

DK**ADVAREL**

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.

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.

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.

DE**WARNUNG**

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

PR electronics A/S**Lerbakken 10****DK-8410 Rende**

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www.prelectronics.com

SN5300-1_107 (1614)

**ADVAREL**

PR Loop Link programmeringenheden må ikke benyttes til kommunikation med moduler installeret i Ex-område.

Enhederne skal installeres i henhold til den tilhørende installationsvejledning ved montering i eksplosionfarlig område.

SIKKERHEDSREGLER**Modtagelse og udpakning**

Udpak modulet uden at beskadige det. Kontrollér ved modtagelsen, at modultypen svaret 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 udset modulen for regn eller kraftig fugt. Om nødvendigt skal opvarming, ud over de opgivne grænser for omgivelstes temperatur, 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 ledningstværsnit, for-sikring og placering.

Beskrivelse af findgang/udgangsforbindelser findes i produktmanualen, som kan hentes på www.prelectronics.dk.

Kalibrering og justering

Under kalibrering og justering skal måling og tilslutning af eksterne spændinger udføres i henhold til denne installationsvejledning, og teknikerne skal benytte sikkerhedsmaßigt 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 moduler både med og uden tilslutning forsyningsspænding, idet kommunikationsinterfacet leverer nødvendig forsyning til opsætningen. Kommunikationsinterfacet er galvanisk isoleret, så PC'en port er optimalt beskyttet. Kommunikationen er 2-vejs, så modulets opsætning kan hentes ind i PC'en, og opsætningen i PC'en kan sendes til modulet. For de brugere, der ikke selv vil foretage opsætning, kan modulet leveres konfigureret efter oplyst specifikation: indgangstype, måleområde, fejlfjeldetektering og udgangssignal.

Elektriske specifikationer

Specifikationsområde..... -40°C til +85°C
Forsyningsspænding,
5331A & 5334A 7,2...35 VDC
Forsyningsspænding,
5331D & 5334B 7,2...30 VDC
Isolationsspænd, test/oper. 1,5 kVAC / 50 VAC
Kalibreringstemperatur 20...28°C
Relativ fugtighed < 95% RH (ikke kond.)
Mål Ø44 x 20,2 mm
Kapslingsklasse (hus/klemme) IP68 / IP00

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 Q...5000 Q
Spænding -12...800 mV

Strømgang:

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

Godkendelser:

DNV, Ships & Offshore Stand. f. Certific. No. 2.4
EAC TR-CU 020/2011
EAC Ex TR-CU 012/2011

Overholdte myndighedskrav:

EMC..... 2014/30/EU
ATEX..... 2014/34/EU
RoHS 2011/65/EU

Observed authority requirements:

EMC..... 2014/30/EU
ATEX..... 2014/34/EU
RoHS 2011/65/EU

CEM..... 2014/30/EU
ATEX..... 2014/34/EU
RoHS 2011/65/EU

Compatibilité avec les normes:

CEM..... 2014/30/EU
ATEX..... 2014/34/EU
RoHS 2011/65/EU

Zulassungen:

DNV, Ships & Offshore Stand. f. Certific. No. 2.4
EAC TR-CU 020/2011
EAC Ex TR-CU 012/2011

Eingehaltene Behördenvorschriften:

EMV..... 2014/30/EU
ATEX..... 2014/34/EU
RoHS 2011/65/EU

DK**Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Sideskit****UK****Side label****FR****Etiquette****DE****Typenschild****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK****Approvals****FR****Approbations****DE****Zulassungen****BR****Aprobaciones****DK****Godkendelser****UK**

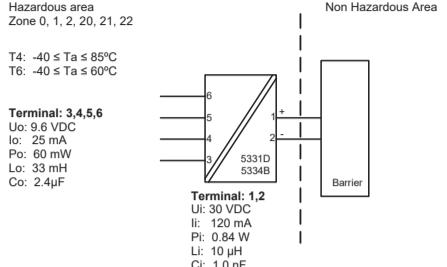
ATEX Installation drawing 5331QA01-V2R0

For safe installation of 5331D or 5334B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 06ATEX 0062 X

Marking II 1 G Ex ia IIC T4...T6 Ga
II 1 D Ex ia IICD Da
I M1 Ex ia I Ma

Standards EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-26 : 2007, EN 60079-15:2010



Installation notes.

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

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

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

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

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

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

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

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

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

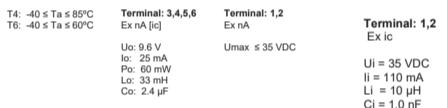
ATEX Installation drawing 5331QA02 – V2R0

For safe installation of 5331AB or 5334AB the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 10ATEX 0002 X

Marking II 3 G Ex nA [ic] IIC T4...T6 Gc
II 3 G Ex c IIC T4...T6 Gc
II 3 D Ex c IICD Da

Standards EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-15 : 2010



Special conditions for safe use.

For type of protection Ex nA, the transmitter shall be mounted in a metal enclosure providing a degree of protection of at least IP64 according to EN60529.

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

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

DECLARATION OF CONFORMITY

(5331_5334Do.c_101)

As manufacturer

PR electronics A/S, Lerbakken 10, DK-8410 Rende

hereby declares that the following products:

Type: 5331 / 5334

Name: 2-Wire programmable transmitter

From serial no.: 150802000

is in conformity with the following directives and standards:

The EMC Directive and later amendments

until 2016.04.19: 2004/108/EC

from 2016.04.20: 2014/30/EU

EN 61326-1 : 2013

For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The ATEX Directive and later amendments

until 2016.04.19: 94/9/EC

from 2016.04.20: 2014/34/EU

EN 60079-0 : 2012, EN 60079-11 : 2012, EN 60079-15 : 2010

and EN 60079-26 : 2007

ATEX certificate: KEMA 10ATEX0002 X (5331 / 5334A)

ATEX certificate: KEMA 06ATEX0062 X (5331D / 5334B)

Notified body

DEKRA Certification B.V. (0344)

Mezel 1051, 6825 MJ Arnhem

P.O. Box 3185, 6802 ED Arnhem

The Netherlands

The RoHS2 Directive 2011/65/EU

The product has been manufactured according to Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Rende, 21 March 2016

Stig Lindemann, CTO

Manufacturer's signature

IECEx Installation drawing 5331QI01-V1R0

For safe installation of 5331D or 5334B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area. Year of manufacture can be taken from the first two digits in the serial number

Certificate IECEx DEK 13.0035X

Marking Ex ia IIC T4...T6 Ga
Ex ia IICD Da
Ex ia I Ma

Standards IEC 60079-0 : 2011, IEC 60079-11 : 2011, IEC 60079-26:2006

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

T4: -40 \leq Ta \leq 85°C
T5: -40 \leq Ta \leq 60°C
T6: -40 \leq Ta \leq 45°C

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

Terminal: 1,2
Ui: 30 VDC
Io: 120 mA
Pi: 0.84 W
Li: 10 μ H
Ci: 1.0 nF

Non Hazardous Area

T4: -40 \leq Ta \leq 85°C
T5: -40 \leq Ta \leq 60°C
T6: -40 \leq Ta \leq 45°C

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

Terminal: 1,2
Ui: 30 VDC
Io: 120 mA
Pi: 0.84 W
Li: 10 μ H
Ci: 1.0 nF

Desenho de Instalação INMETRO 5331QB01-V1R0

Para instalação segura do 5331D ou 5334B o seguinte deve ser observado. O modo deve apenas ser instalado por pessoas qualificadas que são familiarizadas com as leis nacionais e internacionais, diretrizes e padrões que se aplicam a esta área.

Ano de fabricação pode ser pego dos dois primeiros dígitos do número de série

CertificadoDEKRA 13.0001 X

Indicação Ex ia IIC T6...T4 Ga

Padrões ABNT NBR IEC 60079-0 : 2008, ABNT NBR IEC 60079-11 : 2009, IEC 60079-15 : 2010, ABNT NBR IEC 60079-26 : 2006

Áreas Perigosas Zona 0, 1, 2, 20, 21, 22,

T4: -40 \leq Ta \leq 85°C
T5: -40 \leq Ta \leq 60°C
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Io: 120 mA
Pi: 0.84 W
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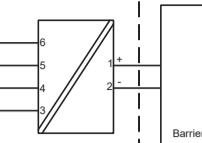
CSA Installation drawing 533XQC03 – V3R0

Hazardous area

T4: -40 \leq Ta \leq 85°C
T6: -40 \leq Ta \leq 60°C

Module 5331D, 5333D
Terminal: 3,4,5,6

Only passive, or non-energy storing devices such as RTD's and Thermocouples may be connected



CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
Class I, Division 1, Groups A, B, C and D
Ex ia IIC, Ga

CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards
Class I, Division 1, Groups A, B, C and D
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 National Electrical Code (NEC).

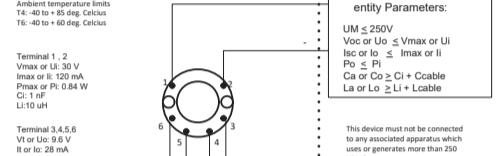
FM Installation Drawing 5300Q502 Rev AH V8R0

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

Hazardous (Classified) Location

Class I, Division 1, Groups A, B, C, D T4..T6

Class I, Zone 0, AEx ia IIC T4..T6

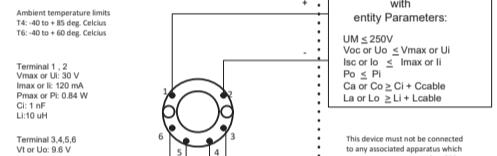


Model 5335C, 5335D, 5336D, 5337D

Hazardous (Classified) Location

Class I, Division 1, Groups A, B, C, D T4..T6

Class I, Zone 0, AEx ia IIC T4..T6



The entity concept

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

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

The entity concept criteria are as follows:
The intrinsically safe devices, other than barriers, must not be a source of power.

The maximum voltage $U_{(VMAX)}$ and current $I_{(IMAX)}$, and maximum power $P_{(MAX)}$, which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (U or V) or current (I or SC) or P and the power $P_{(O)}$ which can be delivered by the barrier.

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

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

The entity parameters $U_{(O)}$, $V_{(O)}$ or $U_{(L)}$ and $I_{(O)}$, $I_{(SC)}$ or $I_{(L)}$, and Ca and La for barriers are provided by the barrier manufacturer.

NI Field Circuit Parameters

Model 5331C, 5331D, 5333C, 5333D, 5335C, 5335D, 5336D, 5337D and 5343B

Hazardous (Classified) Location

Class I, Division 2, Groups A, B, C, D T4..T6

Class I, Zone 2, IIC T4..T6

