

# Safety Instructions

## Proline Promag P 10

ATEX: II2G

II2D

IECEX: Zone 1

Zone 21



- BG - Правила за техниката на безопасност за електрически средства за производство във взривоопасни зони. Ако не разбирате езика на това ръководство има възможност да спорьчате при нас едно ръководство, преведено на езика на Вашата страна.  
**ЕС декларация за съответствие**  
Производителят Endress+Hauser декларира с това заявление за съответствие и с предявяването на сертификата CE, че този продукт отговаря на изискванията на съответните европейски директиви. Прилаганите директиви, норми и документи са указани в заявлението за съответствие.
- CS - Bezpečnostní pokyny pro elektrické přístroje v místech s nebezpečím výbuchu. Pokud nemáte možnost přečíst si tento návod, můžete si u nás objednat návod přeložený do svého jazyka.  
**EU prohlášení o shodě**  
Společnost Endress+Hauser prohlašuje prostřednictvím tohoto prohlášení a použitím značky CE, že tento výrobek vyhovuje příslušným evropským směrnícím. Zmíněné směrnice, normy a dokumenty jsou uvedeny v Prohlášení o shodě.
- DA - Sikkerhedsforskrifter for elektriske apparater certificeret til brug i eksplosionsfarlige områder. Hvis du ikke forstår denne manual, kan en oversat kopi af den på dit eget sprog bestilles fra os.  
**EU-overensstemmelseserklæring**  
Med denne overensstemmelseserklæring og tilføjelsen af CE-mærket sikrer producenten Endress+Hauser, at produktet er i overensstemmelse med relevante europæiske direktiver. Dokumentation for overensstemmelsen gives i de anførte direktiver, standarder og dokumenter.
- EL - Οδηγίες ασφαλείας ηλεκτρικών συσκευών για επικίνδυνες για έκρηξη περιοχές. Σε περίπτωση που δεν μπορείτε να διαβάσετε αυτές τις οδηγίες, τότε μπορείτε να παραγγείλετε ένα αντίτυπο μεταφρασμένο στη γλώσσα σας.  
**Δήλωση συμμόρφωσης ΕΕ**  
Με αυτή τη δήλωση πιστότητας και την τοποθέτηση του σήματος CE ο κατασκευαστής Endress+Hauser δηλώνει, ότι αυτό το προϊόν συμμορφώνεται με τις ευρωπαϊκές οδηγίες που πρέπει να εφαρμοστούν. Οι οδηγίες, τα πρότυπα και τα έγγραφα που εφαρμόστηκαν αναφέρονται στη δήλωση πιστότητας.
- ES - Instrucciones de seguridad de aparatos eléctricos homologados para su utilización en áreas expuestas a riesgos de deflagración. Si no entiende este manual, puede pedir un ejemplar en su idioma.  
**Declaración UE de conformidad**  
Por la presente declaración y la inclusión de la marca CE, el fabricante Endress+Hauser, declara que el producto cumple con las directivas europeas pertinentes. Las directivas, normas y documentos de aplicación se indican en la declaración de conformidad.
- ET - Ohutusjuhised plahvatusohtlikus keskkonnas kasutatavate elektriseadmete kohta. Kui Te ei saa käesolevast juhendist aru, võite meilt tellida Teie riigikeelde tõlgitud juhendi.  
**EL i vastavusdeklaratsioon**  
Tootja Endress+Hauser kinnitab juurdelisatud vastavusdeklaratsiooni esitamisega ja CE-märgise kandmisega tootele, et käesolev toode vastab kohaldatavale Euroopa Liidu direktiivide nõuetele. Kohaldatavad direktiivid, standardid ja dokumendid on ära toodud vastavusdeklaratsioonis.
- FI - Turvallisuusohjeita sähkölaitteille, jotka on vahvistettu käytettäväksi räjähdysvaarallisilla alueilla. Jos et ymmärrä tätä käsikirjaa, voit tilata meiltä käännöksen omalla kansallisella kielelläsi.  
**EU-vaatimustenmukaisuusvakuutus**  
Valmistaja Endress+Hauser vakuuttaa täällä vaatimustenmukaisuustodistuksella ja CE-merkin kiinnittämisellä, että tämä tuote täyttää sovellettavien EU-direktiivien määräykset. Sovellettavat direktiivit, normit ja dokumentit on merkitty vaatimustenmukaisuustodistukseen.
- HR - Sigurnosni naputci za elektromaterijal u sredini u kojoj prijete opasnost od eksplozije. Ako Vam nije moguće čitati ovaj naputak, onda imate mogućnost da kod nas naručite naputak sastavljen na Vašem materninskom jeziku.  
**EU izjava o sukladnosti**  
Dobavljajući Endress+Hauser jamči ovom izjavom i stavljanjem oznake CE da ovaj proizvod udovoljava zahtjevima europskih direktiva koje su na snazi. U izjavi o usuglašenosti se navode direktive, norme i dokumenti koji su na snazi.
- HU - Biztonsági információk robbanásveszélyes területre való elektromos eszközökhöz. Amennyiben nem tudja elolvasni ezt az útmutatót, akkor megrendelheti az Ön anyanyelvére lefordítva is.  
**EU-megfeleléségi nyilatkozat**  
Az Endress+Hauser mint gyártó jelen megfeleléségi nyilatkozattal és a CE-jelzés felhelyezésével kijelenti, hogy ez a termék megfelel az alkalmazandó európai irányelveknek. Az alkalmazott irányelvek, szabványok és dokumentumok a megfeleléségi nyilatkozatban fel vannak tüntetve.

- IT - Istruzioni di sicurezza per apparecchiature elettriche certificate per l'utilizzo in aree con pericolo di esplosione. Se il presente manuale non risulta comprensibile potete ordinarne una copia tradotta nella vostra lingua.  
**Dichiarazione di conformità UE**  
 Con questa dichiarazione e con l'applicazione del marchio CE, il costruttore Endress+Hauser, assicura che il prodotto è conforme alle direttive europee vigenti. Prova della conformità è fornita dall'osservanza delle direttive, delle norme e dei documenti elencati.
- LT - Elektros įrenginio saugumo nurodymai, susiję su sprogimo zonomis. Jeigu negalite perskaityti šios instrukcijos, kreipkitės į mus, kad užsisakytumėte į jūsų gimtąją kalbą išverstą instrukciją.  
**ES atitikties deklaracija**  
 Gamintojas Endress+Hauser šia atitikties deklaracija ir CE ženkliniu patvirtina, kad gaminys atitinka taikytinas ES direktyvas. Taikomos direktyvos, normos ir dokumentai yra pateikiami atitikties deklaracijoje.
- LV - Drošības norādījumi elektrisko darba instrumentu lietošanai apgabalos, kas pakļauti sprādzienbīstamībai. Ja Jums nav iespēju izlasīt šos norādījumus, Jūs varat pasūtīt pie mums tulkojumus Jūsu valsts valodā.  
**ES atbilstības deklarācija**  
 Ražotājs Endress+Hauser ar šo atbilstības apliecinājumu un CE zīmola lietojumu apstiprina, ka produkts izgatavots saskaņā ar atbilstošajām Eiropas vadlīnijām. Piemērotās vadlīnijas, normas un dokumenti atrunāti atbilstības apliecinājumā.
- NL - Veiligheidsinstructies voor elektrisch materieel in explosiegevaarlijke omgeving. Wanneer u deze handleiding niet kunt lezen, kunt u een in uw landstaal vertaalde handleiding bij ons bestellen.  
**EU-conformiteitsverklaring**  
 De leverancier Endress+Hauser waarborgt met deze verklaring en het aanbrengen van het CE-teken, dat dit product overeenstemt met de geldende Europese richtlijnen. De geldende richtlijnen, normen en documenten zijn aangegeven in de conformiteitsverklaring.
- PL - Wskazówki dot. bezpieczeństwa dla urządzeń elektrycznych stosowanych w obszarze zagrożonym wybuchem. Jeśli niniejsza instrukcja napisana jest w języku, którym się nie posługujesz, możesz zamówić u nas przetłumaczony dokument.  
**Deklaracja zgodności UE**  
 Producent Endress+Hauser w niniejszej deklaracji zgodności wraz z nadaniem znaku CE oświadcza, że produkt ten jest zgodny z obowiązującą Europejską Dyrektywą. Zastosowane wytyczne, normy oraz dokumenty podane są w deklaracji zgodności.
- PT - Instruções de segurança para dispositivos eléctricos certificados para utilização em áreas de risco de incêndio. Se não compreender este manual, pode encomendar-nos directamente uma cópia na sua língua.  
**Declaração UE de conformidade**  
 Com esta declaração de conformidade e a aplicação da marca CE, o fabricante Endress+Hauser, garante que o produto obedece às directivas europeias a aplicar. As directivas, normas e documentos são apresentadas na declaração de conformidade.
- RO - Indicații de siguranță pentru mijloacele de producție electrice pentru zonele periclitare de explozie. Dacă nu puteți citi aceste instrucțiuni, atunci puteți comanda la noi instrucțiunile traduse în limba țării dumneavoastră.  
**Declarația UE de conformitate**  
 Producătorul Endress+Hauser declară prin declarația de conformitate alăturată și prin aplicarea semnelui CE că acest produs corespunde directivelor europene aplicabile. Directivele, normele aplicate și documentele sunt menționate în declarația de conformitate.
- SK - Bezpečnostné pokyny pre elektrické zariadenie prevádzkované v priestoroch s nebezpečenstvom výbuchu. Ak nemáte možnosť 'prečítať' si tento návod, môžete si u nás objednať návod preložený do svojho jazyka.  
**EÚ vyhlásenie o zhode**  
 Spoločnosť Endress+Hauser vyhlasuje prostredníctvom tohto vyhlásenia o konformite a použitím značky CE, že tento výrobok vyhovuje príslušným európskym smerniciam. Zmieňované smernice, normy a dokumenty sú uvedené vo Vyhlásení o konformite.
- SL - Varnostni napotki glede električne opreme, namenjene za uporabo v eksplozivnih območjih. Če teh navodil ne morete razumeti, lahko pri nas naročite prevod v vaš jezik.  
**Izjava EU o skladnosti**  
 Proizvajalec Endress+Hauser s to izjavo o skladnosti in navedbo oznake CE izjavlja, da je ta izdelek skladen s predpisanimi evropskimi smernicami. Upoštewane smernice, standardi in dokumenti so navedeni v izjavi o skladnosti.
- SV - Säkerhetsföreskrifter för elektrisk utrustning certifierad för användning i explosionsfarliga områden. Om du inte förstår denna manual, kan en översatt kopia på ditt eget språk beställas från oss.  
**EU-försäkran om överensstämmelse**  
 Endress+Hauser försäkras med vidstående försäkran om överensstämmelse och med CE-märkningen att denna produkt överensstämmer med de tillämpbara europeiska riktlinjerna. De tillämpade riktlinjerna, normerna och dokumenten anges i försäkran om överensstämmelse.



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**Associated documentation**

All documentation is available:

- On the CD-ROM supplied (not included in the delivery for all device versions).
- Available for all device versions via:
  - Internet: [www.endress.com/deviceviewer](http://www.endress.com/deviceviewer)
  - Smart phone/tablet: *Endress+Hauser Operations App*
- In the Download Area of the Endress+Hauser web site: [www.endress.com](http://www.endress.com) → Download.

This document is an integral part of the following Operating Instructions:

Measuring device	Documentation code	
	HART	Modbus
Promag P 10	BA02069D	BA02072D

*Additional documentation*

Contents	Document type	Documentation code
Explosion Protection	Brochure	CP00021Z/11

Please note the documentation associated with the device.

**Manufacturer's certificates****EU Declaration of Conformity**

Documentation code: EU\_00916

**EU type-examination certificate**

Certificate number:

CSACa 21ATEX0001X

**IEC Certificate of Conformity**

Certificate number:

IECEX CSA 21.0020X

Affixing the certificate number certifies conformity with the standards under [www.IECEX.com](http://www.IECEX.com) (depending on the device version).

- IEC 60079-0: 2017
- IEC 60079-1: 2014
- IEC 60079-7: 2017
- IEC 60079-11: 2011
- IEC 60079-31: 2013

**Manufacturer address** Endress+Hauser Flowtec AG  
Kägenstrasse 7  
4153 Reinach BL  
Switzerland

**Extended order code** The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

### Structure of the extended order code

* * * * *	-	* * * * * ... * * * * *	+	A*B*C*D*E*F*G*...
<i>(Device type)</i>		<i>(Basic specifications)</i>		<i>(Optional specifications)</i>

\* = Placeholder  
At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

#### *Device type*

The device and the device design is defined in the "Device type" section (Product root).

#### *Basic specifications*

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available. The selected option of a feature can consist of several positions.

#### *Optional specifications*

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

## Device type

Position	Order code for	Option selected	Description
1	Instrument family	5	Electromagnetic flowmeter
2	Sensor	P	Sensor type
3	Transmitter	B	Transmitter type:
4	Generation index	B	Platform generation
5, 6	Nominal diameter	DN 15 to 600	Nominal diameter of sensor

## Basic specifications

Position 1, 2 Order Code "Approval; Transmitter + Sensor" Option selected	Position 4, 5 Order Code "Output; Input" Option selected	Type of protection
BA	C, U	Ex db eb ib [ib] IIB T4...T1 Gb Ex tb [ib] IIIC T** °C Db
	B, M	Ex db eb ib IIB T4...T1 Gb Ex tb IIIC T** °C Db
BC	C, U	Ex db ib [ib] IIB T4...T1 Gb Ex tb [ib] IIIC T** °C Db
	B, M	Ex db ib IIB T4...T1 Gb Ex tb IIIC T** °C Db

Position	Order code for	Option selected	Description
6	Output, input 1	B	4-20mA HART, Pulse/frequency/switch output
		C	4-20mA HART, Pulse/frequency/switch output Ex i
		M	Modbus RS485, 4-20mA
		U	Modbus RS485, 4-20mA Ex i
7	Display; Operation	A	W/o; via communication
		H	W/o; SmartBlue app
		J	LCD, 2,40"; SmartBlue app
		K	LCD, 2,40"; Touch Screen, SmartBlue app
8	Housing	A	Compact, alu, coated
		P	Remote, alu, coated
17, 18	Device Model	A1	1



## Optional specifications

No options specific to hazardous locations are available.

### Safety instructions: General

- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations or guidelines (e.g. IEC/EN 60079-14 )
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Only use the device in media to which the wetted materials have sufficient durability.
- Refer to the temperature tables for the relationship between the permitted ambient temperature for the sensor and/or transmitter, depending on the range of application, and the temperature classes.
- Modifications to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.
- When using in hybrid mixtures (gas and dust occurring simultaneously), observe additional measures for explosion protection.
- Observe all the technical data of the device (see nameplate).
- Open the housing cover of the transmitter housing in explosion protection Ex db only if one of the following conditions is met:
  - An explosive atmosphere is not present.
  - A waiting time of 10 minutes is observed after switching off the power supply.  
The following warning notice is on the device:  
WARNING – AFTER DE-ENERGIZING, DELAY 10 MINUTES  
BEFORE OPENING ENCLOSURE IN TYPE OF PROTECTION EX D
- Attached nameplates must be included in potential equalization.
- Devices with damaged Ex d threads may no longer be used in hazardous location. It is not permitted to repair or mend Ex d threads.
- Replaced transmitter or sensors shall not be re-used in any other application.

## Safety instructions: Installation

- In potentially explosive atmospheres:
  - Do not disconnect the electrical connection of the power supply circuit when energized.
  - Do not open the connection compartment cover when energized.
- The following applies for transmitter with a connection compartment in Ex db IIB :  
The device may only be opened after a waiting time of 10 minutes after the power supply has been switched off.
- Continuous service temperature of the connecting cable:  
-40 to +80 °C; in accordance with the range of service temperature taking into account additional influences of the process conditions ( $T_{a,min}$  and  $T_{a,max} + 20$  K).
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- Only use certified cable entries or sealing plugs. The metal sealing plugs supplied meet this requirement.
- Supplied cable glands M20 × 1.5 are only suitable for fixed installation of cables and connections. In the installation, a strain relief must be provided.
- Only use certified cable entries suitable for the application. Observe selection criteria as per IEC/EN 60079-14.
- The following applies when connecting the transmitter with a connection compartment in Ex db:  
Only use separately certified cables and wire entries (Ex db IIB or Ex db IIC) which are suitable for operating temperatures up to 85 °C and for IP 66/67. If using conduit entries, the associated sealing mechanisms must be mounted directly on the housing.  
Plastic sealing plugs act as transport protection and have to be replaced by suitable, individually approved installation material.  
The mounted metal thread extensions and blind plugs are tested and certified as part of the housing for type of protection Ex db IIB. The thread extension or the blind plug labeled as follows for identification purposes:
  - Md: M20 x 1.5
  - d: NPT ½"

- The following applies when connecting the transmitter with a connection compartment in Ex eb:  
Only use separately certified cable and wire entries and sealing plugs (Ex eb IIB or Ex eb IIC) which are suitable for operating temperatures up to 85 °C and for IP 66/67. The cables must be routed such that they are securely seated, and sufficient strain relief must be ensured. The mounted metal thread extensions and blind plugs supplied are tested and certified as part of the housing for type of protection Ex eb IIB. Plastic sealing plugs act as transport protection and have to be replaced by suitable, individually approved installation material. Supplied cable glands are separately certified and marked as components and meet device specification requirements.
- When the measuring device is connected, attention must be paid to explosion protection at the transmitter.
- Please note the following if using an RFID TAG:
  - The RFID TAG shall never be exposed to high electromagnetic fields according to IEC/EN 60079-14 .
  - Electrostatic charge shall be avoided. The RFID TAG shall never be used next to strong charge-generating processes.
- When connecting through a conduit entry approved for this purpose, mount the associated sealing unit directly at the enclosure.
- Only use certified sealing plugs. The metal sealing plugs supplied meet this requirement.

### **Intrinsic safety**

- The device can be connected to the Endress+Hauser service tool FXA291; pay attention to the Operating Instructions. Connection to the service connector is only permitted if the atmosphere is not a potentially explosive atmosphere.
- Observe the guidelines for interconnecting intrinsically safe circuits (e.g. IEC/EN 60079-14 , Proof of Intrinsic Safety).
- For display use only battery from Renata type lithium CR1632, 3V.
- The use of the device without a display module is not permitted.

### **Potential equalization**

- Integrate the device into the local potential equalization .
- If the ground connection has been established via the pipe as specified, it is also possible to integrate the sensor into the potential equalization system via the pipe.

**Safety instructions:**  
**Zone 21**

- To ensure dust-tightness, securely seal all housing openings, cable entries and sealing plugs.
- Only open all housing briefly, ensuring that no dust or moisture enters the housing.
- Only use certified cable entries and sealing plugs. The metal cable entries, extensions and sealing plugs supplied meet this requirement.

**Temperature tables**

**Ambient temperature**

*Minimum ambient temperature*

$$T_a = -40\text{ °C}$$

*Maximum ambient temperature*

$T_a = +60\text{ °C}$  depending on the medium temperature and temperature class.

**Medium temperature**

*Minimum medium temperature*

$T_m = -40$  to  $0\text{ °C}$  depending on the selected device version (see nameplate!)

*Maximum medium temperature*

$T_m$  for T4...T1 depending on the maximum ambient temperature  $T_a$

**Compact version**

*Maximum medium temperature with or without thermal insulation according to Endress+Hauser specifications*

Without thermal insulation

Extended neck for insulation (Optional specification, ID Cx (Sensor Option) = CG), with or without thermal insulation

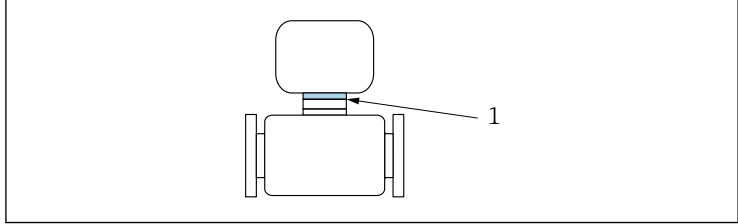
Liner	$T_a$ [°C]	$T_m$ [°C]					
		T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
PTFE (110 °C)	55	-	-	110	110	110	110
	60	-	-	100	100	100	100
PTFE (130 °C)	55	-	-	130	130	130	130
	60	-	-	100	100	100	100

Liner	T <sub>a</sub> [°C]	T <sub>m</sub> [°C]					
		T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
PFA	40	-	-	-	150	150	150
	55	-	-	130	130	130	150
	60	-	-	100	100	100	100


With thermal insulation without Endress+Hauser specifications

The specified reference temperature  $T_{ref}$  and the maximum medium temperature  $T_{m, max}$  for each temperature class must not be exceeded:

→  12



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 1 Position of reference point for temperature measurement

1 Reference point

Reference temperature  $T_{ref}$

T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
-	-	69	69	69	69

**Explosion hazards arising from gas and dust**

**Determining the temperature class and surface temperature with the temperature table**

- In the case of gas: Determine the temperature class as a function of the maximum ambient temperature  $T_a$  and the maximum medium temperature  $T_m$ .
- In the case of dust: Determine the maximum surface temperature as a function of the maximum ambient temperature  $T_a$  and the maximum medium temperature  $T_m$ .

**Example**

- Measured maximum ambient temperature:  $T_{ma} = 63\text{ °C}$
- Measured maximum medium temperature:  $T_{mm} = 108\text{ °C}$

$T_a$ [°C]	T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
40	80	95	130	150	150	150
55	-	95	130	150	150	150
60	-	95	130	150	150	150

Diagram annotations: A blue box '3.' is above the T4 header. A blue box '1.' is below the 60 value in the first column. A blue box '2.' is below the 130 value in the T4 column. A blue box '3.' is above the 135 °C value in the T4 header. Arrows indicate the selection process: a horizontal arrow points to 60, a vertical arrow points up from 60 to 95, a horizontal arrow points right from 95 to 130, and a vertical arrow points up from 130 to 135 °C.

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2 Procedure for determining the temperature class and surface temperature

1. In the column for the maximum ambient temperature  $T_a$  select the temperature that is immediately greater than or equal to the maximum ambient temperature  $T_{ma}$  that is present.
  - ↳  $T_a = 60\text{ °C}$ .  
The row showing the maximum medium temperature is determined.
2. Select the maximum medium temperature  $T_m$  of this row, which is immediately greater than or equal to the maximum medium temperature  $T_{mm}$  that is present.
  - ↳ The column with the temperature class for gas is determined:  
 $108\text{ °C} \leq 130\text{ °C} \rightarrow T4$ .
3. The maximum temperature of the temperature class determined corresponds to the maximum surface temperature for dust:  $T4 = 135\text{ °C}$ .

### Connection values: Signal circuits

The following tables contain specifications which are dependent on the transmitter type and its input and output assignment. Compare the following specifications with those on the nameplate of the transmitter.

#### Safety-related values

Order code "Output; input"		Terminal assignment	Safety-related values
Option B	Current output 4 to 20 mA HART (active)	26 (+), 27 (-)	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$
	Current output 4 to 20 mA HART (passive)	24 (+), 25 (-)	
	Pulse/frequency/switch output	22 (+), 23 (-)	
Option M	Current output 4 to 20 mA (active)	26 (+), 27 (-)	
	Current output 4 to 20 mA (passive)	24 (+), 25 (-)	
	Modbus RS485	22 (B), 23 (A)	

#### Intrinsically safe values

Order code "Output; input"		Terminal assignment	Safety-related values
Option C	Current output 4 to 20 mA HART (active)	26 (+), 27 (-)	$U_0 = 22.3 V$ $I_0 = 93 mA$ $P_0 = 520 mW$ $L_0 = 8 mH$ $C_0 = 500 nF$  $U_1 = 6.5 V$ $I_1 = 10 mA$ $P_1 = 20 mW$
	Current output 4 to 20 mA HART (passive)	24 (+), 25 (-)	$U_1 = 30 V$ $I_1 = 100 mA$ $P_1 = 1.25 W$ $L_1 = 0 \mu H$ $C_1 = 6 nF$
	Pulse/frequency/switch output	22 (+), 23 (-)	$U_1 = 30 V$ $I_1 = 10 mA$ $P_1 = 20 mW$ $L_1 = 0 \mu H$ $C_1 = 10 nF$



Order code "Output; input"		Terminal assignment	Safety-related values
Option U	Current output 4 to 20 mA (active)	26 (+), 27 (-)	$U_0 = 22.3 \text{ V}$ $I_0 = 93 \text{ mA}$ $P_0 = 520 \text{ mW}$ $L_0 = 8 \text{ mH}$ $C_0 = 500 \text{ nF}$  $U_i = 6.5 \text{ V}$ $I_i = 10 \text{ mA}$ $P_i = 20 \text{ mW}$
	Current output 4 to 20 mA (passive)	24 (+), 25 (-)	$U_i = 30 \text{ V}$ $I_i = 100 \text{ mA}$ $P_i = 1.25 \text{ W}$ $L_i = 0 \text{ } \mu\text{H}$ $C_i = 6 \text{ nF}$
	Modbus RS485	22 (B), 23 (A)	$U_i = 4.2 \text{ V}$ $I_i = \text{N/A}$ $P_i = \text{N/A}$ $L_i = 0 \text{ } \mu\text{H}$ $C_i = 6 \text{ nF}$  $U_0 = 4.2 \text{ V}$ $I_0 = 120 \text{ mA}$ $P_0 = 130 \text{ mW}$ $L_0 = 10 \text{ mH}$ $C_0 = 900 \text{ } \mu\text{F}$ $L/R = 1.2 \text{ mH}/\Omega$







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