

ATEX-installation drawing 6331QA01-V3R0

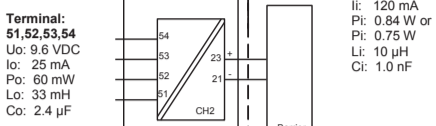
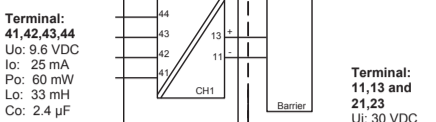
For safe installation of 6331Bxx or 6334Bxx the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate DEKRA 20ATEX 0095 X

Marking II 1 G Ex ia IIC T6...T4 Gc
II 2 D Ex ia IIC Db
I M1 Ex ia I Ma

Standards IEN IEC 60079-0: 2016, EN 60079-11: 2012

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



Temperature Class	Ambient temperature range	
	PI: 0.84 W	PI: 0.75 W
T6	-40°C to +40°C	-40°C to +45°C
T5	-40°C to +55°C	-40°C to +60°C
T4	-40°C to +85°C	-40°C to +85°C

Installation notes
If the enclosure is made of non-metallic plastic materials, electrostatic charges on the transmitter enclosure shall be avoided.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to EN 60529, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga or Ma, 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 transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Db, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to EN 60079-0, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ma, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP54 according to EN 60529, and 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 ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

The sensor circuit is not infallibly galvanically isolated from the input circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500 VAC for 1 minute.

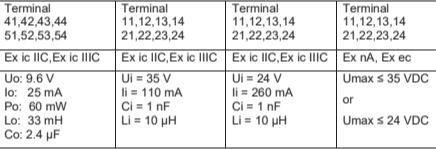
ATEX-installation drawing 6331QA02-V3R0

For safe installation of 6331A and 6334A 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 DEKRA 20ATEX 0096X

Marking II 3 G Ex nA [ic] IIC T6...T4 Gc
II 3 G Ex ec [ic] IIC T6...T4 Gc
II 3 D Ex ic IIC Dc

Standards EN 60079-0: 2018, EN 60079-11: 2012, EN 60079-15: 2010, EN 60079-7:2015+A1: 2018



Ex ic IIC, Ex ic IIIC Temperature Class	Ambient temperature range	
	UI=35 V	UI=24 V
T6	-40°C to +54°C	-40°C to +63°C
T5	-40°C to +69°C	-40°C to +78°C
T4	-40°C to +85°C	-40°C to +85°C

Ex ec, Ex nA Temperature Class	Ambient temperature range	
	Vmax=35 V	Vmax=24 V
T6	-40°C to +43°C	-40°C to +55°C
T5	-40°C to +85°C	-40°C to +85°C
T4	-40°C to +85°C	-40°C to +85°C

Installation notes
If the enclosure is made of non-metallic plastic materials, electrostatic charges on the transmitter enclosure shall be avoided.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex ic, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to EN 60529, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Dc, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to IEC 60079-0, and that is suitable for the application and correctly installed. The surface temperature of the outer enclosure is +20 K above the ambient temperature, determined without a dust layer.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP54 according to EN 60079-0, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.

IECEx-installation drawing 6331QI01-V2R0

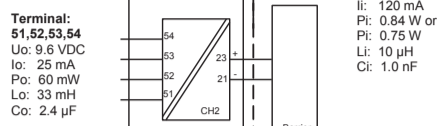
For safe installation of 6331Bxx or 6334Bxx the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

Certificate IECEx DEK 20.0059X

Marking Ex ia IIC T6...T4 Ga
Ex ia IIC Db
Ex ia I Ma

Standards IEC 60079-0: 2017, IEC 60079-11: 2012

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



Temperature Class	Ambient temperature range	
	PI: 0.84 W	PI: 0.75 W
T6	-40°C to +40°C	-40°C to +45°C
T5	-40°C to +55°C	-40°C to +60°C
T4	-40°C to +85°C	-40°C to +85°C

Installation notes
If the enclosure is made of non-metallic plastic materials, electrostatic charges on the transmitter enclosure shall be avoided.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to IEC 60529, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga or Ma, 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 transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Db, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to IEC 60079-0, and that is suitable for the application and correctly installed. The surface temperature of the outer enclosure is +20 K above the ambient temperature, determined without a dust layer.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ma, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to IEC 60529, and 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 ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

The sensor circuit is not infallibly galvanically isolated from the input circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500 VAC for 1 minute.

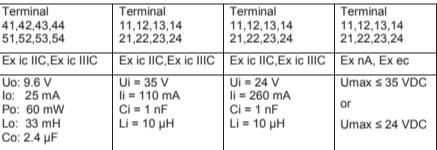
IECEx-installation drawing 6331QI02-V3R0

For safe installation of 6331A and 6334A 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 20.0059X

Marking Ex nA [ic] IIC T6...T4 Gc
Ex ec [ic] IIC T6...T4 Gc
Ex ic IIC T6...T4 Gc
Ex ic IIC Dc

Standards IEC 60079-0: 2017, IEC 60079-11: 2012, IEC 60079-15: 2010, IEC 60079-7: 2017



Ex ic IIC, Ex ic IIIC Temperature Class	Ambient temperature range	
	UI=35 V	UI=24 V
T6	-40°C to +54°C	-40°C to +63°C
T5	-40°C to +69°C	-40°C to +78°C
T4	-40°C to +85°C	-40°C to +85°C

Ex ec, Ex nA Temperature Class	Ambient temperature range	
	Vmax=35 V	Vmax=24 V
T6	-40°C to +43°C	-40°C to +55°C
T5	-40°C to +85°C	-40°C to +85°C
T4	-40°C to +85°C	-40°C to +85°C

Installation notes
If the enclosure is made of non-metallic plastic materials, electrostatic charges on the transmitter enclosure shall be avoided.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex ic, the transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to IEC 60529, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Dc, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to IEC 60079-0, and that is suitable for the application and correctly installed. The surface temperature of the outer enclosure is +20 K above the ambient temperature, determined without a dust layer.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP54 according to IEC 60079-0, and that is suitable for the application and correctly installed.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Gc and applied in type of protection Ex nA or Ex ec, the equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.

Desenho de Instalação INMETRO 6331B01-V1R0

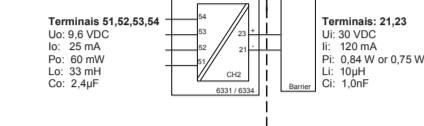
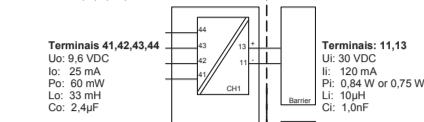
Para instalação segura do 6331B... ou 6334B... o seguinte deve ser observado. O modelo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretrizes e padrões que se aplicam a esta área. O ano de fabricação pode ser pegado dos dois primeiros dígitos do número de série.

Certificado DEKRA 23.0009 X

Marcas Ex ia IIC T6...T4 Ga
Ex ia IIC Db
Ex ia I Ma

Normas ABNT NBR IEC 60079-0:2020 Versão Corrigida:2023
ABNT NBR IEC 60079-11:2013 Versão Corrigida:2017

Áreas classificadas Zona 0, 1, 2, 21, 22 Área não classificada



Classe de temperatura	Faixa de temperatura ambiente	
	PI: 0,84W	PI: 0,75W
T6	-40 °C to +40 °C	-40 °C to +45 °C
T5	-40 °C to +55 °C	-40 °C to +60 °C
T4	-40 °C to +85 °C	-40 °C to +85 °C

Notas de instalação
Se o invólucro for feito de materiais plásticos não metálicos, devem ser evitadas cargas eletrostáticas no invólucro do transmissor.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Ga, o transmissor deverá ser montado em um invólucro que forneça um grau de proteção de pelo menos IP20 de acordo com a ABNT NBR IEC 60529, e que seja adequado para a aplicação e corretamente instalado.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Ga ou Ma, e se o invólucro for feito de alumínio, ele deve ser instalado de forma que fontes de ignição devido a faíscas de impacto e fricção sejam excluídas.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Ma, o transmissor deverá ser montado em um invólucro que forneça um grau de proteção de pelo menos IP54 de acordo com a ABNT NBR IEC 60529, e que seja adequado para a aplicação e corretamente instalado. Faixa de temperatura ambiente: -40 °C a +85 °C.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Db, o transmissor deverá ser montado em um invólucro que forneça um grau de proteção de pelo menos IP54 de acordo com a ABNT NBR IEC 60529, e que seja adequado para a aplicação e corretamente instalado. Faixa de temperatura ambiente: -40 °C a +85 °C.

Devem ser utilizadas entradas de cabos e elementos de fechamento adequados à aplicação e instalados corretamente.

Para uma temperatura ambiente ≥ 60°C, devem ser utilizados cabos resistentes ao calor com uma classificação de pelo menos 20 K acima da temperatura ambiente.

O circuito do sensor não é infalivelmente isolado galvanicamente do circuito de entrada. Porém, o isolamento galvanico entre os circuitos é capaz de suportar uma tensão de teste de 500Vca por 1 minuto.

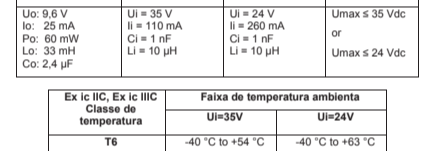
Desenho de Instalação INMETRO 6331B02-V1R0

Para instalação segura do 6331A... ou 6334A... o seguinte deve ser observado. O modelo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretrizes e padrões que se aplicam a esta área. O ano de fabricação pode ser pegado dos dois primeiros dígitos do número de série.

Certificado DEKRA 23.0009 X

Marcas Ex ec [ic] IIC T4, T6 Gc
Ex ic IIC T4, T6 Gc
Ex ic IIC Dc

Normas ABNT NBR IEC 60079-0:2020 Versão Corrigida:2023
ABNT NBR IEC 60079-7:2016 Versão Corrigida:2022
ABNT NBR IEC 60079-11:2013 Versão Corrigida:2017



Ex ic IIC, Ex ic IIIC Classe de temperatura	Faixa de temperatura ambiente	
	UI=35V	UI=24V
T6	-40 °C to +54 °C	-40 °C to +63 °C
T5	-40 °C to +69 °C	-40 °C to +78 °C
T4	-40 °C to +85 °C	-40 °C to +85 °C

Ex ec Classe de temperatura	Faixa de temperatura ambiente	
	Umax=35V	Umax=24V
T6	-40 °C to +43 °C	-40 °C to +55 °C
T5	-40 °C to +85 °C	-40 °C to +85 °C
T4	-40 °C to +85 °C	-40 °C to +85 °C

Notas de instalação
Se o invólucro for feito de materiais plásticos não metálicos, devem ser evitadas cargas eletrostáticas no invólucro do transmissor.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Gc e aplicado no tipo de proteção Ex ic, o transmissor deverá ser montado em um gabinete que forneça um grau de proteção de pelo menos IP20 de acordo com a ABNT NBR IEC 60529, e adequado à aplicação e instalado corretamente.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Dc, o transmissor deverá ser montado em um invólucro certificado separadamente que forneça um grau de proteção de pelo menos IP54 de acordo com a ABNT NBR IEC 60079-0, e que seja adequado para o aplicativo e instalado corretamente. A temperatura da superfície do invólucro externo é +20 K acima da temperatura ambiente, determinada sem camada de poeira.

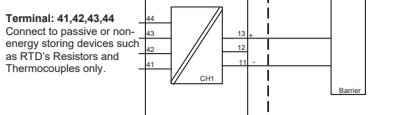
Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Gc e aplicado no tipo de proteção Ex ec, o transmissor deverá ser montado em um invólucro certificado separadamente que forneça um grau de proteção de pelo menos IP54 de acordo com a ABNT NBR IEC 60079-0, e que seja adequado para a aplicação e instalado corretamente.

Se o transmissor for instalado em uma atmosfera explosiva que exija o uso de nível de proteção de equipamento Gc e aplicado no tipo de proteção Ex ec, o equipamento deverá ser usado somente em uma área com grau de poluição não superior a 2, conforme definido na IEC 60664-1.

CSA Installation drawing 6331QC01 – V1R0

Hazardous (Classified) Location IS Class I, Division 1, Group A,B,C,D T4, T6 Ex ia IIC T4, T6 Ga Class I, Zone 0, AEx ia IIC T4, T6 Ga

T6: -40 ≤ Ta ≤ 60°C
T4: -40 ≤ Ta ≤ 85°C



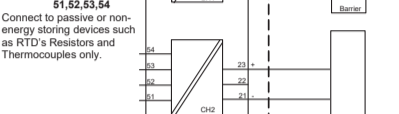
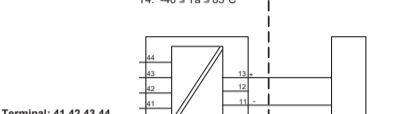
Terminal: 41, 42, 43, 44 Connect to passive or non-energy storing devices such as RTD's Resistors and Thermocouples only.



Installation notes
The Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The Canadian Electrical Code (CEC).
Substitution of components may impair intrinsic safety.

Hazardous (Classified) Location IS Class I, Division 1, Group A,B,C,D T4, T6 Ex ia IIC T4, T6 Ga Class I, Zone 0, AEx ia IIC T4, T6 Ga

T6: -40 ≤ Ta ≤ 60°C
T4: -40 ≤ Ta ≤ 85°C



Terminal: 41, 42, 43, 44 51, 52, 53, 54
Connect to passive or non-energy storing devices such as RTD's Resistors and Thermocouples only.

Installation notes
The Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The Canadian Electrical Code (CEC).
Channel 1 and Channel 2 are separate channels and therefore separate shielded cables shall be used for each channel.
Substitution of components may impair intrinsic safety.

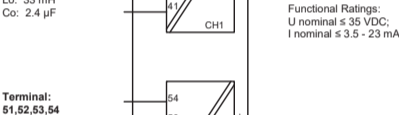
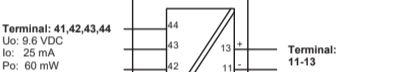
For safe installation of the single channel 6331A2A or the two channel 6331A2B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.

CSA Installation drawing 6331QC02 – V2R0

For safe installation of 6331A and 6334A 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.

Marking Class I, Division 2, Group A,B,C,D T6...T4 Ex nA [ic] IIC T6...T4 Class I, Zone 2, AEx nA [ic] IIC T6...T4

Hazardous Area CL I, Div 2, GP ABCD CL I, Zone 2, IIC



Terminal: 41, 42, 43, 44
UI: 9.6 VDC
Ii: 25 mA
Pi: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 51, 52, 53, 54
UI: 9.6 VDC
Ii: 25 mA
Pi: 60 mW
Lo: 33 mH
Co: 2.4 µF

NI Installation instructions
The transmitter must be installed in an enclosure providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and is correctly installed. Cable entry devices and blanking elements shall fulfill the same requirements.

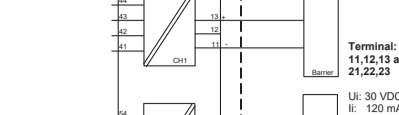
If the enclosure is made of non-metallic materials or of painted metal, electrostatic charging shall be avoided.
Use supply wires with a rating of at least 5 K above the ambient temperature. Supply from a Class 2 Power Supply with Transient protection or equivalent.
WARNING: Substitution of components may impair suitability for Class I, Division 2. AVERTISSEMENT: la substitution de composants peut nuire à l'aptitude à la Classe I, Division 2.

Non Incendive field wiring installation
The non incendive field wiring circuit concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specially examined in combination as a system using any of the wiring methods permitted for unclassified locations.
Voc < Umax, Ca ≥ Ci + Ccable, La ≥ Li + Lcable.

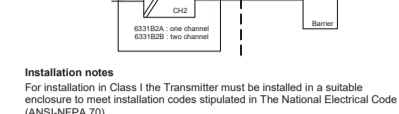
FM Installation Drawing 6331QF01-V1R0

Hazardous (Classified) Location Class I, Division 1, Group A,B,C,D T4, T6 Class I, Zone 0, AEx ia IIC T4, T6

T6: -40 ≤ Ta ≤ 60°C
T4: -40 ≤ Ta ≤ 85°C



Terminal: 11, 13 and 21, 23 UI: 30 VDC Ii: 120 mA Pi: 0.84 W Li: 10 µH Ci: 1.0 nF



Installation notes
For installation in Class I the Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The National Electrical Code (ANSI-NFPA 70).
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 (Uo/VMAX) and current (IiMAX) and maximum power (PiMAX), which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (Uo or VDC or V) and current (Io or ISC or I) and the power Po which can be delivered by the barrier. The sum of the maximum unprotected capacitance (C) 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 (L) 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 Uo, VDC or V and Io, ISC or I, and Ca and La for barriers are provided by the barrier manufacturer.