



eurofins



防爆構造電気機械器具型式検定合格証

| | |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
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| 製造者 | Endress + Hauser Flowtec AG Kaegenstrasse 7, CH-4153 Reinach, Switzerland |
| 品名 | 流量計 |
| 型式の名称 | Proline 500 別紙1のとおり |
| 防爆構造の種類 | 耐圧防爆構造、安全増防爆構造、本質安全防爆構造、非点火防爆構造、 容器による粉じん防爆構造 別紙1のとおり |
| 対象ガス又は蒸気の 発火度及び爆発等級 | IIC T6 Ga/Gb/Gc IIIC T85°C Db 詳細は別紙1のとおり |
| 製品上の Ex マーキング | Ex db eb ia ic ec nC [ia Ga] [Ex ia] [Ex ic] [ic] Ex ia tb 詳細は別紙1のとおり |
| 定 格 | 別紙1のとおり |
| 使用条件 | 別紙2のとおり |
| 型式検定合格番号 | CML 17JPN2348X |
| 有効期間 | 2018年05月16日 から 2021年05月15日まで  |
| | 2021年05月16日 から 2024年05月15日まで  |

機械等検定規則による型式検定に合格したことを証明する

2023年07月11日

型式検定実施者：ユーロフィンズ・イーアンドイー・シーエムエル・リミテッド主任検定員



別紙 1 型式

Proline Promass 500、Proline Cubemass 500

8a5bcc – ddefghijklmnopstttvww + ###

O8a5bcc – ddefghijklmnopstttvwwyy + ###

8x5bxx – ddefghijkmopqrrssww + ###

O8x5bxx – ddefghijkmopqrrsswwyy + ###

OEM バージョン用

交換トランスミッタ用

交換トランスミッタ OEM 用

a = センサタイプ

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 = 世代

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 = サイズ

任意の 2 桁の数字又は文字の組合せ

dd = 認証

Jl = [Ex ia] IIC

(トランスミッタ)

[Ex ia] IIIC

(トランスミッタ)

Ex ia IIB T6...T1 Ga/Gb ¹⁾

(センサ)

Ex ia tb IIIC T**°C Db

(センサ)

JJ = [Ex ia] IIC

(トランスミッタ)



| | | | |
|----|---------------------------------------|-----------|-----|
| | [Ex ia] IIIC | (トランスミッタ) | |
| | Ex ia IIC T6...T1 Ga/Gb ¹⁾ | (センサ) | |
| | Ex ia tb IIIC T***C Db | (センサ) | |
| JL | = nonEx | (トランスミッタ) | |
| | Ex ec IIC T5...T1 Gc | (センサ) | または |
| | Ex ec nC IIC T5...T1 Gc ²⁾ | (センサ) | または |
| | [Ex ic] IIC | (トランスミッタ) | |
| | Ex ec IIC T5...T1 Gc | (センサ) | または |
| | Ex ec nC IIC T5...T1 Gc ²⁾ | (センサ) | |
| JM | = Ex ec nC [ia Ga] IIC T5...T4 Gc | (トランスミッタ) | |
| | [Ex ia] IIIC | (トランスミッタ) | |
| | Ex ia IIB T6...T1 Ga/Gb ¹⁾ | (センサ) | |
| | Ex ia tb IIIC T***C Db | (センサ) | または |
| | Ex ec nC [ic] [ia Ga] IIC T5...T4 Gc | (トランスミッタ) | |
| | [Ex ia] IIIC | (トランスミッタ) | |
| | Ex ia IIB T6...T1 Ga/Gb ¹⁾ | (センサ) | |
| | Ex ia tb IIIC T***C Db | (センサ) | |
| JN | = Ex ec nC [ia Ga] IIC T5...T4 Gc | (トランスミッタ) | |
| | [Ex ia] IIIC | (トランスミッタ) | |
| | Ex ia IIC T6...T1 Ga/Gb ¹⁾ | (センサ) | |
| | Ex ia tb IIIC T***C Db | (センサ) | または |
| | Ex ec nC [ic] [ia Ga] IIC T5...T4 Gc | (トランスミッタ) | |
| | [Ex ia] IIIC | (トランスミッタ) | |
| | Ex ia IIC T6...T1 Ga/Gb ¹⁾ | (センサ) | |
| | Ex ia tb IIIC T***C Db | (センサ) | |
| JS | = Ex ec nC IIC T5...T4 Gc | (トランスミッタ) | |
| | Ex ec IIC T5...T1 Gc | (センサ) | または |
| | Ex ec nC IIC T5...T4 Gc | (トランスミッタ) | |
| | Ex ec nC IIC T5...T1 Gc ²⁾ | (センサ) | または |
| | Ex ec nC [ic] IIC T5...T4 Gc | (トランスミッタ) | |
| | Ex ec IIC T5...T1 Gc | (センサ) | または |
| | Ex ec nC [ic] IIC T5...T4 Gc | (トランスミッタ) | |
| | Ex ec nC IIC T5...T1 Gc ²⁾ | (センサ) | |

¹⁾ 以下のセンサの場合は EPL Gb のみの表示となる:

Promass A DN01, Promass H DN08...50, Promass I DN08...80

²⁾ Ex ec nC は、ページ接続又は破裂板を使用しないセンサにだけ適用される。

e = 電源

I = AC 85...264V 50/60 Hz

DC 19.2...28.8V, 10W

X = センサのみ

ff = 入力/出力 1

BA = 4-20mA HART

BB = 4-20mA WHART

CA = 4-20mA HART Ex i (パッシブ)

CB = 4-20mA WHART Ex i (パッシブ)

CC = 4-20mA HART Ex i (アクティブ)



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CD = 4-20mA WHART Ex i (アクティブ)
GA = Profibus PA
HA = Profibus PA Ex i
LA = Profibus DP
NA = EtherNet/IP
RA = Profinet IO
RB = Profinet
RC = Profinet Ex i
SA = Foundation Fieldbus
TA = Foundation Fieldbus Ex i
MA = Modbus RS485
MB = Modbus TCP
MC = Modbus TCP Ex i
XX = センサのみ

g = 入力/出力 2

A = 入力/出力 2 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)
D = 設定可能 IO
E = パルス/周波数/スイッチ出力
F = 位相シフトパルス出力
G = パルス/周波数/スイッチ出力 Ex i
H = リレー
I = 4-20mA 入力
J = 状態入力
K = パルス出力 Ex i
L = パルス出力
X = センサのみ

h = 入力/出力 3

A = 入力/出力 3 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)
D = 設定可能 IO
E = パルス/周波数/スイッチ出力
F = 位相シフトパルス出力
G = パルス/周波数/スイッチ出力 Ex i
H = リレー
I = 4-20mA 入力
J = 状態入力
K = パルス出力 Ex i
L = パルス出力
X = センサのみ

i = 入力/出力 4

A = 入力/出力 4 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)



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- D = 設定可能 IO
- E = パルス/周波数/スイッチ出力
- F = 位相シフトパルス出力
- G = パルス/周波数/スイッチ出力 Ex i
- H = リレー
- I = 4-20mA 入力
- J = 状態入力
- K = パルス出力 Ex i
- L = パルス出力
- X = センサのみ

- j = 表示部 / 操作部
リモートディスプレイなし: 任意の 1 桁の数字又は文字 (0 を除く)
- k = 内蔵 ISEM 電子モジュール
A = センサ
- m = トランスミッタハウジング
任意の 1 桁の数字又は文字
- n = センサハウジング
任意の 1 桁の数字又は文字
- o = ケーブルセンサ接続
任意の 1 桁の数字又は文字
- p = ケーブルエントリ
任意の 1 桁の数字又は文字
- qq = アップグレードキット
任意の 2 桁の数字又は文字の組合せ
- rr = 既存製品
任意の 2 桁の数字又は文字の組合せ
- ss = 測定管材料
任意の 2 桁の数字又は文字の組合せ
- ttt = プロセス接続
任意の 3 桁の数字又は文字の組合せ
- v = 校正
任意の 1 桁の数字又は文字
- ww = デバイスモデル (2 桁)
A1 = プロダクトバージョン 1
A2 = プロダクトバージョン 2
- yy = カスタマーバージョン (2 桁)
任意の 2 桁の数字又は文字

- ** = 2 桁で表されるオプション (なし、2 桁、2 桁が複数)
任意の数字又は文字の組合せ
- #, + = 拡張オーダーコードのオプションの略語を示す記号

注記: "+####" は、該当する場合にのみ表示される。



Proline Promag 500

5a5bcc – ddzeffghijklmnopstttuvvw + ###

O5a5bcc – ddzeffghijklmnopstttuvwyy + ###

OEM バージョン用

5x5bxx – ddeffghijklmopqqww + ###

交換トランスミッタ用

O5x5bxx – ddeffghijklmopqqwyy + ###

交換トランスミッタ OEM 用

a = センサタイプ

H = センサ Promag H

P = センサ Promag P

W = センサ Promag W

b = 世代

B = 流量計の世代

cc = サイズ

サイズ DN3000 までの任意の数字又は文字の組合せ

dd = 認証

JJ = non-Ex

(トランスミッタ)

Ex db ia IIC T6...T1 Gb

(センサ、端子箱)

Ex ia tb IIIC T**°C Db

(センサ、端子箱)

Ex eb ia IIC T6...T1 Gb

(センサ)

Ex ia tb IIIC T**°C Db

(センサ)

JL = non-Ex

(トランスミッタ)

Ex ec ic IIC T6...T1 Gc

(センサ) または

[Ex ic] IIC

(トランスミッタ)

Ex ec ic IIC T6...T1 Gc

(センサ)

JN = Ex ec nC IIC T5...T4 Gc

(トランスミッタ)

Ex db ia IIC T6...T1 Gb

(センサ、端子箱)

Ex ia tb IIIC T**°C Db

(センサ、端子箱)

Ex eb ia IIC T6...T1 Gb

(センサ)

Ex ia tb IIIC T** °C Db

(センサ) または

Ex ec nC [ic] IIC T5...T4 Gc

(トランスミッタ)

Ex db ia IIC T6...T1 Gb

(センサ、端子箱)

Ex ia tb IIIC T**°C Db

(センサ、端子箱)

Ex eb ia IIC T6...T1 Gb

(センサ)

Ex ia tb IIIC T**°C Db

(センサ)

JS = Ex ec nC IIC T5...T4 Gc

(トランスミッタ)

Ex ec ic IIC T6...T1 Gc

(センサ) または

Ex ec nC [ic] IIC T5...T4 Gc

(トランスミッタ)

Ex ec ic IIC T6...T1 Gc

(センサ)

z = デザイン (Proline Promag W 500 のみ)

任意の 1 桁の数字又は文字



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- e = 電源
- I = AC 85...264V 50/60 Hz
 - DC 19.2...28.8V, 10W
 - X = センサのみ
- ff = 入力/出力 1
- BA = 4-20mA HART
 - BB = 4-20mA WHART
 - CA = 4-20mA HART Ex i (パッシブ)
 - CB = 4-20mA WHART Ex i (パッシブ)
 - CC = 4-20mA HART Ex i (アクティブ)
 - CD = 4-20mA WHART Ex i (アクティブ)
 - GA = Profibus PA
 - HA = Profibus PA Ex i
 - LA = Profibus DP
 - NA = EtherNet/IP
 - RA = Profinet IO
 - RB = Profinet
 - RC = Profinet Ex i
 - SA = Foundation Fieldbus
 - TA = Foundation Fieldbus Ex i
 - MA = Modbus RS485
 - MB = Modbus TCP
 - MC = Modbus TCP Ex i
 - XX = センサのみ
- g = 入力/出力 2
- A = 入力/出力 2 なし
 - B = 4-20mA
 - C = 4-20mA Ex i (パッシブ)
 - D = 設定可能 IO
 - E = パルス/周波数/スイッチ出力
 - F = 位相シフトパルス出力
 - G = パルス/周波数/スイッチ出力 Ex i
 - H = リレー
 - I = 4-20mA 入力
 - J = 状態入力
 - K = パルス出力 Ex i
 - L = パルス出力
 - X = センサのみ
- h = 入力/出力 3
- A = 入力/出力 3 なし
 - B = 4-20mA
 - C = 4-20mA Ex i (パッシブ)
 - D = 設定可能 IO
 - E = パルス/周波数/スイッチ出力
 - F = 位相シフトパルス出力
 - G = パルス/周波数/スイッチ出力 Ex i



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- H = リレー
 - I = 4-20mA 入力
 - J = 状態入力
 - K = パルス出力 Ex i
 - L = パルス出力
 - X = センサのみ
- i = 入力/出力 4
- A = 入力/出力 4 なし
 - B = 4-20mA
 - C = 4-20mA Ex i (パッシブ)
 - D = 設定可能 IO
 - E = パルス/周波数/スイッチ出力
 - F = 位相シフトパルス出力
 - G = パルス/周波数/スイッチ出力 Ex i
 - H = リレー
 - I = 4-20mA 入力
 - J = 状態入力
 - K = パルス出力 Ex i
 - L = パルス出力
 - X = センサのみ
- j = 表示部/操作部
リモートディスプレイなし; 任意の 1 桁の数字又は文字 (0 を除く)
- k = 内蔵 ISEM 電子モジュール
A = センサ
- m = トランスミッタハウジング
任意の 1 桁の数字又は文字
- n = センサハウジング
任意の 1 桁の数字又は文字
- o = ケーブルセンサ接続
任意の 1 桁の数字又は文字
- p = ケーブルエントリ
任意の 1 桁の数字又は文字
- qq = アップグレードキット
任意の 2 桁の数字又は文字
- s = ライナ材料
任意の 1 桁の数字又は文字
- ttt = プロセス接続
任意の 3 桁の数字又は文字
- u = 電極
任意の 1 桁の数字又は文字
- v = 校正
任意の 1 桁の数字又は文字
- ww = デバイスマodel (2 桁)
A1 = プロダクトバージョン 1
A2 = プロダクトバージョン 2
- yy = カスタマーバージョン (2 桁)



- 任意の 2 桁の数字又は文字
- ** = 2 桁で表されるオプション (なし、2 桁、2 桁が複数)
任意の数字又は文字の組合せ
- #, + = 拡張オーダーコードのオプションの略語を示す記号
- 注記: "+###" は、該当する場合にのみ表示される。

Proline Prosonic Flow 500

9G5Bcc – ddeffghijklmnopstuuuvww + ###

09G5Bcc – ddeffghijklmnopstuuuvwwyy + ###

9x5Bxx – ddeffghijklmopqrrssww + ###

09x5Bxx – ddeffghijklmopqrrsswwyy + ###

OEM バージョン用

交換トランスミッタ用

交換トランスミッタ OEM 用

- cc = サイズ
任意の 2 桁の数字又は文字
- dd = 認証
- JJ = non-Ex (トランスミッタ)
 - Ex db ia IIC T6...T1 Gb (センサ、端子箱)
 - Ex ia tb IIC T**°C Db (センサ、端子箱)
 - Ex ia IIC T6...T1 Gb (センサ)
 - Ex ia tb IIC T**°C Db (センサ)
 - JL = non-Ex (トランスミッタ)
 - Ex ec ic IIC T5...T1 Gc (センサ) または
 - [Ex ic] IIC (トランスミッタ)
 - Ex ec ic IIC T5...T1 Gc (センサ)
 - JN = Ex ec nC IIC T5...T4 Gc (トランスミッタ)
 - Ex db ia IIC T6...T1 Gb (センサ、端子箱)
 - Ex ia tb IIC T**°C Db (センサ、端子箱)
 - Ex ia IIC T6...T1 Gb (センサ)
 - Ex ia tb IIC T**°C Db (センサ) または
 - Ex ec nC [ic] IIC T5...T4 Gc (トランスミッタ)
 - Ex db ia IIC T6...T1 Gb (センサ、端子箱)
 - Ex ia tb IIC T**°C Db (センサ、端子箱)
 - Ex ia IIC T6...T1 Gb (センサ)
 - Ex ia tb IIC T**°C Db (センサ)
 - JS = Ex ec nC IIC T5...T4 Gc (トランスミッタ)
 - Ex ec ic IIC T5...T1 Gc (センサ) または
 - Ex ec nC [ic] IIC T5...T4 Gc (トランスミッタ)
 - Ex ec ic IIC T5...T1 Gc (センサ)
- e = 電源
- I = AC 85...264V 50/60 Hz
DC 19.2...28.8V, 10W
 - X = センサのみ
- ff = 入力 / 出力 1
- BA = 4-20mA HART
 - BB = 4-20mA WHART
 - CA = 4-20mA HART Ex i (パッシブ)
 - CB = 4-20mA WHART Ex i (パッシブ)



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CC = 4-20mA HART Ex i (アクティブ)
CD = 4-20mA WHART Ex i (アクティブ)
GA = Profibus PA
HA = Profibus PA Ex i
LA = Profibus DP
NA = EtherNet/IP
RA = Profinet IO
RB = Profinet
RC = Profinet Ex i
SA = Foundation Fieldbus
TA = Foundation Fieldbus Ex i
MA = Modbus RS485
MB = Modbus TCP
MC = Modbus TCP Ex i
XX = センサのみ

g = 入力/出力 2

A = 入力/出力 2 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)
D = 設定可能 IO
E = パルス/周波数/スイッチ出力
F = 位相シフトパルス出力
G = パルス/周波数/スイッチ出力 Ex i
H = リレー
I = 4-20mA 入力
J = 状態入力
K = パルス出力 Ex i
L = パルス出力
X = センサのみ

h = 入力/出力 3

A = 入力/出力 3 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)
D = 設定可能 IO
E = パルス/周波数/スイッチ出力
F = 位相シフトパルス出力
G = パルス/周波数/スイッチ出力 Ex i
H = リレー
I = 4-20mA 入力
J = 状態入力
K = パルス出力 Ex i
L = パルス出力
X = センサのみ

i = 入力/出力 4

A = 入力/出力 4 なし
B = 4-20mA
C = 4-20mA Ex i (パッシブ)
D = 設定可能 IO
E = パルス/周波数/スイッチ出力
F = 位相シフトパルス出力



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- G = パルス／周波数／スイッチ出力 Ex i
- H = リレー
- I = 4-20mA 入力
- J = 状態入力
- K = パルス出力 Ex i
- L = パルス出力
- X = センサのみ

- j = 表示部／操作部
リモートディスプレイなし: 任意の 1 桁の数字又は文字 (0 を除く)
- k = 内蔵 ISEM 電子モジュール
A = センサ
- m = トランスミッタハウジング
任意の 1 桁の数字又は文字
- n = センサハウジング
任意の 1 桁の数字又は文字
- o = ケーブルセンサ接続
任意の 1 桁の数字又は文字
- p = ケーブルエントリ
任意の 1 桁の数字又は文字
- qq = アップグレードキット
任意の 2 桁の数字又は文字の組合せ
- rr = 既存製品交換用
任意の 2 桁の数字又は文字の組合せ
- ss = 測定管材料、センサーバージョン
任意の 2 桁の数字又は文字の組合せ
- t = プロセスコンポーネント
任意の 1 桁の数字又は文字
- uuu = プロセス接続
任意の 3 桁の数字又は文字の組合せ
- v = 校正
任意の 1 桁の数字又は文字
- ww = デバイスモデル (2 桁)
A1 = プロダクトバージョン 1
A2 = プロダクトバージョン 2
- yy = カスタマーバージョン (2 桁)
任意の 2 桁の数字又は文字の組合せ

- ** = 2 桁で表されるオプション (なし、2 桁、2 桁が複数)
任意の数字又は文字の組合せ
- #+ = 拡張オーダーコードのオプションの略語を示す記号

注記: "+###" は、該当する場合にのみ表示される。



Proline t-mass 500

6F5bcc – ddeffghijklmnopstttvww + ###
 6I5bcc – ddeffghijklmnopstttuuvww + ###
 O6F5bcc – ddeffghijklmnopstttvwwyy + ###
 O6I5bcc – ddeffghijklmnopstttuuvwwyy + ###
 6x5bxx – ddeffghijklmopssww + ###
 O6x5bxx – ddeffghijklmopsswwyy + ###

OEM バージョン用
 OEM バージョン用
 交換トランスミッタ用
 交換トランスミッタ OEM 用

- b = 世代
 B = 流量計の世代
- cc = サイズ
 任意の 2 桁の数字又は文字=
 DN100 (t-mass F) / 1500mm (t-mass I)
- dd = 認証
- JJ = [Ex ia] IIC (トランスミッタ)
 [Ex ia] IIIC (トランスミッタ)
 Ex db ia IIC T4...T1 Gb (センサ端子箱)
 Ex ia tb IIIC T**°C Db (センサ端子箱)
 Ex ia IIC T4...T1 Gb (センサ)
 Ex ia tb IIIC T** °C Db (センサ) または
 [Ex ia] IIC (トランスミッタ)
 [Ex ia] IIIC (トランスミッタ)
 Ex db ia IIC T4...T1 Ga/Gb (センサ端子箱)
 Ex ia tb IIIC T**°C Db (センサ端子箱)
 Ex ia IIC T4...T1 Ga/Gb (センサ)
 Ex ia tb IIIC T** °C Db (センサ)
 - JL = non-Ex (トランスミッタ)
 Ex ec IIC T4...T1 Gc (センサ) または
 [Ex ic] IIC (トランスミッタ)
 Ex ec IIC T4...T1 Gc (センサ)
 - JN = Ex ec nC [ia Ga] IIC T5...T4 Gc (トランスミッタ)
 [Ex ia] IIIC (トランスミッタ)
 Ex db ia IIC T4...T1 Gb (センサ端子箱)
 Ex ia tb IIIC T**°C Db (センサ端子箱)
 Ex ia IIC T4...T1 Gb (センサ)
 Ex ia tb IIIC T** °C Db (センサ) または
 Ex ec nC [ia Ga] IIC T5...T4 Gc (トランスミッタ)
 [Ex ia] IIIC (トランスミッタ)
 Ex db ia IIC T4...T1 Ga/Gb (センサ端子箱)
 Ex ia tb IIIC T**°C Db (センサ端子箱)
 Ex ia IIC T4...T1 Ga/Gb (センサ)
 Ex ia tb IIIC T** °C Db (センサ) または
 Ex ec nC [ic] [ia Ga] IIC T5...T4 Gc (トランスミッタ)
 [Ex ia] IIIC (トランスミッタ)
 Ex db ia IIC T4...T1 Gb (センサ端子箱)



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| | | |
|------|-------------------------------------|-----------|
| | Ex ia tb IIIC T**°C Db | (センサ端子箱) |
| | Ex ia IIC T4...T1 Gb | (センサ) |
| | Ex ia tb IIIC T** °C Db | (センサ) または |
| | Ex ec nC [ic][ia Ga] IIC T5...T4 Gc | (トランスミッタ) |
| | [Ex ia] IIIC | (トランスミッタ) |
| | Ex db ia IIC T4...T1 Ga/Gb | (センサ端子箱) |
| | Ex ia tb IIIC T**°C Db | (センサ端子箱) |
| | Ex ia IIC T4...T1 Ga/Gb | (センサ) |
| | Ex ia tb IIIC T** °C Db | (センサ) |
| JS = | Ex ec nC IIC T5...T4 Gc | (トランスミッタ) |
| | Ex ec IIC T4...T1 Gc | (センサ) または |
| | Ex ec nC [ic] IIC T5...T4 Gc | (トランスミッタ) |
| | Ex ec IIC T4...T1 Gc | (センサ) |
| e = | 電源 | |
| | I = AC 85...264V 50/60 Hz | |
| | DC 19.2...28.8V, 10W | |
| | X = センサのみ | |
| ff = | 入力/出力 1 | |
| | BA = 4-20mA HART | |
| | BB = 4-20mA WHART | |
| | CA = 4-20mA HART Ex i (パッシブ) | |
| | CB = 4-20mA WHART Ex i (パッシブ) | |
| | CC = 4-20mA HART Ex i (アクティブ) | |
| | CD = 4-20mA WHART Ex i (アクティブ) | |
| | GA = Profibus PA | |
| | HA = Profibus PA Ex i | |
| | LA = Profibus DP | |
| | NA = EtherNet/IP | |
| | RA = Profinet IO | |
| | RB = Profinet | |
| | RC = Profinet Ex i | |
| | SA = Foundation Fieldbus | |
| | TA = Foundation Fieldbus Ex i | |
| | MA = Modbus RS485 | |
| | MB = Modbus TCP | |
| | MC = Modbus TCP Ex i | |
| | XX = センサのみ | |
| g = | 入力/出力 2 | |
| | A = 入力/出力 2 なし | |
| | B = 4-20mA | |
| | C = 4-20mA Ex i (パッシブ) | |
| | D = 設定可能 IO | |
| | E = パルス/周波数/スイッチ出力 | |
| | F = 位相シフトパルス出力 | |
| | G = パルス/周波数/スイッチ出力 Ex i | |
| | H = リレー | |



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- I = 4-20mA 入力
- J = 状態入力
- K = パルス出力 Ex i
- L = パルス出力
- X = センサのみ
- h = 入力/出力 3
 - A = 入力/出力 3 なし
 - B = 4-20mA
 - C = 4-20mA Ex i (パッシブ)
 - D = 設定可能 IO
 - E = パルス/周波数/スイッチ出力
 - F = 位相シフトパルス出力
 - G = パルス/周波数/スイッチ出力 Ex i
 - H = リレー
 - I = 4-20mA 入力
 - J = 状態入力
 - K = パルス出力 Ex i
 - L = パルス出力
 - X = センサのみ
- i = 入力/出力 4
 - A = 入力/出力 4 なし
 - B = 4-20mA
 - C = 4-20mA Ex i (パッシブ)
 - D = 設定可能 IO
 - E = パルス/周波数/スイッチ出力
 - F = 位相シフトパルス出力
 - G = パルス/周波数/スイッチ出力 Ex i
 - H = リレー
 - I = 4-20mA 入力
 - J = 状態入力
 - K = パルス出力 Ex i
 - L = パルス出力
 - X = センサのみ
- j = 表示部/操作部
リモートディスプレイなし: 任意の 1 桁の数字又は文字 (O を除く)
- k = 内蔵 ISEM 電子モジュール
A = センサ
- m = トランスミッタハウジング
任意の 1 桁の数字又は文字
- n = センサハウジング
任意の 1 桁の数字又は文字
- o = ケーブルセンサ接続
任意の 1 桁の数字又は文字
- p = ケーブルエントリ
任意の 1 桁の数字又は文字
- ss = 材料センサ



| | | |
|------|---|-------------------------------|
| t | = | 任意の 2 桁の数字又は文字 |
| tt | = | プロセス接続 |
| uu | = | 任意の 3 桁の数字又は文字 |
| uu | = | ガasket |
| v | = | 任意の 2 桁の数字又は文字 |
| v | = | 校正 |
| ww | = | 任意の 1 桁の数字又は文字 |
| ww | = | デバイスモデル (2 桁) |
| | | A1 = プロダクトバージョン 1 |
| | | A2 = プロダクトバージョン 2 |
| yy | = | カスタマーバージョン (2 桁) |
| | | 任意の 2 桁の数字又は文字 |
| ** | = | 2 桁で表されるオプション (なし、2 桁、2 桁が複数) |
| | | 任意の数字又は文字の組合せ |
| #, + | = | 拡張オーダーコードのオプションの略語を示す記号 |

注記: "+###" は、該当する場合にのみ表示される。

別紙 2 使用条件

- 測定システムのすべての機器は、等電位ボンディングに組み込まれなくてはならない。本質安全回路に沿って等電位化されていること。
- センサは、接液部が適していることが明らかなプロセス媒体にのみ使用できる。
- 下記オーダーコードのプラスチック製トランスミッタ容器は、汚損度 2 又はそれより軽度の場所に設置すること。

8*5*** - JI/JJ*****A***** + ###
 O8*5*** - JI/JJ*****A***** + ###
 8x5*xx - JI/JJ*****A***** + ###
 O8x5*x - JI/JJ*****A***** + ###
 5*5*** - JJ*****A***** + ###
 O5*5*** - JJ*****A***** + ###
 5x5*xx - JJ*****A***** + ###
 O5x5*xx - JJ*****A***** + ###
 9*5*** - JJ... + ###
 O9*5*** - JJ... + ###
 9x5*xx - JJ... + ###
 O9x5*xx - JJ... + ###
 6*5*** - JJ... + ###
 O6*5*** - JJ... + ###
 6x5*xx - JJ... + ###
 O6x5*xx - JJ... + ###



- センサ端子箱の中にフラットガスケットを使用する Promag のリモートバージョンに関し、使用者は、フラットカバーを固定する前に、フラットカバーのシールがシール表面に対して曲がっていないことを確認すること。平らではないシールは交換すること。
- Renata 社製のリチウム電池 CR1632(3V)のみを使用すること。
- 耐圧防爆接合部は、修理を意図していない。
- オーダーコード「dd」= JI、JJ、JM、JN の Proline Promass 500 :
ゾーン 0 は、計測管内にプロセス媒体が入るセンサにのみ適用される。
- オーダーコード「dd」= JJ、JN の Proline t-mass 500 :
ゾーン 0 は、計測管内にプロセス媒体が入るセンサにのみ適用される。
- ロープ付きのステンレス鋼製ラベルタグを含む Proline 500 流量計が、コーティングされた金属製トランスミッタ及び/又はセンサ容器上に使用され接地に結合されない場合は、摩擦及び/又は清掃から生じる静電気帯電のリスクを防止すること。機器銘板には、以下の警告を有すること。

警告—静電気帯電の危険あり—取扱説明書を参照のこと



Proline 500 トランスミッタ容器と共に使用した時のアンテナブッシュ H337 に関する使用条件

- Endress+Hauser が提供するアンテナだけを使用すること。代替として無給電無指向性 RF アンテナ（ケーブルあり又はケーブルなし）が以下の条件を満たしている場合は、接続することができる。
 - a) アンテナブッシュに接続されるアンテナのインピーダンスが 50Ω 以上であること
 - b) アンテナの定格周波数範囲が 1710MHz~6000MHz を超えないこと
 - c) アンテナの定格電力が 100mW 以上であること
- アンテナブッシュ H337 を取り付けるときは、容器の IP 等級を維持するためにレンチで締め付けること。
- RF アンテナ又は RF アンテナケーブルは、シリーズ N (MIL-STD-348) プラグコネクタで取り付けること。シリーズ N プラグコネクタの結合ナットは、手で締めること。
- アンテナブッシュ H337 の金属容器は、通常はそれが接続される容器を経由して、局所アースにしっかりと接続すること。



Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

| | |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Issued by Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK | |
| Applicant | Endress + Hauser Flowtec AG Kaegenstrasse 7, CH-4153 Reinach, Switzerland |
| Manufacturer name | Endress + Hauser Flowtec AG Kaegenstrasse 7, CH-4153 Reinach, Switzerland |
| Product name | Flowmeter |
| Type/model code | Proline 500 (See attachment 1) |
| Type of protection | Flameproof, increased safety, intrinsically safe, non-sparking and dust protected. See Attachment 1 |
| Group, Temperature Class and EPL | IIC T6 Ga/Gb/Gc IIIC T85°C Db See Attachment 1 |
| The equipment shall be marked with the following | Ex db eb ia ic ec nC [ia Ga] [Ex ia] [Ex ic] [ic] Ex ia tb See attachment 1 for details |
| Ratings | See attachment 1 |
| Special condition for safe use | See attachment 2 |
| Certificate number | CML 17JPN2348X |
| Term of validity | From 16-05-2018 to 15-05-2021  |
| | From 16-05-2021 to 15-05-2024  |

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date: 11-07-2023

Signature of chief examiner:



Attachment 1: Type/Model Code, Marking and Rating

Proline Promass 500, Proline Cubemass 500

Type designation

- 8a5bcc – ddeffghijklmnopstttvww + ###
- O8a5bcc – ddeffghijklmnopstttvwwyy + ### for OEM-version
- 8x5bxx – ddeffghijklmopqrrssww + ### for replacement transmitter
- O8x5bxx – ddeffghijklmopqrrsswwyy + ### 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 and/or letter
- dd** = **Approval**
 - Jl = [Ex ia] IIC (transmitter)
 - [Ex ia] IIIC (transmitter)
 - Ex ia IIB T6...T1 Ga/Gb ¹⁾ (sensor)
 - Ex ia tb IIIC T**°C Db (sensor)
 - JJ = [Ex ia] IIC (transmitter)
 - [Ex ia] IIIC (transmitter)
 - Ex ia IIC T6...T1 Ga/Gb ¹⁾ (sensor)
 - Ex ia tb IIIC T**°C Db (sensor)
 - JL = non-Ex (transmitter)
 - Ex ec IIC T5...T1 Gc (sensor) or



| | | | |
|----|---|---------------------------------------|---------------|
| | | Ex ec nC IIC T5...T1 Gc ²⁾ | (sensor) or |
| | | [Ex ic] IIC | (transmitter) |
| | | Ex ec IIC T5...T1 Gc | (sensor) or |
| | | Ex ec nC IIC T5...T1 Gc ²⁾ | (sensor) |
| JM | = | Ex ec nC [ia Ga] IIC T5...T4 Gc | (transmitter) |
| | | [Ex ia] IIC | (transmitter) |
| | | Ex ia IIB T6...T1 Ga/Gb ¹⁾ | (sensor) |
| | | Ex ia tb IIC T***C Db | (sensor) or |
| | | Ex ec nC [ic][ia Ga] IIC T5...T4 Gc | (transmitter) |
| | | [Ex ia] IIC | (transmitter) |
| | | Ex ia IIB T6...T1 Ga/Gb ¹⁾ | (sensor) |
| | | Ex ia tb IIC T***C Db | (sensor) |
| JN | = | Ex ec nC [ia Ga] IIC T5...T4 Gc | (transmitter) |
| | | [Ex ia] IIC | (transmitter) |
| | | Ex ia IIC T6...T1 Ga/Gb ¹⁾ | (sensor) |
| | | Ex ia tb IIC T***C Db | (sensor) or |
| | | Ex ec nC [ic][ia Ga] IIC T5...T4 Gc | (transmitter) |
| | | [Ex ia] IIC | (transmitter) |
| | | Ex ia IIC T6...T1 Ga/Gb ¹⁾ | (sensor) |
| | | Ex ia tb IIC T***C Db | (sensor) |
| JS | = | Ex ec nC IIC T5...T4 Gc | (transmitter) |
| | | Ex ec IIC T5...T1 Gc | (sensor) or |
| | | Ex ec nC IIC T5...T4 Gc | (transmitter) |
| | | Ex ec nC IIC T5...T1 Gc ²⁾ | (sensor) or |
| | | Ex ec nC [ic] IIC T5...T4 Gc | (transmitter) |
| | | Ex ec IIC T5...T1 Gc | (sensor) or |
| | | Ex ec nC [ic] IIC T5...T4 Gc | (transmitter) |
| | | Ex ec nC IIC T5...T1 Gc ²⁾ | (sensor) |

¹⁾ Following sensors are marked for EPL Gb only: Promass A DN1, Promass H DN08...50, Promass I DN08...80

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

| | | |
|-----------|----|----------------------------------------------------|
| e | = | Power Supply |
| | I | = AC 85 ... 264V 50/60Hz DC 19.2 ... 28.8V, 10W |
| | 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 |



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Issue: 4

| | | | |
|----------|----|-------------------------|------------------------------------|
| | NA | = | EtherNet/IP |
| | RA | = | Profinet IO |
| | RB | = | Profinet |
| | RC | = | Profinet Ex i |
| | SA | = | Foundation Fieldbus |
| | TA | = | Foundation Fieldbus Ex i |
| | MA | = | Modbus RS485 |
| | MB | = | Modbus TCP |
| | MC | = | Modbus TCP 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 |
| | 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 |



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Issue: 4

| | | | |
|-------------|----|---------------------------------------------------------------------------------|------------------------------------------------------------|
| | I | = | 4-20mA input |
| | J | = | Status input |
| | K | = | Pulse output Ex i |
| | L | = | Pulse output |
| | X | = | sensor only |
| j | = | Display / Operation | |
| | | without remote Display | : any single number or letter except 0 |
| k | = | Integrated ISEM electronic | |
| | A | = | sensor |
| m | = | Transmitter Housing | |
| | | | any single number or letter |
| n | = | Sensor Housing | |
| | | | any single number or letter |
| o | = | Cable Sensor Connection | |
| | | | any single number or letter |
| p | = | Cable Entry | |
| | | | any single number or letter |
| qq | = | Upgrade Kit | |
| | | | any double digits with combination of number and/or letter |
| rr | = | Existing Product | |
| | | | any double digits with combination of number and/or letter |
| ss | = | Measuring tube material | |
| | | | any double digits with combination of number and/or letter |
| ttt | = | Process connection | |
| | | | any triple digits with combination of number and/or letter |
| v | = | Calibration | |
| | | | any single number or letter |
| ww | = | Device model (two digits) | |
| | A1 | = | product version 1 |
| | A2 | = | product version 2 |
| yy | = | Customer version (two digits) | |
| | | | any double digits with combination of number and/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 coder code | |

Note: "+#**#" is shown only if applicable.



Proline Promag 500

Type designation

- 5a5bcc** – ddzeffghijklmnopstttuvww + ###
- O5a5bcc** – ddzeffghijklmnopstttuvwwyy + ### for OEM-version
- 5x5bxx** – ddeffghijkmopqqww + ### for replacement transmitter
- O5x5bxx** – ddeffghijkmopqqwwyy + ### for replacement transmitter OEM

- a** = **Type of sensor**
 - H = Sensor Promag H
 - P = Sensor Promag P
 - W = Sensor Promag W
- b** = **Generation**
 - B = Generation of Flowmeter
- cc** = **Size**
any combination of number and/or letter up to size = DN3000
- dd** = **Approval**
 - JJ = non-Ex (transmitter)
 - Ex db ia IIC T6...T1 Gb (sensor terminal box)
 - Ex ia tb IIIC T**°C Db (sensor terminal box)
 - Ex eb ia IIC T6...T1 Gb (sensor)
 - Ex ia tb IIIC T** °C Db (sensor)
 - JL = non-Ex (transmitter)
 - Ex ec ic IIC T6...T1 Gc (sensor) or (transmitter)
 - [Ex ic] IIC (sensor)
 - Ex ec ic IIC T6...T1 Gc (sensor)
 - JN = (transmitter)
 - Ex ec nC IIC T5...T4 Gc (transmitter)
 - Ex db ia IIC T6...T1 Gb (sensor terminal box)
 - Ex ia tb IIIC T**°C Db (sensor terminal box)
 - Ex eb ia IIC T6...T1 Gb (sensor)
 - Ex ia tb IIIC T** °C Db (sensor) or (sensor) or (transmitter)
 - Ex ec nC [ic] IIC T5...T4 Gc (transmitter)
 - Ex db ia IIC T6...T1 Gb (sensor terminal box)
 - Ex ia tb IIIC T**°C Db (sensor terminal box)
 - Ex eb ia IIC T6...T1 Gb (sensor)
 - Ex ia tb IIIC T** °C Db (sensor)
 - JS = (transmitter)
 - Ex ec nC IIC T5...T4 Gc (transmitter)
 - Ex ec ic IIC T6...T1 Gc (sensor) or (transmitter)
 - Ex ec nC [ic] IIC T5...T4 Gc (transmitter)
 - Ex ec ic IIC T6...T1 Gc (sensor)
- z** = **Design (Proline Promag W 500 only)**
any single number or letter
- e** = **Power Supply**
 - I = AC 85 ... 264V 50/60Hz
DC 19.2 ... 28.8V, 10W
 - 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 |
| NA | = | EtherNet/IP |
| RA | = | Profinet IO |
| RB | = | Profinet |
| RC | = | Profinet Ex i |
| SA | = | Foundation Fieldbus |
| TA | = | Foundation Fieldbus Ex i |
| MA | = | Modbus RS485 |
| MB | = | Modbus TCP |
| MC | = | Modbus TCP 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 |
| | = | 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 |
| | = | without remote Display : any single number or letter except O |
| k | = | Integrated ISEM electronic |
| | = | A = sensor |
| m | = | Transmitter Housing |
| | = | any single number or letter |
| n | = | Sensor Housing |
| | = | any single number or letter |
| o | = | Cable Sensor Connection |
| | = | any single number or letter |
| p | = | Cable Entry |
| | = | any single number or letter |
| qq | = | Upgrade Kit |
| | = | any double digits with combination of number and/or letter |
| s | = | Liner material |
| | = | any single number or letter |
| ttt | = | Process connection |
| | = | any triple digits with combination of number and/or letter |
| u | = | Electrode |
| | = | any single number or letter |
| v | = | Calibration |
| | = | any single number or letter |
| ww | = | Device model (two digits) |
| | = | A1 = product version 1 |
| | = | A2 = product version 2 |
| yy | = | Customer version (two digits) |
| | = | any double digits with combination of number and/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 coder code |

Note: "+###" is shown only if applicable.



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Issue: 4



Proline Prosonic Flow 500

Type designation

- 9G5Bcc** – ddeffghijklmnopstuuuvww + ###
- 09G5Bcc** – ddeffghijklmnopstuuuvwwyy + ### for OEM-version
- 9x5Bxx** – ddeffghijklmopqrrssww + ### for replacement transmitter
- 09x5Bxx** – ddeffghijklmopqrrsswwyy + ### for replacement transmitter OEM

| | | | |
|-----------|---|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| cc | = | Size | |
| | | | any double digits with combination of number and/or letter |
| dd | = | Approval | |
| | | JJ | = non-Ex (transmitter) Ex db ia IIC T6...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T6...T1 Gb (sensor) Ex ia tb IIIC T**°C Db (sensor) |
| | | JL | = non-Ex (transmitter) Ex ec ic IIC T5...T1 Gc (sensor) or [Ex ic] IIC (transmitter) Ex ec ic IIC T5...T1 Gc (sensor) |
| | | JN | = Ex ec nC IIC T5...T4 Gc (transmitter) Ex db ia IIC T6...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T6...T1 Gb (sensor) Ex ia tb IIIC T**°C Db (sensor) or Ex ec nC [ic] IIC T5...T4 Gc (transmitter) Ex db ia IIC T6...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T6...T1 Gb (sensor) Ex ia tb IIIC T**°C Db (sensor) |
| | | JS | = Ex ec nC IIC T5...T4 Gc (transmitter) Ex ec ic IIC T5...T1 Gc (sensor) or Ex ec nC [ic] IIC T5...T4 Gc (transmitter) Ex ec ic IIC T5...T1 Gc (sensor) |
| e | = | Power Supply | |
| | | I | = AC 85 ... 264V 50/60Hz DC 19.2 ... 28.8V, 10W |
| | | 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 |



| | | | |
|----------|----|-------------------------|------------------------------------|
| | NA | = | EtherNet/IP |
| | RA | = | Profinet IO |
| | RB | = | Profinet |
| | RC | = | Profinet Ex i |
| | SA | = | Foundation Fieldbus |
| | TA | = | Foundation Fieldbus Ex i |
| | MA | = | Modbus RS485 |
| | MB | = | Modbus TCP |
| | MC | = | Modbus TCP 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 |
| | 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 |



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Issue: 4

| | | | |
|-------------|----|---------------------------------------------------------------------------------|------------------------------------------------------------|
| | I | = | 4-20mA input |
| | J | = | Status input |
| | K | = | Pulse output Ex i |
| | L | = | Pulse output |
| | X | = | sensor only |
| j | = | Display / Operation | |
| | | without remote Display | : any single number or letter except O |
| k | = | Integrated ISEM electronic | |
| | A | = | sensor |
| m | = | Transmitter Housing | |
| | | | any single number or letter |
| n | = | Sensor Housing | |
| | | | any single number or letter |
| o | = | Cable Sensor Connection | |
| | | | any single number or letter |
| p | = | Cable Entry | |
| | | | any single number or letter |
| qq | = | Upgrade Kit | |
| | | | any double digits with combination of number and/or letter |
| rr | = | Existing Product | |
| | GA | = | Prosonic Flow G |
| ss | = | Measuring tube material, sensor version | |
| | | | any double digits with combination of number and/or letter |
| t | = | Process component | |
| | | | any single number or letter |
| uuu | = | Process connection | |
| | | | any triple digits with combination of number and/or letter |
| v | = | Calibration | |
| | | | any single number or letter |
| ww | = | Device model (two digits) | |
| | A1 | = | product version 1 |
| | A2 | = | product version 2 |
| yy | = | Customer version (two digits) | |
| | | | any double digits with combination of number and/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 coder code | |

Note: "+#**#" is shown only if applicable.



Proline t-mass 500

Type designation

- 6F5bcc** – ddeffghijklmnopstttvww + ###
- 6I5bcc** – ddeffghijklmnopstttuuvww + ###
- O6F5bcc** – ddeffghijklmnopstttvwwyy + ### for OEM-version
- O6I5bcc** – ddeffghijklmnopstttuuvwwyy + ### for OEM-version
- 6x5bxx** – ddeffghijklmopssww + ### for replacement transmitter
- O6x5bxx** – ddeffghijklmopsswwyy + ### for replacement transmitter OEM

| | | | |
|-----------|---|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| b | = | Generation | |
| | | B | = Generation of Flowmeter |
| cc | = | Size | |
| | | | any double digits with combination of number and/or letter = DN100 (t-mass F) / 1500mm (t-mass I) |
| dd | = | Approval | |
| | | JJ | = [Ex ia] IIC (transmitter) [Ex ia] IIIC (transmitter) Ex db ia IIC T4...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T4...T1 Gb (sensor) Ex ia tb IIIC T** °C Db (sensor) or [Ex ia] IIC (transmitter) [Ex ia] IIIC (transmitter) Ex db ia IIC T4...T1 Ga/Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T4...T1 Ga/Gb (sensor) Ex ia tb IIIC T** °C Db (sensor) |
| | | JL | = non-Ex (transmitter) Ex ec IIC T4...T1 Gc (sensor) or [Ex ic] IIC (transmitter) Ex ec IIC T4...T1 Gc (sensor) |
| | | JN | = Ex ec nC [ia Ga] IIC T5...T4 Gc (transmitter) [Ex ia] IIIC (transmitter) Ex db ia IIC T4...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T4...T1 Gb (sensor) Ex ia tb IIIC T** °C Db (sensor) or Ex ec nC [ia Ga] IIC T5...T4 Gc (transmitter) [Ex ia] IIIC (transmitter) Ex db ia IIC T4...T1 Ga/Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) Ex ia IIC T4...T1 Ga/Gb (sensor) Ex ia tb IIIC T** °C Db (sensor) or Ex ec nC [ic][ia Ga] IIC T5...T4 Gc (transmitter) [Ex ia] IIIC (transmitter) Ex db ia IIC T4...T1 Gb (sensor terminal box) Ex ia tb IIIC T**°C Db (sensor terminal box) |



| | | | | |
|-----------|----|-------------------------|-------------------------------------|------------------------------------|
| | | | Ex ia IIC T4...T1 Gb | (sensor) |
| | | | Ex ia tb IIIC T** °C Db | (sensor) or |
| | | | Ex ec nC [ic][ia Ga] IIC T5...T4 Gc | (transmitter) |
| | | | [Ex ia] IIIC | (transmitter) |
| | | | Ex db ia IIC T4...T1 Ga/Gb | (sensor terminal box) |
| | | | Ex ia tb IIIC T**°C Db | (sensor terminal box) |
| | | | Ex ia IIC T4...T1 Ga/Gb | (sensor) |
| | | | Ex ia tb IIIC T** °C Db | (sensor) |
| | JS | = | Ex ec nC IIC T5...T4 Gc | (transmitter) |
| | | | Ex ec IIC T4...T1 Gc | (sensor) or |
| | | | Ex ec nC [ic] IIC T5...T4 Gc | (transmitter) |
| | | | Ex ec IIC T4...T1 Gc | (sensor) |
| e | = | Power Supply | | |
| | | I | = | AC 85 ... 264V 50/60Hz |
| | | | | DC 19.2 ... 28.8V, 10W |
| | | 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 |
| | | NA | = | EtherNet/IP |
| | | RA | = | Profinet IO |
| | | RB | = | Profinet |
| | | RC | = | Profinet Ex i |
| | | SA | = | Foundation Fieldbus |
| | | TA | = | Foundation Fieldbus Ex i |
| | | MA | = | Modbus RS485 |
| | | MB | = | Modbus TCP |
| | | MC | = | Modbus TCP 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 |
| | 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 | |
| | | | without remote Display : any single number or letter except O |
| k | = | Integrated ISEM electronic | |
| | A | = | sensor |
| m | = | Transmitter Housing | |
| | | | any single number or letter |
| n | = | Sensor Housing | |
| | | | any single number or letter |
| o | = | Cable Sensor Connection | |
| | | | any single number or letter |
| p | = | Cable Entry | |
| | | | any single number or letter |
| ss | = | Material sensor | |
| | | | any double digits with combination of number and/or letter |
| ttt | = | Process connection | |
| | | | any triple digits with combination of number and/or letter |



| | | |
|-------------|---|--------------------------------------------------------------------------------------------------------------|
| uu | = | Gasket any double digits with combination of number and/or letter |
| v | = | Calibration any single number or letter |
| ww | = | Device model (two digits) A1 = product version 1 A2 = product version 2 |
| yy | = | Customer version (two digits) any double digits with combination of number and/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 coder code |

Note: "+###" is shown only if applicable.

Attachment 2: Special condition for safe use

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

8*5*** – JI/JJ*****A***** + ###
 08*5*** – JI/JJ*****A***** + ###
 8x5*xx – JI/JJ*****A***** + ###
 08x5*x – JI/JJ*****A***** + ###
 5*5*** – JJ*****A***** + ###
 05*5*** – JJ*****A***** + ###
 5x5*xx – JJ*****A***** + ###
 05x5*xx – JJ*****A***** + ###
 9*5*** – JJ... + ###
 09*5*** – JJ... + ###
 9x5*xx – JJ... + ###
 09x5*xx – JJ... + ###
 6*5*** – JJ... + ###
 06*5*** – JJ... + ###
 6x5*xx – JJ... + ###
 06x5*xx – JJ... + ###

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



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Issue: 4

- For remote versions of Promag flowmeters with a flat gasket within the sensor terminal box, the user shall ensure that flat cover seals are not bent into the seal surface before securing the cover. Seals that are not flat shall be replaced.
- Only use battery Renata type lithium CR1632, 3V
- The flameproof joints are not intended to be repaired.
- For Proline Promass 500 with order code 'dd' = JI, JJ, JM & JN: Zone 0 is only applicable to sensor with process medium in the measuring tube.
- For Proline t-mass 500 with order code 'dd' = JJ & JN: Zone 0 is only applicable to sensor with process medium in the measuring tube
- The Proline 500 Flowmeter that include, stainless steel label tag with rope, when not bonded to earth used on coated metallic transmitter and/or sensor enclosure, shall be prevented from risk of electrostatic charging caused by friction and/or cleaning. The equipment nameplate shall bear the following warning:

WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

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

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



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Issue: 4

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