

Safety Instructions

Proline Promass 300

ATEX: II3G

IECEX: Zone 2



- 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 použití 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 veksplodivnih 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. Upošteevane 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 försäkrar 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.

Proline Promass 300

Table of contents

Associated documentation	6
Manufacturer's certificates	7
Manufacturer address	7
Extended order code	7
Safety instructions: General	11
Safety instructions: Installation	11
Temperature tables	13
Connection values: Signal circuits	25

Associated documentation

For an overview of the scope of the associated Technical Documentation, refer to the following:

- *Device Viewer* (www.endress.com/deviceviewer): Enter serial number from nameplate.
- *Endress+Hauser Operations app*: Enter serial number from nameplate or scan matrix code on nameplate.

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

Measuring device	Documentation code			
	HART	FOUNDATION Fieldbus	PROFIBUS PA	PROFIBUS DP
Promass A 300 (8A3B)	BA01482D	BA01515D	BA01504D	–
Promass A 300 (8A3C)	BA01816D	BA01843D	BA01841D	BA01857D
Promass E 300	BA01484D	BA01517D	BA01506D	BA01855D
Promass F 300	BA01485D	BA01518D	BA01507D	BA01850D
Promass H 300	BA01486D	BA01519D	BA01508D	BA01858D
Promass I 300	BA01487D	BA01520D	BA01509D	BA01859D
Promass O 300	BA01488D	BA01521D	BA01510D	BA01860D
Promass P 300	BA01489D	BA01522D	BA01511D	BA01861D
Promass Q 300	BA01490D	BA01523D	BA01512D	BA01862D
Promass S 300	BA01491D	BA01524D	BA01513D	BA01863D
Promass X 300	BA01492D	BA01525D	BA01514D	BA01864D

Measuring device	Documentation code		
	Modbus RS485	EtherNet/IP	PROFINET
Promass A 300 (8A3B)	BA01493D	BA01699D	BA01736D
Promass A 300 (8A3C)	BA01884D	BA01842D	BA01840D
Promass E 300	BA01495D	BA01727D	BA01738D
Promass F 300	BA01496D	BA01728D	BA01739D
Promass H 300	BA01497D	BA01729D	BA01740D
Promass I 300	BA01498D	BA01730D	BA01741D
Promass O 300	BA01499D	BA01731D	BA01742D
Promass P 300	BA01500D	BA01732D	BA01743D
Promass Q 300	BA01501D	BA01733D	BA01744D
Promass S 300	BA01502D	BA01734D	BA01745D
Promass X 300	BA01503D	BA01735D	BA01746D

Additional documentation

Contents	Document type	Documentation code
Remote display and operating module DKX001	Special documentation	SD01763D
	Safety Instructions II3G Ex nA or II3G Ex ec	XA01498D
Explosion Protection	Brochure	CP00021Z/11
Ethernet-APL Installation Drawing	Installation Drawing	HE_01622

Please note the documentation associated with the device.

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

Documentation code: EC_00406

IEC Certificate of Conformity

Certificate number:

IECEX CSA 16.0034X

Affixing the certificate number certifies conformity with the standards under www.IECEx.com (depending on the device version).

- IEC 60079-0: 2017
- IEC 60079-7: 2017
- IEC 60079-11: 2011
- IEC 60079-15: 2017
- IEC TS 60079-47: 2021

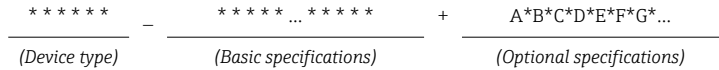
Manufacturer address

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



* = 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	8	Coriolis flowmeter
2	Sensor	A, E, F, H, I, O, P, Q, S, X ¹⁾	Sensor type
3	Transmitter	3	Transmitter type: 4-wire, compact version
4	Generation index	B, C	Platform generation
5, 6	Nominal diameter	Examples: 02, 04, 40, 50, 1H, 3E ^{2) 3)}	Nominal diameter of sensor

- 1) For replacement transmitter only: X
- 2) For the exact specification of the nominal diameter, see nameplate
- 3) For replacement transmitter only: XX

Basic specifications

Position 1, 2 Order code for "Approval" Option selected	Type of protection	
	Transmitter	Sensor
BS	Ex ec nC IIC T5...T1 Gc	Ex ec IIC T5...T1 Gc
	Ex ec nC [ic] IIC T5...T1 Gc ²⁾	Ex ec nC IIC T5...T1 Gc ¹⁾

- 1) The marking Ex ec nC is only applicable for sensor versions without purge connection or rupture disk. (see "Optional specifications").
- 2) The marking Ex ec nC [ic] IIC T5...T1 Gc is only available for devices with order code "Output; Input 1", option HA, TA, MC or RC.

Position	Order code for	Option selected	Description
4, 5	Output, input 1	BA	4-20mA HART
		GA	PROFIBUS PA
		HA	PROFIBUS PA Ex-i
		LA	PROFIBUS DP
		MA	Modbus RS485
		MB	Modbus TCP with Ethernet-APL
		MC	Modbus TCP with Ethernet-APL Ex i
		NA	EtherNet/IP 2-port switch integrated
		RA	PROFINET IO 2-port switch integrated
		RB	PROFINET with Ethernet-APL
		RC	PROFINET with Ethernet-APL Ex i
		SA	FOUNDATION Fieldbus
		TA	FOUNDATION Fieldbus Ex-i
6	Output, input 2	A	W/o
		B	4-20mA
		C	4-20mA Ex-i passive
		D	Configurable I/O initial setting off
		E	Pulse/frequency/switch output
		F	Pulse output, phase-shifted
		G	Pulse/frequency/switch output Ex-i passive
		H	Relay
		I	4-20mA input
		J	Status input

Position	Order code for	Option selected	Description
7	Output, input 3	A	W/o
		B	4-20mA
		C	4-20mA Ex-i passive
		D	Configurable I/O initial setting off
		E	Pulse/frequency/switch output
		F	Pulse output, phase-shifted
		G	Pulse/frequency/switch output Ex-i passive
		H	Relay
		I	4-20mA input
		J	Status input
8	Display; Operation	A	W/o; via communication
		F	4-line, illuminated; touch control
		G	4-line, illuminated; touch control + WLAN
		M	W/o; prepared for remote display DKX001
		O	4-line, illuminated; touch control
9	Housing	A	Alu, coated
		B	Stainless, hygienic
		L	Cast, stainless
11, 12	Meas. Tube Mat., Wetted Parts Surface	LA	Stainl. steel, cryogenic -196°C/-320°F
17, 18	Device Model	A1	1
		A2	2

Optional specifications


ID	Order code for	Option selected	Description
Cx	Sensor option	CA	Rupture disk
Cx	Sensor option	CH	Purge connection
Px	Enclosed accessories	P8	Wireless antenna, wide area (external WLAN antenna) ¹⁾

1) The external WLAN antenna is available with the order code for "Accessory Enclosed", option P8.

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.
- Alterations to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.
- Observe all the technical data of the device (see nameplate).

Safety instructions:
Installation

- In the case of a horizontal orientation and the order code for "Housing", option **B** "Stainless, hygienic": install the transmitter at the side of or below the sensor.
For more information on the orientation, see the Operating Instructions for the device →  6
- The following applies for devices with order code for "Housing", Option B "Stainless, hygienic": Thermal insulation is not allowed.
- 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).
- Only use certified cable entries suitable for the application. Observe selection criteria as per IEC/EN 60079-14.
- When the measuring device is connected, attention must be paid to explosion protection at the transmitter.
- Turning the transmitter housing
 - Loosen both hexagon socket screws until the transmitter housing can be turned.
 - Turn transmitter housing to desired position (mechanically limited); if necessary turn 270° in other direction.
 - Tighten both hexagon socket screws with a maximum of 7 Nm.
- 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.

Ex ec type of protection

- In potentially explosive atmospheres: Do not disconnect the electrical connection of the power supply circuit when energized.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection.
- Only use certified cable entries or sealing plugs.
- Equipment in type of protection Ex ec, shall be installed using a transient protection not exceeding 140% of the peak rated voltage value at the power supply terminals and IO terminals.
- For measuring devices with order code "Housing", option B "Stainless, hygienic":
 - To close the connection compartment cover, first hand-tight the cover and then tighten it further 45° (corresponds to 15 Nm).
 - In combination with order code "Display; Operation", option F or G "4-line illum.": Prevent electrostatic charge. Clean only with moist cloth.

Optional external WLAN antenna


- Connect the antenna bushing H337 to the transmitter housing and tighten by hand.
- Use only external antennas supplied by Endress+Hauser.
- Connect antenna or antenna cable with plug-in connector type N (MIL-STD-348) to antenna bushing H337.

Optional RFID TAG

- In the case of high electromagnetic field intensities in accordance with IEC/EN 60079-14: Use is not permitted.
- Avoid electrostatic charging.

Intrinsic safety

Observe the guidelines for interconnecting intrinsically safe circuits (e.g. IEC/EN 60079-14 , Proof of Intrinsic Safety).

-  When using the remote display and operating module DKX001 the internal display and operating module must be removed.
- When using the separate approved, remote display and operating module DKX001, only use the following variants: Basic specification of the remote display and operating module DKX001, order code "Approval", option BS

Potential equalization

- Integrate the device into the 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.
- The antenna bushing H337 of the external antenna must be integrated into the potential equalization system. This is the case if the sensor is connected in accordance with the regulations via the coupling.

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

- Promass A, F, H, I, P, Q, S, X:
 $T_m = -50\text{ °C}$
- Promass E, O:
 $T_m = -40\text{ °C}$
- Promass F, Q with cryogenic temperature version (order code for "Measuring tube material", option LA):
 $T_m = -196\text{ °C}$

Maximum medium temperature

- T_m for T5...T1 depending on the maximum ambient temperature T_a
- () = The maximum permitted medium temperatures in brackets only apply if the sensor is installed in such a way that the transmitter is not mounted above the sensor and free convection can occur on all sides.

Compact version

NOTICE

In case of heating, risk of overheating.

- ▶ On devices with Heating jacket the corresponding temperature tables for isolated sensor, are to be observed.
- ▶ Make sure that the heating medium, may not exceeded the maximum specified medium temperature of the exact used temperature classes of the device.

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

*Promass A (8A3B**-*... , 8A3C**-*...)*

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
1...4	50	205	-	90 ^{1) 2)}	130	170 ³⁾	205	205
	60		-	-	130	170 ³⁾	205	205

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

Promass E

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8...15	50	150	-	80 ^{1) 2)}	115 ³⁾	150	150	150
	55		-	-	115 ³⁾	150	150	150
	60		-	-	(115 ³⁾)	(140 ⁴⁾)	(150)	(150)
25...80	50	150	-	80 ^{1) 2)}	95 ³⁾	140 ⁴⁾	150	150
	55		-	-	95 ³⁾	140 ⁴⁾	150	150
	60		-	-	(95 ³⁾)	(140 ⁴⁾)	(150)	(150)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 150 °C

Promass F

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
08...15	50	150	-	80 ^{2) 3)}	115 ⁴⁾	150	150	150
	60		-	-	115 ⁴⁾	150	150	150
	50	150 ⁵⁾	-	80 ^{2) 3)}	100	150	150	150
	55		-	-	100	150	150	150
	60		-	-	100	150	150	150

DN	T _a [°C]	T _{m, max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
	50	240	-	80 ^{2) 3)}	115 ⁴⁾	170 ⁶⁾	240	240
	55		-	-	115 ⁴⁾	170 ⁶⁾	240	240
	60		-	-	115 ⁴⁾	170	170 (240)	170 (240)
25...80	50	150	-	60 ^{2) 3)}	95 ⁴⁾	150	150	150
	60		-	-	95 ⁴⁾	150	150	150
	50	150 ⁵⁾	-	60 ^{2) 3)}	95	150	150	150
	55		-	-	95	150	150	150
	60		-	-	95	150	150	150
	50	240	-	60 ^{2) 3)}	95 ⁴⁾	160 ⁶⁾	240	240
	55		-	-	95 ⁴⁾	160 ⁶⁾	240	240
	60		-	-	95 ⁴⁾	150 ⁷⁾	170 (240)	170 (240)
15, 25, 50... 250	50	350	-	85 ^{2) 3)}	120 ⁴⁾	185 ⁶⁾	280 ⁸⁾	350
	60		-	-	120 ⁴⁾	185 ⁶⁾	280 ⁸⁾	350
100...250	50	150	-	60 ^{2) 3)}	95 ⁴⁾	150	150	150
	60		-	-	95 ⁴⁾	150	150	150
	50	150 ⁵⁾	-	60 ^{2) 3)}	95	150	150	150
	60		-	-	95	150	150	150
	50		240	-	60 ^{2) 3)}	95 ⁴⁾	160 ⁶⁾	240
	55	-		-	95 ⁴⁾	160 ⁶⁾	240	240
	60	-		-	95 ⁴⁾	160 ⁷⁾	170 (240)	170 (240)

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 5) Cryogenic temperature version: T_m = -196 to 150 °C
- 6) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 7) The following applies for sensors with type of protection Ex ec nC: T_m = 170 °C
- 8) The following applies for sensors with type of protection Ex ec nC: T_m = 290 °C

Promass H

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	–	80 ²⁾	115 ³⁾	150	150	150
	60		–	–	115 ³⁾	150	150	150
8	50	205	–	80 ²⁾	115 ³⁾	165 ⁴⁾	205	205
	60		–	–	115 ³⁾	165 ⁴⁾	205	205
15...50	50	150	–	60 ²⁾	95 ³⁾	130 ⁵⁾	150	150
	60		–	–	95 ³⁾	130 ⁵⁾	150	150
15...50	50	205	–	60 ²⁾	95 ³⁾	130 ⁴⁾	205	205
	60		–	–	95 ³⁾	130 ⁴⁾	205	205

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 5) The following applies for sensors with type of protection Ex ec nC: T_m = 150 °C

Promass I

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8...80	50	150	–	60 ^{1) 2)}	95 ³⁾	150	150	150
	55		–	–	95 ³⁾	150	150	150
	60		–	–	(95 ³⁾)	(150)	(150)	(150)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C

Promass O

DN	T _a [°C]	T _{m, max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
80 ... 250	50	205	-	60 ¹⁾	95 ²⁾	160 ³⁾	205	205
	55		-	-	95 ²⁾	160 ³⁾	205	205
	60		-	-	95 ²⁾	160 ⁴⁾	180 (205)	180 (205)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 180 °C

Promass P

DN	T _a [°C]	T _{m, max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	-	80 ^{2) 3)}	115 ⁴⁾	150	150	150
	60		-	-	115 ⁴⁾	150	150	150
	50	205	-	80 ^{2) 3)}	115 ⁴⁾	170 ⁵⁾	205	205
	60		-	-	115 ⁴⁾	170 ⁵⁾	205	205
15...50	50	150	-	60 ^{2) 3)}	95 ⁴⁾	150	150	150
	60		-	-	95 ⁴⁾	150	150	150
	50	205	-	60 ^{2) 3)}	95 ⁴⁾	160 ⁵⁾	205	205
	60		-	-	95 ⁴⁾	160 ⁵⁾	205	205

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 5) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

Promass Q

DN	T _a [°C]	T _{m, max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
25 ... 250	50	205	-	60 ^{2) 3)}	95 ⁴⁾	160 ⁵⁾	205	205
	60		-	-	95 ⁴⁾	160 ⁵⁾	205	205

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
25 ... 250	50	150 ⁶⁾	–	60 ^{2) 3)}	95 ⁴⁾	150	150	150
	60		–	–	95 ⁴⁾	150	150	150

- 1) Maximaler Temperaturbereich siehe Typenschild
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 5) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 6) Cryogenic temperature version: T_m = -196 to 150 °C

Promass S

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	–	80 ^{1) 2)}	115 ³⁾	150	150	150
	60		–	–	115 ³⁾	150	150	150
15...50	50	150	–	60 ^{1) 2)}	95 ³⁾	150	150	150
	60		–	–	95 ³⁾	150	150	150

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The maximum admissible ambient temperature changes for devices with order code for "Housing", Option B "Stainless, hygienic" in connection with temperature class T5: T_a = T_a - 3 K
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C

Promass X

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
350	50	180	–	60 ¹⁾	95 ²⁾	160 ³⁾	180	180
	55		–	–	95 ²⁾	160 ³⁾	180	180
	60		–	–	(95 ²⁾)	(160 ³⁾)	(180)	(180)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 180 °C

Maximum medium temperature with thermal insulation according to Endress+Hauser specifications

NOTICE

The following applies for devices with order code for "Housing", Option B "Stainless, hygienic":

- Thermal insulation is not allowed.



For information on the thermal insulation of the device, see the "Thermal insulation" section of the "Operating instructions" document .

Promass A (8A3B**-*..., 8A3C**-*...)

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
1...4	50	205	-	90 ¹⁾	130	170 ²⁾	205	205
	55		-	-	(130)	(170 ²⁾)	(205)	(205)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

Promass E

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8...15	50	150	-	80 ¹⁾	115 ²⁾	150	150	150
	55		-	-	(115 ²⁾)	(140 ³⁾)	(150)	(150)
25...80	50	150	-	60 ¹⁾	95 ²⁾	140 ³⁾	150	150
	55		-	-	(95 ²⁾)	(140 ³⁾)	(150)	(150)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 150 °C

Promass F

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
08...15	50	150	-	80 ²⁾	115 ³⁾	150	150	150
	55		-	-	(115 ³⁾)	(150)	(150)	(150)
	50	150 ⁴⁾	-	80	100	150	150	150

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
	55	240	-	-	100	150	150	150
	50		-	80 ²⁾	115 ³⁾	170 ⁵⁾	240	240
	55		-	-	(115 ³⁾)	(170 ⁵⁾)	(240)	(240)
25...80	50	150	-	60 ²⁾	95 ³⁾	150	150	150
	55		-	-	(95 ³⁾)	(150)	(150)	(150)
	50	150 ⁴⁾	-	60 ²⁾	95	150	150	150
	55		-	-	95	150	150	150
	50	240	-	60 ²⁾	95 ³⁾	160 ⁵⁾	240	240
	55		-	-	(95 ³⁾)	(160 ⁵⁾)	(240)	(240)
15, 25, 50... 250	50	350	-	85 ²⁾	120 ³⁾	185 ⁵⁾	280 ⁶⁾	350
	60		-	-	120 ³⁾	185 ⁵⁾	280 ⁶⁾	350
100...250	50	150	-	60 ²⁾	95 ³⁾	150	150	150
	55		-	-	(95 ³⁾)	(150)	(150)	(150)
	50	150 ⁴⁾	-	60 ²⁾	95	150	150	150
	55		-	-	95	150	150	150
	50	240	-	60 ²⁾	95 ³⁾	160 ⁵⁾	240	240
	55		-	-	(95 ³⁾)	(160 ⁵⁾)	(240)	(240)

1) Maximum temperature range, see nameplate

2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C

3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C

4) Cryogenic temperature version: T_m = -196 to 150 °C

5) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

6) The following applies for sensors with type of protection Ex ec nC: T_m = 290 °C

Promass H

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	-	80 ²⁾	115 ³⁾	150	150	150
	55		-	-	(115 ³⁾)	(150)	(150)	(150)
8	50	205	-	80 ²⁾	115 ³⁾	165 ⁴⁾	205	205
	55		-	-	(115 ³⁾)	(165 ⁴⁾)	(205)	(205)
15...50	50	150	-	60 ²⁾	95 ³⁾	130 ⁵⁾	150	150

DN	T _a [°C]	T _{m, max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
	55		-	-	(95 ³⁾)	(130 ⁵⁾)	(150)	(150)
15...50	50	205	-	60 ²⁾	95 ³⁾	130 ⁴⁾	205	205
	55		-	-	(95 ³⁾)	(130 ⁴⁾)	(205)	(205)

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 5) The following applies for sensors with type of protection Ex ec nC: T_m = 150 °C

Promass I

DN	T _a [°C]	T _{m, max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8...80	50	150	-	60 ¹⁾	95 ²⁾	150	150	150
	60		-	-	(95 ²⁾)	(150)	(150)	(150)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C

Promass O

DN	T _a [°C]	T _{m, max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
80 ... 250	50	205	-	60 ¹⁾	95 ²⁾	160 ³⁾	205	205
	55		-	-	(95 ²⁾)	(160 ³⁾)	(205)	(205)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

Promass P

DN	T _a [°C]	T _{m, max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	-	80 ²⁾	115 ³⁾	150	150	150
	55		-	-	(115 ³⁾)	(150)	(150)	(150)
	50	205	-	80 ²⁾	115 ³⁾	170 ⁴⁾	205	205

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
	55		–	–	(115 ³⁾)	(170 ⁴⁾)	(205)	(205)
15...50	50	150	–	60 ²⁾	95 ³⁾	150	150	150
	55		–	–	95 ³⁾	150	150	150
	60		–	–	(95 ³⁾)	(150)	(150)	(150)
	50	205	–	60 ²⁾	95 ³⁾	160 ⁴⁾	205	205
	55		–	–	95 ³⁾	160 ⁴⁾	205	205
	60		–	–	(95 ³⁾)	(160 ⁴⁾)	(205)	(205)

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C

Promass Q

DN	T _a [°C]	T _{m,max} ¹⁾ [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
25 ... 250	50	205	–	60 ²⁾	95 ³⁾	160 ⁴⁾	205	205
	55		–	(40)	(95)	(160)	(205)	(205)
25 ... 250	50	150 ⁵⁾	–	60 ²⁾	95 ³⁾	150	150	150
	55		–	(40)	(95)	(150)	(150)	(150)

- 1) Maximum temperature range, see nameplate
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 4) The following applies for sensors with type of protection Ex ec nC: T_m = 195 °C
- 5) Cryogenic temperature version: T_m = –196 to 150 °C

Promass S

DN	T _a [°C]	T _{m,max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
8	50	150	–	80 ¹⁾	115 ²⁾	150	150	150
	55		–	–	(115 ²⁾)	(150)	(150)	(150)
15...50	50	150	–	60 ¹⁾	95 ²⁾	150	150	150

DN	T _a [°C]	T _{m, max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
	55		-	-	95 ²⁾	150	150	150
	60		-	-	(95 ²⁾)	(150)	(150)	(150)

- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C

Promass X

DN	T _a [°C]	T _{m, max} [°C]	T _m [°C]					
			T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
350	50	180	-	60 ¹⁾	95 ²⁾	160 ³⁾	180	180
	55		-	-	(95 ²⁾)	(160 ³⁾)	(180)	(180)


- 1) The following applies for sensors with type of protection Ex ec nC: T_m = 95 °C
- 2) The following applies for sensors with type of protection Ex ec nC: T_m = 130 °C
- 3) The following applies for sensors with type of protection Ex ec nC: T_m = 180 °C

With thermal insulation without Endress+Hauser specifications

NOTICE

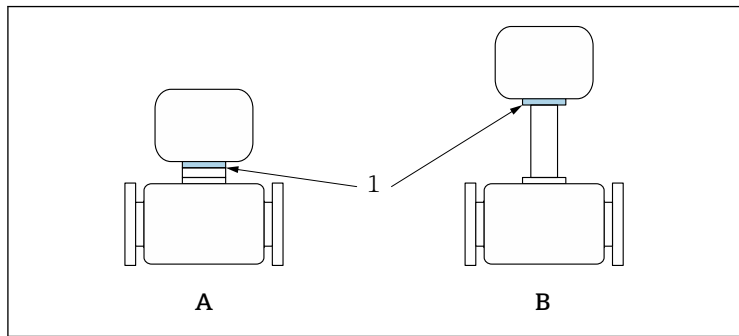
The following applies for devices with order code for "Housing", Option B "Stainless, hygienic":

- Thermal insulation is not allowed.


 For information on the thermal insulation of the device, see the "Thermal insulation" section of the "Operating instructions" document.

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

→  19



A0031198

 1 Position of reference point for temperature measurement

A Standard version

B Extended temperature version, cryogenic temperature version, high-temperature version

1 Reference point (T_{ref})

Reference temperature T_{ref}

T_m [°C]					
T6 [85 °C]	T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
-	63	72	75	77	77

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.

Terminal assignment

Transmitter: supply voltage, input/outputs

HART

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (+)	27 (-)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

FOUNDATION Fieldbus

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (A)	27 (B)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

PROFIBUS DP

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (B)	27 (A)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

PROFIBUS PA

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (B)	27 (A)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

Modbus RS485

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (B)	27 (A)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

Modbus TCP with Ethernet-APL

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (+)	27 (-)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

PROFINET

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	PROFINET (RJ45 connector)		24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

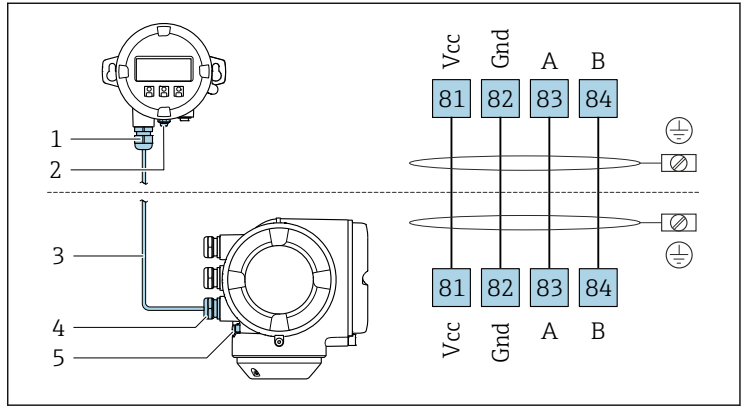
PROFINET with Ethernet-APL

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	26 (+)	27 (-)	24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

EtherNet/IP

Supply voltage		Input/output 1		Input/output 2		Input/output 3	
1 (+)	2 (-)	EtherNet/IP (RJ45 connector)		24 (+)	25 (-)	22 (+)	23 (-)
Device-specific terminal assignment: adhesive label in terminal cover.							

Remote display and operating module DKX001



A0027518

- 1 Remote display and operating module DKX001
- 2 Protective earth (PE)
- 3 Connecting cable
- 4 Measuring device
- 5 Protective earth (PE)

Safety-related values

Order code for "Output; input 1"	Output type	Safety-related values "Output; input 1"	
		26 (+)	27 (-)
Option BA	Current output 4 to 20 mA HART	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	
Option GA	PROFIBUS PA	$U_N = 32 V_{DC}$ $U_M = 250 V_{AC}$	
Option LA	PROFIBUS DP	$U_N = 32 V_{DC}$ $U_M = 250 V_{AC}$	
Option MA	Modbus RS485	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	
Option MB	Modbus TCP with Ethernet-APL	APL port profile SLAX SPE PoDL classes 10, 11, 12 $U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	
Option SA	FOUNDATION Fieldbus	$U_N = 32 V_{DC}$ $U_M = 250 V_{AC}$	
Option NA	EtherNet/IP	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	

Order code for "Output; input 1"	Output type	Safety-related values "Output; input 1"	
		26 (+)	27 (-)
Option RA	PROFINET	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	
Option RB	PROFINET with Ethernet-APL	APL port profile SLAX SPE PoDL classes 10, 11, 12 $U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$	

Order code for "Output; input 2"; "Output; input 3"	Output type	Safety-related values			
		Output; input 2		Output; input 3	
		24 (+)	25 (-)	22 (+)	23 (-)
Option B	Current output 4 to 20 mA	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			
Option D	User-configurable input/output	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			
Option E	Pulse/frequency/ switch output	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			
Option F	Double pulse output	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			
Option H	Relay output	$U_N = 30 V_{DC}$ $I_N = 100 mA_{DC}/500 mA_{AC}$ $U_M = 250 V_{AC}$			
Option I	Current input 4 to 20 mA	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			
Option J	Status input	$U_N = 30 V_{DC}$ $U_M = 250 V_{AC}$			

Intrinsically safe values

Order code for "Output; input 1"	Output type	Intrinsically safe values "Output; input 1"	
		26 (+)	27 (-)
Option HA	PROFIBUS PA Ex i (STANDARD + FISCO)	Ex ic $U_i = 32 \text{ V}$ $I_i = 570 \text{ mA}$ $P_i = 8.5 \text{ W}$ $L_i = 10 \text{ } \mu\text{H}$ $C_i = 5 \text{ nF}$	
Option MC	Modbus TCP with Ethernet-APL Ex i	2-WISE power load, APL port profile SLAC¹⁾ Ex ic $U_i = 17.5 \text{ V}$ $I_i = 380 \text{ mA}$ $P_i = 5.32 \text{ W}$ $L_i = 10 \text{ } \mu\text{H}$ $C_i = 5 \text{ nF}$ Cable specifications according to 2-WISE: $R_c = 15 \text{ to } 150 \text{ } \Omega/\text{km}$ $L_c = 0.4 \text{ to } 1 \text{ mH}/\text{km}$ $C_c = 45 \text{ to } 200 \text{ nF}/\text{km}$ $C_c = C_c \text{ line}/\text{line} + 0,5 C_c \text{ line}/\text{screen}$, if both lines are floating, or $C_c = C_c \text{ line}/\text{line} + C_c \text{ line}/\text{screen}$, if the screen is connected to one line Length of cable (not including cable stubs): $\leq 200 \text{ m (656.2)}$ Length of cable stubs: $\leq 1 \text{ m (3.3 ft)}$	
Option RC	PROFINET with Ethernet-APL Ex i		
Option TA	FOUNDATION Fieldbus Ex i (STANDARD + FISCO)	Ex ic $U_i = 32 \text{ V}$ $I_i = 570 \text{ mA}$ $P_i = 8.5 \text{ W}$ $L_i = 10 \text{ } \mu\text{H}$ $C_i = 5 \text{ nF}$	

1) For further options see Ethernet-APL Installation Drawing HE_01622.

Order code for "Output; input 2"; "Output; input 3"	Output type	Intrinsically safe values			
		Output; input 2		Output; input 3	
		24 (+)	25 (-)	22 (+)	23 (-)
Option C	Current output 4 to 20 mA Ex i passive	$U_i = 30 \text{ V}$ $I_i = 100 \text{ mA}$ $P_i = 1.25 \text{ W}$ $L_i = 0$ $C_i = 0$			
Option G	Pulse/frequency/ switch output Ex i passive	$U_i = 30 \text{ V}$ $I_i = 100 \text{ mA}$ $P_i = 1.25 \text{ W}$ $L_i = 0$ $C_i = 0$			

Remote display DKX001

Basic specification, position 1, 2 Approval	Terminal assignment	Basic specification, position 8 Display; Operation Option O
Option BS	81, 82, 83, 84	$U_n = 3.3 \text{ V}$
		$I_n = 150 \text{ mA}$



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