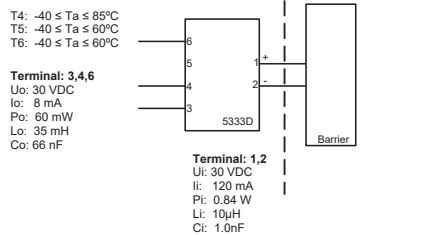


ATEX Installation drawing 5333QA01-V2R0

For safe installation of 5333D the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 03ATEX 1535 X
 Marking II 1 G Ex ia IIC T4...T6 Ga
 II 1 D Ex ia IIIC Da
 II 1 M Ex ia I Ma
 Standards EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-26 : 2007, EN 60079-15 : 2010

Hazardous area Zone 0, 1, 2, 20, 21, 22
 Non Hazardous Area



Installation notes

In a potentially explosive gas atmosphere, the transmitter shall be mounted in an enclosure in order to provide a degree of protection of at least IP20 according to EN60529.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment of category 1 G, 1 M or 2 M, and if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.

If the enclosure is made of non-metallic materials, electrostatic charging shall be avoided.

For installation in a potentially explosive dust atmosphere, the following instructions apply:

The transmitter shall be mounted in a metal enclosure form B that is providing a degree of protection of at least IP6X according to EN60529, that is suitable for the application and correctly installed.

Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

For an ambient temperature $\geq 60^{\circ}\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

The surface temperature of the enclosure is equal to the ambient temperature plus 20 K, for a dust layer with a thickness up to 5 mm.

ATEX Installation drawing 5333QA02-V2R0

For safe installation of 5333A the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 10ATEX 0003X
 Marking II 3 G Ex nA [ic] IIC T4...T6 Gc
 II 3 D Ex ic IIIC Dc
 Standards EN 60079-0 : 2012, EN 60079-11 : 2011, EN 60079-15 : 2010

Terminal	Ex nA [ic]	Ex ic
1,2	U _{max} = 35V	Ui: 35V, Ii:110mA, Ii:10µH, Ci:1,0nF
3,4,6	Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF	

Terminal: 3,4,6
 Uo: 5V
 Io: 4.0 mA
 Po: 20 mW
 Lo: 900 mH
 Co: 1000 µF

Terminal: 1,2
 U_{max} ≤ 35 VDC
 Ex nA

Terminal: 1,2
 Ex ic
 Ui = 35 VDC
 Ii = 110mA
 Li = 10 µH
 Ci = 1.0 nF

Special conditions for safe use

For type of protection Ex nA, the transmitter shall be mounted in a metal enclosure providing a degree of protection of at least IP54 according to EN60529.

For use in the presence of combustible dusts the transmitter shall be mounted in an enclosure providing a degree of protection of at least IP6X in accordance with EN60529, the surface temperature of the outer enclosure is 20 K above the ambient temperature

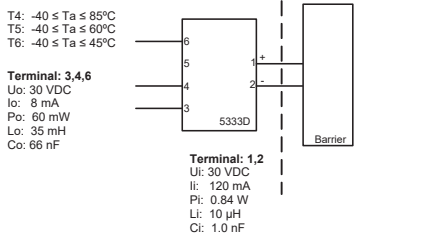
For an ambient temperature $\geq 60^{\circ}\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

IECEx Installation drawing 5333QI01-V1R0

For safe installation of 5333D the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

Certificate IECEX DEK 13.0036X
 Ex ia IIC T4...T6 Ga
 Ex ia IIIC Da
 Ex ia I Ma
 Standards IEC 60079-0 : 2011, IEC 60079-11 : 2011, IEC 60079-26:2006

Hazardous area Zone 0, 1, 2, 20, 21, 22, M1
 Non Hazardous Area



Installation notes

In a potentially explosive gas atmosphere, the transmitter shall be mounted in a metal form B enclosure in order to provide a degree of protection of at least IP20 according to IEC60529. If however the environment requires a higher degree of protection, this shall be taken into account.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, Ma and Mb, and if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.

For installation in a potentially explosive dust atmosphere, the following instructions apply:

For explosive dust atmospheres, the surface temperature of the outer enclosure is 20 K above the ambient temperature.

The transmitter shall be mounted in a metal enclosure form B according to DIN43729 that is providing a degree of protection of at least IP6X according to IEC60529, that is suitable for the application and correctly installed.

Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

For an ambient temperature $\geq 60^{\circ}\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

IECEx Installation drawing 5333QI02-V1R0

For safe installation of 5333A the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

Certificate IECEX DEK 13.0036X
 Ex nA [ic] IIC T6...T4 Gc
 Ex ic IIC T6...T4 Gc
 Ex ic IIIC Dc
 Standards IEC 60079-0 : 2011, IEC 60079-11 : 2011, IEC 60079-15 : 2010

Terminal	Ex nA [ic]	Ex ic
1,2	U _{max} = 35V	Ui: 35V, Ii:110mA, Ii:10µH, Ci:1,0nF
3,4,6	Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF	

Installation note:

For installation in a potentially explosive gas atmosphere, the following instructions apply:

For nA installation the transmitter must be installed in a metal enclosure e.g. a form B enclosure, providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and correctly installed or in an enclosure with type of protection Ex n or Ex e.

For intrinsically safe installation the transmitter must be installed in enclosure providing a degree of protection of at least IP20 according to IEC60529 and that is suitable for the application.

Cable entry devices and blanking elements shall fulfill the same requirements. For an ambient temperature $\geq 60^{\circ}\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

For installation in a potentially explosive dust atmosphere, the following instructions apply:

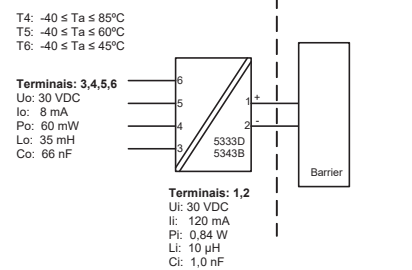
The surface temperature of the enclosure is equal to the ambient temperature plus 20 K, for a dust layer with a thickness up to 5 mm. The transmitter must be mounted in a enclosure according to DIN 43729 that provides a degree of protection of at least IP6X according to IEC60529, and that is suitable for the application. Cable entry devices and blanking elements shall fulfill the same requirements.

Desenho de Instalação InMETRO 5333QB01-V2R0

Para instalação segura do 5333D ou 5343B o seguinte deve ser observado. O modo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretivas e padrões que se aplicam a esta área. Ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado DEKRA 16.0014 X
 Ex ia IIC T6...T4 Ga
 Ex ia IIIC Da
 Normas ABNT NBR IEC 60079-0 : 2013; ABNT NBR IEC 60079-11 : 2013

Áreas Risco Zona 0, 1, 2, 20, 21, 22, M1
 Áreas de não Risco



Notas de Instalação

Em uma atmosfera de gás potencialmente explosiva, o transmissor deve ser montado em um encerramento a fim de garantir um grau de proteção de no mínimo IP20 de acordo com ABNT NBR IEC60529. Se contudo o ambiente requer um nível de proteção maior, isso deve ser levado em conta.

Se o transmissor é instalado em uma atmosfera explosiva exigindo o uso de equipamento de proteção de nível Ga e se o invólucro é feito de alumínio, ele deve ser instalado de modo que, mesmo em caso de avaria rara, fontes de ignição devido a impacto e fricção, faíscas são eliminadas; Se o encerramento é feito de materiais não metálicos, cargas eletroestáticas devem ser evitadas. Se o encerramento é feito de materiais não metálicos, cargas eletroestáticas devem ser evitadas.

Para instalação em atmosfera de poeira potencialmente explosiva, as instruções a seguir:

O transmissor deve ser montado em invólucro de metal forma B de acordo com DIN43729 que está fornecendo um grau de proteção de pelo menos IP6X de acordo com ABNT NBR IEC60529. O invólucro deve ser adequado para aplicação e instalado corretamente.

As entradas dos cabos e os elementos de obturação que podem ser utilizados são adequados para a aplicação e corretamente instalados.

Para temperatura ambiente $\geq 60^{\circ}\text{C}$, fios de resistência ao calor devem ser usados com uma faixa de pelo menos 20K acima da temperatura ambiente.

A temperatura da superfície do invólucro é igual à temperatura ambiente mais de 20 K, por uma camada de pó, com uma espessura até 5 mm.

Desenho de Instalação InMETRO 5333QB02-V2R0

Para instalação segura do 5333A ou 5343A o seguinte deve ser observado. O modo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretivas e padrões que se aplicam a esta área. Ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado DEKRA 16.0014 X

Marcas Ex nA [ic] IIC T6...T4 Gc
 Ex ic IIC T6...T4 Gc
 Ex ic IIIC Dc
 T4: -40 ≤ Ta ≤ 85°C
 T6: -40 ≤ Ta ≤ 60°C

Normas ABNT NBR IEC 60079-0 : 2013;
 ABNT NBR IEC 60079-11 : 2013
 ABNT NBR IEC60079-15 : 2012

Terminais	Ex nA [ic]	Ex ic
1,2	U _{max} = 35V	Ui: 35 V, Ii:110 mA, Ii:10 µH, Ci:1,0 nF
3,4,6	Uo: 5 V, Io: 4 mA, Po: 20 mW, Lo: 900 mH, Co: 1000 µF	

Notas para instalação

Para a instalação em uma atmosfera de gás potencialmente explosivo, se aplicam as instruções a seguir:

Para a instalação nA o transmissor deve ser instalado em um invólucro de metal, por exemplo, gabinete em forma B que forneça um grau de proteção de pelo menos IP54 de acordo com IEC60529 ou em um invólucro com tipo de proteção Ex n ou Ex e.

Para a instalação Ex ic o transmissor deve ser instalado em um invólucro proporcionando um grau de proteção de IP20, pelo menos, de acordo com a norma ABNT NBR IEC 60529. E o invólucro deve ser adequado para a aplicação e corretamente instalado.

Dispositivos de entrada de cabos e elementos de supressão devem cumprir os mesmos requisitos.

Para temperatura ambiente $\geq 60^{\circ}\text{C}$, fios de resistência ao calor devem ser usados com uma faixa de pelo menos 20K acima da temperatura ambiente.

Para a instalação em uma atmosfera de poeira potencialmente explosiva, se aplicam as instruções a seguir:

O transmissor deve ser montado em invólucro de metal forma B de acordo com DIN43729 que está fornecendo um grau de proteção de pelo menos IP6X de acordo com ABNT NBR IEC60529.

O invólucro deve ser adequado para aplicação e instalado corretamente.

As entradas dos cabos e os elementos de obturação que podem ser utilizados são adequados para a aplicação e corretamente instalados.

A temperatura da superfície do invólucro é igual à temperatura ambiente mais 20 K, para uma camada de pó, com uma espessura até 5 mm.

FM Installation Drawing 5300Q502 V3R0

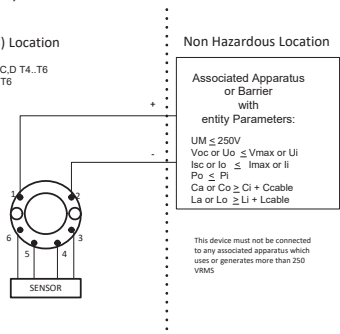
Model 5331D, 5332D, 5333D and 5343B

Hazardous (Classified) Location Class I, Division1, Groups, A,B,C,D T4..T6
 Class I, Zone 0, AEx ia, IIC T4..T6

Ambient temperature limits
 T4: -40 to +85 deg. Celsius
 T6: -40 to +60 deg. Celsius

Terminal 1, 2
 Vmax or Ui: 30 V
 Imax or Ii: 120 mA
 Pmax or Pi: 0.84 W
 Ci: 1 nF
 Li: 10 µH

Terminal 3,4,5,6
 Vi or Uo: 30 V
 Ii or Io: 8 mA
 Pi or Po: 60 mW
 Ci or Co: 3.5 µF
 Li or Lo: 35 mH



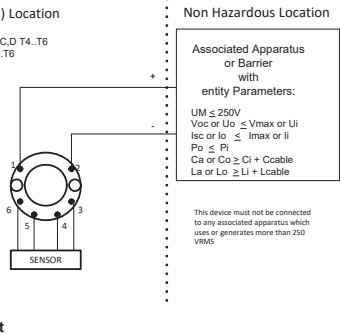
Model 5335D, 5337D

Hazardous (Classified) Location Class I, Division1, Groups, A,B,C,D T4..T6
 Class I, Zone 0, AEx ia, IIC T4..T6

Ambient temperature limits
 T4: -40 to +85 deg. Celsius
 T6: -40 to +60 deg. Celsius

Terminal 1, 2
 Vmax or Ui: 30 V
 Imax or Ii: 120 mA
 Pmax or Pi: 0.84 W
 Ci: 1 nF
 Li: 10 µH

Terminal 3,4,5,6
 Vi or Uo: 30 V
 Ii or Io: 8 mA
 Pi or Po: 60 mW
 Ci or Co: 3.5 µF
 Li or Lo: 35 mH



The entity concept

The Transmitter must be installed according to National Electrical Code (ANSI-NFPA 70) and shall be installed with the enclosure, mounting, and spacing segregation requirement of the ultimate application.

Equipment that is FM-approved for intrinsic safety may be connected to barriers based on the ENTITY CONCEPT. This concept permits interconnection of approved transmitters, meters and other devices in combinations which have not been specifically examined by FM, provided that the agency's criteria are met. The combination is then intrinsically safe, if the entity concept is acceptable to the authority having jurisdiction over the installation.

The entity concept criteria are as follows:

The intrinsically safe devices, other than barriers, must not be a source of power. The maximum voltage U_i(V_{MAX}) and current I_i(I_{MAX}), and maximum power P_i(P_{MAX}), which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (U_o or V_{OC} or V_t) and current (I_o or I_{SC} or I_t) and the power P_o which can be delivered by the barrier.

The sum of the maximum unprotected capacitance (Ci) for each intrinsically device and the interconnecting wiring must be less than the capacitance (Ca) which can be safely connected to the barrier.

The sum of the maximum unprotected inductance (Li) for each intrinsically device and the interconnecting wiring must be less than the inductance (La) which can be safely connected to the barrier.

The entity parameters U_o/V_{OC} or V_t and I_o/I_{SC} or I_t, and Ca and La for barriers are provided by the barrier manufacturer.

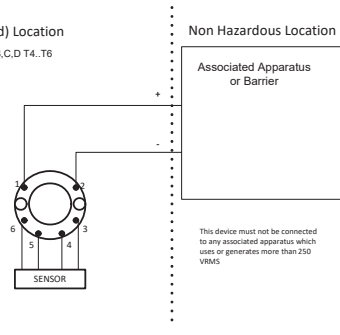
NI Field Circuit Parameters

Model 5331D, 5332D, 5333D, 5335D, 5337D and 5343B

Hazardous (Classified) Location Class I, Division2, Groups, A,B,C,D T4..T6
 Class I, Zone 2, IIC T4..T6

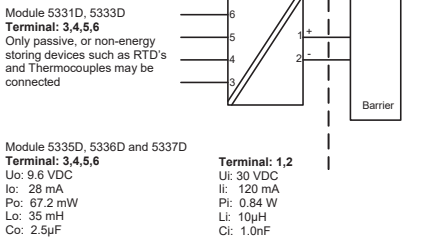
Ambient temperature limits
 T4: -40 to +85 deg. Celsius
 T6: -40 to +60 deg. Celsius

Terminal 1, 2
 Vmax: 35 V
 Ci: 1.0 nF
 Li: 10 µH



CSA Installation drawing 533XQC03 – V4R0

Hazardous area Zone 0, 1, 2, 20, 21, 22
 T4: -40 ≤ Ta ≤ 85°C
 T6: -40 ≤ Ta ≤ 60°C

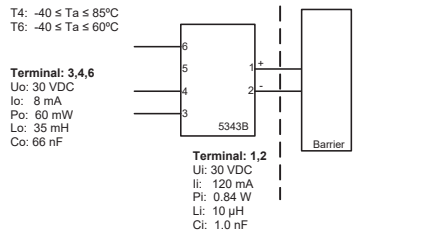


ATEX Installation drawing 5343QA01-V2R0

For safe installation of 5343B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 03ATEX 1538 X
 Marking II 1 G Ex ia IIC T4...T6 Ga
 II 1 D Ex ia IIIC Da
 II 1 M Ex ia I Ma
 Standards EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-26 : 2007

Hazardous area Zone 0, 1, 2, 20, 21, 22
 Non Hazardous Area



Installation notes

In a potentially explosive gas atmosphere, the transmitter shall be mounted in an enclosure in order to provide a degree of protection of at least IP20 according to EN60529.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment of category 1 G, 1 M or 2 M, and if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.

If the enclosure is made of non-metallic materials, electrostatic charging shall be avoided.

For installation in a potentially explosive dust atmosphere, the following instructions apply:

The transmitter shall be mounted in a metal enclosure form B according to DIN43729 that is providing a degree of protection of at least IP6X according to EN60529, that is suitable for the application and correctly installed.

Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

For an ambient temperature $\geq 60^{\circ}\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

The surface temperature of the enclosure is equal to the ambient temperature plus 20 K, for a dust layer with a thickness up to 5 mm.

IECEx Installation drawing 5343QI01-V1R0

For safe installation of 5343B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

Certificate IECEX DEK 13.0036X
 Ex ia IIC T4...T6 Ga
 Ex ia IIIC Da
 Ex ia I Ma
 Standards IEC 60079-0 : 2011, IEC 60079-11 : 2011, IEC 60079-26:2006

Hazardous area Zone 0, 1, 2, 20, 21, 22, M1
 Non Hazardous Area

