

# Safety Instructions

## Dosimass

ATEX: II3G Ex ec IIC T5...T1 Gc



- 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**  
Dobavljač 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-megfelelőségi 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.



# Dosimass

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**About this document**



The document number of these Safety Instructions (XA) must match the information on the nameplate.

**Associated documentation**

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

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

To commission the device, please observe the Operating Instructions pertaining to the device:

Measuring instrument	Documentation code		
	Pulse/frequency/switch output	IO-Link	Modbus RS485
Dosimass	BA02346D	BA02330D	BA02347D

*Additional documentation*

Contents	Document type	Documentation code
Explosion Protection	Brochure	CP00021Z/11

Please note the documentation associated with the device.

**Certificates and declarations**

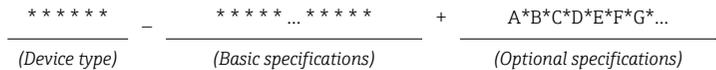
**EU Declaration of conformity**

Documentation code: EC\_01198

**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	Selected option	Description
1	Flow	D	Dosing and batching
2	Instrument family	B	Coriolis flowmeter
3	Product	A	A = Dosimass
4	Generation index	B	Platform generation
5, 6	Nominal diameter	01, 02, 04, 08, 15, 25, 40	Nominal diameter of sensor

**Basic specifications**

Position	Order code for	Selected option	Type of protection
1, 2	Approval	BT	IIBG Ex ec IIC T5...T1 Gc

Position	Order code for	Selected option	Description
4, 5	Output, input	AA	Pulse/frequency/switch output
		FA	IO-Link
		MD	Modbus RS485

**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.
- Use the device only in media where the wetted materials are known to be suitable.
- 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).
- Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, cleaning or maintaining:
  - For external non-metallic surfaces, e.g. housing, attached additional plates, RFID tag.
  - For attached external metallic parts that are not integrated into the local potential equalization system, e.g. nameplate tag, RFID tag.
  - Do not use in areas where the devices/electronic housing are exposed to highly charge-generating processes, pneumatically conveyed dusts and/or charge spraying in an electrostatic coating process.
  - Do not rub surfaces dry. Clean only with moist cloth.
  - Information on electrostatic hazards and how to minimize the generation of static electricity can be found in the technical specification IEC/TS 60079-32-1.

**Safety  
instructions:  
Installation**

**General installation instructions**

- Continuous service temperature of the connecting cable:
  - 25 to +80 °C; but at least according to the operating temperature range of the application plus allowance for process conditions ( $T_{a, \min}$  and  $T_{a, \max} + 20 \text{ K}$ ).
- In potentially explosive atmospheres: Do not disconnect the electrical connection of the power supply circuit when energized.

**Use of plugs and blanking plugs**

- Only use certified connection plugs M12×1 suitable for the application. Please comply with the selection criteria as defined in IEC/EN 60079-14.
- The accessory cables and adapters, order code 50107895 and 71703755, are not intended for use in explosive atmospheres and shall not be used in such areas.
- Seal unused plugs with certified blanking elements that are suitable for the application. The plastic transport sealing plugs do not meet this requirement and must therefore be replaced during installation.
- To ensure the housing protection, securely fasten the connecting plugs and blanking plugs.
- The device must be installed in such a way that the plugs are protected against mechanical impacts.

**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.

**Temperature tables**

**Minimum ambient temperature**

$T_{a, \min} = -25 \text{ }^\circ\text{C}$

**Maximum ambient temperature**

$T_{a, \max} = +60 \text{ }^\circ\text{C}$  depending on temperature class, maximum medium temperature and device-specific features. See the corresponding temperature tables.

**Minimum medium temperature**

$T_{m, \min} = -40 \text{ }^\circ\text{C}$

**Maximum medium temperature**

$T_{m, \max}$  varies depending on temperature class, maximum ambient temperature and device-specific features. See the corresponding temperature tables.

DN	$T_{a, \max}$ [°C]	$T_{m, \max}$ [°C]				
		T5 [100 °C]	T4 [135 °C]	T3 [200 °C]	T2 [300 °C]	T1 [450 °C]
01 to 04	60	70	120	120	150	150
08 to 40	60	100	135	150	150	150

**Connection values: Signal circuits**

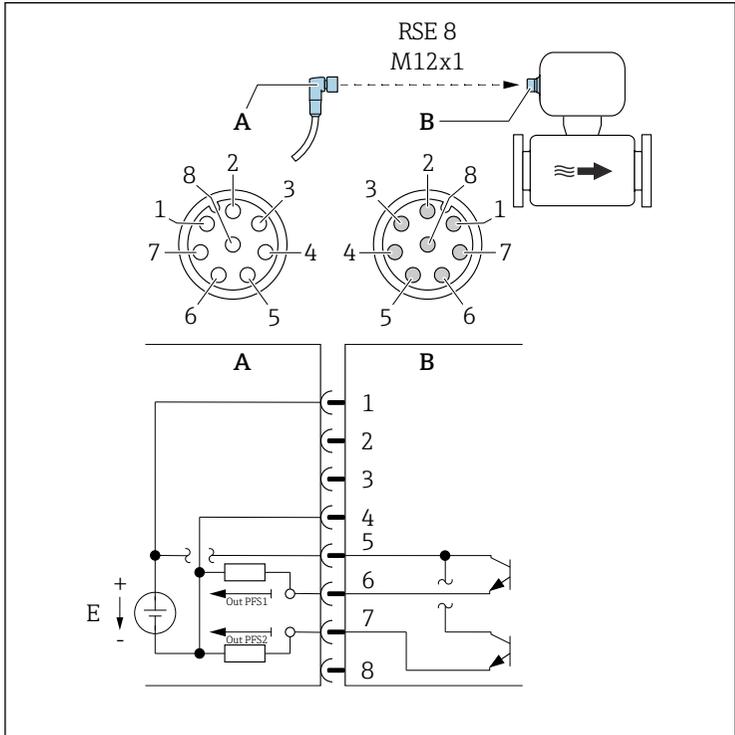
The following tables contain specifications which are dependent on the transmitter type and its input and output assignment. Compare the following specifications with those on the nameplate of the transmitter.

**Available device plugs**

Device version: 2 pulse/frequency/switch outputs

Order code for "Output, input": option AA:

2 pulse/frequency/switch outputs



A0054873

1 Connection to device

- A Coupling: Supply voltage, pulse/freq./switch output
- B Connector: Supply voltage, pulse/freq./switch output
- E SELV/PELV limited energy power supply
- 1 to Pin assignment
- 8

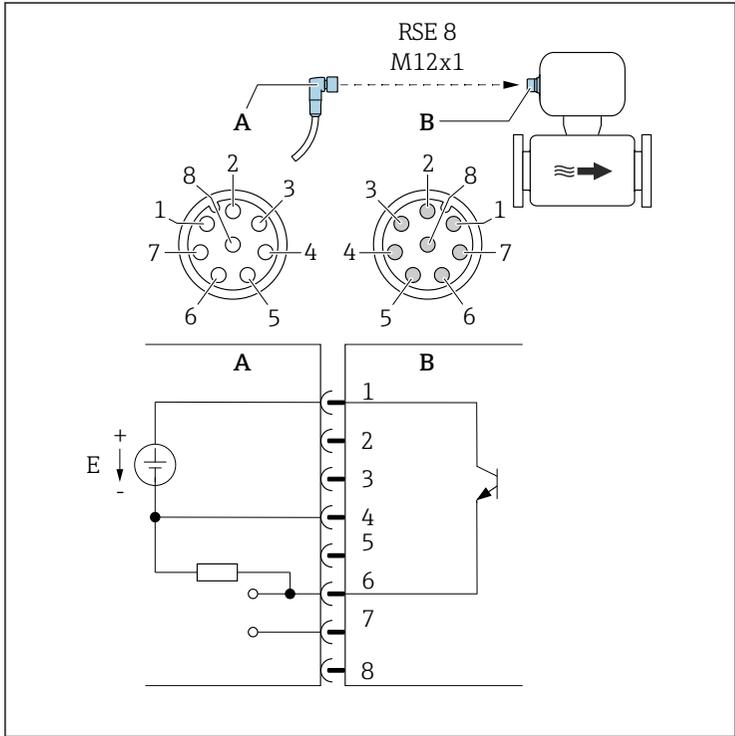
*Pin assignment*

Connection: Coupling (A) – Connector (B)		
Pin	Assignment	
1	L+	Supply voltage
2	+	Service interface RX
3	+	Service interface TX
4	L-	Supply voltage
5	+	Pulse/frequency/switch output 1 and 2
6	-	Pulse/frequency/switch output 1
7	-	Pulse/frequency/switch output 2
8	-	Service interface GND

*Device version: IO-Link, 1 pulse/frequency/switch output*

Order code for "Output, input", option FA:

IO-Link, 1 pulse/frequency/switch output



A0059318

**2** Connection to device

- A Coupling: Supply voltage, pulse/freq./switch output
- B Connector: Supply voltage, pulse/freq./switch output
- E SELV/PELV limited energy power supply
- 1 to Pin assignment
- 8

*Pin assignment*

Connection: Coupling (A) – Connector (B)		
Pin	Assignment	
1	L+	Supply voltage
2	+	Service interface RX
3	+	Service interface TX
4	L-	Supply voltage
5	Not used	
6	-	Pulse/frequency/switch output DQ

Connection: Coupling (A) – Connector (B)		
Pin	Assignment	
7	-	IO-Link communication signal C/Q
8	-	Service interface GND



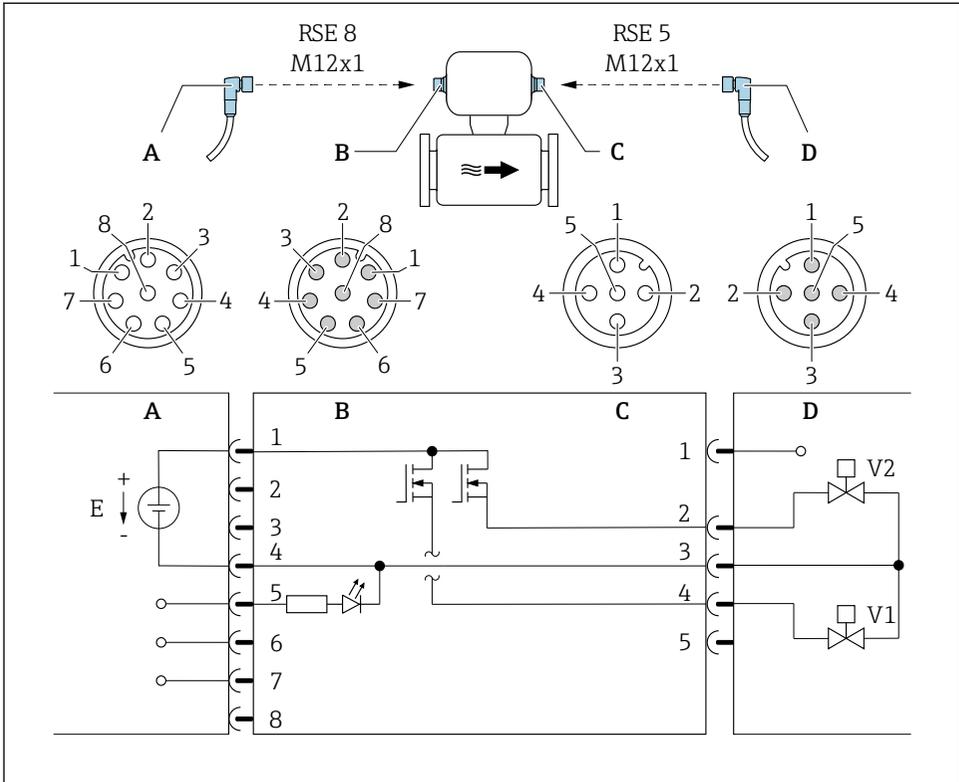
The pin assignment deviates from the IO-Link standard to enable compatibility with previous device versions and installations.

*Device version: Modbus RS485, 2 switch outputs (batch), 1 status output, 1 status input*

Order code for "Output, input", option MD:

Modbus RS485, 2 switch outputs (batch), 1 status output, 1 status input

## Version 1: Status input via connection A/B

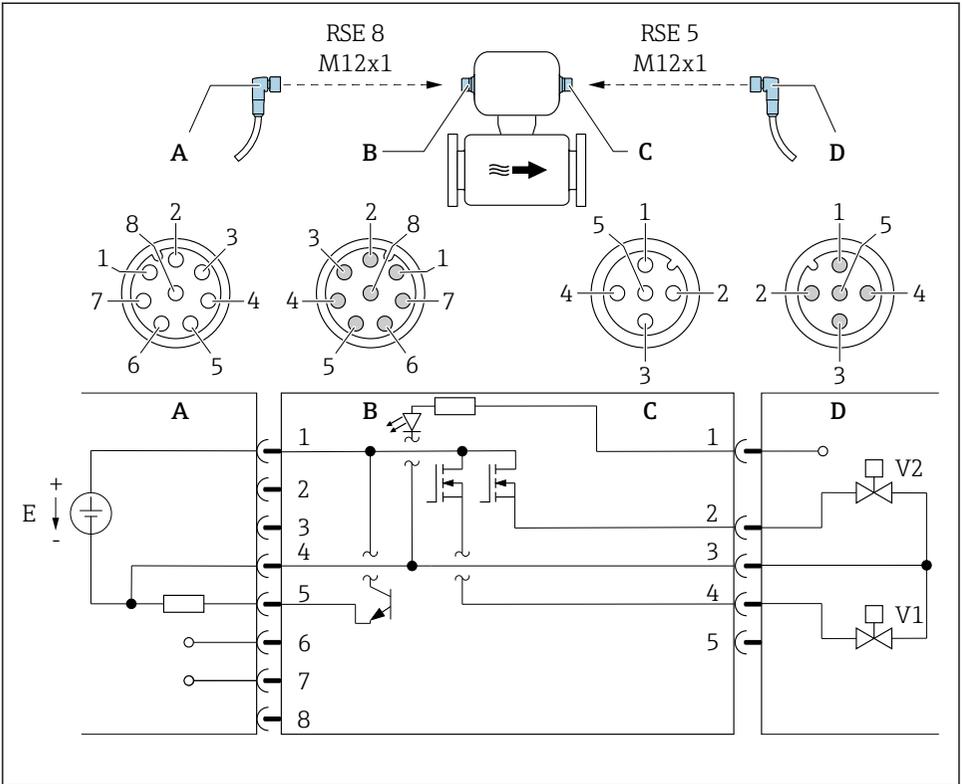


A0053319

3 Connection to device

- A Coupling: Supply voltage, Modbus RS485, status input
- B Connector: Supply voltage, Modbus RS485, status input
- C Coupling: Switch output (batch)
- D Connector: Switch output (batch)
- E SELV/PELV limited energy power supply
- V1 Valve (batch), level 1
- V2 Valve (batch), level 2
- 1 to Pin assignment
- 8

Version 2: Status output via connection A/B



A0053323

4 Connection to device

- A Coupling: Supply voltage, Modbus RS485, status output
- B Connector: Supply voltage, Modbus RS485, status output
- C Coupling: Switch output (batch), status input
- D Connector: Switch output (batch), status input
- E SELV/PELV limited energy power supply
- V1 Valve (batch), level 1
- V2 Valve (batch), level 2
- 1 to Pin assignment
- 8

*Pin assignment*

Connection: Coupling (A) – Connector (B)			Connection: Coupling (C) – Connector (D)		
Pin	Assignment		Pin	Assignment	
1	L+	Supply voltage	1	+	Status input
2	+	Service interface RX	2	+	Switch output (batch) 2
3	+	Service interface TX	3	-	Switch output (batch) 1 and 2, status input
4	L-	Supply voltage	4	+	Switch output (batch) 1
5	+	Status output/Status input <sup>1)</sup>	5	Not used	
6	+	Modbus RS485			
7	-	Modbus RS485			
8	-	Service interface GND			

1) The functionality of status input and status output is not possible at the same time.

**Power consumption**

2.5 W (no outputs)









71646492

[www.addresses.endress.com](http://www.addresses.endress.com)

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