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Safety Instructions
Dosimass

UKEX: II3G

Endress+Hauser
People for Process Automation

Dosimass

Table of contents

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): 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

UK Declaration of conformity

Documentation code: UK_00582

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

* * * * * * (*Device type*) – * * * * * … * * * * * (*Basic specifications*) + A*B*C*D*E*F*G*… (*Optional specifications*)

* = 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	8	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	US	II3G 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. 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 no 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 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

$T_{a, min} = -25$ °C

Maximum ambient temperature

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

Minimum medium temperature

$T_{m, min} = -40$ °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

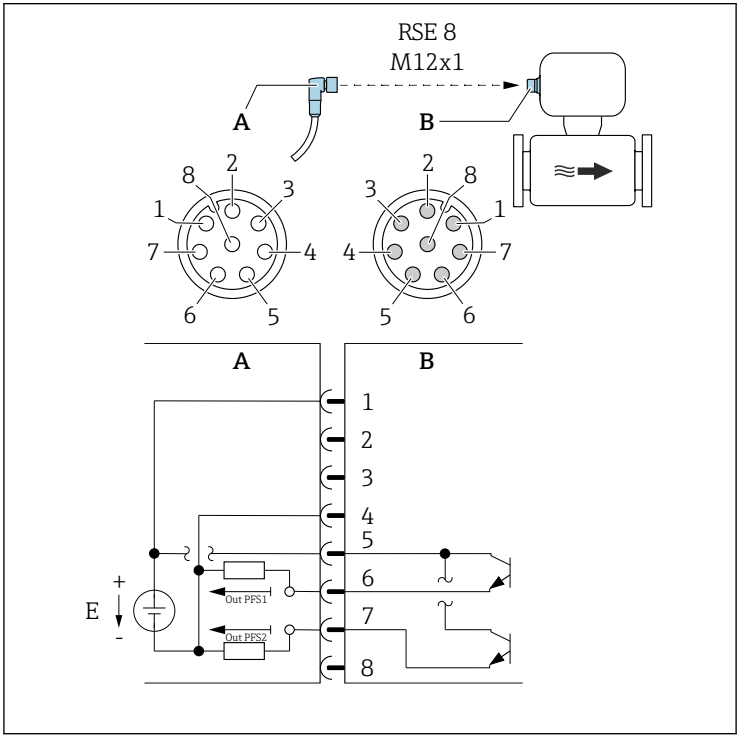
Connection values: Signal circuits

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



1 Connection to device

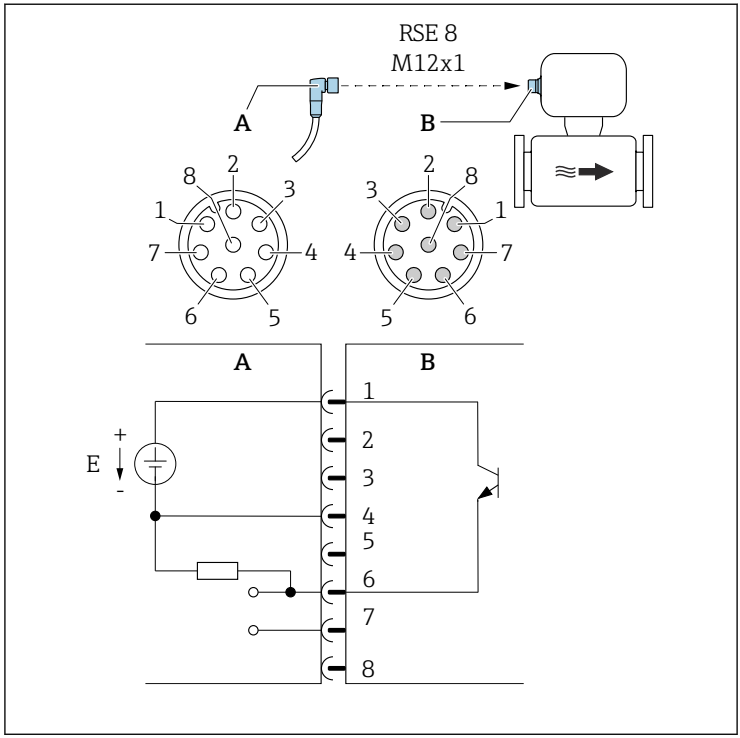
A Coupling: Supply voltage, pulse/freq./switch output
B Connector: Supply voltage, pulse/freq./switch output
E SELV/PELV limited energy power supply
1 to 8 Pin assignment

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



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 8 Pin assignment

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

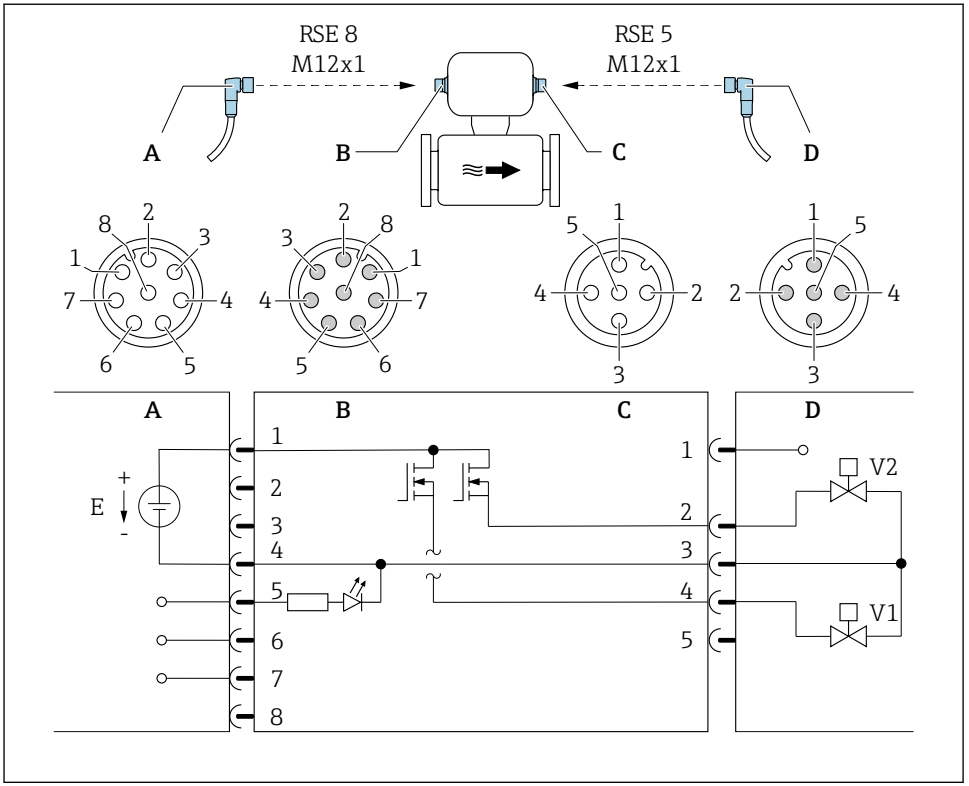
Connection: Coupling (A) – Connector (B)		
Pin	**Assignment**	
7	–	IO-Link communication signal C/Q
8	–	Service interface GND

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

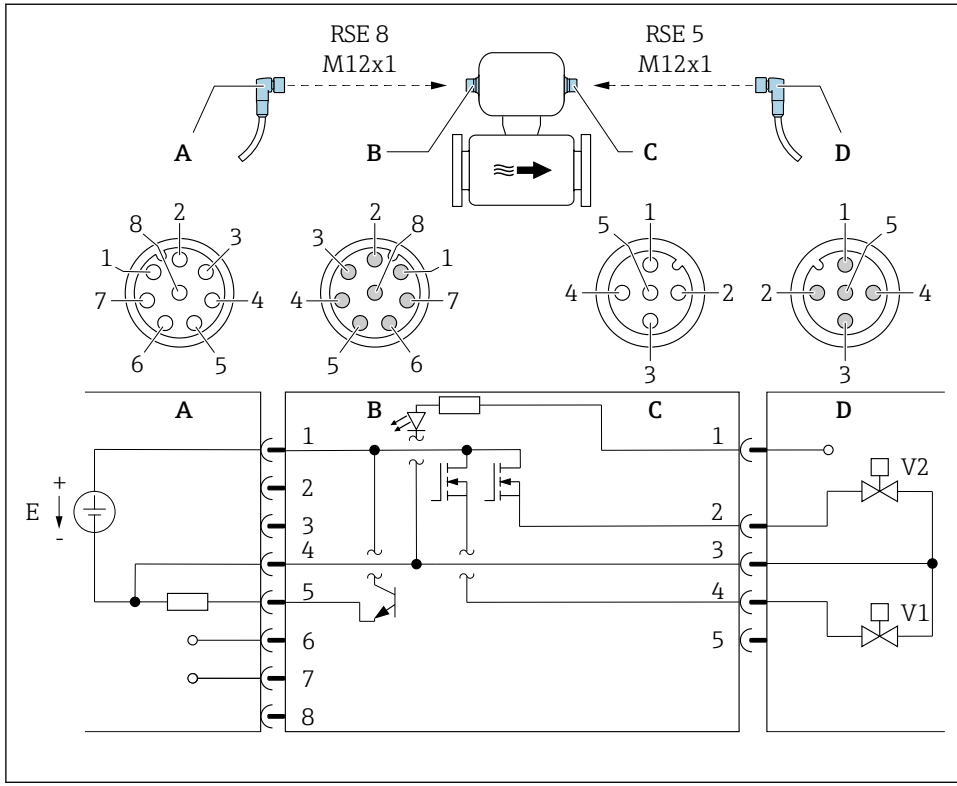
Version 1: Status input via connection A/B



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 8 Pin assignment

Version 2: Status output via connection A/B



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 8 Pin assignment

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 [1)]	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)

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