

Safety Instructions

Nivotester FTL325N

ATEX: II 3 (1) G Ex nA nC [ia Ga] IIC T4 Gc

IECEX: Ex nA nC [ia Ga] IIC T4 Gc



Document: XA00527F-B
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. Jei šis nurodymas perskaityti šios instrukcijos, kreipkitės į mus, kad užsisakytumėte į jūsų gimtąją kalbą išversta 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 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 směrnici. 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 tilføjjelsen 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 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 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 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 tällä 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 megfelelelőségi nyilatkozattal és a CE-jelzés felhelyezésével kijelenti, hogy ez a termék megfelel az alkalmazandó európai irányelveknek. Az alkalmazott irányelvek, szabványok és dokumentumok a megfelelelőségi 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 FTL325P, FTL325N | | | | | | | | | | | | | | | | |
| Regulations | den folgenden Europäischen Richtlinien entspricht: conforms to following European Directives: est conforme aux prescriptions des Directives Européennes suivantes : <table border="0"> <tr> <td>ATEX</td> <td>2014/34/EU (L96/309)</td> </tr> <tr> <td>EMC</td> <td>2014/30/EU (L96/79)</td> </tr> <tr> <td>LVD</td> <td>2014/35/EU (L96/357)</td> </tr> <tr> <td>RoHS</td> <td>2011/65/EU (L174/88)</td> </tr> </table> | ATEX | 2014/34/EU (L96/309) | EMC | 2014/30/EU (L96/79) | LVD | 2014/35/EU (L96/357) | RoHS | 2011/65/EU (L174/88) | | | | | | | | |
| 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 : <table border="0"> <tr> <td>EN 50581</td> <td>(2012)</td> <td>EN 60079-0</td> <td>(2012)</td> </tr> <tr> <td>EN 61010-1</td> <td>(2010)</td> <td>EN 60079-11</td> <td>(2012)</td> </tr> <tr> <td>EN 61326-1</td> <td>(2013)</td> <td>EN 60079-15</td> <td>(2010)</td> </tr> <tr> <td>EN 61326-2-3</td> <td>(2013)</td> <td></td> <td></td> </tr> </table> | EN 50581 | (2012) | EN 60079-0 | (2012) | EN 61010-1 | (2010) | EN 60079-11 | (2012) | EN 61326-1 | (2013) | EN 60079-15 | (2010) | EN 61326-2-3 | (2013) | | |
| EN 50581 | (2012) | EN 60079-0 | (2012) | | | | | | | | | | | | | | |
| EN 61010-1 | (2010) | EN 60079-11 | (2012) | | | | | | | | | | | | | | |
| EN 61326-1 | (2013) | EN 60079-15 | (2010) | | | | | | | | | | | | | | |
| EN 61326-2-3 | (2013) | | | | | | | | | | | | | | | | |
| Certification | EG-Baumusterprüfbescheinigung Nr. DMT 01 ATEX E 052 X EC-Type Examination Certificate No. Numéro de l'attestation d'examen CE de typ Ausgestellt von/issued by/délivré par DEKRA EXAM Bochum (0158) Qualitätssicherung TÜV Nord CERT (GmbH) (0044) Quality assurance Système d'assurance qualité | | | | | | | | | | | | | | | | |

Maulburg, 09.08.2018
 Endress+Hauser SE+Co. KG




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

EC 00528_02.17

Nivotester FTL325N

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| | |
|------------------------------------|--|
| Associated documentation | <p>This document is an integral part of the following Operating Instructions:</p> <p>KA00170F/00, KA00171F/00, TI00353F/00</p> |
| Supplementary documentation | <p>Explosion-protection brochure: CP00021Z/11</p> <p>The Explosion-protection brochure is available:</p> <ul style="list-style-type: none">■ In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Media Type: Documentation -> Documentation Type: Brochures and catalogs -> Text Search: CP00021Z■ On the CD for devices with CD-based documentation |
| Manufacturer's certificates | <p>EU Declaration of Conformity</p> <p>→  4</p> <p>EU type-examination certificate</p> <p>Certificate number: DMT 01 ATEX E 052 X</p> <p>List of applied standards: See EU Declaration of Conformity.</p> <p>IEC Declaration of Conformity</p> <p>Certificate number: IECEX BVS 15.0085 X</p> <p>Affixing the certificate number certifies conformity with the following standards (depending on the device version):</p> <ul style="list-style-type: none">■ IEC 60079-0 : 2011■ IEC 60079-11 : 2011■ IEC 60079-15 : 2010 |
| Manufacturer address | <p>Endress+Hauser SE+Co. KG Hauptstraße 1 79689 Maulburg, Germany</p> <p>Address of the manufacturing plant: See nameplate.</p> |

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

| | | | | |
|----------------------|---|-------------------------------|---|----------------------------------|
| FTL325N | - | ***** | + | 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

FTL325N

Basic specifications

| Position 1 (Approval) | | |
|-----------------------|---|--|
| Selected option | | Description |
| FTL325N | G | ATEX II 3 (1) G Ex nA nC [ia] IIC T4, WHG, SIL, IECEx Zone 2 |

| Position 2 (Housing) | | |
|----------------------|---|-----------------------------------|
| Selected option | | Description |
| FTL325N | 1 | Rail mounting, 22.5 mm, 1-channel |
| | 3 | Rail mounting, 45 mm, 3-channel |

| Position 3 (Power Supply) | | |
|---------------------------|---|-------------------------|
| Selected option | | Description |
| FTL325N | A | 85-253 V AC |
| | E | 20-30 V AC / 20-60 V DC |

| Position 4 (Switch Output) | | |
|----------------------------|---|-------------------------------|
| Selected option | | Description |
| FTL325N | 1 | 1x SPDT level + 1x SPST alarm |
| | 3 | 3x SPDT level + 1x SPST alarm |

Optional specifications

No options specific to hazardous locations are available.

**Safety
instructions:
General**

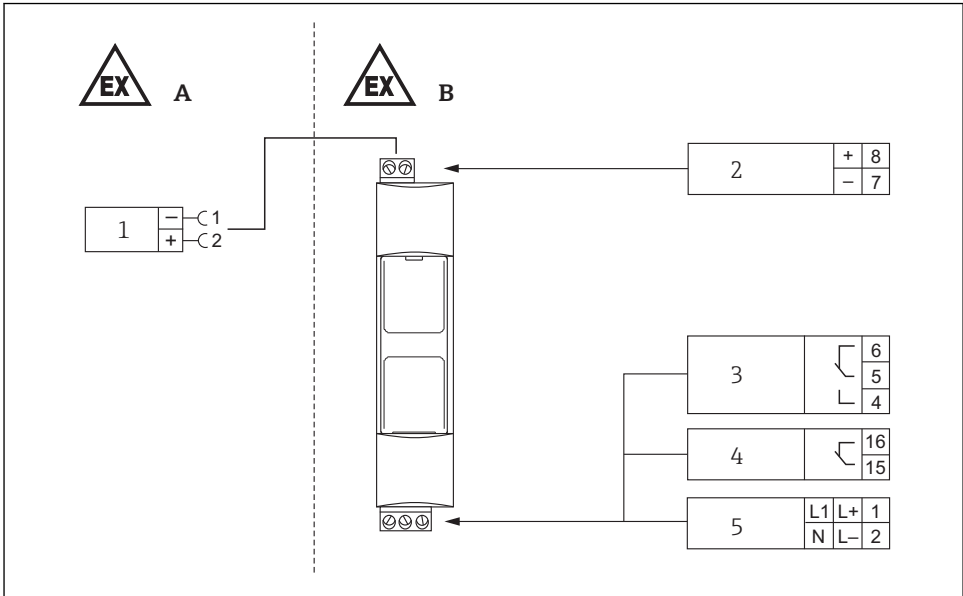
- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
 - Be suitably qualified for their role and the tasks they perform
 - Be trained in explosion protection
 - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Avoid electrostatic charging.

**Safety
instructions:
Special conditions**

- To achieve an ingress protection of at least IP54: Install the device in a control cabinet within Zone 2, which can only be opened with a tool.
- In potentially explosive atmospheres: Do not disconnect electrical connections when energized.
- Use an external overvoltage protection against atmospheric overvoltages.

Safety instructions:
Installation

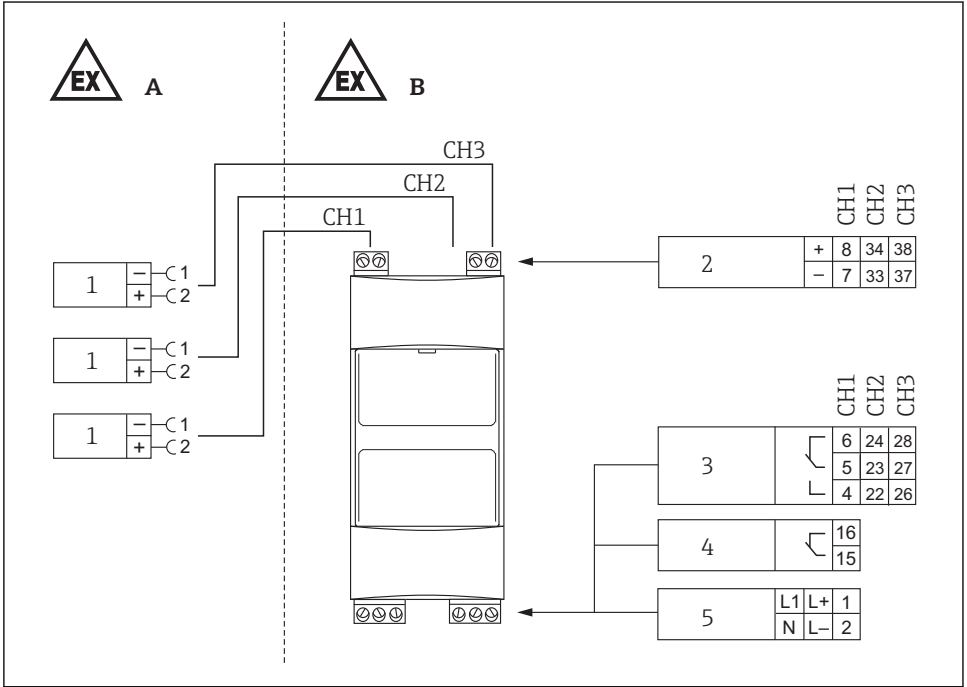
One channel version



A0027416

- 1
- A Zone 0, Zone 1
- B Zone 2
- 1 Sensor, Limit level
- 2 Sensor
- 3 Level relay
- 4 Fault signal relay
- 5 Power supply

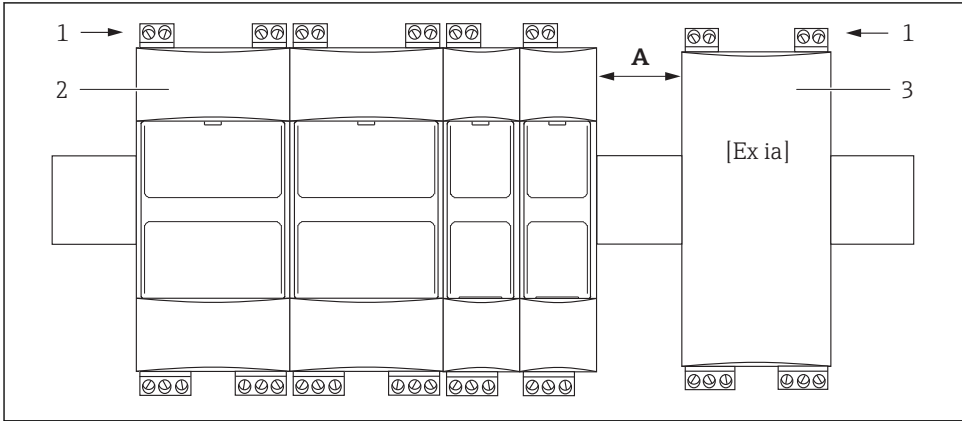
Three channel version



A0027417

2

- A Zone 0, Zone 1
- B Zone 2
- CH1 Channel 1
- CH2 Channel 2
- CH3 Channel 3
- 1 Sensor, Limit level
- 2 Sensor
- 3 Level relay
- 4 Fault signal relay
- 5 Power supply



A0027418

3

- A Min. 6 mm
 1 Intrinsically safe contacts
 2 Nivotester FTL325N
 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.
- 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.

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 | $-20\text{ °C} \leq T_a \leq +60\text{ °C}$ |
| Series installation | $-20\text{ °C} \leq T_a \leq +50\text{ °C}$ |

Connection data

| Power supply circuit | |
|-------------------------------|--|
| Terminal connections: 1, 2 | AC voltage $U = 85 \text{ to } 253 V_{AC}, 50/60 \text{ Hz}$ $P \leq 1.75 \text{ W (one channel version)}$ $P \leq 2.75 \text{ W (three channel version)}$ |
| | DC voltage $U = 20 \text{ to } 60 V_{DC}$ $U = 20 \text{ to } 30 V_{AC}, 50/60 \text{ Hz}$ $P \leq 1.20 \text{ W (one channel version)}$ $P \leq 2.25 \text{ W (three channel version)}$ |

| Contact circuit | |
|---|---|
| Level relay Terminal connections: Channel 1 (CH1): 4, 5, 6 Channel 2 (CH2): 22, 23, 24 ¹⁾ Channel 3 (CH3): 26, 27, 28 ¹⁾ | $U \leq 250 V_{AC}, I \leq 2 \text{ A}, P \leq 500 \text{ VA at } \cos \varphi \geq 0.7$ $U \leq 40 V_{DC}, I \leq 2 \text{ A}, P \leq 80 \text{ W}$ |
| Fault signal relay Terminal connections: 15, 16 | |

1) not available in one channel version

| Sensor circuit | | | | | |
|--|---|--|---|----------------|-------------------|
| Terminal connections: Channel 1 (CH1): 7, 8 Channel 2 (CH2): 33, 34 ¹⁾ Channel 3 (CH3): 37, 38 ¹⁾ | Connection data: | $U_o \leq 12 \text{ V}$ $I_o \leq 34 \text{ mA}$ $P_o \leq 154 \text{ mW}$ | $R_i \geq 644 \Omega$ $C_i = 0$ $L_i = 0$ | | |
| | | Trapezium-shaped characteristic | | | |
| | | [Ex ia Ga] IIC | | [Ex ia Ga] IIB | |
| | | L_o | C_o | L_o | C_o |
| | Max. external capacitance at max. external inductance | 0.5 mH | 500 nF | 1.0 mH | 2.0 μF |
| | | 1.0 mH | 450 nF | 5.0 mH | 1.5 μF |
| | Max. external capacitance or max. external inductance | 30 mH | 1.4 μF | 120 mH | 9.0 μF |
| If using explosion protection group [Ex ib Gb] IIC/IIB the application is limited to II (2) G | | [Ex ib Gb] IIC | | [Ex ib Gb] IIB | |
| | | L_o | C_o | L_o | C_o |
| | Max. external capacitance or max. external inductance | 30 mH | 1.4 μF | 120 mH | 9.0 μF |

1) not available in one channel version



71469354

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