Safety Instructions
Nanomass

ATEX: II 1G Ex ia IIC T4 Ga
II 2G Ex ia IIC T4 Gb
IECEx: Zone 0 Ex ia IIC T4 Ga
Zone 1 Ex ia IIC T4 Gb

Document: XA01467D
Safety instructions for electrical apparatus for explosion-hazardous areas according to Directive 2014/34/EU (ATEX) and IEC 60079-0 → 🖹 4

Endress+Hauser
People for Process Automation

bg – Правила за техниката на безопасност за електрически средства за производство във взривоопасни зони. Ако не разбирате езика на това ръководство има възможност да си поръчате при нас едно ръководство, преведено на езика на Вашата страна.

Заявление за съответствие с ЕС
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.

Prohlášení o shodě s ES
Společnost Endress+Hauser prohlašuje prostřednictvím tohoto prohlášení a použitím značky CE, že tento výrobek vyhovuje příslušným evropským směrnicím. 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.

EF-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 πιστότητας ΕΚ
Με αυτή τη δήλωση πιστότητας και την τοποθέτηση του σήματος CE ο κατασκευαστής Endress+Hauser δηλώνει, ότι αυτό το προϊόν συμορφώνεται με τις ευρωπαϊκές οδηγίες που πρέπει να εφαρμοστούν. Οι οδηγίες, τα πορότυπα 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 de conformidad CE
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 vastavusdeklaratsioon
Tootja Endress+Hauser kinnitab juurdelisatud vastavusdeklaratsiooni esitamisega ja CE-märgise kandmisega tootele, et käesolev toode vastab kohaldatavate 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-vaatimustenmukaisuustodistus
Valmistaja Endress+Hauser vakuuttaa tällä vaatimustenmukaisuustodistuksella ja CE-merkin kiinnittämisellä, että tämä tuote täyttää sovellettavien EU-direktiivien määräykset. Sovellettavat direktiivit, normit ja dokumentit on merkitty vaatimustenmukaisuustodistukseen.

hu – Biztonsági információk robbanásveszélyes területre való elektromos eszközökhöz. Amennyiben nem tudja elolvasni ezt az útmutatót, akkor megrendelheti az Ön anyanyelvére lefordítva is.

EK-megfelelőségi nyilatkozat
Az Endress+Hauser mint gyártó jelen megfelelőségi nyilatkozattal és a CE-jelzés felhelyezésével kijelenti, hogy ez a termék megfelel az alkalmazandó európai irányelveknek. Az alkalmazott irányelvek, szabványok és dokumentumok a megfelelőségi 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 ordinarcene una copia tradotta nella vostra lingua.

Dichiarazione di conformità CE
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.

EB atitikties deklaracija
Gamintojas Endress+Hauser šia atitikties deklaracija ir CE ženklinimu 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 tulkojumu Jūsu valsts valodā.

ES atbilstības apliecinājums
Ražotājs Endress+Hauser ar šo atbilstības apliecinājumu un CE zīmola lietojumu apstiprina, ka produkts izgatavots sakaņā 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.

EG 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 WE
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 dukumenty 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 de conformidade CE
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 – Indicaţii de siguranţă pentru mijloacele de producţie electrice pentru zonele periclitate de explozie. Dacă nu puteţi citi aceste instrucţiuni, atunci puteţi comanda la noi instrucţiunile traduse în limba ţării dumneavoastră.

Declaraţie de conformitate CE
Producătorul Endress+Hauser declară prin declaraţia de conformitate alăturată şi prin aplicarea semnului CE că acest produs corespunde directivelor europene aplicabile. Directivele, normele aplicate şi documentele sunt menţionate în declaraţia 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.

Vyhlásenie o konformite s ES
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.

Pojasnilo glede potrdila o skladnosti EU
Proizvajalec Endress+Hauser s to izjavo o skladnosti in navedbo oznake CE izjavlja, da je ta izdelek skladen s predpisanimi evropskimi smernicami. Upoštevane 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.

EG-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.

EU-Konformitätserklärung
EU-Declaration of Conformity
Déclaration UE de Conformité

Endress+Hauser
People for Process Automation

CE

Company **Endress+Hauser Flowtec AG, Kägenstrasse 7, CH-4153 Reinach**

erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
declares as manufacturer under sole responsibility, that the product
déclare sous sa seule responsabilité en qualité de fabricant que le produit

Product

Massendurchfluß-Meßsystem
Coriolis mass flow measuring system
Système de mesure de débit massique

Nanomass DCEB**-aa**********+#**#
aa = BA, BB or 8A

Regulations den folgenden Europäischen Richtlinien entspricht:
conforms to following European Directives:
est conforme aux prescriptions des Directives Européennes suivantes :

EMC	2014/30/EU (L96/79)
ATEX	2014/34/EU (L96/309)

Standards angewandte harmonisierte Normen oder normative Dokumente:
applied harmonized standards or normative documents:
normes harmonisées ou documents normatifs appliqués:

EN 60079-0: 2012	EN 60079-11: 2012	EN 60079-26: 2007
EN 61010-1: 2010	EN 61326-1: 2013	EN 61326-2-3: 2013

Certification

EG-Baumusterprüfbescheinigung Nr. EC-Type Examination Certificate No. Numéro de l'attestation d'examen CE de type	DEMKO 15 ATEX 1634X
Ausgestellt von/issued by/délivré par	UL International Demko A/S (0539)
Qualitätssicherung Quality assurance Système d'assurance qualité	TÜV NORD CERT GmbH / 0044

Reinach, 18.04.2016

Dr. B.-J. Schäfer
(Geschäftsführer / Managing Director / P.D.G)

i.V. U. Dette
(Gerätesicherheit / Product Safety / Sécurité du produit)

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Nanomass

Table of Contents

Associated documentation

All documentation is available:
- On the CD-ROM supplied.
- Internet: www.endress.com/deviceviewer.
- Smart phone/tablet: Endress+Hauser Operations App.
- In the Download Area of the Endress+Hauser website: www.endress.com → Downloads.

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

Measuring device	Documentation code
Nanomass Gas Density	BA01027D

Additional documentation:

Document type	Contents	Documentation code
Brochure	Explosion Protection	CP00021Z/11

Manufacturer's certificates

EC Declaration of Conformity

→ 🖹 3

EC type-examination certificate

Certificate number:
DEMKO 15 ATEX 1634X

IEC certificate of conformity

Certificate number:
IECEx UL 15.0112X

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

- IEC 60079-0: 2011
- IEC 60079-11: 2011
- IEC 60079-26: 2006

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*...
Device type	Basic specifications	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 are 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 is relevant to hazardous locations.

Device type

Position	Order code	Selected option	Description
1	Flow	D	Flow
2	Instrument family	C	Coriolis MEMS
3	Fluid	D, E	D = Sensor for liquid density, E = Sensor for gas density
4	Generation index	B	Platform generation
5, 6	Nominal diameter	N7	Nominal diameter of sensor

Basic specifications

Position	Order code	Selected option	Description
1, 2	Approval	BA, BB, 8A	BA, 8A = Ex ia IIC T4 Ga BB = Ex ia IIC T4 Gb
3	Power Supply	A	DC 8...30 V
4	Output, Input	A	2× 4-20 mA output, passive USB interface incl. cable
		B	2× 4-20 mA output, passive RS232 plug
		C	2× 4-20 mA output, passive RS232 interface incl. 2 m service cable
		D	2× 4-20 mA output, passive RS232 plug incl. 2 m service cable
5	Display, Operation	A	2-line, push buttons
6	Housing	A	Compact

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 (e.g. IEC 60079-14, NEC or CEC)
- 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 fluid to which the wetted materials have sufficient durability.
- Observe all the technical data of the device (see nameplate).
- Modifications to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.
- No user replaceable parts inside.

⚠ WARNING

Hazard in potentially explosive atmospheres

- ▶ Disconnect power before servicing.
- ▶ The apparatus enclosure contains aluminium: Care must be taken to avoid ignition hazards due to impact or friction.

⚠ WARNING

For Version with USB connection only:

- ▶ Use of the USB connection only allowed for production, tests, repairs or overhaul by Endress+Hauser service technicians.
- ▶ Do not connect USB and power simultaneously.
- ▶ USB data download and configuration done only in non-hazardous location.

Safety instructions: Installation

- Permitted ambient temperature range must be observed.
- Avoid sparks caused by impact and friction.

Intrinsic safety

- Use only approved safety barriers or associated equipment.
- Safety barriers and associated equipment must fulfil the following conditions:
  - $U_0 \leq U_i$
  - $I_0 \leq I_i$
  - $P_0 \leq P_i$
  - $C_0 \geq C_i + C_{cable}$
  - $L_0 \geq L_i + L_{cable}$
- 4-20 mA circuits should be separated by individual grounded shields.
- Safety barriers and associated apparatus output current must be limited by a resistor such that the output voltage-current plot has a linear characteristics.

Potential equalization

- Integrate the device into the local potential equalization.

Temperature information

Ambient temperature

- Minimum ambient temperature: $T_a = -20$°C (−4 °F)
- Maximum ambient temperature: $T_a = +60$ °C (+140 °F)

Medium temperature

- Minimum medium temperature: $T_{med} = -20$ °C (−4 °F)
- Maximum medium temperature: $T_{med} = +60$ °C (+140 °F)

Temperature class

- Temperature class: T4

Connection values: Signal circuit

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

Output type

The order code is part of the extended order code. For detailed information on the features of the device and the structure of the extended order code → 🖹 5.

Order code for "output; input"	Output 1 1 (+/-) / 2 (-/+)	Output 2 3 (+/-) / 4 (-/+)	Output 3 1 to 4
Option **A**	4-20 mA (passive)	4-20 mA (passive)	_
Option **B**	4-20 mA (passive)	4-20 mA (passive)	RS232
Option **C**	4-20 mA (passive)	4-20 mA (passive)	RS232
Option **D**	4-20 mA (passive)	4-20 mA (passive)	RS232

Intrinsically safe values

The order code is part of the extended order code. For detailed information on the features of the device and the structure of the extended order code → 🖹 5.

Order code for "power"	Intrinsically safe values
Option **A**	U_i = 30 V
	I_i = 300 mA
	P_i = 1.1 W
	L_i = 0.22 mH
	C_i = 55 nF

Order code for "input/output"	Output type	Intrinsically safe values
Option **A**	4-20 mA (passive)	U_i = 30 V
		I_i = 320 mA
		P_i = 1.1 W
		L_i = 0.15 mH
		C_i = 48 nF
Option **B**, **C**, **D**	4-20 mA (passive)	U_i = 30 V
		I_i = 320 mA
		P_i = 1.1 W
		L_i = 0.15 mH
		C_i = 48 nF
	RS232	U_i = 15 V
		I_i = 90 mA
		P_i = 1.1 W
		L_i = 1 mH
		C_i = 700 nF

External devices

Device type code, position 3	External device	Intrinsically safe values
Option DC**E**B	Pressure sensor	Pressure sensor, Endress+Hauser, PN UC2 - T3C - cable length max. 30.5 m
Option DC**D**B	e.g. Temperature sensor or other external device	U_o = 5.88 V
		I_o = 400 mA
		P_o = 0.6 W; $P_0 = (I_0 \cdot U_0)/4$
		L_o = 20 µH
		C_o = 41000 nF

www.addresses.endress.com

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