

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 installationsvejledning ved montering i eksplosionsfarlig område.
 System 6300 skal monteres på DIN-skinne efter DIN EN 60715.

SIKKERHEDSREGLER

Motagelse 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 rystelser og stød, og udsæt ikke modulet for regn eller kraftig fugt. Om nødvendigt skal opvarmning, ud over de opgivne grænser for omgivelsestemperatur, 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 ledningstværnsnit, forsikring og placering.
 Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktmanualen og på sideskiltet.

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 6300

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 tilsluttet forsynings-spænding, idet kommunikationsinterfacet leverer nødvendig forsyning til opsettningen. Kommunikationsinterfacet er galvanisk isoleret, så PC'ens 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, følerfejlsdetektering og udgangssignal.

Elektriske specifikationer

| | |
|---|-----------------------|
| Specifikationsområde..... | -40°C til +85°C |
| Forsyningsspænding, 6331A & 6334A..... | 7,2...35 VDC |
| Max. forbrug, 6331A & 6334A, 1 / 2 kanaler..... | 0,8 W / 1,6 W |
| Forsyningsspænding, 6331B & 6334B..... | 7,2...30 VDC |
| Max. forbrug, 6331B & 6334B, 1 / 2 kanaler..... | 0,7 W / 1,4 W |
| Isolationsspænding, test / arbejds..... | 1,5 kVAC / 50 VAC |
| Kalibreringstemperatur..... | 20...28°C |
| Relativ fugtighed..... | < 95% RH (ikke kond.) |
| Mål..... | 109 x 23,5 x 104 mm |
| Kapslingsklasse..... | IP20 |

Indgangstyper:

| | |
|-----------------|--|
| Pt100..... | -200°C...+850°C |
| Ni100..... | -60°C...+250°C |
| TC-indgang..... | B, E, J, K, L, N, R, S, T, U, W3, W5, Lr |
| Lin. R..... | 0 Ω...5000 Ω |
| Spænding..... | -12...800 mV |

Strømodgang:

| | |
|-----------------------------|-------------------------|
| Signalområde..... | 4...20 mA |
| Min. signalområde..... | 16 mA |
| Belastningsmodstand, Q..... | ≤ (Vsupply-7,2 V)/0,023 |

Godkendelser:

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

Overholde myndighedskrav:

| | |
|-------------|----------------|
| EMC..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| ATEX..... | 2014/34/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

DK Ex-godkendelser **UK** I.S approvals **FR** Approbations S.I. **DE** Ex-Zulassungen

| | ATEX | Area | Installation drawing | IECEX | Area | Installation drawing | FM | Area | Installation drawing | CSA | Area | Installation drawing |
|--------------|--------------------|---------------------|----------------------|--------------|---------------------|----------------------|-------------|-----------------|----------------------|---------|-----------------|----------------------|
| 6331A | DEKRA 20ATEX0096 X | 2, 22 | 6331QA02 | DEK 20.0059X | 2, 22 | 6331QI02 | FM17US0013X | 2 / Div 2 | 6331QF01 | 1125003 | 2 / Div 2 | 6331QC02 |
| 6334A | DEKRA 20ATEX0096 X | 2, 22 | 6331QA02 | DEK 20.0059X | 2, 22 | 6331QI02 | | | | | | |
| 6331B | DEKRA 20ATEX0095 X | 0, 1, 2, 21, 22, M1 | 6331QA01 | DEK 20.0059X | 0, 1, 2, 21, 22, M1 | 6331QI01 | FM17US0013X | 0, 1, 2 / Div 1 | 6331QF01 | 1125003 | 0, 1, 2 / Div 1 | 6331QC01 |
| 6334B | DEKRA 20ATEX0095 X | 0, 1, 2, 21, 22, M1 | 6331QA01 | DEK 20.0059X | 0, 1, 2, 21, 22, M1 | 6331QI01 | | | | | | |

DK Kina RoHS **UK** China RoHS **FR** RoHS chinois **DE** China-RoHS

| Part Name | Hazardous Substances | | | |
|-----------------------|----------------------|--------------|--------------|-------------------------------|
| | Lead (Pb) | Mercury (Hg) | Cadmium (Cd) | Hexavalent Chromium (Cr (VI)) |
| Printed circuit board | X | 0 | 0 | 0 |

This table is prepared in accordance with the provisions of SJ/T 11364
 O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
 X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

The product's Environmentally Friendly Use Period (EFUP) is 50 years

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

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

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

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

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.

AVERTISSEMENT

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.
 Il convient de monter l'appareil SYSTEME 6300 sur un rail DIN en se conformant à la norme DIN EN 60715.

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 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.

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 et sur l'étiquette de la face latérale du module.

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 SYSTEME 6300

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, 6331A & 6334A..... | 7,2...35 Vcc |
| Puissance maximale requise, 6331A & 6334A, 1 / 2 voies..... | 0,8 W / 1,6 W |
| Tension d'alimentation, 6331B & 6334B..... | 7,2...30 Vcc |
| Puissance maximale requise, 6331B & 6334B, 1 / 2 voies..... | 0,7 W / 1,4 W |
| Tension d'isolation test/opér..... | 1,5 kVca / 50 Vca |
| Température d'étalonnage..... | 20...28°C |
| Humidité relative..... | < 95% HR (sans cond.) |
| Dimensions..... | 109 x 23,5 x 104 mm |
| Degré de protection..... | IP20 |

Types d'entrée:

| | |
|---------------|--|
| Pt100..... | -200°C...+850°C |
| Ni100..... | -60°C...+250°C |
| TC input..... | B, E, J, K, L, N, R, S, T, U, W3, W5, Lr |
| Lin. R..... | 0 Ω...5000 Ω |
| Voltage..... | -12...800 mV |

Current output:

| | |
|-------------------------|-------------------------|
| Signal range..... | 4...20 mA |
| Min. signal range..... | 16 mA |
| Load resistance, Q..... | ≤ (Vsupply-7,2 V)/0,023 |

Approvals:

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

Observed authority requirements:

| | |
|-------------|----------------|
| EMC..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| ATEX..... | 2014/34/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Compatibilité avec les normes:

| | |
|-------------|----------------|
| CEM..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| ATEX..... | 2014/34/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

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.

WARNUNG

Benutzen Sie die Programmierschnittstelle Loop Link nicht im Ex Bereich. Zur Montage in klassifizierten Zonen müssen die Geräte nach den dazugehörigen Einbauzeichnungen installiert werden.
 Das System 6300 muss auf eine DIN-Schiene nach DIN EN 60715 montiert werden.

SICHERHEITSGEGLER 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 Staubentwicklung 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 angeschlossen werden, die mit den technischen Anweisungen, 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 Produktmanual und auf dem Typenschild.

Kalibrierung und Justierung

Während der Kalibrierung 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 6300

Das Gerät wird für die jeweilige Aufgabe mit Hilfe eines PCs und PR electronics A/S Kommunikationschnittstelle 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, 6331A & 6334A..... | 7,2...35 VDC |
| Leistungsbedarf, 6331A & 6334A, 1 / 2 Kanäle..... | 0,8 W / 1,6 W |
| Versorgungsspannung, 6331B & 6334B..... | 7,2...30 VDC |
| Leistungsbedarf, 6331B & 6334B, 1 / 2 Kanäle..... | 0,7 W / 1,4 W |
| Isolationsspannung, 6331B & 6334B..... | 1,5 kVca / 50 Vca |
| Température d'étalonnage..... | 20...28°C |
| Humidité relative..... | < 95% HR (sans cond.) |
| Dimensions..... | 109 x 23,5 x 104 mm |
| Degré de protection..... | IP20 |

Types d'entrée:

| | |
|---------------|--|
| Pt100..... | -200°C...+850°C |
| Ni100..... | -60°C...+250°C |
| TC input..... | B, E, J, K, L, N, R, S, T, U, W3, W5, Lr |
| Lin. R..... | 0 Ω...5000 Ω |
| Spannung..... | -12...800 mV |

Current output:

| | |
|------------------------------|-----------------------|
| Signal range..... | 4...20 mA |
| Min. Signalbereich..... | 16 mA |
| Belastungswiderstand, Q..... | ≤ (Vvers-7,2 V)/0,023 |

Approvals:

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

Observed authority requirements:

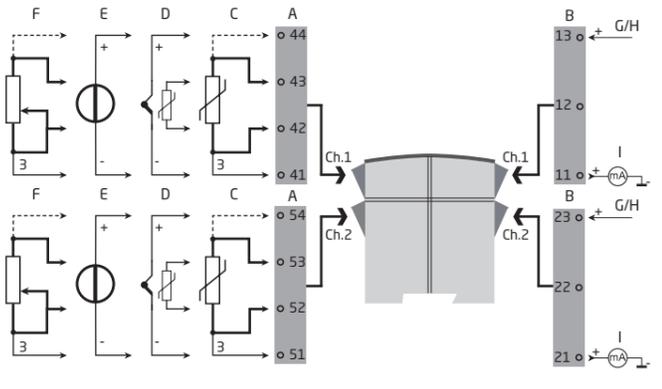
| | |
|-------------|----------------|
| EMV..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| ATEX..... | 2014/34/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

Compatibilité avec les normes:

| | |
|-------------|----------------|
| CEM..... | 2014/30/EU |
| RoHS..... | 2011/65/EU |
| ATEX..... | 2014/34/EU |
| EAC..... | TR-CU 020/2011 |
| EAC Ex..... | TR-CU 012/2011 |

- DK** Installationsvejledningen for teknikere omfatter følgende produkter: 6331A, 6331B, 6334A og 6334B.
- UK** The installation guide for technical personnel covers the following products: 6331A, 6331B, 6334A and 6334B.
- FR** Le guide d'installation pour le personnel qualifié couvre les produits suivants: 6331A, 6331B, 6334A et 6334B.
- DE** Die Installationsanleitung für Techniker umfasst die folgenden Produkte: 6331A, 6331B, 6334A und 6334B.

| | DK | UK | FR | DE |
|------|--|-------------------------------------|---|---|
| A | Indgangssignaler | Input signals | Signaux d'entrée | Eingangssignale |
| B | Udgangssignaler | Output signals | Signaux de sortie | Ausgangssignale |
| C | RTD | RTD | RTD | WTH |
| D | TC | TC | TC | TE |
| E | Spænding | Voltage | Tension | Spannung |
| F | Lin R - Ω | Lin R - Ω | R lin - Ω | Lin R - Ω |
| G | 6331A & 6334A Forsyning + 7,2...35 VDC | 6331A & 6334A Supply + 7,2...35 VDC | 6331A & 6334A Alimentation + 7,2...35 Vcc | 6331A & 6334A Versorgung + 7,2...35 VDC |
| H | 6331B & 6334B Forsyning + 7,2...30 VDC | 6331B & 6334B Supply + 7,2...30 VDC | 6331B & 6334B Alimentation + 7,2...30 Vcc | 6331B & 6334B Versorgung + 7,2...30 VDC |
| I | 4...20 mA udgang | 4...20 mA output | Sortie 4...20 mA | 4...20 mA-Ausgang |
| Ch.1 | Kanal 1 | Channel 1 | Voie 1 | Kanal 1 |
| Ch.2 | Kanal 2 | Channel 2 | Voie 2 | Kanal 2 |



DK Ledningskvadrat (min...max.) 0,13...2,08 mm² / AWG 26...14 firkoret ledning. Klemskruetilspændingsmoment 0,5 Nm.

UK Wire size (min...max.) 0,13...2,08 mm² / AWG 26...14 stranded wire. Screw terminal torque 0,5 Nm.

FR Taille des fils (min...max.) 0,13...2,08 mm² / AWG 26...14 fils multibrins. Pression max. avant déformation de la vis 0,5 Nm.

DE Leitungsquerschnitt (min...max.) 0,13...2,08 mm² / AWG 26...14 Litzenadrt. Klemmschraubanzugsmoment 0,5 Nm.

DK Montering på DIN-skinne.

UK Mounting on DIN rail.

FR Montage sur rail DIN.

DE Montage auf DIN-Schiene.

DK Frigørelse fra DIN-skinne

Husk først at demontere tilslutningsklemmerne med farlig spænding. Modulet frigøres fra DIN-skinnen ved at løfte i den nederste lås.

UK Demounting from DIN rail

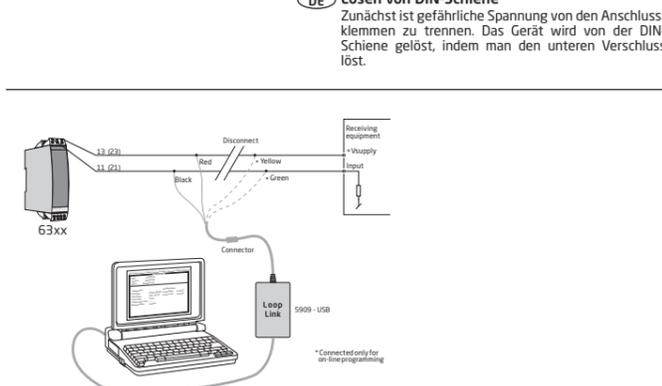
First, remember to demount the connectors with hazardous voltages. Detach the device from the DIN rail by lifting the bottom lock.

FR Démontage du rail DIN

Tout d'abord, n'oubliez pas de démonter les connecteurs où règnent des tensions dangereuses. Débloquez le verrou inférieur pour déloger le module du rail DIN.

DE Lösen von DIN-Schiene

Zunächst ist gefährliche Spannung von den Anschlussklemmen zu trennen. Das Gerät wird von der DIN-Schiene gelöst, indem man den unteren Verschluss löst.



- DK** Loop Link er et kommunikationsinterface, der er nødvendigt for programmering af 63xx. Loop Link må ikke benyttes til kommunikation med moduler installeret i Ex-område.
- UK** Loop Link is a communications interface that is needed for programming 63xx. Loop Link is not approved for communication with devices installed in hazardous (Ex) areas.
- FR** Loop Link est un kit de programmation permettant de programmer les 63xx. Loop Link ne doit pas être utilisé pour communication avec des modules installés en zone dangereuse.
- DE** Loop Link ist eine Schnittstelle zur Programmierung des 63xx. Loop Link darf nicht zur Kommunikation mit Geräten, die in Ex-gefährdeten Bereichen installiert sind, benutzt werden.

DK Sideskilt **UK** Side label **FR** Etiquette **DE** Typenschild

PR PR electronics A/S, Lerbakken 10, 8410 Rønde
 pr@prelectronics.com, www.prelectronics.com
 Phone +45 8637 2677, Denmark, 6311209

CE **6331B2B** G3442

IECEX Ex ia IIC T6...T4 Ga
 Ex ia IIC T6...T4 Ga
 Ex ia I Ma
 IECEX DEK 20.0059X
 Installation Drawing: 6331Q001

FM IS, CL I, DIV 1, GP ABCD T6...T4
 CL I, Za 8, AEx ia IIC T6...T4
 NI, CL I, DIV 2, GP ABCD T6...T4
 FM 17US0013X
 ANI, CL I, DIV 2, GP ABCD T6...T4
 Entry
 Installation Drawing: 6331QF01

ES I 1 G Ex ia IIC T6...T4 Ga
 II 2 D Ex ia IIC T6...T4 Ga
 I M 1 Ex ia I Ma
 DEKRA 20ATEX 0095X
 Installation Drawing: 6331QA01

UK Typenr.
UK Type no.
FR No. de type.
DE Typennr.

DK Godkendelser.
UK Approvals.
FR Homologations.
DE Zulassungen.

Ex IIC Ex ia IIC T6 Ga

2-WIRE PROGRAMMABLE TRANSMITTER

ATEX-installation drawing 6331QA01-V3R0

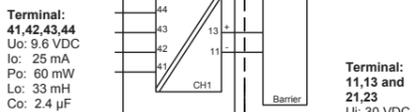
For safe installation of 6331Bxx or 6334Bxx the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits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

ATEX Certificate DEKRA 20ATEX 0095 X

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

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

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



Terminal: 41,42,43,44
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

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

Terminal: 51,52,53,54
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

| 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 $\geq 60^\circ\text{C}$, 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 [c] IIC T6...T4 Gc
II 3 G Ex ec [c] IIC T6...T4 Gc
II 3 D Ex ic IIC T6...T4 Gc
II 3 D Ex ic IIIC Dc

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

| Terminal | Terminal | Terminal | Terminal |
|--|---|---|--|
| 41,42,43,44 | 11,12,13,14 | 11,12,13,14 | 11,12,13,14 |
| 51,52,53,54 | 21,22,23,24 | 21,22,23,24 | 21,22,23,24 |
| Ex ic IIC, Ex ic IIIC | Ex ic IIC, Ex ic IIIC | Ex ic IIC, Ex ic IIIC | 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 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 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 6331QI01-V2R0

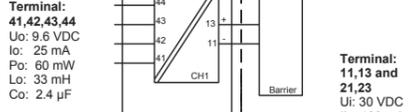
For safe installation of 6331Bxx or 6334Bxx the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits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

Certificate IECEX DEK 20.0059X

Marking Ex ia IIC T6...T4 Ga
Ex ia IIIC 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: 41,42,43,44
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

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

Terminal: 51,52,53,54
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

| 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. 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.

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 [c] IIC T6...T4 Gc
Ex ec [c] IIC T6...T4 Gc
Ex ic IIC T6...T4 Gc
Ex ic IIIC Dc

Standards IEC 60079-0: 2017, IEC 60079-11: 2011, IEC 60079-15: 2010, IEC 60079-7: 2017

| Terminal | Terminal | Terminal | Terminal |
|--|---|---|--|
| 41,42,43,44 | 11,12,13,14 | 11,12,13,14 | 11,12,13,14 |
| 51,52,53,54 | 21,22,23,24 | 21,22,23,24 | 21,22,23,24 |
| Ex ic IIC, Ex ic IIIC | Ex ic IIC, Ex ic IIIC | Ex ic IIC, Ex ic IIIC | 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 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.

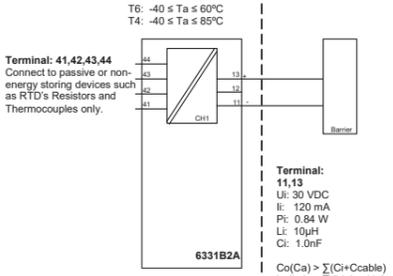
If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Dc, the transmitter shall be mounted in a separately certified enclosure that provides a degree of protection of at least IP5X according to IEC 60079-0, and that is suitable for the application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

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



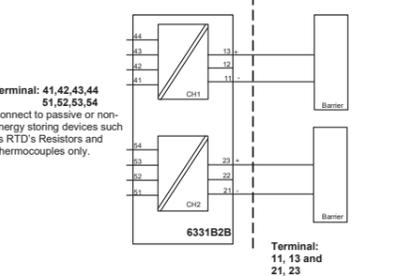
Terminal: 41,42,43,44
Connect to passive or non-energy storing devices such as RTD's Resistors and Thermocouples only.

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

$Co(Ca) > \sum(Ci+Ccable)$
 $Lo(La) > \sum(Li+Lcable)$

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



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

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

$Co(Ca) > \sum(Ci+Ccable)$
 $Lo(La) > \sum(Li+Lcable)$

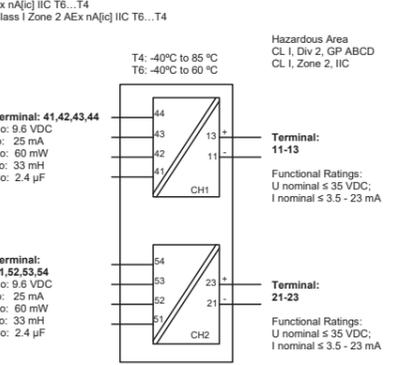
Channel 1 and Channel 2 are separate channels and therefore separate shielded cables shall be used for each channel.

Substitution of components may impair intrinsic safety.

CSA Installation drawing 6331QC02 - V2R0

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.

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



Terminal: 41,42,43,44
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 11-13
Functional Ratings:
U nominal \leq 35 VDC;
I nominal \leq 3.5 - 23 mA

Terminal: 51,52,53,54
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal: 21-23
Functional Ratings:
U nominal \leq 35 VDC;
I nominal \leq 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. 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.

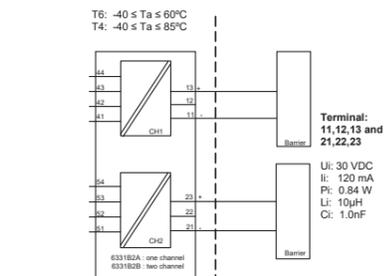
WARNING: Do not disconnect equipment unless power has been switched off or the area is known to be safe. AVERTISSEMENT: Ne débranchez pas l'équipement sauf si l'alimentation a été coupée ou si la zone est connue pour être sûre.

Non incandive field wiring installation
The non incandive field wiring circuit concept allows interconnection of Nonincandive Field wiring Apparatus with Associated Nonincandive 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 6331QF01-V1R0

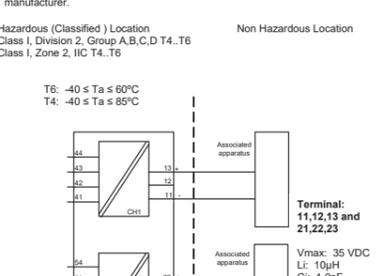
Hazardous (Classified) Location Class I, Division 1, Group A,B,C,D T4..T6
Class I, Zone 0, AEx ia IIC T4..T6



Terminal: 11,12,13 and 21,22,23
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W
Li: 10 µH
Ci: 1.0nF

Substitution of components may impair intrinsic safety.

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



Terminal: 11,12,13 and 21,22,23
Vmax: 35 VDC
Li: 10 µH
Ci: 1.0nF

Substitution of components may impair intrinsic safety.

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.

To assure a Non-Incandive system the transmitter and associated apparatus must be wired in accordance with the associated apparatus manufacturers field wiring instructions and the circuit diagram shown above.

EU DECLARATION OF CONFORMITY

(6331_6334DoC_103)

As manufacturer: PR electronics A/S, Lerbakken 10, DK-8410 Rønde

hereby declares that the following products:
Type: 6331 / 6334
Name: 2-wire programmable transmitter
From serial no.: 221792250 (6331) / 221792263 (6334)

is in conformity with the following directives and standards:
The EMC Directive 2014/30/EU and later amendments
EN 61329-1: 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: 2018, EN 60079-7: 2015 + A1: 2018, EN 60079-11: 2012
and EN 60079-15: 2010
ATEX certificate: DEKRA 20ATEX0096 X (6331A / 6334A)
ATEX certificate: DEKRA 20ATEX0095 X (6331D / 6334B)

ATEX notified body (type approval)
DEKRA Certification B.V.
Meander 1051, 6825 Mj Arnhem
P.O. Box 5185, 6802 ED Arnhem
The Netherlands

The RoHS2 Directive 2011/65/EU and later amendments
EN IEC 63000: 2018

Notified body 0344
DEKRA Certification B.V.
Meander 1051, 6825 Mj Arnhem
P.O. Box 5185, 6802 ED Arnhem
The Netherlands

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Rønde, 2 November 2022

Slig Lindemann, CTO
Manufacturer's signature

