

## 5114A/B, 5115A/B, 5116A/B &amp; 5131A/B

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

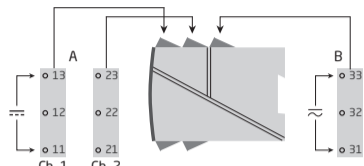
UK	DK	FR	DE	5114	5115	5116	5131
Current	Strøm	Courant	Strom	x	x	x	
Voltage	Spænding	Tension	Spannung	x	x	x	
Potentiometer	Potentiometer	Potentiomètre	Potentiometer	x	x	x	
RTD / lin. R	RTD / lin. R	RTD / rés. lin.	WTH / lin. R	x / x	x / x	x / x	x
TC	TC	TC	TE	x	x	x	x

**DK** Udgangssignaler **UK** Output signals **FR** Signaux de sortie **DE** Ausgangssignale

UK	DK	FR	DE	5114	5115	5116	5131
Current	Strøm	Courant	Strom	x	x	x	x
Voltage	Spænding	Tension	Spannung	x	x	x	x
2-wire output	2-trådsudgang	Sortie 2-fils	2-Draht-Ausgang	x	x	x	x
Relay	Relæ	Relais	Relais			x	

**DK** Forsyning **UK** Supply **FR** Alimentation **DE** Versorgung

		5114	5115	5116	5131
A	7.5..35 VDC				x
B	21.6..253 VAC / 19.2..300 VDC	x	x	x	



**DK** Billede 1: Montering på DIN-skinne.

**UK** Picture 1: Mounting on DIN rail.

**FR** Figure 1: Montage sur rail DIN.

**DE** Abb. 1: Montage auf DIN-Schiene.



**DK** Billede 2: 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** Picture 2: Demounting from DIN rail

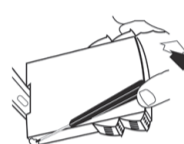
First, remember to demount the connectors with hazardous voltages. Detach the device from the DIN rail by lifting the bottom lock.

**FR** Figure 2: Démontage du rail DIN

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

**DE** Abb. 2: 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** Billede 3: Udtagelse af print

Printet udtages ved at løfte i den øverste lås og samtidig trække ud i frontpladen.

**UK** Picture 3: Removal of PCB

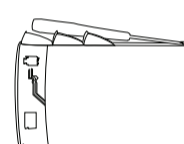
By lifting the upper lock and pulling the front plate simultaneously the PCB is removed.

**FR** Figure 3: Extraction de la carte à circuits imprimés

Débloquez le verrou supérieur tout en extrayant la plaque avant : la carte à circuits imprimés est alors dégagée.

**DE** Abb. 3: Herausnehmen der Platine

Die Platine wird herausgenommen, indem man den oberen Verschluss anhebt und gleichzeitig die Frontabdeckung heraus-zieht.

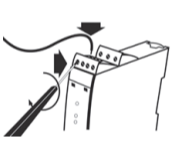


**DK** Ledningskvadrat (min...max.) 0,13...2,08 mm<sup>2</sup> / AWG 26...14 fletkort ledning. Klemmskruetilspændingsmoment 0,5 Nm.

**UK** Wire size (min...max.) 0.13...2.08 mm<sup>2</sup> / AWG 26...14 stranded wire. Screw terminal torque 0.5 Nm.

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

**DE** Leitungsquerschnitt (min...max.) 0,13...2,08 mm<sup>2</sup> / AWG 26...14 Litzendraht. Klemmschraubenanzugsmoment 0,5 Nm.



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

**DK** Benforbindelser. **FR** Raccordement des bornes. **DE** Klemmenschluss.

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

**DK** Topskilt **UK** Top label **FR** Etiquette **DE** Topschild

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

**DK** Produktionsår fremgår af de to første cifre i serienummeret. Year of manufacture can be taken from the first two digits in the serial number. **UK** **FR** L'année de production est définie grace aux deux premiers chiffres du numéro de série. **DE** Die ersten beiden Ziffern der Seriennummer geben das Produktionsjahr an.

**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))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Printed circuit board	X	0	0	0	0	0

This table is prepared in accordance with the provisions of SJ/T 11364

0: 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

## ADVARSEL

**GENERELT** Dette modul er beregnet for tilslutning til livsfarlige elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig legemsbeskadigelse eller mekanisk ødelæggelse.

For at undgå faren for elektriske stød og brand skal sikkerhedsreglerne overholdes, og vejledningerne skal følges.

Specifikationerne må ikke overskrides, og modulet må kun benyttes som beskrevet i det følgende. Installationsvejledningen skal studeres omhyggeligt, før modulet tages i brug. Kun kvalificeret personale (teknikere) må installere dette modul. Hvis modulet ikke benyttes som beskrevet i denne installationsvejledning, så forringes modulets beskyttelsesforanstaltninger.

## ADVARSEL

**FARLIG SPÆNDING** Der må ikke tilsluttes farlig spænding til modulet, før dette er fastmonteret, og 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 og udskiftning af sikringer må kun foretages af PR electronics A/S.

## ADVARSEL

For at overholde sikkerhedsafstande må der ikke tilsluttes både farlig og ikke-farlig spænding på modulets relekontakter. SYSTEM 5000 skal monteres på DIN-skinne efter DIN 46277.

Kommunikationsstikket i SYSTEM 5000 har forbindelse til indgangsklemmer, hvor der kan forekomme farlige spændinger, og det må kun tilsluttes programmeringsenheden Loop Link via det medfølgende kabel.

## SIKKERHEDSREGLER

## Modtagelse og udpakning

Udpak modulet uden at beskadige det. Kontrollér ved modtagelsen, at modulyten svarer til den bestilte. Indpakningen bør fjernes 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 kraftigt fugt. Om nødvendigt skal opvarmning, ud- eller nedopgivne grænser for omgivelsestemperatur, forhindres ved hjælp af ventilation.

Alle moduler hører til Installationskategori II, Forureningsgrad 2 og Isolations-klasse II.

## Installation

Modulet må kun tilsluttes af kvalificerede tekniskere, 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 lændes gældende regler for installation af elektrisk materiel bl.a. med hensyn til ledningstværsnit, for-sikring og placering.

Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktmanualen og på sideskiltet.

For moduler, som er permanent tilsluttet farlig spænding, gælder: For-sikringsens maksimale størrelse er 10 A, og den skal sammen med en afbryder placeres let tilgængeligt og tæt ved modulet. Afbryderen skal mærkes således, at der ikke er tvivl om, at den afbryder spændingen til modulet.

## UL-installationskrav

Brug kun 60/75°C kobberledninger.

Må kun anvendes i forureningsgrad 2 eller bedre.

Max. omgivelsestemperatur ..... 60°C

Max. ledningskvadrat ..... AWG 26-14

UL fil-nummer..... E231911

## 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 5000

Modulet konfigureres til den aktuelle opgave ved hjælp af en PC og PR electronics A/S' kommunikationsinterface Loop Link. Kommunikationsinterface er galvanisk isoleret, så PCens 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, følerfejlsdetektering og udgangssignal.

Loop Link må ikke benyttes til kommunikation med moduler, der er installeret i, modtager signaler fra eller sender signaler til Ex-område

## UK

## WARNING

**GENERAL** This device is designed for connection to hazardous electric voltages. Ignoring this warning can result in severe personal injury or mechanical damage.

To avoid the risk of electric shock and fire, the safety instructions of this guide must be observed and the guidelines followed. The specifications must not be exceeded, and the device must only be applied as described in the following.

Prior to the commissioning of the device, this installation guide must be examined carefully. Only qualified personnel (technicians) should install this device. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

## WARNING

Until the device is fixed, do not connect hazardous voltages to the device.

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 and replacement of circuit breakers must be done by PR electronics A/S only.

## WARNING

To keep the safety distances, the relay contacts on the device must not be connected to both hazardous and non-hazardous voltages at the same time.

SYSTEM 5000 must be mounted on a DIN rail according to DIN 46277. The communication connector of SYSTEM 5000 is connected to the input terminals on which dangerous voltages can occur, and it must only be connected to the programming unit Loop Link by way of the enclosed cable.

## WARNING

System 5000 must be mounted on a DIN rail according to DIN 46277. The communication connector of SYSTEM 5000 is connected to the input terminals on which dangerous voltages can occur, and it must only be connected to the programming unit Loop Link by way of the enclosed cable.

## 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.

All devices fall under Installation Category II, Pollution Degree 2, and Insulation Class II.

## 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 and on the side label.

The following apply to fixed hazardous voltages-connected devices: The max. size of the protective fuse is 10 A and, together with a power switch, it should be easily accessible and close to the device. The power switch should be marked with a label indicating that it will switch off the voltage to the device.

## UL installation requirements

Use 60/75°C copper conductors only. For use only in pollution degree 2 or better.

Max. ambient temperature..... 60°C

Max. wire size..... AWG 26-14

UL file number..... E231911

## 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 5000

The device is configured to the present task by way of a PC and PR electronics A/S' communications interface Loop Link. 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.

Loop Link is not approved for communication with modules installed in, receiving signals from, or transmitting signals to hazardous (Ex) areas.

## FR

## AVERTISSEMENT

**INFORMATIONS GÉNÉRALES** Ce module est conçu pour supporter une connexion à des tensions électriques dangereuses. Si vous ne tenez pas compte de cet avertissement, cela peut causer des dommages corporels ou des dégâts mécaniques.

Pour éviter les risques d'électrocution et d'incendie, conformez-vous aux consignes de sécurité et suivez les instructions mentionnées dans ce guide. Vous devez vous limiter aux spécifications indiquées et respecter les instructions d'utilisation de ce module, telles qu'elles sont décrites dans ce guide.

Il est nécessaire de lire ce guide attentivement avant de mettre ce module en marche. L'installation de ce module est réservée à un personnel qualifié (techniciens). Si la méthode d'utilisation de l'équipement diffère de celle décrite par le fabricant, la protection assurée par l'équipement risque d'être altérée.

## AVERTISSEMENT

Tant que le module n'est pas fixé, ne le mettez pas sous tensions dangereuses.

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.

Débloquez le verrou inférieur pour dégager le module et à remplacer les fusibles.

## AVERTISSEMENT

Afin de conserver les distances de sécurité, les contacts de relais du module ne doivent pas être mis sous tensions dangereuse et non-dangereuse en même temps.

Il convient de monter l'appareil SYSTEM 5000 sur un rail DIN en se conformant à la norme DIN 46277.

Le connecteur de communication du SYSTEM 5000 est relié aux bornes d'entrée sur lesquelles peuvent se produire des tensions dangereuses. Ce connecteur doit uniquement être raccordé à l'appareil de programmation Loop Link au moyen du câble blindé.

## CONSIGNES DE SECURITE

## Réception et déballage

Ne déballer le produit 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.

Tous les modules appartiennent à la catégorie d'installation II, au degré de pollution 2 et à la classe d'isolation II.

## 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 S.A.R.L.

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 de alimentations et des entrées / sorties sont décrites dans le manuel du produit et sur l'étiquette de la face latérale du module.

Les instructions suivantes s'appliquent aux modules fixes connectés en tensions dangereuses: Le fusible de protection doit être de 10 A au maximum. Ce dernier, ainsi que l'interrupteur général, doivent être facilement accessibles et à proximité du module. Il est recommandé de placer sur l'interrupteur général une étiquette indiquant que ce dernier mettra le module hors tension.

## Conditions d'installation UL

N'utilisez que de conducteurs de cuivre 60/75°C. Uniquement pour utilisation en degré de pollution 2 ou meilleur.

Température ambiante max ..... 60°C

Taille max. des fils ..... AWG 26-14

No du fichier UL ..... E231911

## 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 5000

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. 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.

Loop Link ne doit pas être utilisé pour communication avec des modules installés en, recevant des signaux de, ou transmettant des signaux à zone dangereuse.

## DE

## WARNING

**ALLGEMEINES** Dieses Gerät ist für den Anschluss an lebensgefährliche elektrische Spannungen gebaut. Missachtung dieser Warnung kann zu schweren Verletzungen oder mechanischer Zerstörung führen. Um eine Gefährdung durch Stromstöße oder Brand zu vermeiden müssen die Sicherheitsregeln der Installationsanleitung eingehalten, und die Anweisungen befolgt werden. Die Spezifikationswerte dürfen nicht überschritten werden, und das Gerät darf nur gemäß folgender Beschreibung benutzt werden. Diese Installationsanleitung ist sorgfältig durchzulesen, ehe das Gerät in Gebrauch genommen wird. Nur qualifizierte Personen (Techniker) dürfen dieses Gerät installieren. Wenn das Gerät nicht wie in dieser Installationsanleitung beschrieben benutzt wird, werden die Schutzvorrichtungen des Gerätes beeinträchtigt.

## WARNING

Vor dem abgeschlossenen festen Einbau des Gerätes darf daran keine gefährliche Spannung angeschlossen werden, und folgende Maßnahmen sollten nur in spannungslosem Zustand des Gerätes und unter ESD-sicheren Verhältnissen durchgeführt werden: Installation, Montage und Demontage von Leitungen. Fehleruche im Gerät. Reparaturen des Gerätes und Austausch von Sicherungen dürfen nur von PR electronics A/S vorgenommen werden.

## WARNING

Zur Einhaltung der Sicherheitsabstände dürfen die Relaiskontakte des Moduls nicht an sowohl gefährliche und ungefähliche Spannung angeschlossen werden.

Das System 5000 muss auf eine DIN-Schiene nach DIN 46277 montiert werden.

Der Programmierstecker des SYSTEMs 5000 hat Verbindung zu den Eingangsklemmen, in denen gefährliche Spannungen auftreten können. Der Anschluss an die Programmiereneinheit Loop Link ist nur über das Originalkabel zulässig.

## SICHERHEITSREGELN

## Empfang und Auspacken

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

## Umgebungsbedingungen

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

Alle Geräte gehören der Installationskategorie II, dem Verschmutzungsgrad 2 und der Isolationsklasse II an.

EU DECLARATION OF CONFORMITY



(5114DoC\_102)

As manufacturer  
**PR electronics A/S, Lerbakken 10, DK-8410 Rønde**  
 hereby declares that the following products:  
**Type: 5114**  
**Name: Programmable transmitter**  
**From serial no.: 161966001**  
 is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments  
**EN 61326-1 : 2013**  
 Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments  
**EN 61010-1 : 2010**

The ATEX Directive 2014/34/EU and later amendments  
**EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E**  
**and EN 50281-1-1 : 1998 incl. A1**  
**ATEX certificate: DEMKO 99ATEX124571 (5114B)**

No changes are required to enable compliance with the replacement standards:  
**EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012**

ATEX notified body (type approval)  
**UL International Demko A/S**  
**Borupvang 5**  
**DK-2750 Ballerup**

The RoHS2 Directive 2011/65/EU and later amendments  
**EN 50581 : 2012**

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

*Stig Lindemann*  
 Stig Lindemann, CTO  
 Manufacturer's signature

Rønde, 16 March 2018

EU DECLARATION OF CONFORMITY



(5115DoC\_102)

As manufacturer  
**PR electronics A/S, Lerbakken 10, DK-8410 Rønde**  
 hereby declares that the following products:  
**Type: 5115**  
**Name: Signal calculator**  
**From serial no.: 161966001**  
 is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments  
**EN 61326-1 : 2013**  
 Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments  
**EN 61010-1 : 2010**

The ATEX Directive 2014/34/EU and later amendments  
**EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E**  
**and EN 50281-1-1 : 1998 incl. A1**  
**ATEX certificate: DEMKO 00ATEX128567 (5115B)**

No changes are required to enable compliance with the replacement standards:  
**EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012**

ATEX notified body (type approval)  
**UL International Demko A/S**  
**Borupvang 5**  
**DK-2750 Ballerup**

The RoHS2 Directive 2011/65/EU and later amendments  
**EN 50581 : 2012**

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

*Stig Lindemann*  
 Stig Lindemann, CTO  
 Manufacturer's signature

Rønde, 16 March 2018

EU DECLARATION OF CONFORMITY



(5116DoC\_104)

As manufacturer  
**PR electronics A/S, Lerbakken 10, DK-8410 Rønde**  
 hereby declares that the following products:  
**Type: 5116**  
**Name: Programmable transmitter**  
**From serial no.: 201864001**  
 is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments  
**EN 61326-1 : 2013**  
 Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments  
**EN 61010-1 : 2010**

The ATEX Directive 2014/34/EU and later amendments  
**EN IEC 60079-0 : 2018 and EN 60079-11 : 2012**  
**ATEX certificate: KEMA 04ATEX1316 X (5116B)**

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 50581 : 2012**

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

*Stig Lindemann*  
 Stig Lindemann, CTO  
 Manufacturer's signature

Rønde, 3 March 2021

EU DECLARATION OF CONFORMITY



(5131DoC\_102)

As manufacturer  
**PR electronics A/S, Lerbakken 10, DK-8410 Rønde**  
 hereby declares that the following products:  
**Type: 5131**  
**Name: 2-wire programmable transmitter**  
**From serial no.: 161966001**  
 is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments  
**EN 61326-1 : 2013**  
 Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments  
**EN 61010-1 : 2010**

The ATEX Directive and later amendments  
**EN 50014 : 1997 E incl. A1+A2, EN 50020 : 2002 E**  
**and EN 50281-1-1 : 1998 incl. A1**  
**ATEX certificate: DEMKO 99ATEX124572 (5131B)**

No changes are required to enable compliance with the replacement standards:  
**EN 60079-0 : 2012 + A11 : 2013 and EN 60079-11 : 2012**

ATEX notified body (type approval)  
**UL International Demko A/S**  
**Borupvang 5**  
**DK-2750 Ballerup**

The RoHS2 Directive 2011/65/EU and later amendments  
**EN 50581 : 2012**

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

*Stig Lindemann*  
 Stig Lindemann, CTO  
 Manufacturer's signature

Rønde, 16 March 2018

ATEX Installation drawing 5116QA01-V3R0



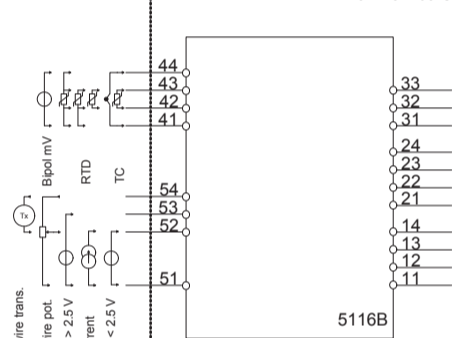
**5116B**  
 For safe installation of 5116B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.  
 Year of manufacture can be taken from the first two digits in the serial number.

ATEX Certificate KEMA 04ATEX1316X

Marking  
 II (1) G [Ex ia Ga] IIC/IIB/IIA  
 II (1) D [Ex ia Da] IIIC

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

Hazardous Area Zone 0, 1, 2, 20, 21, 22 Non Hazardous Area  
 $-20 \leq T_a \leq 60^\circ\text{C}$



Supply / Output / Relay (terminal 31, 32, 33) (terminal 11, 12, 13, 14) (terminal 21, 22, 23, 24)

U<sub>m</sub>: 253 VAC

Terminal	U <sub>o</sub>	I <sub>o</sub>	P <sub>o</sub>	L <sub>o</sub>			C <sub>o</sub>		
				IIC	IIB	IIA	IIC	IIB	IIA
41, 42, 44, 43	7.5 V	2.2 mA	4.2 mW	1 H	1 H	1 H	6 μF	6 μF	6 μF
51, 52, 53	7.5 V	2.2 mA	4.2 mW	1 H	1 H	1 H	6 μF	6 μF	6 μF
51, 52, 53, 54	28 V	93 mA	650 mW	3 mH	16 mH	31 mH	75 nF	645 nF	2 μF

Terminal (31, 33)

Supply:  
 AC Voltage 21.6 – 253 VAC  
 DC Voltage 19.2 – 300 VDC  
 Power max. 3.0 W

Terminal (11, 12, 13, 14)

Analog output:  
 Current 0/4 – 20 mADC  
 Voltage 0 – 10 VDC

Terminal (21, 22) and (23, 24)

Relay 1 and 2:  
 Voltage max. 250 VAC / VDC  
 AC Power max. 500 VA  
 AC Current max. 2 AAC  
 DC Current @ ≤ 30VDC 2ADC  
 DC Current @ ≥ 30VDC 1380 \* U<sup>-2</sup> \* 1.0085<sup>U</sup>

Installation notes

The intrinsically safe circuits are galvanically connected to the communications interface unit.  
 The communications interface may only be connected temporarily, under the condition that the connectors with terminal numbers 41...44 and 51...54 are disconnected on the 5116B.  
 When a higher ingress protection than IP20 is required, this has to be achieved by an additional enclosure which is suitable for the applicable environmental conditions.

In type of protection [Ex ia Da] the parameters for intrinsic safety for gas group IIB are applicable

When two or more units are placed next to each other it has to be assured that all the terminal numbers 41...44 and 51...54 are placed on the same side and are separated from the non-intrinsically safe circuits of the units which could be mounted above or below it.

Each combination of circuits (to terminations 41...44 or to terminations 51...53 or to terminations 51...54) shall be connected via separated cables or if the combinations are in one cable shall be type A or B in accordance with EN60079-14.

Programming of the 5116B module is done by use of Loop Link 5909 outside hazardous area. If the module is installed in hazardous area programming is allowed only if the area is known to be safe.

FM CONTROL DRAWING NO. 5116QF01

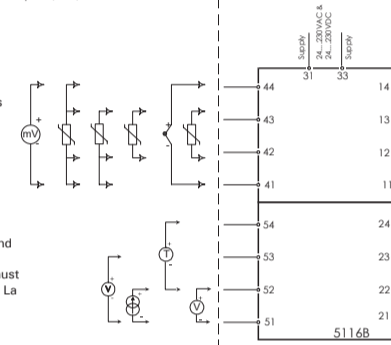
Hazardous (Classified) Location  
 Class I, Division 1, Group A,B,C,D  
 Class II, Division 1 Group E, F, G  
 Class III, Division 1  
 Class I, Zone 0 and 1, Group IIC, IIB, IIA  
 Class II, Zone 20 and 21

Unclassified Location  
 or  
 Hazardous (Classified) Location  
 Class I, Division 2, Group A,B,C,D  
 Class I, Zone 2, Group IIC, IIB, IIA

Simple Apparatus or Intrinsically safe apparatus with entity parameters:

V<sub>max</sub> (U<sub>i</sub>) ≥ V<sub>t</sub> (U<sub>o</sub>)  
 I<sub>max</sub> (I<sub>i</sub>) ≥ I<sub>t</sub> (I<sub>o</sub>)  
 P<sub>i</sub> ≥ P<sub>o</sub>  
 C<sub>a</sub> ≥ C<sub>cable</sub> + C<sub>i</sub>  
 L<sub>a</sub> ≥ L<sub>cable</sub> + L<sub>i</sub>

The sum of capacitance and inductance of cable and intrinsic safe equipment must be less or equal to C<sub>a</sub> and L<sub>a</sub>



Terminal	Voc (V)	Isc (mA)	Po (mW)	L <sub>a</sub> (mH)			C <sub>a</sub> (μF)		
				A,B	C,E	D,F,G	A,B	C,E	D,F,G
41,42,43,44	7.5	2.2	4.2	1000	1000	1000	6	36	445
51,52,53	7.5	2.2	4.2	1000	1000	1000	6	36	445
51,52,53,54	28	93.0	650	3	16	31	0.075	0.645	2

Installation notes:

- 1) The maximum non hazardous location voltage is 250Vac/dc.
- 2) The installation shall be in accordance with the National Electrical Code NFPA 70, Articles 504 and 505.
- 3) 5116B is galvanic isolated and does not require grounding
- 4) For Installation in Div 2 or Zone 2 the 5116B must be installed in an enclosure according to ANSI/ISA SB2.
- 5) Install in Pollution degree 2 or better
- 6) Use 60 / 75 °C Copper Conductors with Wire Size AWG: (26 – 14).
- 7) Warning: Substitution of components may impair intrinsic safety.

Rev. AA 2005-07-20