

Modul et må kun tilsluttes af kvalificerede teknkere, som er bekendte med de tekniske udtryk, advarsler og instruktioner i installationsvejledningen...

Udskifning af komponenter kan forringe egenskaberne af modul et må kun foretages af PR electronics A/S.

Elektriske specifikationer Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mekaniske specifikationer Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés conformés aux termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Electrical specifications Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mechanical specifications Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés conformés aux termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Electrical specifications Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mechanical specifications Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés conformés aux termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Electrical specifications Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mechanical specifications Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés conformés aux termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Electrical specifications Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mechanical specifications Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés conformés aux termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Electrical specifications Operating temperature with silicone O-ring -40°C to +85°C with FKM O-ring -20°C to +85°C

Mechanical specifications Dimensions 109.3x145x126 mm Aluminium ADC3 (AL) 109.3x145x126 mm

Common electrical specifications Supply voltage, DC: Ex ia, intrinsically safe 10...30 VDC (12...30 VDC with backlight)

Indgangsspecifikationer Indgang for RTD-type P150, P1100, P1200, P1500, P11000, N150, N1100

Indgang for TC-type B, E, J, K, L, N, R, S, T, U, W3, W5, Lr mV-Indgang Måleområde, spænding -800...+800 mV

Strømgang Signalmålede 4...20 mA Min. signalmålede 16 mA

Falerfjeldetektering programmerbar 3.5...23 mA NAMUR NE43 Upscale 23 mA

Overholdte myndighedskrav EMC 2014/30/EU ATEX 2014/34/EU RoHS 2011/65/EU EAC TR-CU 020/2011

DK Sideskilt / mærkning UK Side label / Marking FR Etiquette / marquage DE Typenschild / Markierung

PR electronics, Lerbakken 10, 8410 Rønne, Denmark. Read manual / Leia o manual. Includes safety icons and technical specifications.

DK Godkendelser UK Approvals FR Approbations DE Zulassungen

Når modul et installeres som Ex ia, ic, db, ec eller to, skal der på topkasset sættes en konopkabel til mærkning af den anvendte installationstype.

DK Ex-godkendelser UK I.S. approvals FR Approbations S.1 DE Ex-Zulassungen BR Aproveçoes S.1

Table with columns: Model, Area / Zone, Installation drawing, NEPSI, IECEx, CSA, FM, FMI6/GS0009X/FMI6/CA0010X, INMETRO, DEKRA, 15.0014 X

7501 IECEX Installation
For safe installation of 7501 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 (IEC60079-14) that apply to this area.
Year of manufacture can be taken from the first two digits in the serial number.

Ex ia installation:
Certificate IECEx DEK 15.0039 X
Marking Ex ia IIC T6, T4 Gc
Ex ia IIC T100°C Dc
Ex ia I Ma (7501B)
Standards IEC 60079-0:2017, IEC 60079-11:2011
Hazardous area Zone 0, 1, 2, 21, 22, Minas
Non Hazardous Area
T4: -40 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -40 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -40 ≤ Ta ≤ 60°C T75 °C
T6: -40 ≤ Ta ≤ 45°C T80 °C
Sensor
Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 28 mA
Po: 67 mW
Li: 35 mH
Ci: 2 nF
Supply
Terminal: 1,2
Uo: 30 VDC
Io: 120 mA
Po: 0.84 W
Li: 0 μH
Ci: 2 nF

Ex ia installation:
General installation instructions
The sensor circuit is not intrinsically isolated from the supply output circuit. However, the galvanic isolation between the circuits is capable of withstanding a total voltage of 500 VAC during 1 minute.
The enclosure must be connected to the potential matching line.
If the transmitter is physically connected to a possible source of heating or cooling, e.g. by mounting to a process pipe or a temperature sensor, the temperature at the point of connection shall be within the ambient temperature range as given in the certificate or in this manual.
Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.
For installation of 7501A in zone 0 / EPL Ga, the transmitter must be installed such, that even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.
Protection degree of IP 54 according to IEC 60529 is achieved if certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed.
Protection degree of IP 68 according to IEC 60529 is only achieved if certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed with sealing washers or Loctite sealant added to the threads of the sensor, blanking elements and cable glands.
For group III (dust), electrostatic charging of the paint layer shall be avoided.

Ex ec, ic installation:
Certificate IECEx DEK 15.0039 X
Marking Ex ec IIC T6, T4 Gc
Ex ec IIC T6, T4 Gc
Ex ic IIC T100°C Dc
Standards IEC 60079-0:2017, IEC 60079-11:2011, IEC 60079-31:2013
Type of protection Ex ec Type of protection Ex ic
O-ring Sealing: Silicone
T4: -40 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -40 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -40 ≤ Ta ≤ 55°C Umax 24V
T6: -40 ≤ Ta ≤ 43°C Umax 35V
O-ring Sealing: FKM
T4: -20 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -20 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -20 ≤ Ta ≤ 55°C Umax 24V
T6: -20 ≤ Ta ≤ 43°C Umax 35V
Hazardous area Zone 2, 22
Non Hazardous Area
Terminal: 3,4,5,6
Sensor: RTD or TC
Supply Terminal: 1,2
Uo: 30 VDC
Io: 120 mA
Po: 0.84 W
Li: 0 μH
Ci: 2 nF
Supply Terminal: 1,2
Uo: 35 VDC
Io: 0 μH
Ci: 2 nF

Explosion proof / Dust ignition proof installation
Hazardous area Class I, II, III Division 1, Groups ABCDEFG
Class I Zone 1, ExIAX or IIC T6
Non Hazardous Area
T6: -20 /40 ≤ Ta ≤ 70°C
T5, T4: -20 /40 ≤ Ta ≤ 85°C
Terminal: 3,4,5,6
Sensor: RTD or TC
Terminal: 1,2
Umax: 35 VDC
O-ring Sealings
Silicone rubber: -40°C ≤ Ta ≤ +85°C
FKM rubber: -20°C ≤ Ta ≤ +85°C
Protection: Indoor and Outdoor Type 4X or IP68

Explosion proof / Dust ignition proof installation
The enclosure must be installed such, that even in the event of rare incidents, ignition sources due to impact and friction, sparks are excluded.
Unsed cable entries must be sealed by approved sealing plugs.
Certified cable and cable glands shall be used that are suitable for the application and correctly installed or the cables must be run in conduit.
For an ambient temperature exceeding 70 °C, heat resistant cables and cable glands suitable for at least 90°C shall be used.
For process temperatures above 85°C or below -20/-40°C installer must verify by measurements that the service temperature of the 7501 module is held within this range taking worst conditions into account.
The display cover must be screwed all the way in and the safety catch must be fastened before operation.
Protection degree of IP 68 or TYPE IAX is only achieved if certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed with sealing washers or Loctite sealant is added to the threads of the sensor, blanking elements and cable glands.
The enclosure must be connected to the potential matching line.
Warning:
Do not open display cover unless area is known to be safe.
For installation in Canada the following must be taken into account:
All openings for conduit and sensor connection must be in NPT threads.
For Class I Group A installation, conduit seal is required within 18 inches of the enclosure.
For Class I Zone 1 installation, conduit seal is required within 18 inches of the enclosure.

7501 Desenho de Instalação INMETRO
Para instalação segura de 7501 o seguinte deve ser observado. O módulo deve ser instalado, apenas por pessoas qualificadas as quais estão familiarizadas com as normas nacionais e internacionais, diretrizes e padrões (ABNT NBR IEC60079-14) que se aplicam a esta area.
Instalação Segura do Ex ia installation:
Certificado DEKRA 15.0014X
Marca Ex ia IIC T6, T4 Ga
Ex ia IIC T100°C Da
Ex ia I Ma (peças para Tipo 7501B...2)
Normas: ABNT NBR IEC 60079-0: 2013, ABNT NBR IEC 60079-11: 2013
ABNT NBR IEC 60079-26: 2008
Normas classificadas Zona 0, 1, 2, 20, 21, 22, Minas
Áreas não classificadas
T4: -40 ≤ Ta ≤ 85°C T100 °C (7501A)
T4: -40 ≤ Ta ≤ 85°C T100 °C (7501B)
T6: -40 ≤ Ta ≤ 60°C T100 °C
T6: -40 ≤ Ta ≤ 45°C T100 °C
Terminal do sensor: 3,4,5,6
Uo: 9.6 VDC
Io: 28 mA
Po: 67 mW
Li: 35 mH
Ci: 2 nF
Terminal de alimentação: 1,2
Uo: 30 VDC
Io: 120 mA
Po: 0.84 W
Li: 0 μH
Ci: 2 nF

Ex ec, ic installation:
Installation of equipment shall take place under dry and clean conditions and the equipment may not be opened for maintenance in uncontrolled environment.
For Ex ic installation in uncontrolled environment the module must be installed with a protection degree of IP54.
For Ex ec installation in a pollution degree 2 environment the module must be installed with a minimum protection degree of IP54.
Protection degree of IP 54 according to EN 60529 is achieved if certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed.
For Ex ec installation in an uncontrolled environment the module must be installed with a minimum protection of IP68.
Protection degree of IP 68 according to EN 60529 is only achieved if certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed with sealing washers or Loctite sealant added to the threads of the sensor, blanking elements and cable glands.
For an ambient temperature exceeding 70°C, heat resistant cables and cable glands suitable for at least 90°C shall be used.
If the transmitter is physically connected to a possible source of heating or cooling, e.g. by mounting to a process pipe or a temperature sensor, the temperature at the point of connection shall be within the ambient temperature range as given in this certificate.
Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.
The enclosure must be connected to the potential matching line.
Applied screw terminal torque is max 0.4 Nm on all terminals.
For group III (dust), electrostatic charging of the paint layer shall be avoided.

Ex db, tb installation:
Certificate IEC DEK 15.0039 X
Marking Ex db IIC T6, T4 Gb
Ex ic IIC T100°C Dc
Standards IEC 60079-0:2017, IEC 60079-1:2014, IEC 60079-31:2013
Type of protection Ex db Type of protection Ex tb
T4,T5: -40 ≤ Ta ≤ 85°C (7501A)
T4,T5: -40 ≤ Ta ≤ 85°C (7501B)
T6: -40 ≤ Ta ≤ 70°C
O-ring Sealing: Silicone
T4: -40 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -40 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -40 ≤ Ta ≤ 70°C T85 °C
O-ring Sealing: FKM
T4: -20 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -20 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -20 ≤ Ta ≤ 70°C T85 °C
Hazardous area Zone 1, 2, 21, 22
Non Hazardous Area
Terminal: 3,4,5,6
Sensor: RTD or TC
Terminal: 1,2
Umax: 35 VDC

Ex db, tb installation:
No modification to the enclosure is allowed by the customer except as mentioned in the manual or installation drawing.
Flame proof joints are not intended to be repaired.
The transmitter is intended, either to be connected via a cable, or to be mounted directly onto a temperature sensing probe.
Only IECEx equipment certified sensors, suitable for the application and correctly installed, may be mounted directly onto the transmitter without additional certification of the connection.
If the transmitter is physically connected to a possible source of heating or cooling, e.g. by mounting to a process pipe or a temperature sensor, the temperature at the point of connection shall be within the ambient temperature range as given in the certificate. The sensor shall be suitable for use as entry device on an Ex d enclosure and shall not add volume to the 7501 enclosure. The thread of the sensor must be in compliance with IEC60079-1 / IEC60079-31.
Unsed cable entries must be sealed by the blanking elements 8550-xxx and 8551-xxx supplied with the 7501 or other Ex d and / or Ex tb certified blanking elements suitable for the application.
Only Ex d and / or Ex tb certified cable and cable glands shall be used that are suitable for the application and correctly installed.
Protection degree of IP 54 according to IEC 60529 is achieved if Ex d certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed.
Protection degree of IP 68 according to IEC 60529 is only achieved if Ex d certified cable glands or conduit entry devices are used that are suitable for the application and correctly installed with sealing washers or Loctite sealant added to the threads of the sensor, blanking elements and cable glands.
The display cover must be screwed all the way in and the safety catch must be fastened before putting into service. Do not open display cover until 30 minutes after disconnecting power to the equipment allowing internal capacitors to discharge, or do not open display cover unless area is known to be safe.
For an ambient temperature exceeding 70°C, heat resistant cables and cable glands suitable for at least 90°C shall be used.
The enclosure must be connected to the potential matching line.
When the process temperature range exceeds the service temperature range it shall be verified by on-site temperature measurements, taking the worst case conditions into account, that the service temperature does not exceed the range of the module.
For group III (dust), electrostatic charging of the paint layer shall be avoided.

Instalação do Ex ia
Instruções de instalação gerais
O circuito do sensor não é intrinsecamente isolado do circuito de saída de alimentação. Contudo, a isolamento galvanica entre os circuitos é capaz de resistir a teste de tensão de 500Vac durante 1 minuto.
O equipamento deve ser conectado à linha potencial correspondente
Se o transmissor estiver fisicamente conectado a uma possível fonte de calor ou resfriamento, por exemplo, através da montagem de um tubo de processo ou sensor de temperatura, a temperatura no ponto de conexão deve estar entre a faixa de temperatura ambiente determinada no certificado ou neste manual.
As entradas dos cabos e elementos de supressão devem ser usadas adequadamente para aplicação INMETRO, aprovada e instalada corretamente.
Para instalação 7501A em zona 0 / EPL Ga, se aplicam as seguintes instruções:
O transmissor deve ser instalado de modo que, mesmo em um evento raro de incidente, fontes de ignição devido a impacto e fricção, sejam evitadas.
Para instalação 7501A em zona 0 / EPL Ga, se aplicam as seguintes instruções:
O transmissor deve ser instalado de modo que, mesmo em um evento raro de incidente, fontes de ignição devido a impacto e fricção, sejam evitadas.
O grau de proteção do IP 54 de acordo com a ABNT NBR IEC 60529 é alcançado se o certificado prensa-cabos ou dispositivos de entrada de condutos são usados e adequados para a aplicação e instalados corretamente.
O grau de proteção do IP 68 de acordo com a ABNT NBR IEC 60529 é apenas alcançado se o certificado prensa-cabos ou dispositivos de entrada de condutos são usados e adequados para a aplicação e instalados corretamente com selos de vedação ou selante Loctite adicionados para as linhas do sensor, elementos de supressão e prensa-cabos.
Para o grupo III (poeiras), deve ser evitada a carga eletrostática da camada de tinta.

Instalação Ex ic, Ex nA:
Certificado DEKRA 15.0014X
Marca Ex nA IIC T6, T4 Gc
Ex ic IIC T6, T4 Gc
Normas: ABNT NBR IEC 60079-0: 2013, ABNT NBR IEC 60079-15: 2012
Ex ic
Anel de vedação O: Silicone
T4: -40 ≤ Ta ≤ 85°C (7501A)
T4: -40 ≤ Ta ≤ 85°C (7501B)
T6: -40 ≤ Ta ≤ 60°C
T6: -40 ≤ Ta ≤ 60°C
Anel de vedação O: FKM
T4: -20 ≤ Ta ≤ 85°C (7501A)
T4: -20 ≤ Ta ≤ 85°C (7501B)
T6: -20 ≤ Ta ≤ 60°C
Áreas classificadas Zona 2
Áreas não classificadas
Terminal do sensor: 3,4,5,6
Ex ic
Uo: 9.6 VDC
Io: 28 mA
Po: 67 mW
Li: 45 mH
Ci: 2 nF
Terminal de alimentação: 1,2
Ex nA
Uo: 35 VDC
Io: 0 μH
Ci: 2 nF
Terminal de alimentação: 1,2
Ex nA
Uo: 35 VDC
Io: 0 μH
Ci: 2 nF

FM Installation drawing 7501
For safe installation of 7501 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.
Pour une mise en oeuvre de 7501 en toute sécurité, les préconisations ci-dessous doivent être observées. Le module doit être mis en oeuvre par du personnel qualifié familier avec les Lois, Directives et Normes, nationales et internationales, qui s'appliquent à la zone d'installation.
Intrinsic safe installation:
Hazardous classified Location Class I,II,III, Division 2, Groups, ABCDEFG Class I, Zone 0, IIC, Zone 20
Non classified Location
T4: -40 ≤ Ta ≤ 85°C
T4: -40 ≤ Ta ≤ 85°C
T6: -40 ≤ Ta ≤ 40°C
Zone 20 Temperature Class:
T4: -40 ≤ Ta ≤ 85°C T100 °C
T4: -40 ≤ Ta ≤ 85°C T100 °C
T6: -40 ≤ Ta ≤ 60°C T75 °C
T6: -40 ≤ Ta ≤ 45°C T80 °C
Terminal: 1,2
Uo: 30 VDC
Io: 120 mA
Po: 0.84 W
Li: 0 μH
Ci: 2 nF
Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 28 mA
Po: 67 mW
Li: 35 mH
Ci: 2 nF
UM ≤ 250V
Voc or Uo < Vmax or Uo
Isc or Io < Imax or Io
Po < Pi
Ca or Co > Ci + Ccable
La or Lo > Li + Lcable

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 accepted by 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(Umax) and current Io(Io,max), and maximum power Po(Pmax), which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (Uo or Uo, or Vi) and current (Io or Io, or Ii) and the power Po which can be delivered by the barrier.
The sum of the maximum unprotected capacitance (Co) for each intrinsically device and the interconnecting wiring must be less than the capacitance (Ci) which can be safely connected to the barrier.
The sum of the maximum unprotected inductance (Lo) for each intrinsically device and the interconnecting wiring must be less than the inductance (Li) which can be safely connected to the barrier.
The entity parameters Uo/Voc or Vi and Io/Isc or Ii, and Co, and Ci and Li for barriers are provided by the barrier manufacturer.
For Class II and Class III installations where rigid conduit is not used, seal cable entries against dust and fibres using a NRTL listed cable gland fitting.

Non Incendive installation:
Hazardous classified Location Class I,II,III, Division 2, Groups, ABCDEFG Class I, Zone 2, IIC
Non classified Location
T4: -20/40 ≤ Ta ≤ 85°C
T6: -20/40 ≤ Ta ≤ 85°C
Terminal: 3,4,5,6
Sensor: RTD or TC
Terminal: 1,2
Vmax: 35VDC
O-ring Sealings
Silicone rubber: -40°C ≤ Ta ≤ +85°C
FKM rubber: -20°C ≤ Ta ≤ +85°C
Protection: Indoor and Outdoor TYPE 4X or IP68

Instalação Ex tb, Ex db:
Certificado DEKRA 15.0014X
Marca Ex db IIC T6, T4 Gb
Ex tb IIC T100°C Dc
Normas ABNT NBR IEC 60079-0: 2013, ABNT NBR IEC 60079-1: 2014, ABNT NBR IEC 60079-31: 2013
Ex db
T4,T5: -40 ≤ Ta ≤ 85°C (7501A)
T4,T5: -40 ≤ Ta ≤ 85°C (7501B)
T6: -40 ≤ Ta ≤ 70°C
Ex tb
Anel de vedação O: Silicone
T4: -40 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -40 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -40 ≤ Ta ≤ 70°C T100 °C
Anel de vedação O: FKM
T4: -20 ≤ Ta ≤ 85°C T100°C (7501A)
T4: -20 ≤ Ta ≤ 85°C T100°C (7501B)
T6: -20 ≤ Ta ≤ 70°C T100 °C
Áreas classificadas Zona 1, 2, 21, 22
Áreas não classificadas
Terminal: 3,4,5,6
Sensor: RTD or TC
Terminal: 1,2
Alimentação: 35 VDC

EU DECLARATION OF CONFORMITY
(7501DCC_104)
As manufacturer: PR electronics A/S, Lerbakken 10, DK-8410 Randø hereby declares that the following product:
Type: 7501
Name: Field mounted HART temperature transmitter
From serial no: 160808041
is in conformity with the following directives and standards:
The EMC Directive 2014/53/EU and later amendments EN 61326-1:2013
Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.
The ATEX Directive 2014/34/EU and later amendments EN IEC 60079-0: 2015, EN 60079-1: 2014, EN 60079-7: 2015 + A1: 2018 EN 60079-11: 2012 and EN60079-31: 2014
ATEX certificate: DEKRA 15ATEX0058 X (7501xxxxx2)
ATEX notified body (type approval): DEKRA Certification B.V.
Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
The RoHS Directive 2011/65/EU and later amendments EN 50581: 2012
Notified body 03424 DEKRA Certification B.V.
Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
Rande, 6 May 2021
Sieg Lindemann, CTO
Manufacturer's signature