

Safety Instructions

Nivotester FTC325

ATEX: II (1) G [Ex ia Ga] IIC
II (1) D [Ex ia Da] IIIC
IECEx: [Ex ia Ga] IIC
[Ex ia Da] IIIC



Document: XA00195F-D
Safety instructions for electrical apparatus for explosion-
hazardous areas →  5

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 gaminyje 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 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 periclitate 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 semnului 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 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.

BG - Правила за техниката на безопасност за електрически средства за производство във взривоопасни зони. Ако не разбирате езика на това ръководство има възможност да споряте 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 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.

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 EE

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 εφαρμόστούν. 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 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 kiinnitab 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-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 prijeti opasnost od eksplozije. Ako Vam nije moguće čitati ovaj naputak, onda imate mogućnost da kod nas naručite naputak sastavljen na Vašem materinskom 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 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.

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

Endress+Hauser 
People for Process Automation



Company **Endress+Hauser SE+Co. KG, Hauptstraße 1, 79689 Maulburg**
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 **NIVOTESTER**
FTC325PFM

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

ATEX	2014/34/EU (L96/309)
EMC	2014/30/EU (L96/79)
LVD	2014/35/EU (L96/357)
RoHS	2011/65/EU (L174/88)

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

EN 61010-1	(2010)	EN 50581	(2012)
EN 61326-1	(2013)	EN 60079-11	(2012)
EN 61326-2-3	(2013)	EN IEC 60079-0	(2018)

Certification	EG-Baumusterprüfbescheinigung Nr. EC-Type Examination Certificate No. Numéro de l'attestation d'examen CE de typ	DMT 02 ATEX E 232
	Ausgestellt von/issued by/délivré par Qualitätssicherung Quality assurance Système d'assurance qualité	DEKRA EXAM Bochum (0158) TÜV Nord CERT (GmbH) (0044)

Maulburg, 30.07.2020
Endress+Hauser SE+Co. KG



i.V. Stefan Muth
Produktsicherheitsingenieur
Expert Product Safety
Expert Sécurité Produit

EG 02 051-f

Nivotester FTC325

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Associated documentation

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

TI00380F/00, KA00221F/00

Supplementary documentation

Explosion-protection brochure: CP00021Z/11

The Explosion-protection brochure is available:

- In the download area of the Endress+Hauser website:
www.endress.com -> Downloads -> Brochures and Catalogs ->
Text Search: CP00021Z
- On the CD for devices with CD-based documentation

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

→  4

EU type-examination certificate

Certificate number:

DMT 02 ATEX E 232

List of applied standards: See EU Declaration of Conformity.

IEC Declaration of Conformity

Certificate number:

IECEX BVS 20.0037

Affixing the certificate number certifies conformity with the following standards (depending on the device version):

- IEC 60079-0 : 2017
- IEC 60079-11 : 2011

Manufacturer address

Endress+Hauser SE+Co. KG

Hauptstraße 1

79689 Maulburg, Germany

Address of the manufacturing plant: See nameplate.

Other standards

Among other things, the following standards shall be observed in their current version for proper installation:

- IEC/EN 60079-14: "Explosive atmospheres - Part 14: Electrical installations design, selection and erection"
- EN 1127-1: "Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology"

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

FTC325	–	*****	+	A*B*C*D*E*F*G*..
<i>(Device type)</i>		<i>(Basic specifications)</i>		<i>(Optional specifications)</i>

* = Placeholder

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

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.

Extended order code: Nivotester

-  The following specifications reproduce an extract from the product structure and are used to assign:
- This documentation to the device (using the extended order code on the nameplate).
 - The device options cited in the document.

Device type
FTC325

Basic specifications

Position 1 (Approval)		
Selected option		Description
FTC325	C	ATEX II (1) G [Ex ia Ga] IIC, WHG ATEX II (1) D [Ex ia Da] IIIC, WHG
	H	IECEX [Ex ia Ga] IIC IECEX [Ex ia Da] IIIC

Position 2 (Input; Housing)		
Selected option		Description
FTC325	1	2-wire PFM; 45mm, DIN Rail

Position 3 (Power Supply)		
Selected option		Description
FTC325	A	85-253 VAC
	B	20-30 VAC / 20-60 VDC

Position 4 (Switch Output)		
Selected option		Description
FTC325	1	1x SPDT level + 1x SPST alarm N.C. (normal closed)
	2	1x SPDT level + 1x SPST alarm N.O. (normal open)

Optional specifications
No options specific to hazardous locations are available.

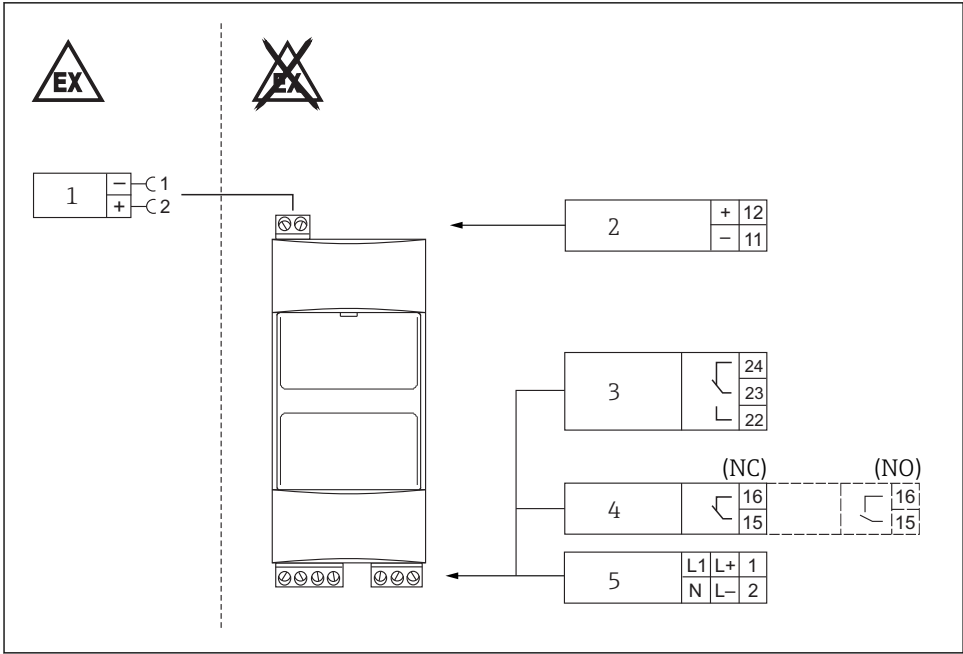
**Safety
instructions:
General**

- 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
- Comply with the installation and safety instructions in the Operating Instructions.
- 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.
- Avoid electrostatic charging.
- Modifications to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser.

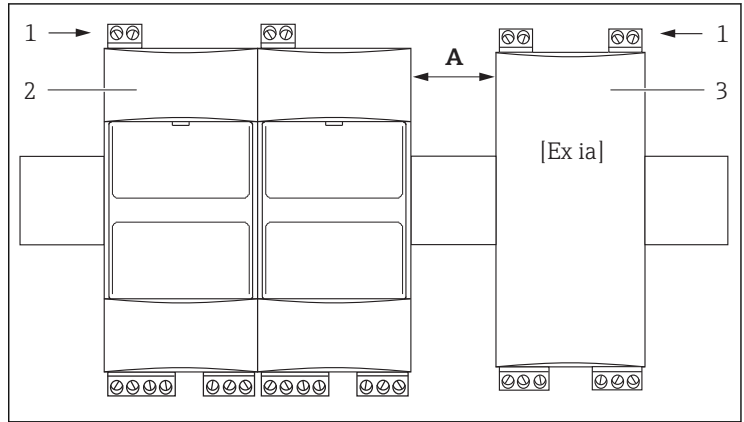
**Safety
instructions:
Special conditions**

To avoid electrostatic charging: Do not rub surfaces with a dry cloth.

**Safety
instructions:
Installation**



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2

- A *Min. 6 mm*
 1 *Intrinsically safe contacts*
 2 *Nivotester FTC325*
 3 *Other type, other product*

- To achieve an ingress protection of at least IP55: Protect the device from dust and humidity, e.g. in control rooms, or located in a suitable protective housing.
- The device is an associated apparatus: Only use the device outside explosion hazardous areas.
- If an intrinsically safe circuit is connected to the device passes through dust explosion-hazardous areas of Zones 20 or Zone 21, make sure that the devices connected to this circuit meet the requirements of categories 1 D or 2 D and are certified accordingly.
- There must be a distance (thread measure) of at least 50 mm between intrinsically safe and nonintrinsically safe terminals.
- When combining the device with other types and products on the same top-hat rail: Keep the distances comply to the relevant standards and rules.
- When combining with devices from other manufacturers: Observe ingress protection of the housing.

Intrinsic safety

- Observe the pertinent guidelines when interconnecting intrinsically safe circuits.
- The intrinsically-safe input circuits are galvanically isolated from other circuits up to a peak value of the nominal voltage of 375 V.

Temperature tables

Ambient temperature range	
Individual installation	$-20\text{ }^{\circ}\text{C} \leq T_a \leq +60\text{ }^{\circ}\text{C}$
Series installation	$-20\text{ }^{\circ}\text{C} \leq T_a \leq +50\text{ }^{\circ}\text{C}$

Connection data

Power supply circuit		
Terminal connections: 1, 2	AC voltage	$U = 85\text{ to }253\text{ V}_{AC}, 50/60\text{ Hz}$ $P \leq 6.0\text{ VA}$
	DC voltage	$U = 20\text{ to }60\text{ V}_{DC}$ $U = 20\text{ to }30\text{ V}_{AC}, 50/60\text{ Hz}$ $P \leq 2.0\text{ W}$
Contact circuit		
Level relay Terminal connections: 22, 23, 24	$U \leq 250\text{ V}_{AC}, I \leq 2\text{ A}, P \leq 500\text{ VA at } \cos \varphi \geq 0.7$ $U \leq 40\text{ V}_{DC}, I \leq 2\text{ A}, P \leq 80\text{ W}$	
Fault signal relay Terminal connections: 15, 16	$U \leq 250\text{ V}_{AC}, I \leq 2\text{ A}, P \leq 500\text{ VA at } \cos \varphi \geq 0.7$ $U \leq 40\text{ V}_{DC}, I \leq 2\text{ A}, P \leq 80\text{ W}$ optionally NC or NO, →  1,  10	

Sensor circuit					
Terminal connections: 11, 12	Connection data:	$U_0 \leq 13.9\text{ V}$ $I_0 \leq 99\text{ mA}$ $P_0 \leq 874\text{ mW}$		$R_t \geq 391\text{ }\Omega$ $C_t = 138\text{ nF}$ $L_t = 0.13\text{ mH}$	
		Trapezium-shaped characteristic			
		[Ex ia Ga] IIC		[Ex ia Ga] IIB [Ex ia Da] IIIC	
		L _o	C _o	L _o	C _o
	Max. external capacitance at max. external inductance	0.85 mH	0.18 µF	0.85 mH	2.06 µF
		0.35 mH	0.26 µF	4.85 mH	1.06 µF
	Max. external capacitance or max. external inductance	3.50 mH	0.60 µF	14.3 mH	4.56 µF
	If using explosion protection group [Ex ib Gb] IIC/IIB the application is limited to II (2) G or EPL Gb		[Ex ib Gb] IIC		[Ex ib Gb] IIB
L _o			C _o	L _o	C _o
Max. external capacitance or max. external inductance		3.50 mH	0.60 µF	14.3 mH	4.56 µF



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