

DK ADVARSEL

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

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

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Farlig Spænding Der må ikke tilsluttes farlig spænding til modulet, før dette er fastmonteret, og følgende operationer bør kun udføres på modulet på spændingsløs tilstand og under ESD-sikre forhold: Installation, ledningsmontage og -demontage, fejlfinding på modulet. Reparation af modulet og udsifting af sikringer må kun foretages af PR electronics A/S.

DK ADVARSEL

Modulets frontplade må ikke åbnes, da dette vil medføre skade på stikforbindelsen til display- / programmeringsfronten PR 4501. Modulerne indeholder ingen DIP-switches eller jumpere.

DK SIKKERHEDSREGLER

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

Miljøforhold Undgå direkte sollys, kraftigt støv eller varme, mekaniske rystelser og stød, og udsæt ikke modulet for regn eller kraftigt fugt. Om nødvendigt skal opvarmning, ud over de opgivne grænser for omgivelsestemperatur, forhindres ved hjælp af ventilation. Alle moduler kan anvendes i Måle- / overspændingskategori II og Foreningsringskat 2. Modulerne er designet til at være sikker mindst op til en højde af 2000 m.

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 det rettes henvendelse til den lokale forhandler eller alternativt direkte til PR electronics A/S.

Det er ikke tilladt at benytte flerkeret ledning ved tilslutning af forsyningsledning med mindre ledningsmateriale er forsynet med ledningsstyler. Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktmanualen og på sideskiltet. Modulet er forsynet med skrutermineraler og skal forsynes fra en dobbeltisoleret / forstærket isoleret spændingsforsyning. En afbryder placeres til tilgængeligt og tæt ved modulet. Afbryderen skal mærkes således, at der ikke er tvivl om, at den afbryder spændingen til modulet.

Ved installation på Power Rail 9400 bliver forsyningsledning leveret af Power Control Unit type 9410. 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.

Betjening under normal drift Operatører må kun indstille eller betjene modulerne, når disse er fast installeret på forsvarlig måde i tavler eller lignende, så betjeningen ikke medfører fare for liv eller materiel. Dvs., at der ikke er berøringsskade, og at modulet er placeret, så det er let at betjene.

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

Elektriske specifikationer

Specifikationsområde.....	-20°C til +60°C
Forsyningsspænding.....	19,2...31,2 VDC
Max. forbrug.....	≤ 2,1 W
Max. effekttæthed.....	≤ 1,7 W
Sikring.....	1,25 A T / 250 VAC
Isoleringsspændinger, test / drift:	
Indgang til alle.....	2,6 kVAC/300 VAC forstærket
Analog udgang til forsyning.....	2,6 kVAC/300 VAC forstærket
Statusrelæ til forsyning.....	1,5 kVAC/150 VAC forstærket
Kalibreringstemperatur.....	20...28°C
EMC-immunitetspåvirkning.....	< +0,5% af span
Udvædet EMC-immunitet:	
NAMUR NE21, A.krit., glistæst.....	< +1% af span
2-trådsforsyning (Klemme 44..43).....	25..16 VDC / 0..20 mA
Relativ luftfugtighed.....	< 95% RH (ikke kond.)
Mål, uden 4501/4511 (H x B x D).....	109 x 23,5 x 116/131 mm
Mål, uden 4501/4511 (H x B x D).....	109 x 23,5 x 104 mm
Kapslingsklasse.....	IP20

Indgang for RTD-typer:

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 N150, N1100, N120, N1100	
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Indgang for TC-typer:

B, E, J, K, L, N, R, S, T, U, W3, W5, LR

Current output:

Programmable signal ranges.....	0...20, 0/2...1 / 0,5 / 1,5 / 0,10 and 2...10 VDC
Load.....	≤ 600 Ω
Load stability.....	≤ 0,01% of span / 100 Ω
Sensor error detection.....	0 / 3,5 / 23 mA / none
NAMUR NE43 Upscale / Downscale.....	23 mA / 3,5 mA
Current limit.....	≤ 28 mA

Approvals:

DNV-GL, Ships & Offshore.....	Stand. f. Certification No. 2.4 ClassNK
UL, Standard for Safety.....	TA18527M
EAC.....	TR-CU 020/2011
EAC Ex.....	TR-CU 012/2011
SIL.....	IEC 61508

Observed authority requirements:

EMC.....	2014/30/EU
LVD.....	2014/35/EU
ATEX.....	2014/34/EU
RoHS.....	2011/65/EU

EU DECLARATION OF CONFORMITY

(9116DoC_102)

As manufacturer **PR electronics A/S, Lerbakken 10, DK-8410 Rønde** hereby declares that the following products: **Type: 9116** **Name: Pulse isolator** **From serial no.: 161414072** is in conformity with the following directives and standards: **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. **EN 61010-1 : 2010** The Low Voltage Directive 2014/35/EU and later amendments **EN 61010-1 : 2010** The ATEX Directive 2014/34/EU and later amendments **EN 60079-0 : 2012 + A11 : 2013, EN 60079-11 : 2012 and EN 60079-15 : 2010** **ATEX certificate: PR 14ATEX0101 X (9116A)** **ATEX certificate: KEMA 10ATEX0053 X (9116B)** 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** Rønde, 16 March 2018 *Stig Lindemann* Manufacturer's signature

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.

UK WARNING

Hazardous Voltage 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.

UK WARNING

Do not open the front plate of the device as this will cause damage to the connector for the display / programming front PR 4501. The SYSTEM 9000 devices contain no DIP-switches or jumpers.

UK 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 can be used for Measurement / Overvoltage Category II and Pollution Degree 2. The modules are designed to be safe at least under an altitude up to 2000 m.

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.

The use of stranded wires is not permitted for mains wiring except when wires are fitted with cable ends. Descriptions of input / output and supply connections are shown in the product manual and on the side label. The device is provided with field wiring terminals and shall be supplied from a Power Supply having double / reinforced insulation. A power switch shall be easily accessible and close to the device. The power switch shall be marked as the disconnecting unit for the device. For installation on Power Rail 9400 the power is supplied by Power Control Unit 9410.

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.

Electrical specifications

Specifications range.....	-20°C to +60°C
Supply voltage.....	19,2...31,2 VDC
Max. required power.....	≤ 2,1 W
Max. power dissipation.....	≤ 1,7 W
Fuse.....	1,25 A SB / 250 VAC
Isolation - test / working:	
Input to any.....	2,6 kVAC/300 VAC reinforced
Analog output to supply.....	2,6 kVAC/300 VAC reinforced
Status relay to supply.....	1,5 kVAC/150 VAC reinforced
Calibration temperature.....	20...28°C
EMC immunity influence.....	< +0,5% of span
Extended EMC immunity:	
NAMUR NE21, A.criterion, burst.....	< +1% of span
2-wire supply (terminal 44..43).....	25..16 VDC / 0..20 mA
Relative humidity.....	< 95% RH (non-cond.)
Dimensions with 4501/4511 (HxWxD).....	109 x 23,5 x 116/131 mm
Dimensions without 4501/4511 (HxWxD).....	109 x 23,5 x 104 mm
Protection degree.....	IP20

Input for RTD types:

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 N150, N1100, N120, N1100

Input for TC types:

B, E, J, K, L, N, R, S, T, U, W3, W5, LR

Current output:

Programmable measurement ranges.....	0...20 and 4...20 mA
Input resistance.....	Nom. 20 Ω + PTC 50 Ω

Voltage input:

Programmable measurement ranges.....	0...1 / 0,2...1 / 0,5 / 1,5 / 0,10 and 2...10 VDC
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Current output:

Programmable signal ranges.....	0...20, 0/2...10/0,20..4 mA
Load.....	≤ 600 Ω
Load stability.....	≤ 0,01% of span / 100 Ω
Sensor error detection.....	0 / 3,5 / 23 mA / none
NAMUR NE43 Upscale / Downscale.....	23 mA / 3,5 mA
Current limit.....	≤ 28 mA

Approvals:

DNV-GL, Ships & Offshore.....	Stand. f. Certification No. 2.4 ClassNK
UL, Standard for Safety.....	TA18527M
EAC.....	TR-CU 020/2011
EAC Ex.....	TR-CU 012/2011
SIL.....	IEC 61508

Observed authority requirements:

EMC.....	2014/30/EU
LVD.....	2014/35/EU
ATEX.....	2014/34/EU
RoHS.....	2011/65/EU

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 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.

FR AVERTISSEMENT

Tension Danger-Reuse 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. Seule PR electronics SARL est autorisée à réparer le module et à remplacer les fusibles.

FR AVERTISSEMENT

Ne pas ouvrir la plaque avant du module au risque d'endommager le connecteur de l'indicateur / la façade de programmation PR 4501. Les modules ne contiennent ni de commutateurs DIP ni de cavaliers.

FR CONSIGNES DE SECURITE

Réception et déballage Déballer le module sans l'endommager. Il est recommandé de garder l'emballage jusqu'à ce que le 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 l'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'un pièce soit chauffée au-delà des limites prescrites pour les températures ambiantes.

Tous les modules peuvent être installés dans catégorie de mesure / surtension II et degré de pollution 2. Ce module est conçu pour fonctionner en toute sécurité sous une altitude inférieure à 2000 m.

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 quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à PR electronics SARL.

Le raccordement électrique de l'alimentation générale, il est possible d'utiliser des fils multibrins seulement s'ils possèdent des embouts de câblage. Les connexions des alimentations et des entrées / sorties sont décrites dans le manuel du produit et sur l'étiquette de la face latérale du module. Les appareils sont équipés de borniers à vis et doivent être raccordés à une alimentation qui a une isolation double ou renforcée. L'interrupteur doit être à proximité du module et facile d'accès. Ce bouton doit être étiqueté avec la mention : peut couper la tension du module. Pour une installation sur le rail d'alimentation 9400, le module sera alimenté par le contrôleur d'alimentation 9410.

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.

Spécifications

Plage de température.....	-20° à +60°C
Tension d'alimentation.....	19,2...31,2 Vcc
Puissance nécessaire.....	≤ 2,1 W
Puissance dissipée max.....	≤ 1,7 W
Fusible.....	1,25 A SB / 250 Vca
Tension d'isolation, test / opération :	
Entrée aux autres.....	2,6 kVca/300 Vca renforcée
Sortie analogique à l'alimentation.....	2,6 kVca/300 Vca renforcée
Relais d'état à l'alimentation.....	1,5 kVAC/150 VAC renforcée
Température d'étalonnage.....	20...28°C
Immunité CEM.....	< +0,5% de l'échelle
Immunité CEI améliorée:	
NAMUR NE21, critère A, burst.....	< +1% de l'échelle
Alimentation 2-fils (bornes 44..43).....	25..16 Vcc / 0..20 mA
Humidité relative.....	< 95% HR (sans cond.)
Dimensions avec 4501/4511 (HxLxP).....	109 x 23,5 x 116/131 mm
Dimensions sans 4501/4511 (HxLxP).....	109 x 23,5 x 104 mm
Degré de protection.....	IP20

Entrée pour types Pt100:

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 N150, N1100, N120, N1100

Entrée pour types TC:

B, E, J, K, L, N, R, S, T, U, W3, W5, LR

Current output:

Programmable measurement ranges.....	0...20 and 4...20 mA
Input resistance.....	Nom. 20 Ω + PTC 50 Ω

Voltage input:

Programmable measurement ranges.....	0...1 / 0,2...1 / 0,5 / 1,5 / 0,10 and 2...10 VDC
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Current output:

Programmable signal ranges.....	0...20, 0/2...10/0,20..4 mA
Load.....	≤ 600 Ω
Load stability.....	≤ 0,01% of span / 100 Ω
Sensor error detection.....	0 / 3,5 / 23 mA / none
NAMUR NE43 Upscale / Downscale.....	23 mA / 3,5 mA
Current limit.....	≤ 28 mA

Approvals:

DNV-GL, Ships & Offshore.....	Stand. f. Certification No. 2.4 ClassNK
UL, Standard for Safety.....	TA18527M
EAC.....	TR-CU 020/2011
EAC Ex.....	TR-CU 012/2011
SIL.....	IEC 61508

Observed authority requirements:

EMC.....	2014/30/EU
LVD.....	2014/35/EU
ATEX.....	2014/34/EU
RoHS.....	2011/65/EU

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

	9116B	9116A
IECEx	[Ex ia Ga] IIC/IB/IIA Ex nA nC IIC T4 Gc [Ex ia Da] IIC / [Ex ia Ma] I	IECEx KEM 10.0022X Installation Drawing: 9116QIO1
ATEX	II (1) G [Ex ia Ga] IIC/IB/IIA II 3G Ex nA nC IIC T4 Gc II (1) D [Ex ia Da] IIC (M1) [Ex ia Ma] I	KEMA 10ATEX 0053 X Installation Drawing: 9116QA01 PR 14ATEX0101 X II 3 G Ex nA nC IIC T4 Gc
FM	Install in CL I, Div. 2, Gr. A-D T4 Provides IS circuits to CL I, HII, Div. 1/2, Gr. A-G or CL I, Zn2 AEx/Ex nA nC [ia] IIC T4	3038267 Installation Drawing: 9116QF01
INMETRO	[Ex ia Ga] IIC/IB/IIA Ex nA nC IIC T4 Gc [Ex ia Da] IIC / [Ex ia Ma] I	DEKRA 16.0004 X Installation Drawing: 9116QB01
COE	[Ex ia Ga] IIC/IB/IIA	P373494/1

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

Hazardous Substances						
Part Name	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

DE WARNUNG

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.

DE WARNUNG

Gefährliche Spannung 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. Fehlersuche im Gerät. Reparaturen des Gerätes und Austausch von Sicherungen dürfen nur von PR electronics A/S vorgenommen werden.

DE WARNUNG

Die Frontplatte des Gerätes darf nicht geöffnet werden, weil hierdurch die Kontakte zur Kontaktierung des frontdisplays 4501 beschädigt werden können. Die Geräte enthalten keine internen DIP-Schalter oder Programmierbrücken.

DE SICHERHEITSGEDELN

Empfang und Auspacken Packen Sie das Gerät 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 Staubbildung 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 können für Mess- / Überspannungskategorie II und Verschmutzungsgrad 2 benutzt werden. Das Gerät ist so konzipiert, dass es auch in einer Einsetzhöhe von bis zu 2000 m noch sicher funktioniert.

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.

Der Einsatz von verdrehter Leitung ist nicht erlaubt außer die Enden sind mit Aderendhülsen versehen. Eine Beschreibung von Eingangs- / Ausgangs- und Versorgungsschlüssen befindet sich a im Produktmanual und auf dem Typenschild. Das Gerät ist mit Feldverdrahtungsklemmen ausgestattet und wird von einem Netzteil mit doppelter / verstärkter Isolierung versorgt. Der Netzschalter sollte leicht zugänglich und in der Nähe des Gerätes sein. Der Netzschalter sollte mit einem Schild gekennzeichnet sein, auf dem steht, dass durch Betätigung dieses Schalters das Gerät vom Netz genommen wird. Für den Anschluss auf der Power Rail 9400 wird das Gerät über das Power Control Unit 9410 versorgt.

Kalibrrierung 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.

Elektrische Daten

Umgebungstemperatur.....	-20°C bis +60°C
Versorgungsspannung.....	19,2...31,2 VDC
Leistungsbedarf max.....	≤ 2,1 W
Max. Verlustleistung.....	≤ 1,7 W
Sicherung.....	1,25 A T / 250 VAC
Isolationsspannungen, Test / Betrieb:	
Eingang zu igenwelchen.....	2,6 kVAC/300 VAC verstärk.
Analogausgang zur Versorgung.....	2,6 kVAC/300 VAC verstärk.
Statusrelais zur Versorgung.....	1,5 kVAC/150 VAC verstärk.
Kalibrierungstemperatur.....	20...28°C
EMV Störspannungseinfluss.....	< +0,5% d. Messspanne
Erweiterter EMV Störfestigkeit:	
NAMUR NE21, Kriterium A, Burst.....	< +1% d. Messspanne
2-Draht-Versorg. (Klemme 44..43).....	25..16 VDC / 0..20 mA
Relative Luftfeuchtigkeit.....	< 95% RH (nicht kond.)
Abmessungen mit 4501/4511 (HxWxD).....	109 x 23,5 x 116/131 mm
Abmessungen ohne 4501/4511 (HxWxD).....	109 x 23,5 x 104 mm
Schutzart.....	IP20

Eingang für WTH-Typen:

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000 N150, N1100, N120, N1100

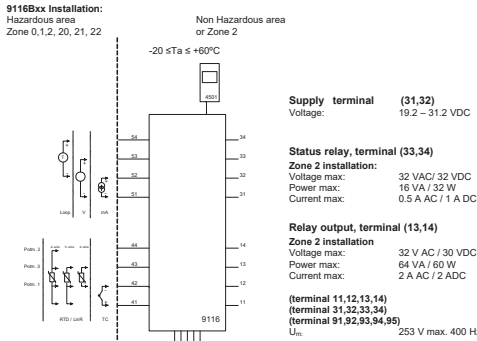
Eingang

ATEX Installation drawing 9116QA01-V8R0

For safe installation of 9116 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.

For installation in Zone 2 the following must be observed. The 4501 programming module is to be used solely with PR electronics' modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

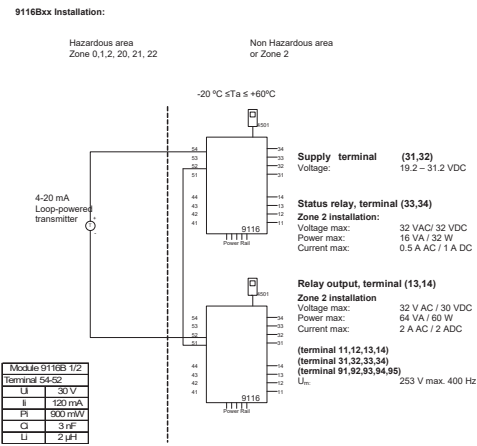
ATEX Certificate: KEMA 10 ATEX 0053 X
Marking 9116Bxx: II (1) G [Ex ia Ga] IIC/IIIB/IIA
 II 3 G Ex nA nC IIC T4 Gc
 II (1) D [Ex ia Da] IIC
 I (M) [Ex ia Ma]
Marking 9116Axx: II 3 G Ex nA nC IIC T4 Gc
Standards: EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010



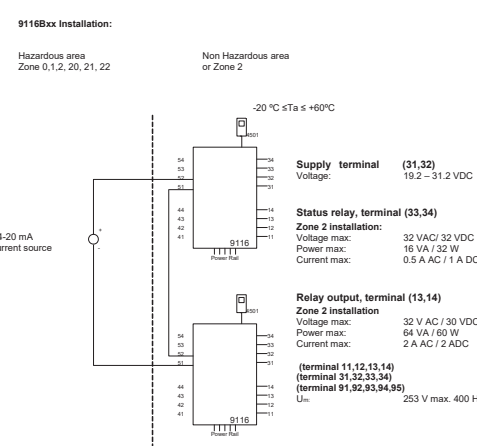
Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 30 V	U _o 30 V	U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA	I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW	P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH

Installation notes:
 For group I (mines), the parameters for group IIA apply.
 Install in pollution degree 2, overvoltage category II as defined in EN60664-1
 Do not separate connectors when energized and an explosive gas mixture is present.
 Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.
 Disconnect power before servicing.
 The wiring of unused terminals is not allowed.

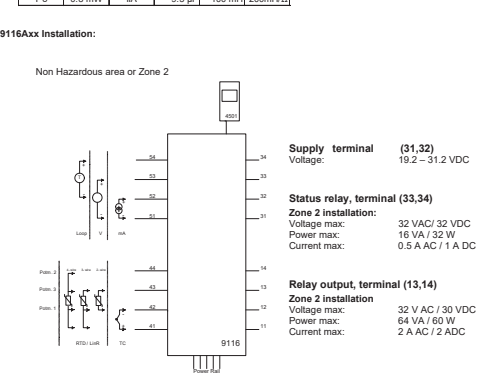
In type of protection [Ex ia Da] the parameters for intrinsic safety for gas group IIB are applicable.
 For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex e, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.
 For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX0152 X) is allowed.



Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 28 V	U _o 28 V	U _o 28 V	U _o 28 V
I _o 80 mA	I _o 80 mA	I _o 80 mA	I _o 80 mA
P _o 224 mW	P _o 224 mW	P _o 224 mW	P _o 224 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH



Module 9116B1/2	Terminal 51-52
U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH



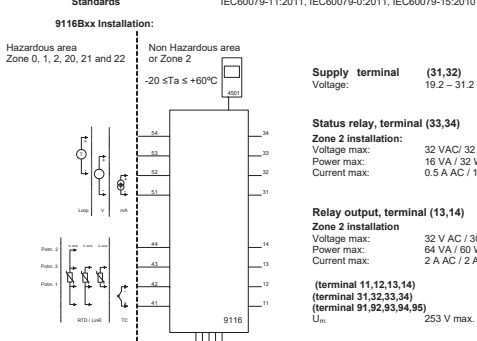
For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex e, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.
 For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX0152 X) is allowed.
 The 4501 programming module is to be used solely with PR electronics' modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

IECEx Installation drawing 9116QI01-V8R0

For safe installation of 9116 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.

For installation in Zone 2 the following must be observed. The 4501 programming module is to be used solely with PR electronics modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

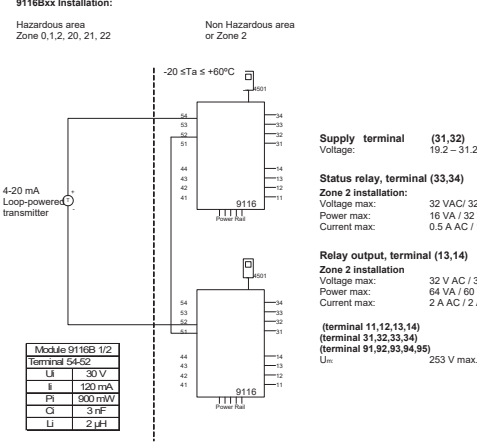
IECEx Certificate: KEM 10.0022X
Marking 9116Bxx: [Ex ia Ga] IIC/IIIB/IIA
 Ex nA nC IIC T4 Gc
 [Ex ia Ma]
Marking 9116Axx: Ex nA nC IIC T4 Gc
Standards: IEC60079-0:2011, IEC60079-0:2011, IEC60079-15:2010



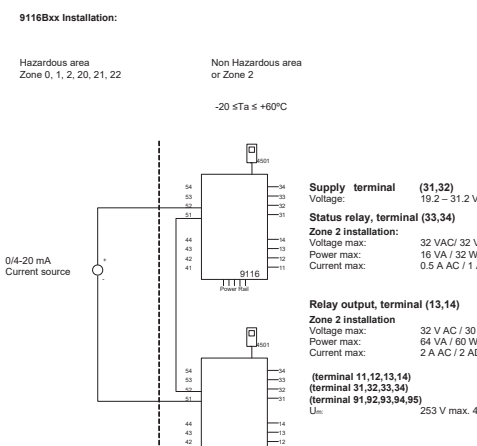
Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 30 V	U _o 30 V	U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA	I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW	P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH

Installation notes:
 For group I (mines), the parameters for group IIA apply.
 Install in pollution degree 2, overvoltage category II as defined in IEC60664-1
 Do not separate connectors when energized and an explosive gas mixture is present.
 Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.
 Disconnect power before servicing.
 The wiring of unused terminals is not allowed.

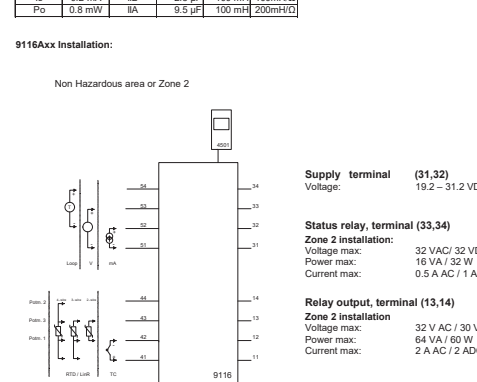
In type of protection [Ex ia Da] the parameters for intrinsic safety for gas group IIB are applicable.
 For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex e, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.
 For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX0152 X) is allowed.



Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 28 V	U _o 28 V	U _o 28 V	U _o 28 V
I _o 80 mA	I _o 80 mA	I _o 80 mA	I _o 80 mA
P _o 224 mW	P _o 224 mW	P _o 224 mW	P _o 224 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH



Module 9116B1/2	Terminal 51-52
U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH



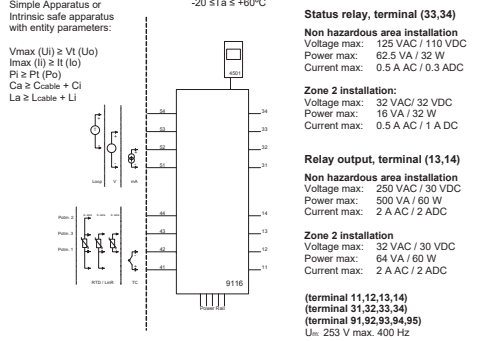
For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex e, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.
 For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX0152 X) is allowed.
 The 4501 programming module is to be used solely with PR electronics' modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

FM Installation drawing 9116QF01-V6R0

For safe installation of 9116 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.

For installation in Zone 2 / Division 2 the following must be observed. The 4501 programming module is to be used solely with PR electronics modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

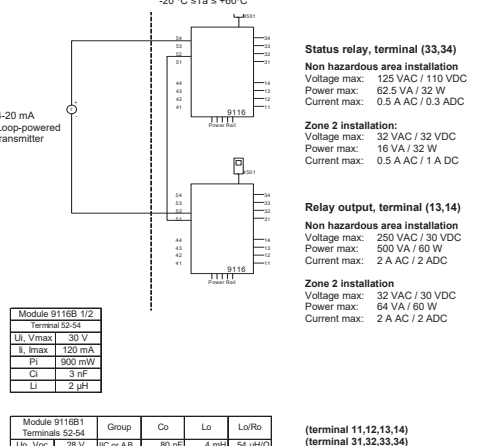
FM-US Certificate: 3038267
Hazardous Classified Location: Class III/III, Division 1, Group A,B,C,D,E,F,G or Class I, Zone 0/1 Group IIC, [AEx ia] IIC or Class I, Zone 0/1 Group IIC, [Ex ia] IIC
Unclassified Location or Hazardous Classified Location: Class I, Division 2, Group A,B,C,D T4 or Class I, Zone 2, Group IIC T4



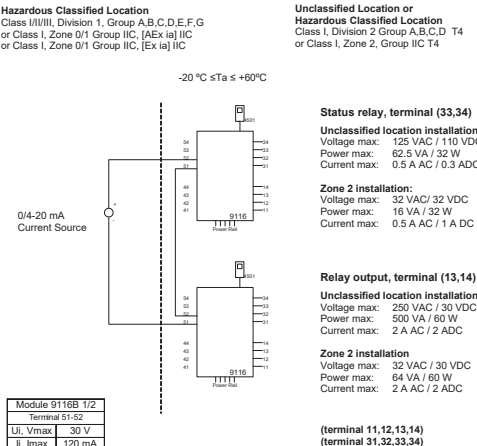
Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 30 V	U _o 30 V	U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA	I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW	P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH

Installation notes:
 The installation and wiring shall be in accordance with the Canadian Electrical Code for Canada and National Electrical Code NFPA 70, Article 500 or 505 for installation in USA.
 The module must be supplied from a Power Supply having double or reinforced insulation.
 The use of stranded wires is not permitted for mains wiring except where wires are fitted with cable ends.
 For installation on the 9400 Power Rail the power must be supplied from Power Control Module Unit 9410.
 Install in pollution degree 2 or better, overvoltage category I or II.
 The module must be installed in an enclosure suitable for the environment for which it is used.
 In Class I, Division 2 / Zone 2 installations, the subject equipment shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code for USA or the Canadian Electrical Code for Canada.
 The module is galvanic isolated and does not require grounding.
 Use 60 / 75 °C Copper Conductors with wire size AWG: (28-14).
Warning: Substitution of components may impair intrinsic safety.
Warning: To prevent ignition of the explosive atmosphere, disconnect power before servicing and do not separate connectors when energized and an explosive gas mixture is present.
Warning: Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.

Hazardous Classified Location: Class III/III, Division 1, Group A,B,C,D,E,F,G or Class I, Zone 0/1 Group IIC, [AEx ia] IIC or Class I, Zone 0/1 Group IIC, [Ex ia] IIC
Unclassified Location or Hazardous Classified Location: Class I, Division 2, Group A,B,C,D T4 or Class I, Zone 2, Group IIC T4



Module 9116B1	Terminal 51-52	Module 9116B2	Terminal 51-52
U _o 28 V	U _o 28 V	U _o 28 V	U _o 28 V
I _o 80 mA	I _o 80 mA	I _o 80 mA	I _o 80 mA
P _o 224 mW	P _o 224 mW	P _o 224 mW	P _o 224 mW
C _o 3 nF	C _o 3 nF	C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH	L _o 2 μH	L _o 2 μH



Module 9116B1/2	Terminal 51-52
U _o 30 V	U _o 30 V
I _o 120 mA	I _o 120 mA
P _o 360 mW	P _o 360 mW
C _o 3 nF	C _o 3 nF
L _o 2 μH	L _o 2 μH



For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex e, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.
 For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX0152 X) is allowed.
 The 4501 programming module is to be used solely with PR electronics' modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

INMETRO Desenhos para Instalação 9116QB01-V7R0

Para instalação segura do 9116B o manual seguinte deve ser observado. O módulo deve ser instalado somente por profissionais qualificados que estão familiarizados com as leis nacionais e internacionais, diretrizes e normas que se aplicam a esta área.
Ano de fabricação pode ser obtido a partir dos dois primeiros dígitos do número de série.

Para a instalação na Zona 2 o seguinte deve ser