

5332N, 5332A & 5332D



DK ADVARSEL

Følgende operationer bør kun udføres på modulet i spændingsløs tilstand og under ESD-sikre forhold. Installation, ledningsmontage og demontage. Fejlfinding på modulet. Reparation af modulet må kun foretages af PR electronics A/S.

ADVARSEL

PR Loop Link programmeringsenheden må ikke benyttes til kommunikation med moduler installeret i Ex-område. Enhederne skal installeres i henhold til den tilhørende installations vejledning ved montering i eksplosionsfarlig område.

SIKKERHEDSREGLER

Modtagelse og udpakning
Udpak modulet uden at beskadige det. Kontrollér ved modtagelsen, at modultypen svarer til den bestilte. Indpakningen bør følge modulet, indtil dette er monteret på blivende plads.

Miljøforhold

Undgå direkte sollys, kraftigt støv eller varme, mekaniske ystelser og stød, og udsæt ikke modulet for regn eller kraftigt fugt. Om nødvendigt skal opsætning og demontage udføres inden for omgivelsetemperatur, forhindres ved hjælp af ventilation.

Installation

Modulet må kun tilsluttes af kvalificerede teknikere, som er bekendte med de tekniske udtryk, advarsler og instruktioner i installationsvejledningen, og som vil følge disse. Hvis der er tvivl om modulets rette håndtering, skal der rettes henvendelse til den lokale forhandler eller alternativt direkte til PR electronics A/S. Installation og tilslutning af modulet skal følge landets gældende regler for installation af elektrisk materiel bl.a. med hensyn til ledningsværnsnit, for sikring og placering. Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktmanualen, som kan hentes på www.prelctronics.dk.

Kalibrering og justering

Under kalibrering og justering skal måling og tilslutning af eksterne spændinger udføres i henhold til denne installationsvejledning, og teknikeren skal benytte sikkerhedsmæssigt korrekte værktøjer og instrumenter.

Rengøring

Modulet må, i spændingsløs tilstand, rengøres med en klud let fugtet med destilleret vand.

PC-programmering af SYSTEM 5300

Modulet konfigureres til den aktuelle opgave ved hjælp af en PC og PR electronics A/S' kommunikationsinterface Loop Link. Det er muligt at konfigurere modulet både med og uden tilslutning af forsyningsspænding. Idet kommunikationsinterface leverer nødvendig forsyning til opsettningen. Kommunikationsinterface er galvanisk isoleret, så PCens port er optimalt beskyttet. Kommunikationen er 2-vejs, så modulets opsettning kan hentes ind i PC'en, og opsettningen i PC'en kan sendes til modulet. For de brugere, der ikke selv vil foretage opsettning, kan modulet leveres konfigureret efter oplyst specifikation: indgangstype, måleområde, følerfejldetektering og udgangssignal.

Elektriske specifikationer

| | |
|--|---------------------------------------|
| Specifikationsområde..... | -40°C til +85°C |
| Forsyningsspænding, 5332N & 5332A..... | 7.2...35 VDC |
| Internt effekttab, 5332N & 5332A..... | 25 mW...0.8 W |
| Forsyningsspænding, 5332D..... | 7.2...30 VDC |
| Internt effekttab, 5332D..... | 25 mW...0.7 W |
| Kalibreringstemperatur..... | 20...28°C |
| Relativ fugtighed..... | < 95% RH (ikke kond.) |
| Mål..... | Ø44 x 20,2 mm |
| Kapslingsklasse (hus/klemme)..... | IP68 / IP00 |
| Indgangstyper | |
| P1100..... | -200°C...+850°C |
| N1100..... | -60°C...+250°C |
| Lin. R..... | 0 Ω...5000 Ω |
| Strømodgang | |
| Signalområde..... | 4...20 mA |
| Min. signalområde..... | 16 mA |
| Belastningsmodstand, Ω..... | ≤ (V _{forsyn.} -7.2 V)/0.023 |

Overholde myndighedskrav

| | |
|-------------|------------------------------|
| EMC..... | 2014/30/EU & UK SI 2016/1091 |
| ATEX..... | 2014/34/EU & UK SI 2016/1107 |
| RoHS..... | 2011/65/EU & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Godkendelser

| | |
|-------------|-------------------------|
| EAC Ex..... | RU C-DK.HA65.B.00355/19 |
|-------------|-------------------------|

UK WARNING

The following operations should only be carried out on a disconnected device and under ESD safe conditions. General mounting, connection and disconnection of wires. Troubleshooting the device. Repair of the device must be done by PR electronics A/S only.

ADVARSEL

Do not use the Loop Link programming interface to program the units in Ex area. For installation in classified area the modules must be installed according to the appropriate installation drawings.

SAFETY INSTRUCTIONS

Receipt and unpacking
Unpack the device without damaging it. The packing should always follow the device until this has been permanently mounted. Check at the receipt of the device whether the type corresponds to the one ordered.

Environment

Avoid direct sunlight, dust, high temperatures, mechanical vibrations and shock, as well as rain and heavy moisture. If necessary, heating in excess of the stated limits for ambient temperatures should be avoided by way of ventilation.

Mounting

Only qualified technicians who are familiar with the technical terms, warnings, and instructions in this installation guide and who are able to follow these should connect the device. Should there be any doubt as to the correct handling of the device, please contact your local distributor or, alternatively, PR electronics A/S. Mounting and connection of the device should comply with national legislation for mounting of electric materials, i.e. wire cross section, protective fuse, and location. Descriptions of input / output and supply connections are shown in the product manual found on www.prelctronics.com.

Calibration and adjustment

During calibration and adjustment, the measuring and connection of external voltages must be carried out according to the specifications of this installation guide. The technician must use tools and instruments that are safe to use.

Cleaning

When disconnected, the device may be cleaned with a cloth moistened with distilled water.

PC programming of SYSTEM 5300

The device is configured to the present task by way of a PC and PR electronics A/S' communications interface Loop Link. The device can be configured with or without a connected supply voltage as the communications interface supplies the necessary voltage to the set-up. The communications interface is galvanically isolated to protect the PC port. Communication is 2-way to allow the retrieval of the device set-up into the PC and to allow the transmission of the PC set-up to the device. For users who do not wish to do the set-up themselves, the device can be delivered configured according to customer specifications: input type, measurement range, sensor error detection, and output signal.

Electrical specifications

| | |
|--|--------------------------------------|
| Specifications range..... | -40°C to +85°C |
| Supply voltage, 5332N & 5332A..... | 7.2...35 VDC |
| Internal power dissipation, 5332N & 5332A..... | 25 mW...0.8 W |
| Supply voltage, 5332D..... | 7.2...30 VDC |
| Internal power dissipation, 5332D..... | 25 mW...0.7 W |
| Calibration temperature..... | 20...28°C |
| Relative humidity..... | < 95% RH (non-cond.) |
| Dimensions..... | Ø44 x 20.2 mm |
| Protection degree (enc./terminal)..... | IP68 / IP00 |
| Input types | |
| P1100..... | -200°C...+850°C |
| N1100..... | -60°C...+250°C |
| Lin. R..... | 0 Ω...5000 Ω |
| Current output | |
| Signal range..... | 4...20 mA |
| Min. signal range..... | 16 mA |
| Load resistance, Ω..... | ≤ (V _{supply} -7.2 V)/0.023 |

Observed authority requirements

| | |
|-------------|------------------------------|
| EMC..... | 2014/30/EU & UK SI 2016/1091 |
| ATEX..... | 2014/34/EU & UK SI 2016/1107 |
| RoHS..... | 2011/65/EU & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Approvals

| | |
|-------------|-------------------------|
| EAC Ex..... | RU C-DK.HA65.B.00355/19 |
|-------------|-------------------------|

FR AVERTISSEMENT

Les opérations suivantes doivent être effectuées avec le module débranché et dans un environnement exempt de décharges électrostatiques (ESD): montage général, raccordement et débranchement de fils et recherche de pannes sur le module. Seule PR electronics SARL est autorisée à réparer le module.

ADVARSEL

Ne pas utiliser le kit de programmation "Loop Link" en zone classée dangereuse Ex. Pour des installations en zone classée, les modules doivent être monté conformément aux plans appropriés.

CONSIGNES DE SECURITE

Réception et déballage
Déballer le module sans l'endommager. Il est recommandé de conserver l'emballage du module tant que ce dernier n'est pas définitivement monté. A la réception du module, vérifiez que le type de module reçu correspond à celui que vous avez commandé.

Environnement

N'exposez pas votre module aux rayons directs du soleil et choisissez un endroit à humidité modérée et à l'abri de la poussière, des températures élevées, des chocs et des vibrations mécaniques et de la pluie. Le cas échéant, des systèmes de ventilation permettent d'éviter qu'une pièce soit chauffée au-delà des limites prescrites pour les températures ambiantes.

Montage

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés qui connaissent les termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces derniers. 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. Le montage et le raccordement du module doivent être conformes à la législation nationale en vigueur pour le montage de matériaux électriques, par exemple, diamètres des fils, fusibles de protection et implantation des modules. Les connexions des alimentations et des entrées / sorties sont décrites dans le manuel du produit sur www.prelctronics.fr.

Etalonnage et réglage

Lors des opérations d'étalonnage et de réglage, il convient d'effectuer les mesures et les connexions des tensions externes en respectant les spécifications mentionnées dans ce guide. Les techniciens doivent utiliser des outils et des instruments pouvant être manipulés en toute sécurité.

Maintenance et entretien

Une fois le module hors tension, prenez un chiffon imbibé d'eau distillée pour le nettoyer.

Programmation par PC du SYSTÈME 5300

Le module peut être programmé en fonction d'une application donnée à partir d'un PC et le kit de programmation Loop Link de PR electronics A/S. Le module peut être programmé sans être alimenté car l'interface de communication fournit l'alimentation nécessaire pour la configuration. L'interface de communication est dotée d'une isolation galvanique pour protéger le port du PC. La communication est bidirectionnelle. Cela permet non seulement la programmation du module mais également la récupération d'une configuration existante ainsi que la lecture du numéro de série et du repère. Le module peut être livré déjà programmé, si l'utilisateur le souhaite.

Spécifications

| | |
|--|-------------------------------------|
| Plage de température..... | -40°C à +85°C |
| Tension d'alimentation, 5332N & 5332A..... | 7.2...35 Vcc |
| Puissance dissipée, 5332N & 5332A..... | 25 mW...0.8 W |
| Tension d'alimentation, 5332D..... | 7.2...30 Vcc |
| Puissance dissipée, 5332D..... | 25 mW...0.7 W |
| Température d'étalonnage..... | 20...28°C |
| Humidité relative..... | < 95% HR (sans cond.) |
| Dimensions..... | Ø44 x 20,2 mm |
| Degré de protection (boîtier/bornier)..... | IP68 / IP00 |
| Types d'entrée | |
| P1100..... | -200°C...+850°C |
| N1100..... | -60°C...+250°C |
| Lin. R..... | 0 Ω...5000 Ω |
| Types d'entrée | |
| Signal range..... | 4...20 mA |
| Min. signal range..... | 16 mA |
| Résistance linéaire..... | 0 Ω...5000 Ω |
| Sortie courant | |
| Gamme de signal..... | 4...20 mA |
| Plage de signal min..... | 16 mA |
| Résistance de charge, Ω..... | ≤ (V _{alim.} -7.2 V)/0.023 |

Compatibilité avec les normes

| | |
|-------------|------------------------------|
| CEM..... | 2014/30/UE & UK SI 2016/1091 |
| ATEX..... | 2014/34/UE & UK SI 2016/1107 |
| RoHS..... | 2011/65/UE & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Approbations

| | |
|-------------|-------------------------|
| EAC Ex..... | RU C-DK.HA65.B.00355/19 |
|-------------|-------------------------|

DE WARNUNG

Folgende Maßnahmen sollten nur in spannungslosem Zustand des Gerätes und unter ESD-sicheren Verhältnisse durchgeführt werden: Installation, Montage und Demontage von Leitungen. Fehlersuche im Gerät, und Reparaturen des Gerätes dürfen nur von PR electronics A/S vorgenommen werden.

ADVARSEL

Benutzen Sie die Programmierschnittstelle Loop Link nicht im Ex Bereich. Zur Montage in klassifizierten Zonen müssen die Geräte nach den dazugehörigen Einbauezeichnungen installiert werden.

SICHERHEITSGEDELN

Empfang und Auspacken
Packen Sie das Gerät aus, ohne es zu beschädigen, und kontrollieren Sie beim Empfang, ob der Gerätetyp Ihrer Bestellung entspricht. Die Verpackung sollte beim Gerät bleiben, bis dieses am endgültigen Platz montiert ist.

Umgebungsbedingungen

Direkte Sonneneinstrahlung, starke Staubeentwicklung oder Hitze, mechanische Erschütterungen und Stöße sind zu vermeiden; das Gerät darf nicht Regen oder starker Feuchtigkeit ausgesetzt werden. Bei Bedarf muss eine Erwärmung, welche die angegebenen Grenzen für die Umgebungstemperatur überschreitet, mit Hilfe eines Kühlgebläses verhindert werden.

Installation

Das Gerät darf nur von qualifizierten Technikern angeschossen werden, die mit den technischen Ausdrücken, Warnungen und Anweisungen in dieser Installationsanleitung vertraut sind und diese befolgen. Sollten Zweifel bezüglich der richtigen Handhabung des Gerätes bestehen, sollte man mit dem Händler vor Ort Kontakt aufnehmen. Sie können aber auch direkt mit PR electronics GmbH Kontakt aufnehmen. Die Installation und der Anschluss des Gerätes haben in Übereinstimmung mit den geltenden Regeln des jeweiligen Landes bez. der Installation elektrischer Apparaturen zu erfolgen, u.a. bezüglich Leitungsquerschnitt, (elektrischer) Vor-Absicherung und Positionierung. Eine Beschreibung von Eingangs- / Ausgangs- und Versorgungsanschlüssen befindet sich im Produkthandbuch, das unter www.prelctronics.de gefunden und abgerufen werden kann.

Kalibrering und Justierung

Während der Kalibrering und Justierung sind die Messung und der Anschluss externer Spannungen entsprechend dieser Installationsanleitung auszuführen, und der Techniker muss hierbei sicherheitsmäßig einwandfreie Werkzeuge und Instrumente benutzen.

Reinigung

Das Gerät darf in spannungslosem Zustand mit einem Lappen gereinigt werden, der mit destilliertem Wasser leicht angefeuchtet ist.

PC-Programmierung des Systems 5300

Das Gerät wird für die jeweilige Aufgabe mit Hilfe eines PCs und PR electronics A/S Kommunikationsschnittstelle Loop Link konfiguriert. Es ist möglich, das Gerät sowohl mit als auch ohne angeschlossene Versorgungsspannung zu konfigurieren, da die Kommunikationsschnittstelle die notwendige Versorgung für die Einstellung liefert. Die Kommunikationsschnittstelle ist galvanisch isoliert, sodass der Anschluss des PCs optimal geschützt ist. Die Kommunikation erfolgt in beiden Richtungen, sodass die Einstellung des Gerätes in den PC geholt, und die Einstellung im PC an das Gerät gesandt werden kann. Für diejenigen Anwender, welche die Einstellung nicht selbst vornehmen wollen, kann das Gerät nach folgenden Kundenspezifikationen konfiguriert geliefert werden: Eingangstyp, Messbereich, Fehlererkennung und Ausgangssignal.

Elektrische Daten

| | |
|---|--|
| Spezifikationsbereich..... | -40°C bis +85°C |
| Versorgungsspannung, 5332N & 5332A..... | 7.2...35 VDC |
| Verlustleistung, 5332N & 5332A..... | 25 mW...0.8 W |
| Versorgungsspannung, 5332D..... | 7.2...30 VDC |
| Verlustleistung, 5332D..... | 25 mW...0.7 W |
| Kalibreringstemperatur..... | 20...28°C |
| Luftfeuchtigkeit..... | < 95% RF (nicht kond.) |
| Maß..... | Ø44 x 20,2 mm |
| Schutzart (Gehäuse / Anschluss)..... | IP68 / IP00 |
| Eingangs-Typen | |
| P1100..... | -200°C...+850°C |
| N1100..... | -60°C...+250°C |
| Lin. R..... | 0 Ω...5000 Ω |
| Stromausgang | |
| Signalbereich..... | 4...20 mA |
| Min. Signalbereich..... | 16 mA |
| Belastungswiderstand, Ω..... | ≤ (V _{Versorg.} -7.2 V)/0.023 |

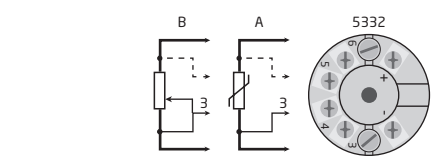
Eingehaltene Behördenvorschriften

| | |
|-------------|------------------------------|
| EMV..... | 2014/30/EU & UK SI 2016/1091 |
| ATEX..... | 2014/34/EU & UK SI 2016/1107 |
| RoHS..... | 2011/65/EU & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Zulassungen

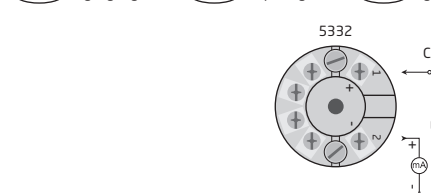
| | |
|-------------|-------------------------|
| EAC Ex..... | RU C-DK.HA65.B.00355/19 |
|-------------|-------------------------|

DK Indgangssignaler UK Input signals FR Signaux d'entrée DE Eingangssignale



| | DK | UK | FR | DE | 5332 |
|---|-------|-------|-------|-------|------|
| A | RTD | RTD | RTD | WTH | X |
| B | Lin R | Lin R | Lin R | Lin R | X |

DK Udgangssignaler UK Output signals FR Signaux de sortie DE Ausgangssignale



| | DK | UK | FR | DE | 5332N 5332A | 5332D |
|---|-------------------------|----------------------|----------------------------|--------------------------|-------------|-------|
| C | Forsyning +7.2...35 VDC | Supply +7.2...35 VDC | Alimentation +7.2...35 Vcc | Versorgung +7.2...35 VDC | X | |
| D | Forsyning +7.2...30 VDC | Supply +7.2...30 VDC | Alimentation +7.2...30 Vcc | Versorgung +7.2...30 VDC | | X |
| E | 4...20 mA udgang | 4...20 mA output | Sortie 4...20 mA | 4...20 mA-Ausgang | X | X |

PC-Programmierung des Systems 5300

Das Gerät wird für die jeweilige Aufgabe mit Hilfe eines PCs und PR electronics A/S Kommunikationsschnittstelle Loop Link konfiguriert. Es ist möglich, das Gerät sowohl mit als auch ohne angeschlossene Versorgungsspannung zu konfigurieren, da die Kommunikationsschnittstelle die notwendige Versorgung für die Einstellung liefert. Die Kommunikationsschnittstelle ist galvanisch isoliert, sodass der Anschluss des PCs optimal geschützt ist. Die Kommunikation erfolgt in beiden Richtungen, sodass die Einstellung des Gerätes in den PC geholt, und die Einstellung im PC an das Gerät gesandt werden kann. Für diejenigen Anwender, welche die Einstellung nicht selbst vornehmen wollen, kann das Gerät nach folgenden Kundenspezifikationen konfiguriert geliefert werden: Eingangstyp, Messbereich, Fehlererkennung und Ausgangssignal.

- DK **Montering af følerledninger**
Ledninger monteres mellem metalpladerne. Ledningskvadrat (max.) 1x1,5 mm² flerkeret ledning. Klemmekræftspændingsmoment 0,4 Nm.
- UK **Mounting of sensor wires**
Wires must be mounted between the metal plates. Max. wire size 1x1.5 mm² stranded wire. Screw terminal torque 0.4 Nm.
- FR **Montage des fils du capteur**
Les fils doivent être montés entre les plaques métalliques. Taille max. des fils 1x1,5 mm² fils multibrins. Pression max. avant déformation de la vis 0,4 Nm.
- DE **Montage von Fühlerleitungen**
Die Leitungen müssen zwischen den Metalplatten montiert werden. Leitungsquerschnitt (max.) 1x1,5 mm² Litzendraht. Klemmschraubenanzugsmoment 0,4 Nm.

- DK Mekaniske specifikationer.
- UK Mechanical specifications.
- FR Dimensions mécaniques.
- DE Abmessungen.

DK Dokumentation, godkendelser og yderligere information findes på internettet på www.prelctronics.dk

UK Documentation, permits and other information can be found on the internet at www.prelctronics.com

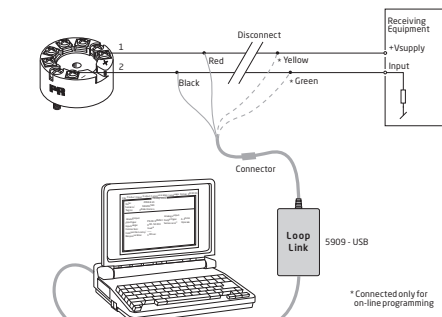
FR La documentation et toute autre information peuvent être trouvées sur l'Internet sur notre site: www.prelctronics.fr

DE Dokumentationen, Zulassungen und andere Informationen können auf unserer Internet-Seite unter www.prelctronics.de gefunden und abgerufen werden.

BR Documentações, licenças e outras informações podem ser encontradas no site www.prelctronics.com

DK Godkendelser UK Approvals FR Approbations DE Zulassungen BR Aproveçoes

| | ATEX | Area / Zone | Installation drawing | IECEX | Area / Zone | Installation drawing | FM | Zone / Div. | Installation drawing | CSA | Zone / Div. | Installation drawing | INMETRO | Zone / Div. | Installation drawing |
|-------|--------------------|---------------------|----------------------|--------------|--------------------|----------------------|--------------|--------------------|----------------------|---------|--------------------|----------------------|-----------------|------------------------|----------------------|
| 5332A | DEKRA 20ATEX0096 X | 2, 22 | 5332QA02 | DEK 20.0059X | 2, 22 | 5332QI02 | | | | 1125003 | 2 / Div 2 | 5331QC02 | DEKRA 16.0013 X | 2, 22 | 5332QB02 |
| 5332D | DEKRA 20ATEX0095 X | 0, 1, 2, 21, 22, M1 | 5332QA01 | DEK 20.0059X | 0, 1, 2, 21, 22, M | 5332QI01 | FMI17U50013X | 0, 1, 2 / Div 1, 2 | 5332QC01 | 1125003 | 0, 1, 2 / Div 1, 2 | 533XQC03 | DEKRA 16.0013 X | 0, 1, 2, 20, 21, 22, M | 5332QB01 |



ATEX-installation drawing 5332QA01-V2R0



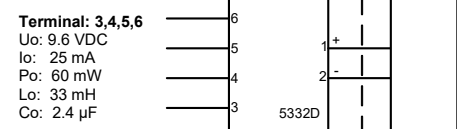
For safe installation of 5332D the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate DEKRA 20ATEX0095 X

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

Standards EN 60079-0: 2018, EN 60079-11: 2012

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



Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 1,2
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W or 0.75 W
Li: 10 µH
Ci: 1.0 nF

| Temperature Class | Ambient temperature range | |
|-------------------|---------------------------|----------------|
| | Pi: 0.84 W | Pi: 0.75 W |
| T6 | -40°C to +47°C | -40°C to +50°C |
| T5 | -40°C to +62°C | -40°C to +65°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 $\geq 60^\circ\text{C}$, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

ATEX-installation drawing 5332QA02-V2R0

For safe installation of 5332A 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 20ATEX0096 X

Marking II 3 G Ex nA [ic] IIC T6 ... T4 Gc
II 3 G Ex ec [ic] IIC T6 ... T4 Gc
II 3 G Ex 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 60079-20:2015 +A1: 2018

| Terminal 3,4,5,6 | Terminal 1,2 | Terminal 1,2 | Terminal 1,2 |
|--|---|---|--|
| Ex ic IIC, Ex ic IIC | Ex ic IIC, Ex ic IIC | Ex ic IIC, Ex ic IIC | Ex nA, Ex ec |
| Uo: 9.6 V Io: 25 mA Po: 60 mW Lo: 33 mH Co: 2.4 µF | Ui = 35 V Ii = 110 mA Ci = 1 nF Li = 10 µH | Ui = 24 V Ii = 260 mA Ci = 1 nF Li = 10 µH | Umax \leq 35 VDC or Umax \leq 24 VDC |

| Ex ic IIC, Ex ic IIC 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 EN 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. Ambient temperature range: -40°C to +85°C.

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 5332QI01-V2R0



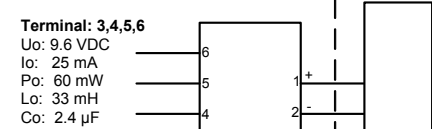
For safe installation of 5332D the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial 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: 2011

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



Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 1,2
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W or 0.75 W
Li: 10 µH
Ci: 1.0 nF

| Temperature Class | Ambient temperature range | |
|-------------------|---------------------------|----------------|
| | Pi: 0.84 W | Pi: 0.75 W |
| T6 | -40°C to +47°C | -40°C to +50°C |
| T5 | -40°C to +62°C | -40°C to +65°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. Ambient temperature range: -40°C to +85°C.

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 IEC 60529, and that is suitable for the application and correctly installed. Ambient temperature range: -40°C to +85°C.

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 5332QI02-V2R0

For safe installation of 5332A 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: 2011, IEC 60079-15: 2010, IEC 60079-20:2017

| Terminal 3,4,5,6 | Terminal 1,2 | Terminal 1,2 | Terminal 1,2 |
|--|---|---|--|
| Ex ic IIC, Ex ic IIC | Ex ic IIC, Ex ic IIC | Ex ic IIC, Ex ic IIC | Ex nA, Ex ec |
| Uo: 9.6 V Io: 25 mA Po: 60 mW Lo: 33 mH Co: 2.4 µF | Ui = 35 V Ii = 110 mA Ci = 1 nF Li = 10 µH | Ui = 24 V Ii = 260 mA Ci = 1 nF Li = 10 µH | Umax \leq 35 VDC or Umax \leq 24 VDC |

| Ex ic IIC, Ex ic IIC 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. Ambient temperature range: -40°C to +85°C.

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 5332QB01-V1R0

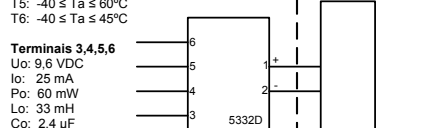


Para instalação segura do 5332D o seguinte deve ser observado. O modelo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretivas e padrões que se aplicam a esta área. O ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado DEKRA 16.0013 X
Marcas Ex ia IIC T6...T4 Ga
Ex ia IIC Da
Ex ia I Ma

Normas ABNT NBR IEC 60079-0: 2013; ABNT NBR IEC 60079-11: 2013

Áreas classificadas Zona 0, 1, 2, 20, 21, 22 Área não classificada



Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 1,2
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W
Li: 10 µH
Ci: 1.0 nF

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

Se o transmissor estiver instalado em uma atmosfera explosiva que exija o uso dos níveis de proteção de equipamento Ga, Ma e Mb, e se o gabinete for de alumínio, ele deverá ser instalado de forma que as fontes de ignição devido a falhas de impacto e fricção sejam excluídas.

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

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 pretendida e instalado corretamente.

As entradas dos cabos e os elementos de obstrução que podem ser utilizados devem ser adequados à aplicação pretendida 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.

Desenho de Instalação INMETRO 5332QB02-V1R0



Para instalação segura do 5332A o seguinte deve ser observado. O modelo 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. O ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado DEKRA 16.0013 X

Marcas Ex nA [ic] IIC T4..T6 Gc
Ex ic IIC T4..T6 Gc
Ex ic IIC Dc

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

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

| Terminal: 3,4,5,6 | Terminal: 1,2 | Terminal: 1,2 | Terminal: 1,2 |
|--|---|---------------|---------------|
| Uo: 9.6 V Io: 25 mA Po: 60 mW Lo: 33 mH Co: 2.4 µF | Ui: 35 VDC Ii: 110 mA Ci: 1 nF Li: 10 µH | Ex nA | Ex ic |

Notas para instalação
Para a instalação em uma atmosfera de gás potencialmente explosivo, aplicam-se 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 ABNT NBR 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 IP20 de acordo com a norma ABNT NBR IEC60529. E o invólucro deve, pelo menos, 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, aplicam-se as instruções a seguir:

O transmissor deve ser montado em invólucro de metal forma B de acordo com DIN43729 que está fornecendo pelo menos um grau de proteção 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 obstrução que podem ser utilizados devem ser adequados à aplicação pretendida 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 de até 5 mm.

CSA Installation drawing 5332QC01 - V2R0

Hazardous area Non Hazardous Area

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



Terminal: 3,4,5,6
Connect only to passive, or non-energy storing devices such as RTD's.

Terminal: 1,2
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W
Li: 10 µH
Ci: 1.0 nF

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsic Safe Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsic Safe Entity - For Hazardous Locations - Certified to US Standards

Class I, Division 1, Groups A, B, C and D T6...T4
Ex ia IIC T6...T4 Ga
Class I, Zone 0, AEx ia IIC Ga

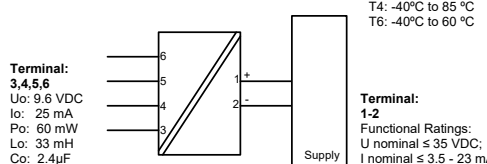
Warning:
Substitution of components may impair intrinsic safety.

The transmitters must be installed in a suitable enclosure to meet installation codes stipulated in the Canadian Electrical Code (CEC) or for US the National Electrical Code (NEC).

CSA Installation drawing 5331QC02 - V2R0

For safe installation of the 5331A and 5332A 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



Terminal: 3,4,5,6
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 1,2
Functional Ratings:
U nominal \leq 35 VDC;
I nominal 3.5 - 23 mA

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. Charging 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.

WARNING: Do not disconnect equipment unless power has been switched off or the area is known to be safe.

AVERTISSEMENT: Ne débrancher pas l'équipement sauf si l'alimentation a été coupée ou si la zone est connue pour être sûre.

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 < Vmax, Ca \geq Ci + Ccable, La \geq Li + Lcable.

FM Installation Drawing 5300Q502 V3R0

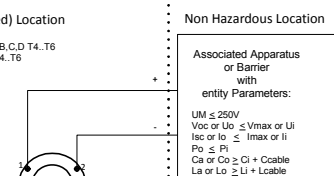
Model 5331D, 5332D, 5333D and 5343B

Hazardous (Classified) Location Non Hazardous 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
Ii: 120 mA
Pi: 0.84 W
Lo: 33 mH
Co: 2.4 µF



Associated Apparatus or Barrier with entity Parameters:
UM \leq 250V
Voc or Uo \leq Vmax or Ui
Isc or Io \leq Ii
Po \leq Pi
Ca or Co \geq Ci + Ccable
La or Lo \geq Li + Lcable

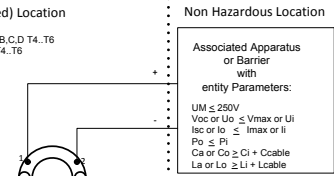
Model 5335D, 5337D

Hazardous (Classified) Location Non Hazardous 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
Ii: 120 mA
Pi: 0.84 W
Lo: 33 mH
Co: 2.4 µF



Associated Apparatus or Barrier with entity Parameters:
UM \leq 250V
Voc or Uo \leq Vmax or Ui
Isc or Io \leq Ii
Po \leq Pi
Ca or Co \geq Ci + Ccable
La or Lo \geq Li + Lcable

The entity concept

The Transmitter must be installed according to National Electrical Code (ANSI-NF