e** = "Power Supply" code, **ff** = "IO1" code, **g** = "IO2" code, **h** = "IO3" code, **i** = "IO4" code

1) General requirements

- This Control Drawing must be read in conjunction with the Safety Instructions (XA...) specified on the device's nameplate and the following documents:
 - FES0259 - ELECTRICAL PARAMETERS**
 - FES0264 - THERMAL PARAMETERS**
- Install the Proline 300/500 devices in accordance with the Canadian Electrical Code (CEC) or the National Electrical Code (NEC) ANSI/NFPA 70.
- The Proline 300/500 devices shall be connected to the potential equalization system using designated protective earth (PE) connection facilities or, alternatively, through a metallic piping system, provided that the pipe meets the grounding requirements of applicable national regulations.
- Requirements for connection cables (power supply cable, signal cable, remote connection cable, PE conductor):
 - Use cable or conductors with insulation rated for at least 20°C above the maximum ambient temperature at the installation location.
 - The cross-sectional area of the protective earth (PE) conductor connected to the device's internal and external earthing (grounding) facilities shall not exceed 4 mm².
- Requirements for cable glands, blanking elements and thread adapters:
 - Only use separately Ex certified cable glands, Ex blanking elements and Ex thread adapters that are suitable for the intended application (see device's nameplates). All Ex cable glands, Ex blanking elements and Ex thread adapters must be rated for the required ingress of protection (IP, Type), level of protection and an operating temperature range from the minimum specified ambient temperature (Ta) to the maximum specified ambient temperature Ta + 20°C (see device's nameplates).
 - All unused cable entries must be closed with suitable Ex certified blanking elements that are compatible with the device's application (see device's nameplates).
- The Proline 300/500 devices shall be used only with process media for which the process-wetted parts are known to be suitable.
- WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2**
AVERTISSEMENT – RISQUE D'EXPLOSION – LA SUBSTITUTION DES COMPOSANTS PEUT RENDRE CE MATÉRIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2

 Endress+Hauser People for Process Automation	Endress+Hauser Flow Kägenstrasse 7, 4153 Reinach, Basel-Landschaft, Switzerland	Control Drawing - CSA, cCSAus	Document No.:	FES0269
		Proline Promass 300/500, Proline Cubemass 300/500	Rev.:	I
		General Requirements	Date:	15.04.2025
		Class I Division 2, Class I Zone 2	Page:	1/4

8. Avoidance of electrostatic charges which could result in electrostatic discharges while installing, operating, cleaning or maintaining:
 - For external non-metallic surfaces, e.g. housing, attached additional plates, RFID tag.
 - For attached external metallic parts that are not integrated into the local potential equalization system, e.g. nameplate tag, RFID tag.
 - Do not use in areas where the devices are exposed to highly charge-generating processes, pneumatically conveyed dusts and/or charge spraying in an electrostatic coating process.
 - Control of environmental humidity to minimize the generation of static electricity.
 - Protection from direct airflow causing a charge transfer.
 - Means to continuously drain off electrostatic charges.
 - Clean the device only with a damp cloth.
 - If the stainless-steel nameplate or tag is not directly bonded to earth (ground), the maximum capacitance of the nameplate or tag shall not exceed 30 pF when mounted on a coated metallic enclosure, or 20 pF when mounted on a polymeric enclosure. These values shall be considered in the electrostatic assessment for use in hazardous areas in accordance with national bonding and grounding requirements.
9. The Proline 300/500 devices are designed for the following range of environmental conditions:
 - Outdoor use
 - Pollution Degree: 4 (Macro), 2 (Micro) for all versions
 - Pollution Degree: 2 (Macro), 2 (Micro) for plastic transmitter enclosures with Ex ic sensor outputs
 - Overvoltage category II
 - Mode of operation: Continuous
 - Maximum installation altitude: 2000 m
10. Proline Promass 300/500 and Proline Cubemass 300/500, when equipped with sensor types A, C, E, F, H, O, P, Q, S, or X are classified as Dual Seal devices. Refer to the device nameplate for the specified maximum working pressure.
11. For the Proline 500 (ISEM in transmitter) and Proline 500 Digital (ISEM in sensor) devices, which use a flat gasket within the sensor terminal enclosure, the end user shall ensure that the flat cover seals are not bend before securing the cover. Any seals that are not flat or are damaged must be replaced prior to reassembly.
12. For the Proline 500 Digital (ISEM in sensor) devices, all transmitter enclosure cover screws shall be tightened to a torque of 2.5 Nm.
13. Do not operate the I/O1 (Terminal 26, 27 or Port 1 (RJ45)) and Service Interface (CDI) / Port 2 (RJ45) simultaneously in hazardous locations.
14. For information: the Proline 300/500 flowmeters are equipped with factory-mounted metallic thread extensions and/or blanking elements. These thread extensions and blanking elements have been tested and certified as Ex ec and Class I Div. 2 as part of the devices. Refer to the Safety Instructions XA*** for applicable models.

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		Proline Promass 300/500, Proline Cubemass 300/500	Rev.:	I
		General Requirements	Date:	15.04.2025
		Class I Division 2, Class I Zone 2	Page:	2/4

2) Specific requirements for Class I Division 2 or Ex ec / AEx ec (Zone 2)

1. For the M12 receptacle (plug-in connector), approved for use in hazardous locations:
 - The connection shall be in accordance with the Canadian Electrical Code (CEC) or the National Electrical Code (NEC) ANSI/NFPA 70.
 - The M12 mating connector, supplied by the user, must be approved for use in hazardous locations and must be rated for ingress of protection Type 4X and IP66/IP67. It must also be equipped with a mechanical retention system to prevent unintentional disconnection under normal operating conditions.
 - Unused M12 receptacle must be closed with a suitable Ex certified blanking element.
2. For the M12 receptacle (plug-in connector), used in non-hazardous (unclassified) locations:
 - The connection shall be in accordance with the Canadian Electrical Code (CEC) or the National Electrical Code (NEC) ANSI/NFPA 70.
 - The M12 mating connector, supplied by the user, must be rated for ingress of protection Type 4X and IP66/IP67.
 - Unused M12 receptacle must be closed with a suitable Ex certified blanking element.

3) Specific requirements for NIFW / Ex ic / AEx ic (Zone 2)

1. Observe the guidelines for interconnecting intrinsically safe circuits (e.g. CEC or NEC and other applicable standards).
2. For the device with I/O circuits rated as NIFW and Ex/AEx ic IIC Gc, refer to drawing "FES0259" for entity parameters and installation details, which must be read in conjunction with this control drawing.
3. Do not connect to the Service Interface / Port 2 (RJ45) in hazardous locations.

4) Specific requirements for the devices using stainless steel hygienic enclosure

1. All covers shall be first closed hand-tight and then tightened with an additional 45° turn, using an appropriate tool.
2. In the case of a horizontal orientation, the transmitter shall not be installed vertically above the sensor.

 Endress+Hauser People for Process Automation	Endress+Hauser Flow Kägenstrasse 7, 4153 Reinach, Basel-Landschaft, Switzerland	Control Drawing - CSA, cCSA_{US}	Document No.:	FES0269
		Proline Promass 300/500, Proline Cubemass 300/500	Rev.:	I
		General Requirements	Date:	15.04.2025
		Class I Division 2, Class I Zone 2	Page:	3/4

5) Specific requirements for Remote Display type DKX001 or ODKX001

- When using a Remote Display type DKX001 or ODKX001:
 - The corresponding control drawing specified on the remote display's nameplate shall be consulted and followed, in addition to this control drawing.
 - The internal display module must be removed.
- If a separately ordered Remote Display type DKX001 or ODKX001 is connected to a Proline 300 flowmeter, the order code "Approval bb" of the Remote Display must match with the order code "Approval dd" of the Proline 300 flowmeter as given in the table below. Only matched approval combinations are permitted for use in hazardous locations.

Hazardous locations	Proline 300 with order code "Approval" dd =	Remote Display type DKX001 or ODKX001 (as covered by certificate CSA 160686-70030937) with order code "Approval" bb =
Class I Division 2	CS	CS
Class I Zone 2	CZ	CZ

6) Specific requirements for External Antenna and Antenna Feedthrough (Antenna Bushing H337)

External Antenna:

- Only use the external antenna (with or without an extension cable) supplied by Endress+Hauser. This antenna meets the Proline 300/500 device's specific requirements.
- Alternatively, any passive, omni-directional RF external antenna, with or without an extension cable, may be connected to the Type N female connector of the antenna bushing H337, provided the following conditions are met:
 - The external antenna shall have an impedance of at least 50 Ω .
 - The rated frequency range of the external antenna shall not exceed 1710 MHz ... 6000 MHz.
 - The external antenna (with or without an extension cable) shall be equipped with a Type N male connector (MIL-STD-348).
- The coupling nut of the Type N male connector shall be hand tightened only.

Antenna Feedthrough (Antenna Bushing H337):

- The antenna bushing H337 shall be installed wrench tight to the transmitter enclosure cable entry M20x1.5 to maintain the enclosure's certified ingress of protection.
- The antenna bushing enclosure shall be securely connected to local earth (ground). This is typically achieved through mechanical contact and bonding with the transmitter enclosure to which the antenna bushing is installed.

 Endress+Hauser People for Process Automation	Endress+Hauser Flow Kägenstrasse 7, 4153 Reinach, Basel-Landschaft, Switzerland	Control Drawing - CSA, cCSA_{US}	Document No.:	FES0269
		Proline Promass 300/500, Proline Cubemass 300/500	Rev.:	I
		General Requirements	Date:	15.04.2025
		Class I Division 2, Class I Zone 2	Page:	4/4

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

Notes: The chapter 1 applies to Proline Promass 300 and Proline Cubemass 300 versions with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promass 300	8*3*** – dd...	O8*3*** – dd...	8x3xxx – dd...	O8x3xxx – dd...
Proline Cubemass 300				
with "Approval"	dd = CS, CZ (cCSAus / CSA) dd = BS (IECEX / ATEX)			

1.1. Ambient temperature range T_a

The rated ambient temperature range is indicated on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, this range may be further limited by the applied medium (process) temperature and temperature class. Refer to the temperature tables below for detailed limitations.

1.2. Medium (process) temperature range T_m

The allowable medium temperature range is specified on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, depending on the applied ambient temperature and temperature class, this range may be further limited. Refer to the temperature tables below for detailed limitations.

1.3. Proline Promass 300 & Proline Cubemass 300 without thermal insulation

1.3.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note: Refer to the nameplate on the sensor housing to determine the type of protection.

Temperature class vs. Maximum ambient temperature ($T_{a, \max}$) and Maximum permitted medium temperature ($T_{m, \max}$ permitted)												
Sensor	Size / DN	Type of protection	Medium range T_m ⁽³⁾		Ambient range T_a ⁽¹⁾		$T_{m, \max}$ permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec / NI	-50	205	-50 / -40	50	---	90	130	170	205	205
						60	---	---	130	170	205	205
Cubemass C	01...06	Ex ec / NI	-50	205		50	---	90	130	140	205	205
						60	---	---	130	140	205	205
Promass E	08...50	Ex ec / NI	-50	205		50	---	80	115	165	205	205
						55	---	---	115	165	205	205
						60	---	---	(115) ⁽²⁾	(140) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	80	Ex ec / NI	-50	205		50	---	80	95	140	205	205
						55	---	---	95	140	205	205
						60	---	---	(95) ⁽²⁾	(140) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass F	08...15	Ex ec / NI	-50 / -200	150		50	---	80	115	150	150	150
			-50 / -200	240		60	---	---	115	150	150	150
						50	---	80	115	170	240	240
						55	---	---	115	170	240	240
						60	---	---	115	170	170 (240) ⁽²⁾	170 (240) ⁽²⁾
	25...40	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		60	---	---	95	150	150	150
						50	---	60	95	170	240	240
						55	---	---	95	170	240	240
						60	---	---	95	170	170 (240) ⁽²⁾	170 (240) ⁽²⁾
	50...80	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		60	---	---	95	150	150	150
						50	---	60	95	160	240	240
						55	---	---	95	160	240	240
						60	---	---	95	160	170 (240) ⁽²⁾	170 (240) ⁽²⁾
	100...250	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		60	---	---	95	150	150	150
						50	---	60	95	160	240	240
						55	---	---	95	160	240	240
						60	---	---	95	160	170 (240) ⁽²⁾	170 (240) ⁽²⁾
	15...250	Ex ec / NI	-50 / -200	350		50	---	85	120	185	280	350
						60	---	---	120	185	280	350



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Proline Promass 300/500, Proline Cubemass 300/500

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Temperature class vs. Maximum ambient temperature (T_{a, max}) and Maximum permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass H	08	Ex ec / NI	-50 / -200	205	-50 / -40	50	---	80	115	165	205	205
						60	---	---	115	165	205	205
	15...50	Ex ec / NI	-50 / -200	205		50	---	60	95	130	205	205
						60	---	---	95	130	205	205
Promass S, P	08	Ex ec / NI	-50	150		50	---	80	115	150	150	150
						60	---	---	115	150	150	150
			-50	205		50	---	80	115	170	205	205
						60	---	---	115	170	205	205
	15...50	Ex ec / NI	-50	150		50	---	60	95	150	150	150
						60	---	---	95	150	150	150
			-50	205		50	---	60	95	160	205	205
						60	---	---	95	160	205	205
Promass I	08...80	Ex ec / NI	-50	150		50	---	60	95	150	150	150
						55	---	---	95	150	150	150
						60	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
Promass O	80...250	Ex ec / NI	-50	205		50	---	60	95	160	205	205
						55	---	---	95	160	205	205
						60	---	---	95	160	180 (205) ⁽²⁾	180 (205) ⁽²⁾
Promass X	350	Ex ec / NI	-50	205		50	---	60	95	160	205	205
						55	---	---	95	160	205	205
						60	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass Q	25...250	Ex ec / NI	-50 / -200	240		50	---	60	95	160	240	240
					60	---	---	95	160	240	240	

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

Specific requirements for Proline Promass 300 & Proline Cubemass 300 using a stainless steel (hygienic) enclosure:

- the transmitter shall not be installed vertically above the sensor.

- to maintain a temperature class T5 rating, the maximum applied ambient temperature shall be reduced by 3°C.

1.3.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.

- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.

- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Temperature class vs. Maximum ambient temperature (T_{a, max}) and Maximum permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec nC	-50	205	-50 / -40	50	---	95	130	195	205	205
						60	---	---	130	195	205	205
Cubemass C	01...06	Ex ec nC	-50	205		50	---	95	130	195	205	205
						60	---	---	130	195	205	205
Promass E	08...15	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	130	195	205	205
						60	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	25...80	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	130	195	205	205
						60	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass F	08...15	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
			-50 / -200	240		60	---	---	130	150	150	150
						50	---	95	130	195	240	240
						55	---	---	130	195	240	240
						60	---	---	130	170	170 (240) ⁽²⁾	170 (240) ⁽²⁾



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Temperature class vs. Maximum ambient temperature (T _{a, max}) and Maximum permitted medium temperature (T _{m, max permitted})												
Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass F	25...80	Ex ec nC	-50 / -200	150	-50 / -40	50	---	95	130	150	150	150
						60	---	---	130	150	150	150
			-50 / -200	240		50	---	95	130	195	240	240
						55	---	---	130	195	240	240
						60	---	---	130	170	170 (240) ⁽²⁾	170 (240) ⁽²⁾
	100...250	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
						60	---	---	130	150	150	150
			-50 / -200	240		50	---	95	130	195	240	240
						55	---	---	130	195	240	240
						60	---	---	130	170	170 (240) ⁽²⁾	170 (240) ⁽²⁾
15...250	Ex ec nC	-50 / -200	350	50		---	95	130	195	290	350	
				60		---	---	130	195	290	350	
Promass H	08	Ex ec nC	-50 / -200	205		50	---	95	130	195	205	205
	15...50	Ex ec nC	-50 / -200	205		60	---	---	130	195	205	205
						50	---	95	130	195	205	205
						60	---	---	130	195	205	205
Promass S, P	08	Ex ec nC	-50	150		50	---	95	130	150	150	150
				60		---	---	130	150	150	150	
			-50	205		50	---	95	130	195	205	205
						60	---	---	130	195	205	205
	15...50	Ex ec nC	-50	150		50	---	95	130	150	150	150
				60		---	---	130	150	150	150	
			-50	205		50	---	95	130	195	205	205
						60	---	---	130	195	205	205
Promass I	08...80	Ex ec nC	-50	150		50	---	95	130	150	150	150
				55		---	---	130	150	150	150	
				60		---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	
Promass O	80...250	Ex ec nC	-50	205		50	---	95	130	195	205	205
				55		---	---	130	195	205	205	
				60		---	---	130	180	180 (205) ⁽²⁾	180 (205) ⁽²⁾	
Promass X	350	Ex ec nC	-50	205		50	---	95	130	195	205	205
				55		---	---	130	195	205	205	
				60		---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾	
Promass Q	25...250	Ex ec nC	-50 / -200	240	50	---	95	130	195	240	240	
				60	---	---	130	195	240	240		

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).
(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.
(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

Specific notes for Proline Promass 300 & Proline Cubemass 300 using a stainless steel (hygienic) enclosure:

- the transmitter shall not be installed vertically above the sensor.
- to maintain a temperature class T5 rating, the maximum applied ambient temperature shall be reduced by 3°C.



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1.4. Proline Promass 300 & Proline Cubemass 300 with thermal insulation in accordance with E+H's specifications

Note: For thermal insulation specifications, refer to E+H's manuals.

1.4.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Versions using a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

Temperature class vs. Maximum ambient temperature (T _{a, max}) and Maximum permitted medium temperature (T _{m, max permitted})												
Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec / NI	-50	205	-50 / -40	50	---	90	130	170	205	205
						55	---	---	(130) ⁽²⁾	(170) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Cubemass C	01...06	Ex ec / NI	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(170) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass E	08...15	Ex ec / NI	-50	205		50	---	80	115	165	205	205
						55	---	---	(115) ⁽²⁾	(140) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	25...80	Ex ec / NI	-50	205		50	---	60	95	140	205	205
						55	---	---	(95) ⁽²⁾	(140) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass F	08...15	Ex ec / NI	-50 / -200	150		50	---	80	115	150	150	150
			-50 / -200	240		55	---	---	(115) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	80	115	170	240	240
						55	---	---	(115) ⁽²⁾	(170) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	25...40	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		55	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
			-50 / -200	240		50	---	60	95	170	240	240
						55	---	---	(95) ⁽²⁾	(170) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	50...80	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		55	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	60	95	160	240	240
						55	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	100...250	Ex ec / NI	-50 / -200	150		50	---	60	95	150	150	150
			-50 / -200	240		55	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	60	95	160	240	240
						55	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	15...250	Ex ec / NI	-50 / -200	350		50	---	85	120	185	280	350
						60	---	---	120	185	280	350
Promass H	08	Ex ec / NI	-50 / -200	205		50	---	80	115	165	205	205
						55	---	---	(115) ⁽²⁾	(165) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	15...50	Ex ec / NI	-50 / -200	205		50	---	60	95	130	205	205
						55	---	---	(95) ⁽²⁾	(130) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass S, P	08	Ex ec / NI	-50	150		50	---	80	115	150	150	150
			-50	205		55	---	---	(115) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	80	115	170	205	205
						55	---	---	(115) ⁽²⁾	(170) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	15 ... 50	Ex ec / NI	-50	150		50	---	60	95	150	150	150
						55	---	---	95	150	150	150
			-50	205		60	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	60	95	160	205	205
						55	---	---	95	160	205	205
						60	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass I	08 ... 80	Ex ec / NI	-50	150		50	---	60	95	150	150	150
						60	---	---	(95) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
Promass O	80...250	Ex ec / NI	-50	205		50	---	60	95	160	205	205
						55	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass X	350	Ex ec / NI	-50	205		50	---	60	95	160	205	205
						55	---	---	(95) ⁽²⁾	(160) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass Q	25...250	Ex ec / NI	-50 / -200	240		50	---	60	95	160	205	205
						55	---	---	(40) ⁽²⁾	(95) ⁽²⁾	(160) ⁽²⁾	(240) ⁽²⁾

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



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1.4.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).
- Versions using a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

Temperature class vs. Maximum ambient temperature (T_{a, max}) and Maximum permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec nC	-50	205	-50 / -40	50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Cubemass C	01...06	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass E	08...15	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	25...80	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass F	08...15	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
			-50 / -200	240		55	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	95	130	195	240	240
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	25...80	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
			-50 / -200	240		55	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	95	130	195	240	240
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	100...250	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
			-50 / -200	240		55	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	95	130	195	240	240
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(240) ⁽²⁾	(240) ⁽²⁾
	15...250	Ex ec nC	-50 / -200	350		50	---	95	130	195	290	350
						60	---	---	130	195	290	350
Promass H	08	Ex ec nC	-50 / -200	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	15...50	Ex ec nC	-50 / -200	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass S, P	08	Ex ec nC	-50	150		50	---	95	130	150	150	150
			-50	205		55	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
						50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
	15...50	Ex ec nC	-50	150		50	---	95	130	150	150	150
						55	---	---	130	150	150	150
						60	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
			-50	205		50	---	95	130	195	205	205
						55	---	---	130	195	205	205
						60	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass I	08...80	Ex ec nC	-50	150		50	---	95	130	150	150	150
						60	---	---	(130) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾	(150) ⁽²⁾
Promass O	80...250	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass X	350	Ex ec nC	-50	205		50	---	95	130	195	205	205
						55	---	---	(130) ⁽²⁾	(195) ⁽²⁾	(205) ⁽²⁾	(205) ⁽²⁾
Promass Q	25...250	Ex ec nC	-50 / -200	240		50	---	95	130	195	205	205
						55	---	---	(40) ⁽²⁾	(95) ⁽²⁾	(160) ⁽²⁾	(240) ⁽²⁾

- Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).
(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.
(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline Promass 300/500, Proline Cubemass 300/500

Thermal Parameter

EPL Gc (Zone 2); Class I Zone 2; Class I Division 2

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1.5. Proline Promass 300 & Proline Cubemass 300 with thermal insulation NOT in accordance with E+H's specifications

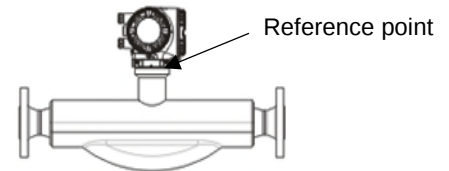
1.5.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Versions using a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

Temperature class vs. Maximum ambient temperature ($T_{a, \max}$) and Maximum permitted reference temperature ($T_{\text{ref, max permitted}}$)											
Sensor	Size / DN	Medium range $T_m^{(3)}$		Ambient range $T_a^{(1)}$		Reference temperature $T_{\text{ref, max permitted}}^{(2)} (^\circ\text{C})$					
		min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	T6 (85 $^\circ\text{C}$)	T5 (100 $^\circ\text{C}$)	T4 (135 $^\circ\text{C}$)	T3 (200 $^\circ\text{C}$)	T2 (300 $^\circ\text{C}$)	T1 (450 $^\circ\text{C}$)
Promass A	01...04	-50	205	-40 / -50	60	---	63	72	75	77	77
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

- Notes:
- (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).
- (2) $T_{\text{ref, max permitted}}$: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the $T_{\text{ref, max permitted}}$ shall not exceed the values given in this table.
- (3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



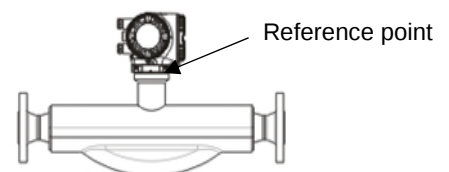
1.5.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).
- Versions using a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

Temperature class vs. Maximum ambient temperature ($T_{a, \max}$) and Maximum permitted reference temperature ($T_{\text{ref, max permitted}}$)											
Sensor	Size / DN	Medium range $T_m^{(3)}$		Ambient range $T_a^{(1)}$		Reference temperature $T_{\text{ref, max permitted}}^{(2)} (^\circ\text{C})$					
		min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	T6 (85 $^\circ\text{C}$)	T5 (100 $^\circ\text{C}$)	T4 (135 $^\circ\text{C}$)	T3 (200 $^\circ\text{C}$)	T2 (300 $^\circ\text{C}$)	T1 (450 $^\circ\text{C}$)
Promass A	01...04	-50	205	-40 / -50	60	---	63	72	75	77	77
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

- Notes:
- (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).
- (2) $T_{\text{ref, max permitted}}$: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the $T_{\text{ref, max permitted}}$ shall not exceed the values given in this table.
- (3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



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Proline Promass 300/500, Proline Cubemass 300/500

Thermal Parameter

EPL Gc (Zone 2); Class I Zone 2; Class I Division 2

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2. Proline Promass A/E/F/H/I/O/P/Q/S/X 500 & Proline Cubemass C 500 (ISEM in transmitter, defined by the order code “ISEM electronic” k = B)

Notes: The chapter 2 applies to Proline Promass 500 and Proline Cubemass 500 versions with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promass 500	8*5*** – dd*****B...	O8*5*** – dd*****B...	8x5xxx – dd*****B...	O8x5xxx – dd*****B...
Proline Cubemass 500				
with “Approval”	dd = CS, CZ (cCSAus / CSA)			
	dd = BS (IECEX / ATEX)			

2.1. Ambient temperature range Ta

The rated ambient temperature range is indicated on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, this range may be further limited by the applied medium (process) temperature and temperature class. Refer to the temperature tables below for detailed limitations.

2.2. Medium (process) temperature range Tm

The allowable medium temperature range is specified on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, depending on the applied ambient temperature and temperature class, this range may be further limited. Refer to the temperature tables below for detailed limitations.

2.3. Proline Promass 500 & Proline Cubemass 500 without thermal insulation

2.3.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note:
- Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature (Ta, max)		
Transmitter	Ta, max (°C)	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135°C)
	45	T5 (100°C)
Notes: Ta, min = -40°C, -50°C or may be further limited (see the nameplate on the transmitter housing)		

Sensor temperature class vs. Max. ambient temperature (Ta, max) & Max. permitted medium temperature (Tm, max permitted)												
Sensor	Size / DN	Type of protection	Medium range Tm (2)		Ambient range Ta (1)		Tm, max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec / NI	-50	205	-50 / -40	50	50	95	130	170	205	205
						60	---	95	130	170	205	205
Cubemass C	01...06	Ex ec / NI	-50	205		60	---	90	130	140	205	205
Promass E	08...50	Ex ec / NI	-50	205		45	45	80	115	165	205	205
						60	---	80	115	165	205	205
	80	Ex ec / NI	-50	205		60	---	60	95	140	205	205
Promass F	08...15	Ex ec / NI	-50 / -200	150		50	50	80	115	150	150	150
						60	---	---	115	150	150	150
			-50 / -200	240		50	50	80	115	170	240	240
						60	---	80	115	170	240	240
	25...40	Ex ec / NI	-50 / -200	150		45	60	60	95	150	150	150
						60	---	60	95	150	150	150
			-50 / -200	240		45	60	60	95	170	240	240
						60	---	60	95	170	240	240
	50...80	Ex ec / NI	-50 / -200	150		45	60	60	95	150	150	150
						60	---	60	95	150	150	150
			-50 / -200	240		45	60	60	95	160	240	240
						60	---	60	95	160	240	240
	100...250	Ex ec / NI	-50 / -200	150		45	60	60	95	150	150	150
						60	---	60	95	150	150	150
			-50 / -200	240		45	60	60	95	160	240	240
						60	---	60	95	160	240	240
	15...250	Ex ec / NI	-50 / -200	350		60	70	85	120	185	280	350
Promass H	08	Ex ec / NI	-50 / -200	205		50	45	80	115	165	205	205
						60	---	80	115	165	205	205
	15...50	Ex ec / NI	-50 / -200	205		60	---	60	95	130	205	205

Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽²⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass S, P	08	Ex ec / NI	-50	150	-50 / -40	45	45	80	115	150	150	150
				60		---	80	115	150	150	150	
			-50	205		45	45	80	115	170	205	205
				60		---	80	115	170	205	205	
	15...50	Ex ec / NI	-50	150		45	45	60	95	150	150	150
				60		---	60	95	150	150	150	
			-50	205		45	45	60	95	160	205	205
				60		---	60	95	160	205	205	
Promass I	08...80	Ex ec / NI	-50	150	45	45	60	95	150	150	150	
					60	---	60	95	150	150	150	
Promass O	80...250	Ex ec / NI	-50	205	45	45	60	95	160	205	205	
					60	---	60	95	160	205	205	
Promass X	350	Ex ec / NI	-50	205	45	45	60	95	160	205	205	
					60	---	60	95	160	205	205	
Promass Q	25...250	Ex ec / NI	-50 / -200	240	45	45	60	95	160	240	240	
					60	---	60	95	160	240	240	

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

2.3.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.

- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.

- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature (T_{a, max})

Transmitter	T _{a, max} (°C)	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135°C)
	45	T5 (100°C)

Notes: T_{a, min} = -40°C, -50°C or may be further limited (see the nameplate on the transmitter housing)**Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})**

Sensor	Size / DN	Type of protection	Medium range T _m ⁽²⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01 ... 04	Ex ec nC	-50	205	-50 / -40	60	80	95	130	195	205	205
Cubemass C	01 ... 06	Ex ec nC	-50	205		60	80	95	130	195	205	205
Promass E	08 ...15	Ex ec nC	-50	205		60	80	95	130	195	205	205
	25 ... 80	Ex ec nC	-50	205		60	80	95	130	195	205	205
Promass F	08 ... 15	Ex ec nC	-50 / -200	150		60	80	95	130	150	150	150
			-50 / -200	240		60	80	95	130	195	240	240
	25 ... 80	Ex ec nC	-50 / -200	150		60	80	95	130	150	150	150
			-50 / -200	240		60	80	95	130	195	240	240
	100...250	Ex ec nC	-50 / -200	150		60	80	95	130	150	150	150
			-50 / -200	240		60	80	95	130	195	240	240
	15...250	Ex ec nC	-50 / -200	350		60	80	95	130	195	290	350
						60	80	95	130	195	290	350
Promass H	08	Ex ec nC	-50 / -200	205		60	80	95	130	195	205	205
	15 ... 50	Ex ec nC	-50 / -200	205		60	80	95	130	195	205	205
Promass S, P	08	Ex ec nC	-50	150		60	80	95	130	150	150	150
			-50	205		60	80	95	130	195	205	205
	15 ... 50	Ex ec nC	-50	150		60	80	95	130	150	150	150
			-50	205		60	80	95	130	195	205	205
Promass I	8 ... 80	Ex ec nC	-50	150	60	80	95	130	150	150	150	
Promass O	80...250	Ex ec nC	-50	205	60	80	95	130	195	205	205	
Promass X	350	Ex ec nC	-50	205	60	80	95	130	195	205	205	
Promass Q	25...250	Ex ec nC	-50 / -200	240	60	80	95	130	195	240	240	

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

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2.4. Proline Promass 500 & Proline Cubemass 500 with thermal insulation in accordance with E+H's specifications

Notes:

- For thermal insulation specifications, refer to E+H's manuals.
- Versions with a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

2.4.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note: Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature (T _{a, max})		
Transmitter	T _{a, max} (°C)	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135°C)
	45	T5 (100°C)
Notes: T _{a, min} = -40°C, -50°C or may be further limited (see the nameplate on the transmitter housing)		

Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted medium temperature (T _{m, max permitted})														
Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)							
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)		
Promass A	01...04	Ex ec / NI	-50	205	-50 / -40	50	50	95	130	150	150 (180) ⁽²⁾	150 (180) ⁽²⁾		
Cubemass C	01...06	Ex ec / NI	-50	205		60	---	95	130	150	150	150		
						50	---	90	130	140	150 (180) ⁽²⁾	150 (180) ⁽²⁾		
						60	---	90	130	140	150	150		
Promass E	08...15	Ex ec / NI	-50	205		45	45	80	115	165	205	205		
	25...80	Ex ec / NI	-50	205		60	---	80	115	165	205	205		
Promass F	08...15	Ex ec / NI	-50 / -200	150		60	---	60	95	140	205	205		
						50	50	80	115	150	150	150		
			-50 / -200	240		60	---	80	115	150	150	150		
						50	50	80	115	170	240	240		
	25...40	Ex ec / NI	-50 / -200	150		60	---	80	115	170	240	240		
						45	60	60	95	150	150	150		
			-50 / -200	240		60	---	60	95	150	150	150		
						45	60	60	95	170	240	240		
	50...80	Ex ec / NI	-50 / -200	150		60	---	60	95	170	240	240		
						45	60	60	95	150	150	150		
			-50 / -200	240		60	---	60	95	150	150	150		
						45	60	60	95	160	240	240		
	100...250	Ex ec / NI	-50 / -200	150		60	---	60	95	160	240	240		
						45	60	60	95	150	150	150		
			-50 / -200	240		60	---	60	95	160	240	240		
						45	60	60	95	160	240	240		
15...250	Ex ec / NI	-50 / -200	350	60		---	60	95	160	240	240			
				60		70	85	120	185	280	350			
		Promass H	08	Ex ec / NI		-50 / -200	205	50	45	80	115	165	205	205
			15...50	Ex ec / NI		-50 / -200	205	60	---	80	115	165	205	205
60	---							60	95	130	205	205		
Promass S, P	08	Ex ec / NI	-50	150		45	45	80	115	150	150	150		
						60	---	80	115	150	150	150		
			-50	205		45	45	80	115	170	205	205		
						60	---	80	115	170	205	205		
	15...50	Ex ec / NI	-50	150		45	45	60	95	150	150	150		
						60	---	60	95	150	150	150		
			-50	205		45	45	60	95	160	205	205		
						60	---	60	95	160	205	205		
Promass I	08...80	Ex ec / NI	-50	150		45	45	60	95	150	150	150		
Promass O	80...250	Ex ec / NI	-50	205		60	---	60	95	150	150	150		
						45	45	60	95	160	205	205		
						60	---	60	95	160	205	205		
Promass X	350	Ex ec / NI	-50	205		45	45	60	95	160	205	205		
Promass Q	25...250	Ex ec / NI	-50 / -200	240		60	---	60	95	160	240	240		
						45	45	60	95	160	240	240		
						60	---	60	95	160	240	240		
Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).														
(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.														
(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).														



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2.4.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature ($T_{a, \max}$)		
Transmitter	$T_{a, \max}$ (°C)	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135°C)
	45	T5 (100°C)
Notes: $T_{a, \min}$ = -40°C, -50°C or may be further limited (see the nameplate on the transmitter housing)		

Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted medium temperature (T _{m, max permitted})													
Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)						
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)	
Promass A	01...04	Ex ec nC	-50	205	-50 / -40	50	80	95	130	150	150 (180) ⁽²⁾	150 (180) ⁽²⁾	
Cubemass C	01...06	Ex ec nC	-50	205		60	---	95	130	150	150	150	
						50	80	95	130	150	150 (180) ⁽²⁾	150 (180) ⁽²⁾	
						60	80	95	130	150	150	150	
Promass E	08...15	Ex ec nC	-50	205		60	80	95	130	195	205	205	
	25...80	Ex ec nC	-50	205		60	80	95	130	195	205	205	
Promass F	08...15	Ex ec nC	-50 / -200	150		60	80	95	130	150	150	150	
			-50 / -200	240		60	80	95	130	195	240	240	
			-50 / -200	150		60	80	95	130	150	150	150	
			-50 / -200	240		60	80	95	130	195	240	240	
	100...250	Ex ec nC	-50 / -200	150		60	80	95	130	150	150	150	
			-50 / -200	240		60	80	95	130	195	240	240	
			-50 / -200	350		60	80	95	130	195	290	350	
			-50 / -200	205		60	80	95	130	195	205	205	
Promass H	08	Ex ec nC	-50 / -200	205		60	80	95	130	195	205	205	
	15...50	Ex ec nC	-50 / -200	205		60	80	95	130	195	205	205	
Promass S, P	08	Ex ec nC	-50	150		60	80	95	130	150	150	150	
			-50	205		60	80	95	130	195	205	205	
	15...50	Ex ec nC	-50	150		60	80	95	130	150	150	150	
			-50	205		60	80	95	130	195	205	205	
			-50	205		60	80	95	130	195	205	205	
Promass I	08...80	Ex ec nC	-50	150		60	80	95	130	150	150	150	
Promass O	80...250	Ex ec nC	-50	205		60	80	95	130	195	205	205	
Promass X	350	Ex ec nC	-50	205		60	80	95	130	195	205	205	
Promass Q	25...250	Ex ec nC	-50 / -200	240		60	80	95	130	195	240	240	
Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).													
(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.													
(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).													

2.5. Proline Promass 500 & Proline Cubemass 500 with thermal insulation NOT in accordance with E+H's specifications

Note:

- Versions with a stainless steel (hygienic) enclosure are not allowed to be installed with thermal insulation.

2.5.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note:

- Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature ($T_{a, \max}$)		
Transmitter	$T_{a, \max}$ (°C)	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135°C)
	45	T5 (100°C)
Notes: $T_{a, \min}$ = -40°C, -50°C or may be further limited (see the nameplate on the transmitter housing)		



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Proline Promass 300/500, Proline Cubemass 300/500

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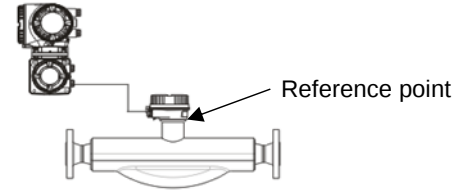
Sensor temperature class vs. Max. ambient temperature ($T_{a, \max}$) & Max. permitted reference temperature ($T_{\text{ref, max permitted}}$)

Sensor	Size / DN	Medium range $T_m^{(3)}$		Ambient range $T_a^{(1)}$		Reference temperature $T_{\text{ref, max permitted}}^{(2)} (^\circ\text{C})$					
		min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	T6 (85 $^\circ\text{C}$)	T5 (100 $^\circ\text{C}$)	T4 (135 $^\circ\text{C}$)	T3 (200 $^\circ\text{C}$)	T2 (300 $^\circ\text{C}$)	T1 (450 $^\circ\text{C}$)
Promass A	01...04	-50	205	-50 / -40	60	69	72	84	91	91	91
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) $T_{\text{ref, max}}$: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the $T_{\text{ref, max permitted}}$ shall not exceed the values given in this table.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).


2.5.2. Versions with sensor rated in type of protection Ex ec nC or AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
- The table below is not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature ($T_{a, \max}$)

Transmitter	$T_{a, \max} (^\circ\text{C})$	Temperature class
Proline Promass 500 & Proline Cubemass 500	60	T4 (135 $^\circ\text{C}$)
	45	T5 (100 $^\circ\text{C}$)

Notes: $T_{a, \min} = -40^\circ\text{C}$, -50°C or may be further limited (see the nameplate on the transmitter housing)

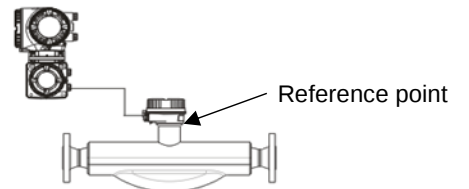
Sensor temperature class vs. Max. ambient temperature ($T_{a, \max}$) & Max. permitted reference temperature ($T_{\text{ref, max permitted}}$)

Sensor	Size / DN	Medium range $T_m^{(3)}$		Ambient range $T_a^{(1)}$		Reference temperature $T_{\text{ref, max permitted}}^{(2)} (^\circ\text{C})$					
		min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	min. ($^\circ\text{C}$)	max. ($^\circ\text{C}$)	T6 (85 $^\circ\text{C}$)	T5 (100 $^\circ\text{C}$)	T4 (135 $^\circ\text{C}$)	T3 (200 $^\circ\text{C}$)	T2 (300 $^\circ\text{C}$)	T1 (450 $^\circ\text{C}$)
Promass A	01...04	-50	205	-50 / -40	60	69	72	84	91	91	91
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) $T_{\text{ref, max}}$: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the $T_{\text{ref, max permitted}}$ shall not exceed the values given in this table.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



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Proline Promass 300/500, Proline Cubemass 300/500

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3. Proline Promass A/E/F/H/I/O/P/Q/S/X 500 Digital & Proline Cubemass 500 Digital (ISEM in sensor, defined by the order code "ISEM electronic" k = A)

Notes: The chapter 3 applies to Proline Promass 500 Digital & Proline Cubemass 500 Digital versions with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promass 500 Digital	8*5*** – dd*****A...	O8*5*** – dd*****A...	8x5xxx – dd*****A...	O8x5xxx – dd*****A...
Proline Cubemass 500 Digital				
with "Approval"	dd = CS, CZ dd = BS, BL	(cCSAus / CSA) (IECEX / ATEX)		

3.1. Ambient temperature range T_a

The rated ambient temperature range is indicated on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, this range may be further limited by the applied medium (process) temperature and temperature class. Refer to the temperature tables below for detailed limitations.

3.2. Medium (process) temperature range T_m

The allowable medium temperature range is specified on the device's nameplate. This range is determined by factors such as sensor type, size, flange, maximum working pressure, and selected options. Additionally, depending on the applied ambient temperature and temperature class, this range may be further limited. Refer to the temperature tables below for detailed limitations.

3.3. Proline Promass 500 Digital & Proline Cubemass 500 Digital *without thermal insulation*

3.3.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note: Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature (T _{a, max})				
Transmitter	Type of enclosure	T _{a, min} (°C)	T _{a, max} (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)
Notes: (1) T _{a, min} = -50°C for aluminium enclosure, T _{a, min} = -40°C for plastic enclosure. For versions with the transmitter installed in non-hazardous areas (with order code “Approval” dd = BL): T _{a, max} = 60°C. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).				

Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted medium temperature (T _{m, max permitted})												
Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	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	Ex ec / NI	-50	205	-50 / -40	60	---	95	130	170	205	205
Promass A (type 8A5C)	01...04	Ex ec / NI	-50	205		55	---	95	130	170	205	205
Cubemass C	01...06	Ex ec / NI	-50	205		60	---	95	130	170	190	190
						55	---	95	130	140	205	205
Promass E	08...15	Ex ec / NI	-50	205		60	---	75	115	165	205	205
	25...80	Ex ec / NI	-50	205		60	---	60	95	140	205	205
Promass F	08...15	Ex ec / NI	-50 / -200	150		55	---	80	115	130	150	150
						60	---	80	115	130	130	130
						60	---	80	115	170	240	240
						55	---	60	95	150	150	150
	25...40	Ex ec / NI	-50 / -200	150		60	---	60	95	130	130	130
						60	---	60	95	170	240	240
						55	---	60	95	150	150	150
						60	---	60	95	160	240	240
	50...80	Ex ec / NI	-50 / -200	150		60	---	60	95	130	130	130
						60	---	60	95	160	240	240
						55	---	60	95	150	150	150
						60	---	60	95	160	240	240
	100...250	Ex ec / NI	-50 / -200	150		55	---	60	95	150	150	150
						60	---	60	95	130	130	130
						60	---	60	95	160	240	240
						50	---	85	120	185	280	350
15...250	Ex ec / NI	-50 / -200	350	60		---	85	120	185	240 (280) ⁽²⁾	240 (350) ⁽²⁾	
Promass H	08	Ex ec / NI	-50 / -200	205	60	---	80	115	165	205	205	
	15...50	Ex ec / NI	-50 / -200	205	60	---	60	95	130	205	205	



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Proline Promass 300/500, Proline Cubemass 300/500

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Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass S, P	08	Ex ec / NI	-50	150	-50 / -40	60	---	80	115	150	150	150
			-50	205		60	---	80	115	170	205	205
	15...50	Ex ec / NI	-50	150		60	---	60	95	150	150	150
			-50	205		60	---	60	95	160	205	205
Promass I	08...80	Ex ec / NI	-50	150		55	---	60	95	150	150	150
Promass O	80...250	Ex ec / NI	-50	205		60	---	60	95	140	140	140
Promass X	350	Ex ec / NI	-50	205		60	---	60	95	160	205	205
Promass Q	25...250	Ex ec / NI	-50 / -200	240		60	---	60	95	160	240	240

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

3.3.2. Versions with sensor rated in type of protection Ex ec nC, AEx ec nC

Notes:

- Refer to the nameplate on the sensor housing to determine the type of protection.
- Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
- The following temperature tables are not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature (T_{a, max})

Transmitter	Type of enclosure	T _{a, min} (°C)	T _{a, max} (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)

Notes: (1) T_{a, min} = -50°C for aluminium enclosure, T_{a, min} = -40°C for plastic enclosure.

For versions with the transmitter installed in non-hazardous areas (with order code "Approval" dd = BL): T_{a, max} = 60°C. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).

Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)					
			min. (°C)	max. (°C)	min. (°C)	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	Ex ec nC	-50	205	-50 / -40	60	---	95	130	195	205	205
Promass A (type 8A5C)	01...04	Ex ec nC	-50	205		55	---	95	130	195	205	205
Cubemass C	01...06	Ex ec nC	-50	205		60	---	95	130	190	190	190
						55	---	95	130	195	205	205
Promass E	08...15	Ex ec nC	-50	205		60	---	95	130	195	205	205
	25...80	Ex ec nC	-50	205		60	---	95	130	195	205	205
Promass F	08...15	Ex ec nC	-50 / -200	150		55	---	95	130	130	150	150
			-50 / -200	240		60	---	95	130	130	130	130
				60		---	95	130	195	240	240	
				55		---	95	130	150	150	150	
	25...80	Ex ec nC		-50 / -200		150	60	---	95	130	130	130
			-50 / -200	240		55	---	95	130	150	150	150
				60		---	95	130	195	240	240	
				60		---	95	130	130	130	130	
100...250	Ex ec nC	-50 / -200		150		60	---	95	130	150	150	150
		-50 / -200	240	55		---	95	130	150	150	150	
			60	---		95	130	130	130	130		
			60	---		95	130	195	240	240		
15...250	Ex ec nC		-50 / -200	350		50	---	95	130	195	290	350
		-50 / -200	240	60		---	95	130	195	240	240	
Promass H	08		Ex ec nC	-50 / -200		205	60	---	95	130	195	205
	15...50	Ex ec nC	-50 / -200	205		60	---	95	130	195	205	205
Promass S, P	08	Ex ec nC	-50	150		60	---	95	130	150	150	150
			-50	205		60	---	95	130	195	205	205
	15...50	Ex ec nC	-50	150	60	---	95	130	150	150	150	
			-50	205	60	---	95	130	195	205	205	



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Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass I	8 ... 80	Ex ec nC	-50	150	-50 / -40	55	---	95	130	150	150	150
						60	---	95	130	140	140	140
Promass O	80...250	Ex ec nC	-50	205		60	---	95	130	195	205	205
Promass X	350	Ex ec nC	-50	205		60	---	95	130	195	205	205
Promass Q	25...250	Ex ec nC	-50 / -200	240		60	---	95	130	195	240	240

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) Values in brackets apply to installations where the transmitter is not installed above the sensor.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

3.4. Proline Promass 500 Digital & Proline Cubemass 500 Digital with thermal insulation in accordance with E+H's specifications

Notes:

- For thermal insulation specifications, refer to E+H's manuals.

3.4.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

Note: Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature (T_{a, max})

Transmitter	Type of enclosure	T _{a, min} (°C)	T _{a, max} (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)

Notes: (1) T_{a, min} = -50°C for aluminium enclosure, T_{a, min} = -40°C for plastic enclosure.

For versions with the transmitter installed in non-hazardous areas (with order code "Approval" dd = BL): T_{a, max} = 60°C. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).

Sensor temperature class vs. Max. ambient temperature (T_{a, max}) & Max. permitted medium temperature (T_{m, max permitted})

Sensor	Size / DN	Type of protection	Medium range T _m ⁽²⁾		Ambient range T _a ⁽¹⁾		T _m , max permitted (°C)						
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)	
Promass A	01...04	Ex ec / NI	-50	205	-50 / -40	50	---	95	130	130	130	130	
Cubemass C	01...06	Ex ec / NI	-50	205		50	---	90	130	130	130	130	
Promass E	08...15	Ex ec / NI	-50	205		50	---	75	115	165	205	205	
	25...80	Ex ec / NI	-50	205		50	---	60	95	140	205	205	
Promass F	08...15	Ex ec / NI	-50 / -200	150		45	---	80	115	150	150	150	
						50	---	80	115	130	130	130	
			-50 / -200	240		50	---	80	115	170	240	240	
						45	---	60	95	150	150	150	
	25...40	Ex ec / NI	-50 / -200	150		50	---	60	95	130	130	130	
						50	---	60	95	170	240	240	
			-50 / -200	240		45	---	60	95	150	150	150	
						50	---	60	95	160	240	240	
	50...80	Ex ec / NI	-50 / -200	150		45	---	60	95	150	150	150	
						50	---	60	95	130	130	130	
100...250			Ex ec / NI	-50 / -200		150	45	---	60	95	150	150	150
							50	---	60	95	130	130	130
	-50 / -200	240		50		---	60	95	160	240	240		
				50		---	85	120	185	280	350		
Promass H	08	Ex ec / NI	-50 / -200	205		55	---	80	115	165	205	205	
	15...50	Ex ec / NI	-50 / -200	205		55	---	60	95	130	205	205	
Promass S, P	08	Ex ec / NI	-50	150		45	---	80	100	150	150	150	
						50	---	80	100	130	130	130	
			-50	205		55	---	80	115	170	205	205	
						45	---	60	95	150	150	150	
	15...50	Ex ec / NI	-50	150		50	---	60	95	130	130	130	
						55	---	60	95	160	205	205	



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Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted medium temperature (T _{m, max permitted})												
Sensor	Size / DN	Type of protection	Medium range T _m ⁽²⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass I	08...80	Ex ec / NI	-50	150	-50 / -40	45	---	60	95	150	150	150
						50	---	60	95	130	130	130
Promass O	80...250	Ex ec / NI	-50	205		55	---	60	95	160	205	205
Promass X	350	Ex ec / NI	-50	205		55	---	60	95	160	205	205
Promass Q	25...250	Ex ec / NI	-50 / -200	240		50	---	60	95	160	240	240
Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).												
(2) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).												

3.4.2. Versions with sensor rated in type of protection Ex ec nC, AEx ec nC

- Notes:
- Refer to the nameplate on the sensor housing to determine the type of protection.
 - Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
 - The following temperature tables are not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature (T _{a, max})				
Transmitter	Type of enclosure	T _{a, min} (°C)	T _{a, max} (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)
Notes: (1) T _{a, min} = -50°C for aluminium enclosure, T _{a, min} = -40°C for plastic enclosure. For versions with the transmitter installed in non-hazardous areas (with order code "Approval" dd = BL): T _{a, max} = 60°C. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).				

Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted medium temperature (T _{m, max permitted})												
Sensor	Size / DN	Type of protection	Medium range T _m ⁽²⁾		Ambient range T _a ⁽¹⁾		T _{m, max permitted} (°C)					
			min. (°C)	max. (°C)	min. (°C)	max. (°C)	T6 (85°C)	T5 (100°C)	T4 (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Promass A	01...04	Ex ec nC	-50	205	-50 / -40	50	---	95	130	130	130	130
Cubemass C	01...06	Ex ec nC	-50	205		50	---	95	130	130	130	130
Promass E	08...15	Ex ec nC	-50	205		50	---	95	130	195	205	205
	25...80	Ex ec nC	-50	205		50	---	95	130	195	205	205
Promass F	08...15	Ex ec nC	-50 / -200	150		45	---	95	130	150	150	150
				50		---	95	130	130	130	130	
			-50 / -200	240		50	---	95	130	195	240	240
				45		---	95	130	150	150	150	
	25...80	Ex ec nC	-50 / -200	150		50	---	95	130	130	130	130
				50		---	95	130	195	240	240	
			-50 / -200	240		45	---	95	130	150	150	150
				50		---	95	130	130	130	130	
	100...250	Ex ec nC	-50 / -200	150		50	---	95	130	150	150	150
				50		---	95	130	130	130	130	
15...250	Ex ec nC	-50 / -200	350	50		---	95	130	195	280	350	
Promass H	08	Ex ec nC	-50 / -200	205		55	---	95	130	195	205	205
	15...50	Ex ec nC	-50 / -200	205		55	---	95	130	195	205	205
Promass S, P	08	Ex ec nC	-50	150		45	---	95	130	150	150	150
				50		---	95	130	130	130	130	
			-50	205		55	---	95	130	195	205	205
				45		---	95	130	150	150	150	
	15...50	Ex ec nC	-50	150	50	---	95	130	130	130	130	
				55	---	95	130	195	205	205		
Promass I	08...80	Ex ec nC	-50	150	45	---	95	130	150	150	150	
					50	---	95	130	130	130	130	
Promass O	80...250	Ex ec nC	-50	205	55	---	95	130	195	205	205	
Promass X	350	Ex ec nC	-50	205	55	---	95	130	195	205	205	
Promass Q	25...250	Ex ec nC	-50 / -200	240	50	---	95	130	195	240	240	
Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).												
(2) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).												

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	Proline Promass 300/500, Proline Cubemass 300/500		Rev.:	I
	Thermal Parameter		Date:	15.04.2025
	EPL Gc (Zone 2); Class I Zone 2; Class I Division 2		Page:	15/17

3.5. Proline Promass 500 Digital & Proline Cubemass 500 Digital *with thermal insulation* NOT in accordance with E+H's specifications

3.5.1. Versions with sensor rated in type of protection Ex ec, AEx ec or NI (Cl. I Div. 2)

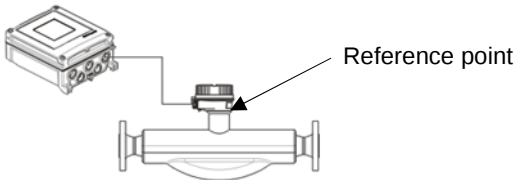
Note: Refer to the nameplate on the sensor housing to determine the type of protection.

Transmitter temperature class vs. Maximum ambient temperature ($T_{a, \max}$)				
Transmitter	Type of enclosure	$T_{a, \min}$ (°C)	$T_{a, \max}$ (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)

Notes: (1) $T_{a, \min} = -50^{\circ}\text{C}$ for aluminium enclosure, $T_{a, \min} = -40^{\circ}\text{C}$ for plastic enclosure.
For versions with the transmitter installed in non-hazardous areas (with order code "Approval" dd = BL): $T_{a, \max} = 60^{\circ}\text{C}$. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).

Sensor temperature class vs. Max. ambient temperature ($T_{a, \max}$) & Max. permitted reference temperature ($T_{\text{ref, max permitted}}$)											
Sensor	Size / DN	Medium range T_m ⁽³⁾		Ambient range T_a ⁽¹⁾		Reference temperature $T_{\text{ref, max permitted}}$ ⁽²⁾ (°C)					
		min. (°C)	max. (°C)	min. (°C)	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 / -40	60	---	72	82	85	85	85
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

Notes: (1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).
(2) $T_{\text{ref, max permitted}}$: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the $T_{\text{ref, max permitted}}$ shall not exceed the values given in this table.
(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).



3.4.2. Versions with sensor rated in type of protection Ex ec nC, AEx ec nC

- Notes:
- Refer to the nameplate on the sensor housing to determine the type of protection.
 - Type of protection Ex ec nC or AEx ec nC is applicable only for sensor versions without purge connection or rupture disk.
 - The following temperature tables are not applicable for versions rated Class I Division 2 (with order code "Approval" dd = CS).

Transmitter temperature class vs. Maximum ambient temperature ($T_{a, \max}$)				
Transmitter	Type of enclosure	$T_{a, \min}$ (°C)	$T_{a, \max}$ (°C)	Temperature class
Proline Promass 500 Digital & Proline Cubemass 500 Digital	Aluminium or Plastic	-50 / -40 ⁽¹⁾	60	T4 (135°C)
			45	T5 (100°C)

Notes: (1) $T_{a, \min} = -50^{\circ}\text{C}$ for aluminium enclosure, $T_{a, \min} = -40^{\circ}\text{C}$ for plastic enclosure.
For versions with the transmitter installed in non-hazardous areas (with order code "Approval" dd = BL): $T_{a, \max} = 60^{\circ}\text{C}$. Applicable ambient temperature range may be further limited (see the nameplate on the transmitter housing).



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline Promass 300/500, Proline Cubemass 300/500

Thermal Parameter

EPL Gc (Zone 2); Class I Zone 2; Class I Division 2

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Sensor temperature class vs. Max. ambient temperature (T _{a, max}) & Max. permitted reference temperature (T _{ref, max permitted})											
Sensor	Size / DN	Medium range T _m ⁽³⁾		Ambient range T _a ⁽¹⁾		Reference temperature T _{ref, max permitted} ⁽²⁾ (°C)					
		min. (°C)	max. (°C)	min. (°C)	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 / -40	60	---	72	82	85	85	85
Cubemass C	01...06	-50	205								
Promass E	08...80	-50	205								
Promass F	08...250	-50 / -200	150 / 240 / 350								
Promass H	08...50	-50 / -200	205								
Promass S, P	08...50	-50	150 / 205								
Promass I	08...80	-50	150								
Promass O	80...250	-50	205								
Promass X	350	-50	205								
Promass Q	25...250	-50 / -200	240								

Notes:

(1) Applicable ambient temperature range may be further limited (see the nameplate on the sensor housing).

(2) T_{ref, max permitted}: the maximum temperature measured at the reference point at the sensor neck. To maintain the assigned temperature class rating, the T_{ref, max permitted} shall not exceed the values given in this table.

(3) Applicable medium temperature range may be further limited (see the nameplate on the sensor housing).

Reference point



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline Promass 300/500, Proline Cubemass 300/500

Thermal Parameter

EPL Gc (Zone 2); Class I Zone 2; Class I Division 2

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1. Proline 300 – Compact version

1.1. Devices installed in EPL Gb (Zone 1), Db (Zone 21); Cl. I Div. 1, Cl. I Zone 1; Cl. II, III, Zone 21

This section applies to Proline 300 versions with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 300	5*3*** – dd*effgh...	O5*3*** – dd*effgh...	5x3bxx – ddeffgh...	O5x3bxx – ddeffgh...
Proline Promass 300	8*3*** – ddeffgh...	O8*3*** – ddeffgh...	8x3bxx – ddeffgh...	O8x3bxx – ddeffgh...
Proline Prosonic Flow G 300	9*3*** – ddeffgh...	O9*3*** – ddeffgh...	9x3bxx – ddeffgh...	O9x3bxx – ddeffgh...
Proline t-mass 300	6*3*** – ddeffgh...	O6*3*** – ddeffgh...	6x3bxx – ddeffgh...	O6x3bxx – ddeffgh...
Proline Teqwave M 300	4*3*** – ddeffgh...	O4*3*** – ddeffgh...	4x3bxx – ddeffgh...	O4x3bxx – ddeffgh...

with “Approval” options **dd** = CC, CD, CE, C1, C2, C3, C4 (cCSAus / CSA)
dd = BA, BB, BC, BD (IECEX / ATEX)
e = “Power Supply” code, **ff** = “IO1” code, **g** = “IO2” code, **h** = “IO3” code, **i** = “IO4” code

1.1.1. Power Supply

Order code “Power supply” e =	Terminal No.	Type of protection	Values
D	1(L+) and 2(L-)	Non-intrinsically safe	U _N = DC 19.2...28.8 V U _M = AC 250 V
E	1(L) and 2(N)		U _N = AC 85...264 V U _M = AC 250 V

1.1.2. Input/Output

Input/Output 1			
Order code “Input/Output 1” ff =	Terminal No.	Type of protection	Values
HA, TA	I/O1 (Terminal 26, 27)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 570 mA, P _i = 8.5 W, L _i = 10 µH, C _i = 5 nF
CA, CB			U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 6 nF
CC, CD			U _o = 21.8 V, I _o = 90 mA, P _o = 491 mW, L _o = 4.1 mH (IIC) / 15 mH (IIB), C _o = 160 nF (IIC) / 1160 nF (IIB)
			U _i = 30 V, I _i = 10 mA, P _i = 0.3 W, L _i = 5 µH, C _i = 6 nF
RC, MC			2-WISE power load APL port profile SLAA (see Note 1): U _i = 17.5 V, I _i = 380 mA, P _i = 5.32 W, L _i = 10 µH, C _i = 5 nF
BA, BB, MA		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
LA, GA, SA			U _N = DC 32 V, U _M = AC 250 V
RB, MB			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V
NA, RA			U _N = AC 3.3 V, U _M = AC 250 V
	I/O1 (Port 1 (RJ45))		

Input/Output 2			
Order code “Input/Output 2” g =	Terminal No.	Type of protection	Values
C, G, K	I/O2 (Terminal 24, 25)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code “Input/Output 3” h =	Terminal No.	Type of protection	Values
C, G, K	I/O3 (Terminal 22, 23)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Note 1: for devices with the order code “Output; Input 1” ff = RC and MC, the installation instructions in “Ethernet-APL Installation Drawing - Device End Users v1.0” for option 2-WISE power load port (6) must be followed. This document is available for download at <https://www.ethernet-apl.org/library/>.

1.1.3. Service interface

Order code “Approval” dd =	Terminal no.	Type of protection	Values
BA, BB, C1, C2	Service Interface (CDI) or Port 2 (RJ45)	Intrinsically safe (IS, Ex ia, AEx ia)	Ui = 10 V, li = n.a., Pi = n.a., Ci = 200 nF, Li = 0
		Non-intrinsically safe	UN = AC 3.3 V, UM = AC 250 V Connect only to a non-intrinsically safe circuit in areas which are known to be non-hazardous
BC, BD, CC, CD, CE, C3, C4		Intrinsically safe (IS, Ex ia, AEx ia)	Ui = 10 V, li = n.a., Pi = n.a., Ci = 200 nF, Li = 0
		Non-intrinsically safe	UN = AC 3.3 V, UM = AC 250 V

1.1.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BA, BB, C1, C2	Type N connector	Intrinsically safe (IS, Ex ia, AEx ia)	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

1.1.5. Output for Remote Display DKX001 or ODKX001

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BA, BB, BC, BD, CC, CD, CE, C1, C2, C3, C4	81, 82, 83, 84	Intrinsically safe (IS, Ex ia, AEx ia)	$U_o = 3.9 \text{ V}$ $I_o = 1.5 \text{ A (spark)}$ 200 mA (power) $P_o = 600 \text{ mW}$ $R_i = 2.6 \Omega$ $C_o = 670 \mu\text{F}$ $L_o = 0$ Note: a connection cable with a ratio $L_{\text{cable}}/R_{\text{cable}} \leq 0.024$ mH/Ω and $C_{\text{cable}} \leq 600 \mu\text{F}$ must be used when connecting the Remote Display DKX001 or ODKX001



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Control Drawing - IECEx, ATEX, CSA, cCSAus

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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1.2. Devices installed in EPL Gc (Zone 2); Cl. I Div. 2, Cl. I Zone 2

This section applies to Proline 300 versions with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 300	5*3*** – dd*effgh...	O5*3*** – dd*effgh...	5x3bxx – ddeffgh...	O5x3bxx – ddeffgh...
Proline Promass 300	8*3*** – ddeffgh...	O8*3*** – ddeffgh...	8x3bxx – ddeffgh...	O8x3bxx – ddeffgh...
Proline Prosonic Flow G 300	9*3*** – ddeffgh...	O9*3*** – ddeffgh...	9x3bxx – ddeffgh...	O9x3bxx – ddeffgh...
Proline t-mass 300	6*3*** – ddeffgh...	O6*3*** – ddeffgh...	6x3bxx – ddeffgh...	O6x3bxx – ddeffgh...
Proline Teqwave M 300	4*3*** – ddeffgh...	O4*3*** – ddeffgh...	4x3bxx – ddeffgh...	O4x3bxx – ddeffgh...

with "Approval" options **dd** = CS, CZ, (cCSAus / CSA)
 dd = BS (IECEX / ATEX)
 e = "Power Supply" code, **ff** = "IO1" code, **g** = "IO2" code, **h** = "IO3" code, **i** = "IO4" code

1.2.1. Power Supply

Order code "Power supply" e =	Terminal No.	Type of protection	Values
I	1(L+/L) and 2(L-/N)	Non-intrinsically safe	U _N = DC 19.2...28.8 V / AC 85...264 V U _M = AC 250 V

1.2.2. Input/Output

Input/Output 1			
Order code "Input/Output 1" ff =	Terminal No.	Type of protection	Values
HA, TA	I/O1 (Terminal 26, 27)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 570 mA, P _i = 8.5 W, L _i = 10 µH, C _i = 5 nF
CA, CB			U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 6 nF
CC, CD			U _o = 21.8 V, I _o = 90 mA, P _o = 491 mW, L _o = 4.1 mH (IIC) / 15 mH (IIB), C _o = 160 nF (IIC) / 1160 nF (IIB)
RC, MC			U _i = 30 V, I _i = 10 mA, P _i = 0.3 W, L _i = 5 µH, C _i = 6 nF
BA, BB, MA		Non-intrinsically safe	2-WISE power load APL port profile SLAC (see Note 1): U _i = 17.5 V, I _i = 380 mA, P _i = 5.32 W, L _i = 10 µH, C _i = 5 nF
LA, GA, SA			U _N = DC 30 V, U _M = AC 250 V
RB, MB			U _N = DC 32 V, U _M = AC 250 V
NA, RA			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V U _N = AC 3.3 V, U _M = AC 250 V

Input/Output 2			
Order code "Input/Output 2" g =	Terminal No.	Type of protection	Values
C, G, K	I/O2 (Terminal 24, 25)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code "Input/Output 3" h =	Terminal No.	Type of protection	Values
C, G, K	I/O3 (Terminal 22, 23)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Note 1: for devices with the order code "Output; Input 1" ff = RC and MC, the installation instructions in "Ethernet-APL Installation Drawing - Device End Users v1.0" for option 2-WISE power load port (6) must be followed. This document is available for download at <https://www.ethernet-apl.org/library/>.



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Control Drawing - IECEx, ATEX, CSA, cCSAus

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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1.2.3. Service interface

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BS, CS, CZ	Service Interface (CDI) or Port 2 (RJ45)	Non-intrinsically safe	$U_N = AC\ 3.3\ V$, $U_M = AC\ 250\ V$

1.2.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BS, CS, CZ	Type N connector	Intrinsically safe (NIFW, Ex ic, AEx ic)	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

1.2.5. Output for Remote Display DKX001 or ODKX001

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BS, CS, CZ	81, 82, 83, 84	Non-intrinsically safe	$U_N = 3.3\ V$ $I_N = 150\ mA$



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Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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2. Proline 500 (ISEM in transmitter) – Remote version

2.1. Transmitter and sensor installed in EPL Gb (Zone 1), Db (Zone 21); Cl. I Div. 1, Cl. I Zone 1; Cl. II, III, Zone 21

This section applies to Proline 500 versions (ISEM in transmitter) with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 500	5*5*** – dd*effghi.B...	O5*5*** – dd*effghi.B...	5x5bxx – ddeffghi.B...	O5x5bxx – ddeffghi.B...
Proline Promass 500	8*5*** – ddeffghi.B...	O8*5*** – ddeffghi.B...	8x5bxx – ddeffghi.B...	O8x5bxx – ddeffghi.B...
Proline Prosonic Flow P 500	9*5*** – ddeffghi.B...	O9*5*** – ddeffghi.B...	9x5bxx – ddeffghi.B...	O9x5bxx – ddeffghi.B...

with "Approval" options

dd = CC, CD, CE, C1, C2, C3, C4, C7, C8 (cCSAus / CSA)

dd = BA, BB, BC, BD, B7, B8 (IECEX / ATEX)

e = "Power Supply" code, ff = "IO1" code, g = "IO2" code, h = "IO3" code, i = "IO4" code

2.1.1. Power Supply

Order code "Power supply" e =	Terminal No.	Type of protection	Values
D	1(L+) and 2(L-)	Non-intrinsically safe	U _N = DC 19.2...28.8 V U _M = AC 250 V
E	1(L) and 2(N)		U _N = AC 85...264 V U _M = AC 250 V

2.1.2. Input/Output

Input/Output 1			
Order code "Input/Output 1" ff =	Terminal No.	Type of protection	Values
HA, TA	I/O1 (Terminal 26, 27)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 570 mA, P _i = 8.5 W, L _i = 10 µH, C _i = 5 nF
CA, CB			U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 6 nF
CC, CD			U _o = 21.8 V, I _o = 90 mA, P _o = 491 mW, L _o = 4.1 mH (IIC) / 15 mH (IIB), C _o = 160 nF (IIC) / 1160 nF (IIB)
			U _i = 30 V, I _i = 10 mA, P _i = 0.3 W, L _i = 5 µH, C _i = 6 nF
RC, MC		Non-intrinsically safe	2-WISE power load APL port profile SLAA (see Note 1): U _i = 17.5 V, I _i = 380 mA, P _i = 5.32 W, L _i = 10 µH, C _i = 5 nF
BA, BB, MA			U _N = DC 30 V, U _M = AC 250 V
LA, GA, SA			U _N = DC 32 V, U _M = AC 250 V
RB, MB			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V
NA, RA	I/O1 (Port 1 (RJ45))		U _N = AC 3.3 V, U _M = AC 250 V

Input/Output 2			
Order code "Input/Output 2" g =	Terminal No.	Type of protection	Values
C, G, K	I/O2 (Terminal 24, 25)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code "Input/Output 3" h =	Terminal No.	Type of protection	Values
C, G, K	I/O3 (Terminal 22, 23)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 4			
Order code "Input/Output 4" i =	Terminal No.	Type of protection	Values
C, G, K	I/O4 (Terminal 20, 21)	Intrinsically safe (IS, Ex ia, AEx ia)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Note 1: for devices with the order code "Output; Input 1" ff = RC and MC, the installation instructions in "Ethernet-APL Installation Drawing - Device End Users v1.0" for option 2-WISE power load port (6) must be followed. This document is available for download at <https://www.ethernet-apl.org/library/>.



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Switzerland

Control Drawing - IECEx, ATEX, CSA, cCSAus

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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2.1.3. Service interface

Order code “Approval” dd =	Terminal no.	Type of protection	Values
BA, BB, B7, C1, C2, C7	Service Interface (CDI) or Port 2 (RJ45)	Intrinsically safe (IS, Ex ia, AEx ia)	Ui = 10 V, li = n.a., Pi = n.a., Ci = 200 nF, Li = 0
		Non-intrinsically safe	UN = AC 3.3 V, UM = AC 250 V Connect only to a non-intrinsically safe circuit in areas which are known to be non-hazardous
BC, BD, B8, CC, CD, CE, C3, C4, C8		Intrinsically safe (IS, Ex ia, AEx ia)	Ui = 10 V, li = n.a., Pi = n.a., Ci = 200 nF, Li = 0
		Non-intrinsically safe	UN = AC 3.3 V, UM = AC 250 V

2.1.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BA, BB, B7, C1, C2, C7	Type N connector	Intrinsically safe (IS, Ex ia, AEx ia)	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

2.1.5. Output for Remote Display DKX001 or ODKX001

The Remote Display DKX001 or ODKX001 is not intended for connection to the Proline 500.



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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2.2. Transmitter and sensor installed in EPL Gc (Zone 2); Cl. I Div. 2, Cl. I Zone 2

This section applies to Proline 500 versions (ISEM in transmitter) with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 500	5*5*** – dd*effghi.B...	O5*5*** – dd*effghi.B...	5x5bxx – ddeffghi.B...	O5x5bxx – ddeffghi.B...
Proline Promass 500	8*5*** – ddeffghi.B...	O8*5*** – ddeffghi.B...	8x5bxx – ddeffghi.B...	O8x5bxx – ddeffghi.B...
Proline Prosonic Flow P 500	9*5*** – ddeffghi.B...	O9*5*** – ddeffghi.B...	9x5bxx – ddeffghi.B...	O9x5bxx – ddeffghi.B...

with "Approval" options

dd = CS, CZ

(cCSAus / CSA)

dd = BS

(IECEX / ATEX)

e = "Power Supply" code, ff = "IO1" code, g = "IO2" code, h = "IO3" code, i = "IO4" code

2.2.1. Power Supply

Order code "Power supply" e =	Terminal No.	Type of protection	Values
I	1(L+/L) and 2(L-/N)	Non-intrinsically safe	U _N = DC 19.2...28.8 V / AC 85...264 V U _M = AC 250 V

2.2.2. Input/Output

Input/Output 1			
Order code "Input/Output 1" ff =	Terminal No.	Type of protection	Values
HA, TA	I/O1 (Terminal 26, 27)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 570 mA, P _i = 8.5 W, L _i = 10 µH, C _i = 5 nF
CA, CB			U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 6 nF
CC, CD			U _o = 21.8 V, I _o = 90 mA, P _o = 491 mW, L _o = 4.1 mH (IIC) / 15 mH (IIB), C _o = 160 nF (IIC) / 1160 nF (IIB)
			U _i = 30 V, I _i = 10 mA, P _i = 0.3 W, L _i = 5 µH, C _i = 6 nF
RC, MC		Non-intrinsically safe	2-WISE power load APL port profile SLAC (see Note 1): U _i = 17.5 V, I _i = 380 mA, P _i = 5.32 W, L _i = 10 µH, C _i = 5 nF
BA, BB, MA			U _N = DC 30 V, U _M = AC 250 V
LA, GA, SA			U _N = DC 32 V, U _M = AC 250 V
RB, MB			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V
NA, RA	I/O1 (Port 1 (RJ45))		U _N = AC 3.3 V, U _M = AC 250 V

Input/Output 2			
Order code "Input/Output 2" g =	Terminal No.	Type of protection	Values
C, G, K	I/O2 (Terminal 24, 25)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code "Input/Output 3" h =	Terminal No.	Type of protection	Values
C, G, K	I/O3 (Terminal 22, 23)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 4			
Order code "Input/Output 4" i =	Terminal No.	Type of protection	Values
C, G, K	I/O4 (Terminal 20, 21)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Note 1: for devices with the order code "Output; Input 1" ff = RC and MC, the installation instructions in "Ethernet-APL Installation Drawing - Device End Users v1.0" for option 2-WISE power load port (6) must be followed. This document is available for download at <https://www.ethernet-apl.org/library/>.



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Control Drawing - IECEx, ATEX, CSA, cCSAus

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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2.2.3. Service interface

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BS CS, CZ	Service Interface (CDI) or Port 2 (RJ45)	Non-intrinsically safe	$U_N = AC\ 3.3\ V$, $U_M = AC\ 250\ V$

2.2.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BS, CS, CZ	Type N connector	Intrinsically safe (NIFW, Ex ic, AEx ic)	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

2.2.5. Output for Remote Display DKX001 or ODKX001

The Remote Display DKX001 or ODKX001 is not intended for connection to the Proline 500.



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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3. Proline 500 Digital (ISEM in sensor) – Remote version

3.1. Transmitter and sensor installed in EPL Gc (Zone 2); Cl. I Div. 2, Cl. I Zone 2

This section applies to Proline 500 Digital versions (ISEM in sensor) with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 500 Digital	5*5*** – dd*effghi.A...	O5*5*** – dd*effghi.A...	5x5bxx – ddeffghi.A...	O5x5bxx – ddeffghi.A...
Proline Promass 500 Digital	8*5*** – ddeffghi.A...	O8*5*** – ddeffghi.A...	8x5bxx – ddeffghi.A...	O8x5bxx – ddeffghi.A...
Proline Prosonic Flow G 500 Digital	9*5*** – ddeffghi.A...	O9*5*** – ddeffghi.A...	9x5bxx – ddeffghi.A...	O9x5bxx – ddeffghi.A...
Proline t-mass 500 Digital	6*5*** – ddeffghi.A...	O6*5*** – ddeffghi.A...	6x5bxx – ddeffghi.A...	O6x5bxx – ddeffghi.A...
Proline Tegwave M 500 Digital	4*5*** – ddeffghi.A...	O4*5*** – ddeffghi.A...	4x5bxx – ddeffghi.A...	O4x5bxx – ddeffghi.A...

with "Approval" options

dd = CM, CN, CS, CZ, C5, C6 (cCSAus / CSA)

dd = BM, BN, BS (IECEX / ATEX)

e = "Power Supply" code, ff = "IO1" code, g = "IO2" code, h = "IO3" code, i = "IO4" code

3.1.1. Power Supply

Order code "Power supply" e =	Terminal No.	Type of protection	Values
I	1(L+/L) and 2(L-/N)	Non-intrinsically safe	U _N = DC 19.2...28.8 V / AC 85...264 V U _M = AC 250 V

3.1.2. Input/Output

Input/Output 1			
Order code "Input/Output 1" ff =	Terminal No.	Type of protection	Values
HA, TA	I/O1 (Terminal 26, 27)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 570 mA, P _i = 8.5 W, L _i = 10 µH, C _i = 5 nF
CA, CB			U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 6 nF
CC, CD			U _o = 21.8 V, I _o = 90 mA, P _o = 491 mW, L _o = 4.1 mH (IIC) / 15 mH (IIB), C _o = 160 nF (IIC) / 1160 nF (IIB)
			U _i = 30 V, I _i = 10 mA, P _i = 0.3 W, L _i = 5 µH, C _i = 6 nF
RC, MC		Non-intrinsically safe	2-WISE power load APL port profile SLAC (see Note 1): U _i = 17.5 V, I _i = 380 mA, P _i = 5.32 W, L _i = 10 µH, C _i = 5 nF
BA, BB, MA			U _N = DC 30 V, U _M = AC 250 V
LA, GA, SA			U _N = DC 32 V, U _M = AC 250 V
RB, MB			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V
NA, RA	I/O1 (Port 1 (RJ45))		U _N = AC 3.3 V, U _M = AC 250 V

Input/Output 2			
Order code "Input/Output 2" g =	Terminal No.	Type of protection	Values
C, G, K	I/O2 (Terminal 24, 25)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code "Input/Output 3" h =	Terminal No.	Type of protection	Values
C, G, K	I/O3 (Terminal 22, 23)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 4			
Order code "Input/Output 4" i =	Terminal No.	Type of protection	Values
C, G, K	I/O4 (Terminal 20, 21)	Intrinsically safe (NIFW, Ex ic, AEx ic)	U _i = 30 V, I _i = 100 mA, P _i = 1.25 W, L _i = 0, C _i = 0
B, D, E, F, I, J, L		Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Note 1: for devices with the order code "Output; Input 1" ff = RC and MC, the installation instructions in "Ethernet-APL Installation Drawing - Device End Users v1.0" for option 2-WISE power load port (6) must be followed. This document is available for download at <https://www.ethernet-apl.org/library/>.



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Control Drawing - IECEx, ATEX, CSA, cCSAus

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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3.1.3. Service interface

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BM, BN, BS CM, CN, CS, CZ, C5, C6	Service Interface (CDI) or Port 2 (RJ45)	Non-intrinsically safe	$U_N = AC\ 3.3\ V$, $U_M = AC\ 250\ V$

3.1.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BM, BN, BS, CM, CN, CS, CZ, C5, C6	Type N connector	Intrinsically safe (NIFW, Ex ic, AEx ic)	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

3.1.5. Output for Remote Display DKX001 or ODKX001

The Remote Display DKX001 or ODKX001 is not intended for connection to the Proline 500 Digital.



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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3.2. Transmitter installed in non-hazardous areas and sensor in EPL Gb (Zone 1) or EPL Gc (Zone 2)

This section applies to Proline 500 Digital versions (ISEM in sensor) with extended order code covering:

	flowmeter	flowmeter OEM version	replacement transmitter	replacement transmitter OEM
Proline Promag 500 Digital	5*5*** – dd*effghi.A...	O5*5*** – dd*effghi.A...	5x5bxx – ddeffghi.A...	O5x5bxx – ddeffghi.A...
Proline Promass 500 Digital	8*5*** – ddeffghi.A...	O8*5*** – ddeffghi.A...	8x5bxx – ddeffghi.A...	O8x5bxx – ddeffghi.A...
Proline Prosonic Flow G 500 Digital	9*5*** – ddeffghi.A...	O9*5*** – ddeffghi.A...	9x5bxx – ddeffghi.A...	O9x5bxx – ddeffghi.A...
Proline t-mass 500 Digital	6*5*** – ddeffghi.A...	O6*5*** – ddeffghi.A...	6x5bxx – ddeffghi.A...	O6x5bxx – ddeffghi.A...
Proline Teqwave M 500 Digital	4*5*** – ddeffghi.A...	O4*5*** – ddeffghi.A...	4x5bxx – ddeffghi.A...	O4x5bxx – ddeffghi.A...

with "Approval" options

dd = BI, BJ, BL (IECEX / ATEX)

e = "Power Supply" code, **ff** = "IO1" code, **g** = "IO2" code, **h** = "IO3" code, **i** = "IO4" code

3.2.1. Power Supply

Order code "Power supply" e =	Terminal No.	Type of protection	Values
I	1(L+/L) and 2(L-/N)	Non-intrinsically safe	U _N = DC 19.2...28.8 V / AC 85...264 V U _M = AC 250 V

3.2.2. Input/Output

Input/Output 1			
Order code "Input/Output 1" ff =	Terminal No.	Type of protection	Values
BA, BB, MA	I/O1 (Terminal 26, 27)	Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
LA, GA, SA			U _N = DC 32 V, U _M = AC 250 V
RB, MB			APL port profile SLAX / SPE PoDL classes 10, 11, 12: U _N = AC 3.3 V, U _M = AC 250 V
NA, RA	I/O1 (Port 1 (RJ45))		U _N = AC 3.3 V, U _M = AC 250 V

Input/Output 2			
Order code "Input/Output 2" g =	Terminal No.	Type of protection	Values
B, D, E, F, I, J, L	I/O2 (Terminal 24, 25)	Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 3			
Order code "Input/Output 3" h =	Terminal No.	Type of protection	Values
B, D, E, F, I, J, L	I/O3 (Terminal 22, 23)	Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

Input/Output 4			
Order code "Input/Output 4" i =	Terminal No.	Type of protection	Values
B, D, E, F, I, J, L	I/O4 (Terminal 20, 21)	Non-intrinsically safe	U _N = DC 30 V, U _M = AC 250 V
H			U _N = DC 30 V, I _N = DC 100 mA / AC 500 mA, U _M = AC 250 V

3.2.3. Service interface

Order code "Approval" dd =	Terminal No.	Type of protection	Values
BI, BJ, BL	Service Interface (CDI) or Port 2 (RJ45)	Non-intrinsically safe	U _N = AC 3.3 V, U _M = AC 250 V

3.2.4. Output for external antenna (via Antenna Bushing H337)

Order code "Approval" dd =	Terminal no.	Type of protection	Values
BI, BJ, BL	Type N connector	Non-intrinsically safe	Use only external antenna supplied by Endress+Hauser (refer to E+H Safety Instructions for more details)

3.2.5. Output for Remote Display DKX001 or ODKX001

The Remote Display DKX001 or ODKX001 is not intended for connection to the Proline 500 Digital.



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Control Drawing - IECEx, ATEX, CSA, cCSA_{US}

Proline 300/500

Electrical Parameters

EPL Gb (Zone 1), EPL Gc (Zone 2), EPL Db (Zone 21); Cl. I Div. 1,
Div. 2, Cl. I Zone 1; Zone 2, Cl. II, III, Zone 21

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