

# 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 eksplosionsfarligt område.

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

**Miljøforhold**  
Undgå direkte sollys, kraftigt støv eller varme, mekaniske rykninger 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 ledningsværnsnit, for-sikring og placering.  
Beskrivelse af indgang/udgang/forsyningsforbindelser findes i produktmanualen, som kan hentes på www.prelectronics.dk.

**Kalibrering og justering**  
Under kalibrering og justering skal måling og tilslutning af ekstern spænding 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 tilsluttet forsyningspænding, idet kommunikationsinterface leverer nødvendig forsyning til opsettningen. Kommunikationsinterface 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, 5333A & 5343A.....	8,0...35 VDC
Forsyningsspænding, 5333D & 5343B.....	8,0...30 VDC
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
Lin. R. 5333.....	0 Ω...10000 Ω
Lin. R. 5343.....	0 Ω...100 kΩ

**Strømodgang:**

Signalområde.....	4...20 mA
Min. signalområde.....	16 mA
Belastningsmodstand, Ω.....	≤ (Vforsyn.-8,0 V)/0,023

**Godkendelser:**

*DNV, Ships & Offshore.....	Stand. f. Certific. No. 2.4
**GL.....	VI-7-2
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

\* Gælder kun 5333  
\*\* Gælder kun 5343

**DK** Godkendelser

ATEX	Area / Zone	Installation drawing	IECEX	Area / Zone	Installation drawing	FM	Zone / Div.	Installation drawing	CSA	Zone / Div.	Installation drawing	INMETRO	Area	Installation drawing	PESO / COE	
5333A	KEMA 10ATEX0003 X	2, 22	5333QA02	DEK 13.0036X	2, 22	5333QI02						DEKRA 13.0002 X	2, 22	5333QB02	P337392/3	
5343A	KEMA 10ATEX0004 X	2, 22	5343QA02	DEK 13.0036X	2, 22	5333QI02						DEKRA 13.0002 X	2, 22	5333QB02		
5333D	KEMA 03ATEX1535 X	0, 1, 2, 20, 21, 22, M1	5333QA01	DEK 13.0036X	0, 1, 2, 20, 21, 22, M	5333QI01	2D5A7.AX	0, 1, 2 / Div 1, 2	5300Q502	1125003	0, 1, 2 / Div 1, 2	5333QC03	DEKRA 13.0002 X	0, 1, 2, 20, 21, 22	5333QB01	P337392/4
5343B	KEMA 03ATEX1538 X	0, 1, 2, 20, 21, 22, M1	5343QA01	DEK 13.0036X	0, 1, 2, 20, 21, 22, M	5333QI01	2D5A7.AX	0, 1, 2 / Div 1, 2	5300Q502			DEKRA 13.0002 X	0, 1, 2, 20, 21, 22	5333QB01		

## DECLARATION OF CONFORMITY (5343DoC\_101)

As manufacturer  
**PR electronics A/S, Lerbakken 10, DK-8410 Rønde**  
hereby declares that the following product:  
**Type:** 5343  
**Name:** 2-wire level 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 10ATEX0004 X (5343A)  
ATEX certificate: KEMA 03ATEX1538 X (5343B)

Notified body  
DEKRA Certification B.V. (0344)  
Heander 1051, 6825 MJ Arnhem  
P.O. Box 5185, 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.

Rønde, 23 March 2016  
Stig Lindemann, CTO  
Manufacturer's signature

# 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.

**WARNING**  
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.prelectronics.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, 5333A & 5343A.....	8,0...35 VDC
Supply voltage, 5333D & 5343B.....	8,0...30 VDC
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Dimensions.....	Ø44 x 20,2 mm
Protection degree (encl./terminal).....	IP68 / IP00

**Input types:**

*Pt100.....	-200°C...+850°C
**Ni100.....	-60°C...+250°C
Lin. R. 5333.....	0 Ω...10000 Ω
Lin. R. 5343.....	0 Ω...100 kΩ

**Current output:**

Signal range.....	4...20 mA
Min. signal range.....	16 mA
Load resistance, Ω.....	≤ (Vsupply-8,0 V)/0,023

**Approvals:**

*DNV, Ships & Offshore.....	Stand. f. Certific. No. 2.4
**GL.....	VI-7-2
EAC.....	TR-CU 020/2011
EAC Ex.....	TR-CU 012/2011

**Observed authority requirements:**

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

\* Only applies to 5333  
\*\* Only applies to 5343

**UK** Approvals

# 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.

**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 sur www.prelectronics.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 SYSTEM 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, 5333A & 5343A.....	8,0...35 Vcc
Tension d'alimentation, 5333D & 5343B.....	8,0...30 Vcc
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:**

*Pt100.....	-200°C...+850°C
**Ni100.....	-60°C...+250°C
Résistance linéaire, 5333.....	0 Ω...10000 Ω
Résistance linéaire, 5343.....	0 Ω...100 kΩ

**Sortie courant:**

Gamme de signal.....	4...20 mA
Plage de signal min.....	16 mA
Résistance de charge, Ω.....	≤ (Vvalim.-8,0 V)/0,023

**Approbations:**

*DNV, Ships & Offshore.....	Stand. f. Certific. No. 2.4
**GL.....	VI-7-2
EAC.....	TR-CU 020/2011
EAC Ex.....	TR-CU 012/2011

**Compatibilité avec les normes:**

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

\*\* Uniquement applicable pour 5333  
\*\* Uniquement applicable pour 5343

**FR** Aprovações

# DE

**WARNUNG**  
Folgende Maßnahmen sollten nur in spannungslosem Zustand des Gerätes und unter ESD-sicheren Verhältnissen 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 Einba Zeichnungen 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 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.

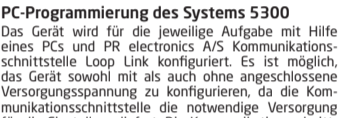
**Installation**  
Das Gerät darf nur von qualifizierten Technikern angeschlossen werden, die mit den technischen Ausdrücken, Warnungen und Anweisungen in dieser Installationsanleitung vertraut sind und diese befolgen. Sollten Zweifel bezüglich der richtigen Handhabung des Gerätes bestehen, sollte man 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 Apparate 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.prelectronics.de gefunden und abgerufen werden kann.

**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 5300**  
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 Kommunikationschnittstelle 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, Fehlerföhererkennung und Ausgangssignal.

**Elektrische Daten**  
Spezifikationsbereich..... -40°C bis +85°C  
Versorgungsspannung, 5333A & 5343A..... 8,0...35 VDC  
Versorgungsspannung, 5333D & 5343B..... 8,0...30 VDC  
Kalibrierungstemperatur..... 20...28°C  
Luftfeuchtigkeit..... < 95% RF (nicht kond.)  
Maß..... Ø44 x 20,2 mm  
Schutzart (Gehäuse / Anschluss)..... IP68 / IP00



**Eingangs-Typen:**

*Pt100.....	-200°C...+850°C
**Ni100.....	-60°C...+250°C
Lin. R. 5333.....	0 Ω...10000 Ω
Lin. R. 5343.....	0 Ω...100 kΩ

**Stromausgang:**

Signalbereich.....	4...20 mA
Min. Signalbereich.....	16 mA
Belastungswiderstand, Ω.....	≤ (Vversor.-8,0 V)/0,023

**Zulassungen:**

*DNV, Ships & Offshore.....	Stand. f. Certific. No. 2.4
**GL.....	VI-7-2
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

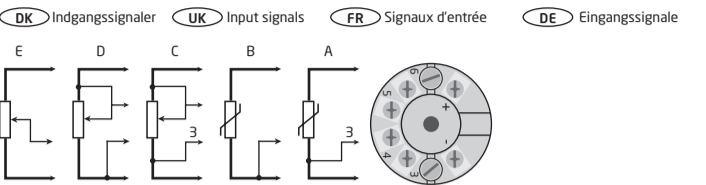
\* Gilt nur für 5333  
\*\* Gilt nur für 5343

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

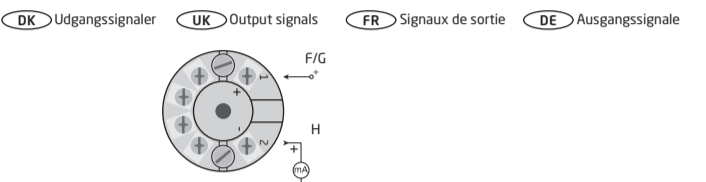
**DK** Dokumentation, godkendelser og yderligere information findes på internettet på [www.prelectronics.dk](http://www.prelectronics.dk)  
**UK** Documentation, permits and other information can be found on the internet at [www.prelectronics.com](http://www.prelectronics.com)  
**FR** La documentation et toute autre information peuvent être trouvées sur l'Internet sur notre site: [www.prelectronics.fr](http://www.prelectronics.fr)  
**DE** Dokumentationen, Zulassungen und andere Informationen können auf unserer Internet-Seite unter [www.prelectronics.de](http://www.prelectronics.de) gefunden und abgerufen werden.  
**BR** Documentações, licenças e outras informações podem ser encontradas no site [www.prelectronics.com](http://www.prelectronics.com)

PR electronics A/S  
Lerbakken 10  
DK-8410 Rønde  
Tel. +45 8637 2677  
Fax +45 8637 3085  
www.prelectronics.com

**DK** Installationsvejledningen for teknikere omfatter følgende produkter: 5333A, 5333D, 5343A og 5343B.  
**UK** This installation guide for technical personnel covers the following products: 5333A, 5333D, 5343A and 5343B.  
**FR** Ce guide d'installation pour le personnel qualifié couvre les produits suivants: 5333A, 5333D, 5343A and 5343B.  
**DE** Diese Installationsanleitung für Techniker umfasst die folgenden Produkte: 5333A, 5333D, 5343A und 5343B.

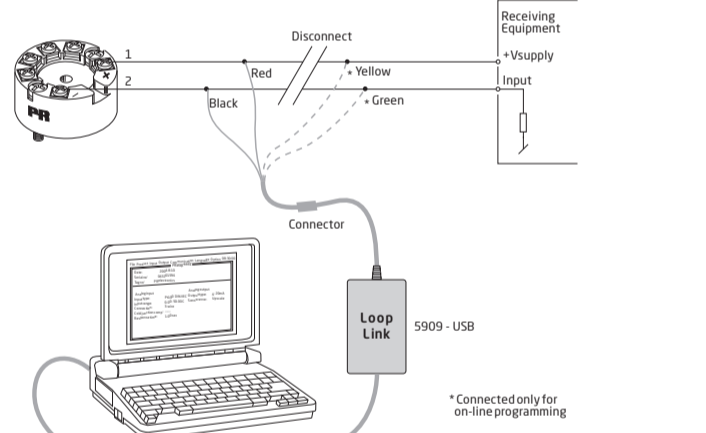
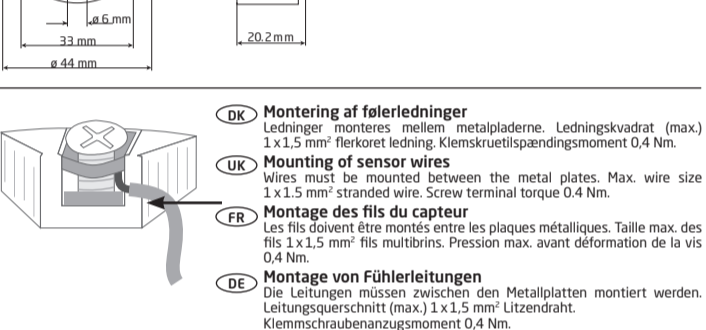


	DK	UK	FR	DE	5333	5343
A	RTD, 3-leder	RTD, 3-wire	RTD, 3-fils	WTH, 3-Leiter	x	
B	RTD, 2-leder	RTD, 2-wire	RTD, 2-fils	WTH, 2-Leiter	x	
C	Modstand, 3-leder	Resistance, 3-wire	Résistance, 3-fils	Widerstand, 3-Leiter	x	x
D	Modstand, 2-leder	Resistance, 2-wire	Résistance, 2-fils	Widerstand, 2-Leiter	x	x
E	Potentiometer, 3-leder	Potentiometer, 3-wire	Potentiomètre, 3-fils	Potentiometer, 3-Leiter		x

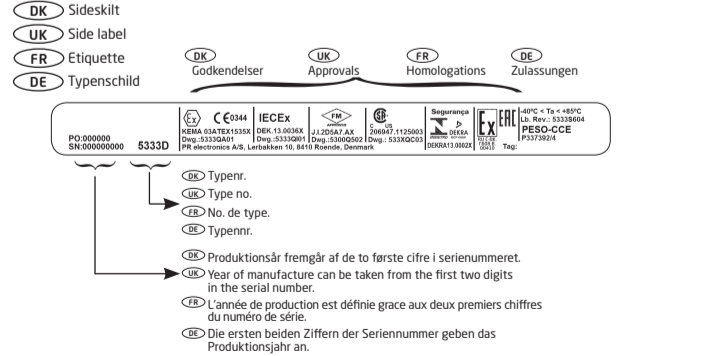


	DK	UK	FR	DE	5333A	5333D	5343A	5343B
F	Forsyning +8,0...35 VDC	Supply +8,0...35 VDC	Alimentation +8,0...35 Vcc	Versorgung +8,0...35 VDC	x		x	
G	Forsyning +8,0...30 VDC	Supply +8,0...30 VDC	Alimentation +8,0...30 Vcc	Versorgung +8,0...30 VDC		x		x
H	4...20 mA udgang	4...20 mA output	Sortie 4...20 mA	4...20 mA-Ausgang	x	x	x	x

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



**DK** Loop Link er et kommunikationsinterface, der er nødvendigt for programmering af PRetop 53xx. 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 PRetop 53xx. 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 le PRetop 53xx. 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 PRetop 53xx. Loop Link darf nicht zur Kommunikation mit Geräten, die in Ex-gefährdeten Bereichen installiert sind, benutzt werden.



**DK** Dokumentation, godkendelser og yderligere information findes på internettet på [www.prelectronics.dk](http://www.prelectronics.dk)  
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**BR** Documentações, licenças e outras informações podem ser encontradas no site [www.prelectronics.com](http://www.prelectronics.com)

## ATEX Installation drawing 5333QA01-V2R0



For safe installation of 5333D 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 03ATEX 1535 X

Marking II 1 G Ex ia IIC T4...T6 Ga  
II 1 D Ex ia IIIC Da  
II 1 M Ex ia I Ma

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

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

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

Terminal: 3,4,6  
Uo: 30 VDC  
Io: 8 mA  
Po: 60 mW  
Lo: 35 mH  
Co: 66 nF

Non Hazardous Area

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

### Installation notes

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 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 ≥ 60°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 5333QA02-V2R0

For safe installation of 5333A 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 0003X

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

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

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

Terminal: 3,4,6  
Uo: 5V  
Io: 4.0 mA  
Po: 20 mW  
Lo: 900 mH  
Co: 1000 µF

Terminal: 1,2  
Ex nA

Terminal: 1,2  
Ex ic

Umax ≤ 35 VDC  
Ui = 35 VDC  
Ii = 110mA  
Li = 10 µH  
Ci = 1.0 nF

### 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 IP54 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 ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

## IECEX Installation drawing 5333QI01-V1R0



For safe installation of 5333D 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 13.0036X

Marking Ex ia IIC T4...T6 Ga  
Ex ia IIIC 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 ≤ Ta ≤ 85°C  
T5: -40 ≤ Ta ≤ 60°C  
T6: -40 ≤ Ta ≤ 45°C

Terminal: 3,4,6  
Uo: 30 VDC  
Io: 8 mA  
Po: 60 mW  
Lo: 35 mH  
Co: 66 nF

Non Hazardous Area

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

### Installation notes

In a potentially explosive gas atmosphere, the transmitter shall be mounted in a metal form B enclosure in order to provide a degree of protection of at least IP20 according to IEC60529. If however the environment requires a higher degree of protection, this shall be taken into account.

If the transmitter is installed in an explosive atmosphere requiring the use of equipment protection level Ga, Ma and Mb, and if the enclosure is made of aluminum, it must be installed such that ignition sources due to impact and friction sparks are excluded.

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

For explosive dust atmospheres, the surface temperature of the outer enclosure is 20 K above the ambient temperature.

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 IEC60529, that is suitable for the application and correctly installed.

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

For an ambient temperature ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

## IECEX Installation drawing 5333QI02-V1R0



For safe installation of 5333A 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 13.0036X

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

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

Terminal	Ex nA [ic]	Ex ic
1,2	Umax = 35V	Ui: 35V, Ii:110mA, Li:10µH, Ci:1.0nF
3,4,6	Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF	

Terminal: 1,2  
Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF

Terminal: 3,4,6  
Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF

Terminal: 1,2  
Ex nA

Terminal: 1,2  
Ex ic

Umax ≤ 35 VDC  
Ui = 35 VDC  
Ii = 110mA  
Li = 10 µH  
Ci = 1.0 nF

### Installation note:

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

For nA installation the transmitter must be installed in a metal enclosure e.g. a form B enclosure, providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and correctly installed or in an enclosure with type of protection Ex n or Ex e.

For intrinsically safe installation the transmitter must be installed in enclosure providing a degree of protection of at least IP20 according to IEC60529 and that is suitable for the application.

Cable entry devices and blanking elements shall fulfill the same requirements

For an ambient temperature ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

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

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.

The transmitter must be mounted in a enclosure according to DIN 43729 that provides a degree of protection of at least IP6X according to IEC60529, and that is suitable for the application. Cable entry devices and blanking elements shall fulfill the same requirements.

## Desenho de Instalação InMETRO 5333QB01-V1R0



Para instalação segura do 5333D ou 5343B o seguinte deve ser observado. O modo 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.  
Ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado DEKRA 13.0002 X

Indicação Ex ia IIC T6...T4 Ga  
Ex ia IIIC Da

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

Áreas perigosas Zona 0, 1, 2, 20, 21, 22, M1

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

Terminal: 3,4,5,6  
Uo: 30 VDC  
Io: 8 mA  
Po: 60 mW  
Lo: 35 mH  
Co: 66 nF

Sem áreas perigosas

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

### Notas de Instalação

Em uma atmosfera de gás potencialmente explosiva, o transmissor deve ser montado em um enclosure a fim de garantir um grau de proteção de no mínimo IP20 de acordo com EN60529. Se contudo o ambiente requer um nível de proteção maior, isso deve ser levado em conta.

Se o transmissor é instalado em uma atmosfera explosiva exigindo o uso de equipamento de categoria Ga e se o enclosure é feito de alumínio, ele deve ser instalado de modo que, mesmo em caso de avaria rara, fontes de ignição devido a impacto e fricção, faíscas são eliminadas, se o enclosure é feito de materiais não metálicos, cargas eletrostáticas devem ser evitadas.

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

O transmissor deve ser montado em enclosure de metal forma B de acordo com DIN43729 que está fornecendo um grau de proteção de pelo menos IP6X de acordo com EN60529. Isso é adequado para aplicação e corretamente instalado.

As entradas dos cabos e os elementos de obturação que podem ser utilizados são adequados para a aplicação e corretamente instalados.

Para temperatura ambiente ≥ 60°C, fios de resistência ao calor devem ser usados com uma faixa de pelo menos 20K acima da temperatura ambiente.

A temperatura da superfície do enclosure é igual à temperatura ambiente mais de 20 K, por uma camada de pó, com uma espessura até 5 mm.

## Desenho de Instalação InMETRO 5333QB02-V1R0



Para instalação segura do 5333A ou 5343A o seguinte deve ser observado. O modo 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.  
Ano de fabricação pode ser pego dos dois primeiros dígitos do número de série.

Certificado IECEX DEK 13.0002 X

Indicação Ex nA [ic] IIC T6...T4 Gc  
Ex ic IIC T6...T4 Gc  
Ex ic IIIC Dc

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

Terminal	Ex nA [ic]	Ex ic
1,2	Umax = 35 V	Ui: 35 V, Ii:110 mA, Li:10 µH, Ci:1.0 nF
3,4,6	Uo: 5 V, Io: 4 mA, Po: 20 mW, Lo: 900 mH, Co: 1000 µF	

Terminal: 1,2  
Uo: 5 V, Io: 4 mA, Po: 20 mW, Lo: 900 mH, Co: 1000 µF

Terminal: 3,4,6  
Uo: 5 V, Io: 4 mA, Po: 20 mW, Lo: 900 mH, Co: 1000 µF

Terminal: 1,2  
Ex nA

Terminal: 1,2  
Ex ic

Umax ≤ 35 VDC  
Ui = 35 VDC  
Ii = 110mA  
Li = 10 µH  
Ci = 1.0 nF

### Notas para instalação

Para a instalação em uma atmosfera de gás potencialmente explosivo, se aplicam as instruções a seguir:

Para a instalação nA o transmissor deve ser instalado em um gabinete de metal, por exemplo, gabinete em forma B que fornece um grau de proteção de pelo menos IP54 de acordo com IEC60529 ou em um caixa com tipo de proteção Ex n ou Ex e.

Para a instalação IC o transmissor deve ser instalado em um invólucro proporcionando um grau de proteção de IP20, pelo menos, de acordo com a norma IEC60529 que é adequado para a aplicação.

Dispositivos de entrada de cabos e elementos de supressão devem cumprir os mesmos requisitos.

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

Para a instalação em uma atmosfera de poeira potencialmente explosiva, se aplicam as instruções a seguir:

A temperatura da superfície do invólucro é igual à temperatura ambiente mais 20 K, para uma camada de pó, com uma espessura superior a 5 mm.

O transmissor deve ser montado em um invólucro de acordo com a norma DIN 43729, que proporciona um grau de proteção de, pelo menos, IP6X de acordo com a norma IEC60529, e que seja apropriado para a aplicação.

Dispositivos de entrada de cabos e elementos de supressão devem cumprir as mesmas exigências.

## 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

Non Hazardous Location

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

Ambient temperature limits  
T4: -40 to +85 deg. Celsius  
T6: -40 to +60 deg. Celsius

Terminal: 1, 2  
Vmax or Uo: 30 V  
Imax or Io: 120 mA  
Pmax or Pi: 0.84 W  
Ci: 1 nF  
Li: 10 µH

Terminal: 3, 4, 5, 6  
Vi or Uo: 58 V  
Ii or Io: 28 mA  
Pi or Po: 67.2 mW  
Ca or Co: 3.5 µF  
La or Lo: 35 mH

This device must not be connected to any associated apparatus which uses or generates more than 250 Vrms

### 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

Non Hazardous Location

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

Ambient temperature limits  
T4: -40 to +85 deg. Celsius  
T6: -40 to +60 deg. Celsius

Terminal: 1, 2  
Vmax or Uo: 30 V  
Imax or Io: 120 mA  
Pmax or Pi: 0.84 W  
Ci: 1 nF  
Li: 10 µH

Terminal: 3, 4, 5, 6  
Vi or Uo: 58 V  
Ii or Io: 28 mA  
Pi or Po: 67.2 mW  
Ca or Co: 3.5 µF  
La or Lo: 35 mH

This device must not be connected to any associated apparatus which uses or generates more than 250 Vrms

### 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 Uo(VMAX) and current Ii(IMAX), and maximum power Pi(PMAX), which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (Uo or VOC or Vt) and current (Ii or ISC or It) and the power Po which can be delivered by the barrier.

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

The entity parameters Uo, Voc or Vt and Io, Isc or It, 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

Non Hazardous Location

Associated Apparatus or Barrier

Ambient temperature limits  
T4: -40 to +85 deg. Celsius  
T6: -40 to +60 deg. Celsius

Terminal: 1, 2  
Vmax: 35 V  
Ci: 1.0 nF  
Li: 10 µH

This device must not be connected to any associated apparatus which uses or generates more than 250 Vrms

## CSA Installation drawing 533XQC03 - V3R0

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

Non Hazardous Area

Module 5331D, 5333D  
Terminal: 3,4,5,6  
Only passive, or non-energy storing devices such as RTD's and Thermocouples may be connected

Module 5335D, 5336D and 5337D  
Terminal: 3,4,5,6  
Uo: 9.6 VDC  
Io: 6.2 mA  
Po: 67.2 mW  
Lo: 35 mH  
Co: 2.5µF

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

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entry - 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 Entry - 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 the National Electrical Code (NEC).

## IECEX Installation drawing 5343QI02-V1R0



For safe installation of 5343A 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 13.0036X

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

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

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

Terminal: 1,2  
Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF

Terminal: 3,4,6  
Uo: 5V, Io: 4mA, Po: 20mW, Lo: 900mH, Co: 1000µF

Terminal: 1,2  
Ex nA

Terminal: 1,2  
Ex ic

Umax ≤ 35 VDC  
Ui = 35 VDC  
Ii = 110mA  
Li = 10 µH  
Ci = 1.0 nF

For an ambient temperature ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

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 ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

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

For nA installation the transmitter must be installed in a metal enclosure e.g. a form B enclosure, providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and correctly installed or in an enclosure with type of protection Ex n or Ex e.

For intrinsically safe installation the transmitter must be installed in enclosure providing a degree of protection of at least IP20 according to IEC60529 and that is suitable for the application.

Cable entry devices and blanking elements shall fulfill the same requirements

For an ambient temperature ≥ 60°C, heat resistant cables shall be used with a rating of at least 20 K above the ambient temperature.

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

The transmitter must be mounted in a enclosure according to DIN 43729 that provides a degree of protection of at least IP6X according to IEC60529, and that is suitable for the application. Cable entry devices and blanking elements shall fulfill the same requirements.

## ATEX Installation drawing 5343QA01-V2R0



For safe installation of 5343B 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 03ATEX 1538 X

Marking II 1 G Ex ia IIC T4...T6 Ga  
II 1 D Ex ia IIIC Da  
II 1 M Ex ia I Ma

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

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

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

Terminal: 3,4,6  
Uo: 30 VDC  
Io: 8 mA  
Po: 60 mW  
Lo: 35 mH  
Co: 66 nF

Non Hazardous Area

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

### Installation notes

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 ≥ 60°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.

## IECEX Installation drawing 5343QI01-V1R0



For safe installation of 5343B 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 13.0036X

Marking Ex ia IIC T4...T6 Ga  
Ex ia IIIC 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 ≤ Ta ≤ 85°C  
T5: -40 ≤ Ta ≤ 60°C  
T6: -40 ≤ Ta ≤ 45°C

Terminal: 3,