



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 adfærd.

For at undgå faren for elektriske stød og brand skal sikkerhedsreglerne overholdes, og vejledninger skal læses.

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

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

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

UK WARNING

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

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.

FR AVERTISSEMENT

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. Seule PR electronics SARL est autorisée à réparer le module et à remplacer les fusibles.

AVERTISSEMENT

Ne pas ouvrir la plaque avant du module car cela 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.

DE WARNUNG

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 Schutzeinrichtungen des Gerätes beeinträchtigt.

WARNUNG

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.

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.

SIKKERHEDSREGLER

Mottagelse og upakning

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.

Allé moduler kan anvendes i Måle- / overspændingskategorii II og Foreningsgrad 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 henvisning til den lokale forhandler eller alternativt direkte til PR electronics A/S.

Det er ikke tilladt at benytte flertrådet ledning ved tilslutning af forsyningsledning med mindre ledningsmateriale er forsynet med ledningsklemmer.

Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktmanualen og på sideskiltet. Modulet er forsynet med skrueterminaler og skal forsynes fra en dobbeltisoleret / forstærket isoleret spændingsforsyning. 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.

Ved installation på Power Rail 9400 bliver forsyningsspændingen leveret af Power Control Unit 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 forsvarelig måde i tavler eller lignende, så betjening ikke medfører fare for liv eller materiel. Dvs., at der ikke er berøringfare, og at modulet er placeret, så det er let at betjene.

Rengøring

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

CONSIGNES DE SECURITE

Réception et déballage

Déballer le module sans l'endommager. Il est recommandé de vérifier l'emballage du module avant 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 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.

Pour 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.

Etaionnement et réglage

Lors des opérations d'étaionnement et de réglage, il convient d'effectuer les mesures et les connexions 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 max.: < 95% RH (sans cond.)
1 / 2 voies: < 0,8 W / 1,4 W
Fusible: 400 mA SB / 250 Vca
Tension d'isolation, test / opération: < +1% of span
Entrée aux autres: 2,6 kVAC/300 Vca renforcée
Sortie analogique à l'alimentation: 1,5 kVAC/150 Vca renforcée
Relais d'état à l'alimentation: < 0,5% de f.échelle
Humidité relative: < 95% de f.échelle
Immunité CEM: < 0,5% de f.échelle
Immunité CEM améliorée: < 0,5% de f.échelle
NAMUR NE21, critère A, burst: < ±1% de f.échelle
Alimentation 2-fils (bornes 44...43): 25...16 Vcc / 0...20 mA
Humidité relative: < 95% RH (sans cond.)
Dimensions, avec 4501 (HxWxD): 109 x 23,5 x 116 mm
Dimensions, without 4501 (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
Ni50, Ni100, Ni120, Ni1000

Input for TC types:

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

Current input:

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

Current output:

Programmable signal ranges: 0...20/4...20/20...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

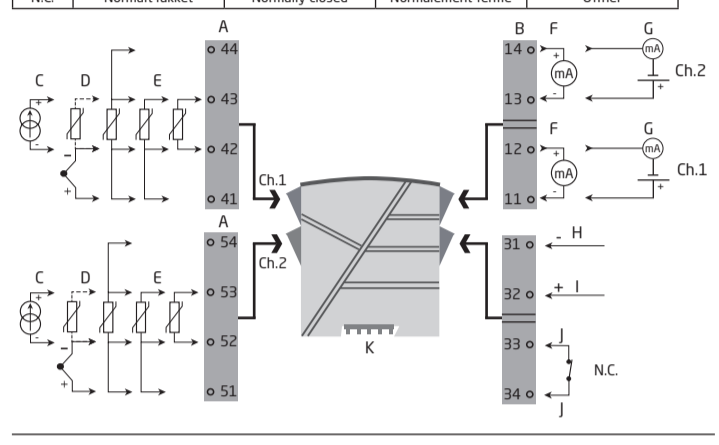
Approvals:

DNV-GL, Ships & Offshore: Stand. f. Certification No. 2.4
UL, Standard for Safety: UL 61010-1
EAC: TR-CU 020/2011
EAC Ex: TR-CU 012/2011
SIL: IEC 61508

Observed authority requirements:

EMC: 2014/30/UE
LVD: 2014/35/UE
ATEX: 2014/34/UE
RoHS: 2011/65/UE

	DK	UK	FR	DE
A	Indgangssignaler	Input signals	Signaux d'entrée	Eingangssignale
B	Udgangssignaler	Output signals	Signaux de sortie	Ausgangssignale
C	Strøm	Current	Courant	Strom
D	TC	TC	TC	TE
E	RTD	RTD	RTD	wTH
F	0/4...20 mA udgang	0/4...20 mA output	Sortie 0/4...20 mA	0/4...20 mA Ausgang
G	2-tråds 4...20 mA udgang	2-wire 4...20 mA output	Sortie 2-fils 4...20 mA	2-Draht-Ausgang 4...20 mA
H	Forsyning -	Supply -	Alimentation -	Versorgung -
I	Forsyning +19,2...31,2 VDC	Power supply +19,2...31,2 VDC	Alimentation +19,2...31,2 Vcc	2-Draht-Ausgang +19,2...31,2 VDC
J	Modulstatus	Device status	Etat du module	Gerätestatus
K	Forsyning via power rail	Power supply via power rail	Alimentation par rail	Versorgung über Power Rail
Ch.1	Kanal 1	Channel 1	Voie 1	Kanal 1
Ch.2	Kanal 2	Channel 2	Voie 2	Kanal 2
N.C.	Normalt lukket	Normally closed	Normalement fermé	Öffner



- DK** Påsætning af PR4501/4511:
 - Indst. tappene på 4501/4511 i hulernerne øverst på modulet.
 - Swing 4501/4511 på plads.
 - Aftagning af 4501/4511.
 - Tryk på udløserknop i bunden af 4501/4511 og swing 4501/4511 op.
- UK** Mounting of PR4501/4511:
 - Insert the tabs of the PR 4511 / 4501 into the holes at the top of the device.
 - Hinge the PR 4511 / 4501 down until it snaps into place.
 - Push the release button on the bottom of the PR 4511 / 4501 and hinge the the PR 4511 / 4501 out and up.
 - With the PR 4511 / 4501 hinged up, remove from holes at the top of the device.
- DE** Anbringen des PR4501/4511:
 - Einbringen der beiden Fixierstifte des PR4501/4511 in die Öffnungen an der oberen Frontplatte des Gerätes.
 - Das Display 4501/4511 an der Unterkante einrasten lassen.
 - Entfernen des PR4501/4511 an der Unterseite betätigen und das 4501/4511 vorsichtig abnehmen.
- FR** Montage du PR4501/4511:
 - Insérez les crochets du 4501/4511 dans les trous en haut du module.
 - Poussez le bas du 4501/4511 vers le module.
 - Démontage du 4501/4511:
 - Appuyez sur le bouton de déclenchement en dessous du 4501/4511, puis tirez le 4501/4511 vers le haut.

Elektriske specifikationer

Specifikationsområde: -20°C til +60°C
Forsyningsspænding: 19,2...31,2 VDC
Max. forbrug, 1 / 2 kanaler: < 0,8 W / 1,4 W
Max. effekttæthed, 1 / 2 kanaler: < 0,8 W / 1,4 W
Sikring: 400 mA SB / 250 VAC

Isoleringskrav, 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-immunitetspårvirkning: < ±0,5% af span

Udvædet EMC-immunitet:

NAMUR NE21, A.krit. glnststet: < ±1% af span
2-trådsforsyning (klemme 44...43): 25...16 VDC / 0...20 mA
Relativ luftfugtighed: < 95% RH (ikke kond.)
Mål, med 4501 (H x B x D): 109 x 23,5 x 116 mm
Mål, uden 4501 (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
Ni50, Ni100, Ni120, Ni1000

Indgang for TC typer:

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

Current input:

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

Current output:

Programmable signal ranges: 0...20/4...20/20...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
UL, Standard for Safety: UL 61010-1
EAC: TR-CU 020/2011
EAC Ex: TR-CU 012/2011
SIL: IEC 61508

Observed authority requirements:

EMC: 2014/30/UE
LVD: 2014/35/UE
ATEX: 2014/34/UE
RoHS: 2011/65/UE

Elektriske Daten

Umgebungstemperatur: -20°C bis +60°C
Versorgungsspannung: 19,2...31,2 VDC
Leistungsbedarf, max.: < 0,8 W / 1,4 W
Max. Verlustleistung, 1 / 2 Kan.: < 0,8 W / 1,4 W
Sicherung: 400 mA SB / 250 VAC

Isolationsspannungen, Test / Betrieb:

Eingang zu Igenwelchen: 2,6 kVAC/300 VAC verstärkt.
Analogausgang zur Versorgung: 2,6 kVAC/300 VAC verstärkt.
Statusrelais zur Versorgung: 1,5 kVAC/150 VAC verstärkt.
Kalibrierungstemperatur: 20...28°C
EMV Störspannungseinfluss: < ±0,5% d. Messspanne
Erweiterte 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 (HxBxT): 109 x 23,5 x 116 mm
Abmess., ohne 4501 (HxBxT): 109 x 23,5 x 104 mm
Schutzart: IP20

Eingang für WTH-Typen:

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250, Pt300, Pt400, Pt500, Pt1000
Ni50, Ni100, Ni120, Ni1000

Eingang für TC-Typen:

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

Stromeingang:

Programmierbare Messbereiche: 0...20 und 4...20 mA
Eingangswiderstand: Nom. 20 Ω ± PTC 50 Ω

Stromausgang:

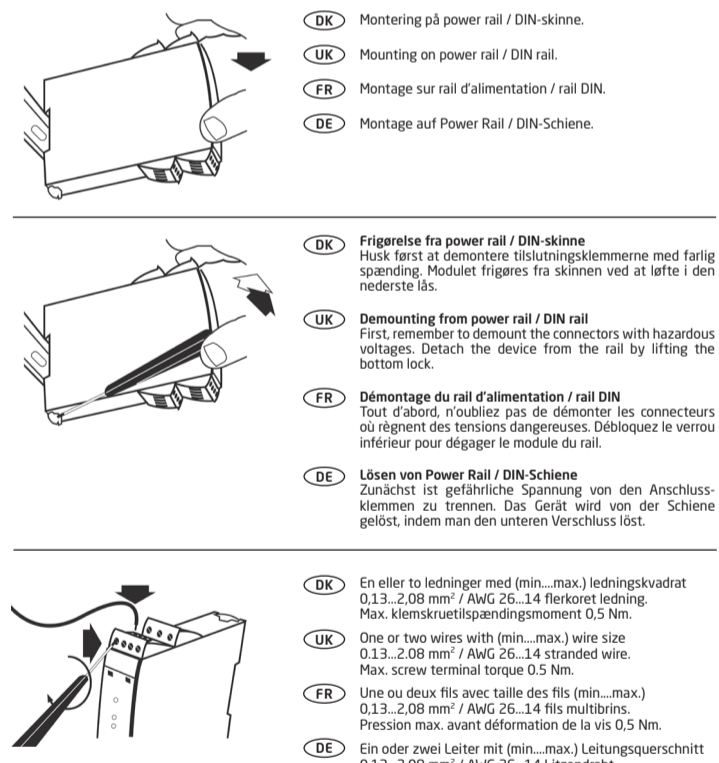
Programmierbare Signalebereiche: 0...20/4...20/20...0/20...4 mA
Belastung: < 600 Ω
Belastungsstabilität: < 0,01% d. Messsp. / 100 Ω
Fehlerreaktion: 0 / 3,5 / 23 mA / keine
NAMUR NE43 Upscale / Downscale: 23 mA / 3,5 mA
Strombegrenzung: < 28 mA

Zulassungen:

DNV-GL, Ships & Offshore: Stand. f. Certification No. 2.4
UL, Standard for Safety: UL 61010-1
EAC: TR-CU 020/2011
EAC Ex: TR-CU 012/2011
SIL: IEC 61508

Eingehaltene Behördenvorschriften:

EMV: 2014/30/UE
LVD: 2014/35/UE
ATEX: 2014/34/UE
RoHS: 2011/65/UE



EU DECLARATION OF CONFORMITY

(9113DoC_102)

As manufacturer **PR electronics A/S, Lerbakken 10, DK-8410 Rønde** hereby declares that the following products:
Type: 9113
Name: Temperature / mA converter
From serial no.: 161458112
is in conformity with the following directives and standards:

The EMC Directive 2014/30/UE 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/UE and later amendments
EN 61010-1 : 2010

The ATEX Directive 2014/34/UE and later amendments
EN 60079-0 : 2012 + A11 : 2013, EN 60079-11 : 2012 and EN 60079-15 : 2010
ATEX certificate: PR 14ATEX0101 X (9113A)
ATEX certificate: KEMA 07ATEX0148 X (9113B)
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/UE and later amendments
EN 50581 : 2012

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

Rønde, 11 December 2017
Stig Lindemann, CTO
Manufacturer's signature

	DK Ex-godkendelser	UK LS approvals	FR Approbations S.I.	DE Ex-Zulassungen
IECEx	[Ex ia Ga] IIC/IIIB/IIA Ex nA nC IIC T4 Gc [Ex ia Da] IIC / [Ex ia Ma] I		IECEx KEM 09.0052X Installation Drawing: 9113QF01	
ATEX	II (1) G [Ex ia Ga] IIC/IIIB/IIA II 3G Ex nA nC IIC T4 Gc II (1) D [Ex ia Da] IIC (M1) [Ex ia Ma] I		KEMA 07ATEX 0148 X Installation Drawing: 9113QA01	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, III, Div. 1/2, Gr. A-G or CL I, Zn2 AEx/Ex nA nC [ia] IIC T4		3038279 Installation Drawing: 9113QF01	
INMETRO	Ex nA nC IIC T4 Gc [Ex ia Ga] IIC/IIIB/IIA [Ex ia Da] IIC / [Ex ia Ma] I		DEKRA 16.0003 X Installation Drawing: 9113QB01	
COE	[Ex ia Ga] IIC/IIIB/IIA		P337349/3	

Compatibilité avec les normes:
CEM: 2014/30/UE
DBT: 2014/35/UE
ATEX: 2014/34/UE
RoHS: 2011/65/UE

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

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

9113B

SN: YZZZZZZZ

PR electronics A/S, Lerbakken 10, 8410 Rønde
pr@prelectronics.dk, www.prelectronics.com, 91138289

30°C ~ Ta 50°C
19.2 to 31.2 VDC
max. 3 W
Relay: N.C.
34: Status

41: Input ch1 4W / 3W / TC
42: Input ch1 4W / 3W / mA / TC
43: Input ch1 4W / 3W / 2W / mA
44: Input ch1 4W / 3W / 2W / mA

51: Input ch2 4W / 3W / TC
52: Input ch2 4W / 3W / mA / TC
53: Input ch2 4W / 3W / 2W / mA
54: Input ch2 4W / 3W / 2W / mA

31: Supply -
32: Supply +
33: Status
34: Status

11: Output ch1 mA / Loop +
12: Output ch1 mA / Loop -
13: Output ch2 mA / Loop +
14: Output ch2 mA / Loop -

II (1) G [Ex ia Ga] IIC/IIIB/IIA
II 3G Ex nA nC IIC T4 Gc
II (1) D [Ex ia Da] IIC (M1) [Ex ia Ma] I

IECEx KEM 09.0052X Install: 9113QF01
KEMA 07ATEX 0148X Install: 9113QA01

Attention! Read manual before installation / operation. Life limited product. Life limited / operation.

Segurança [Ex ia Ga] IIC/IIIB/IIA
Ex nA nC IIC T4 Gc
[Ex ia Da] IIC [Ex ia Ma] I
DEKRA 16.0003X Install: 9113QB01

TEMPERATURE / mA CONVERTER 9113
Ver: 9113-004

DK Sideskilt

UK Side label

FR Etiquette

DE Typenschild

Typenr.
Type no.
No. de type.
Typennr.

Produktionsfrå fremgår af de første cifre i serienummer.
Year of manufacture can be taken from the first two digits in the serial number.
L'année de production est définie grâce aux deux premiers chiffres du numéro de série.
Die ersten beiden Ziffern der Seriennummer geben das Produktionsjahr an.

Benforbindelser.
Pin connections.
Raccordement des bornes.
Klemmenanschluss.

Godkendelser.
Approvals.
Homologations.
Zulassungen.

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

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

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

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

ATEX Installation drawing 9113QA01-V5R0

For safe installation of 9113 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.

4501
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 07ATEX0148 X
Marking: II (1) G [Ex ia Ga] IIC/IIA/IIA
Ex nA nC IIC T4 Gc
II (1) D [Ex ia Da] IIC
I (M1) [Ex ia Ma] I

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

Supply terminal (31,32)
Voltage: 19.2 – 31.2 VDC

Status Relay, terminal (33,34)
Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

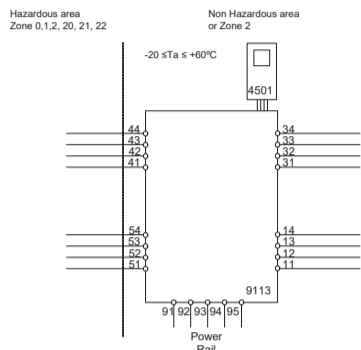
Installation notes:
Install in pollution degree 2, overvoltage category II as defined in EN60664-1.
Do not separate connectors when energized and an explosive gas mixture is present.
Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.
Disconnect power before servicing.
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.

9113Bx Installation:



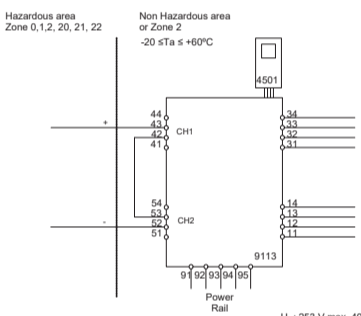
Ex input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)
U_i: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
LoRo: 892 µHΩ

	IIC	IIB	IIA or I
C _s	5 µF	50 µF	1000 µF
L _s	100 mH	300 mH	700 mH

U_i: 10 V
I_c: 30 mA
C_c: 30 nF
L_c: 820 nH

U_o: 253 V max. 400 Hz
Supply / Output:
(terminal 11,12,13,14)
(terminal 31,32,33,34)
(terminal 91,92,93,94,95)

9113Bx Installation:



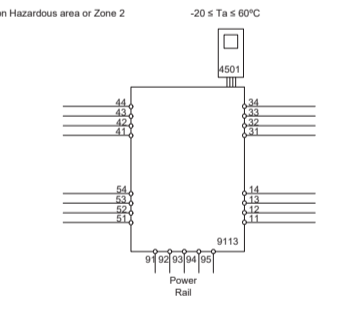
Ex input
CH1 (terminal 43)
CH2 (terminal 52)
U_i: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
LoRo: 445 µHΩ

	IIC	IIB	IIA or I
C _s	0.3 µF	1.6 µF	8 µF
L _s	80 mH	250 mH	600 mH

U_i: 10 V
I_c: 30 mA
C_c: 15 nF
L_c: 1.7 µH

U_o: 253 V max. 400 Hz
Supply / Output:
(terminal 11,12,13,14)
(terminal 31,32,33,34)
(terminal 91,92,93,94,95)

9113Ax Installation:



Supply: 19.2 – 31.2 VDC
(terminal 31,32)
(terminal 91,92,93,94,95)

Input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)

Status Relay, terminal (33,34)
Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

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.

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 Installation drawing 9113Q01-V5R0

For safe installation of 9113 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.

4501
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 09.0052 X
Marking: [Ex ia Ga] IIC/IIA/IIA
Ex nA nC IIC T4 Gc
[Ex ia Da] IIC
[Ex ia Ma] I

Standards: IEC6079-0:2011, IEC60079-11:2011, IEC60079-15:2010

Supply terminal (31,32)
Voltage: 19.2 – 31.2 VDC

Status Relay, terminal (33,34)
Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

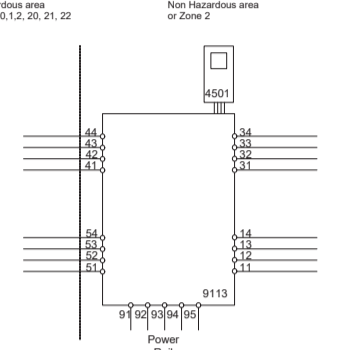
Installation notes:
Install in pollution degree 2, overvoltage category II as defined in IEC60664-1.
Do not separate connectors when energized and an explosive gas mixture is present.
Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.
Disconnect power before 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 IECEx KEM 08.0025X) is allowed.

9113Bx Installation:



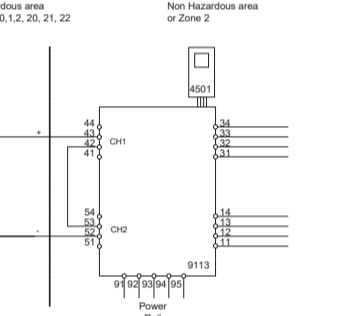
Ex input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)
U_i: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
LoRo: 892 µHΩ

	IIC	IIB	IIA or I
C _s	5 µF	50 µF	1000 µF
L _s	100 mH	300 mH	700 mH

U_i: 10 V
I_c: 30 mA
C_c: 30 nF
L_c: 820 nH

U_o: 253 V max. 400 Hz
Supply / Output:
(terminal 11,12,13,14)
(terminal 31,32,33,34)
(terminal 91,92,93,94,95)

9113Bx Installation:



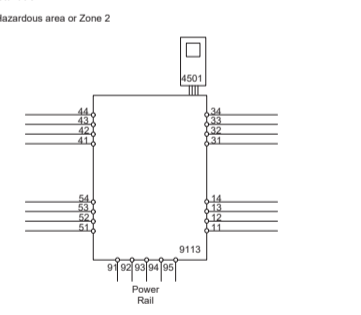
Ex input
CH1 (terminal 43 +)
CH2 (terminal 52 -)
U_i: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
LoRo: 445 µHΩ

	IIC	IIB	IIA
C _s	0.3 µF	1.6 µF	8 µF
L _s	80 mH	250 mH	600 mH

U_i: 10 V
I_c: 30 mA
C_c: 15 nF
L_c: 1.7 µH

U_o: 253 V max. 400 Hz
Supply / Output:
(terminal 11,12,13,14)
(terminal 31,32,33,34)
(terminal 91,92,93,94,95)

9113Ax Installation:



Supply: 19.2 – 31.2 VDC
(terminal 31,32)
(terminal 91,92,93,94,95)

Input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)

Status Relay, terminal (33,34)
Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

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 IECEx KEM 08.0025X) is allowed.

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.

FM Installation drawing 9113QF01-V4R0

9113
For safe installation of 9113B 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.

4501
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.

c-EM-ur Certificate: 3038279

Hazardous Classified Location

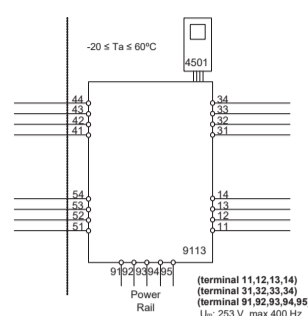
Class I/III, Division 1, Group A,B,C,D,E,F,G
or Class I, Zone 0/1 Group IIC, [AEx ia] IIC
or Class I, Zone 0/1 Group IIC, [Ex ia] IIC

Unclassified Location or Hazardous Classified Location

Class I, Division 2, Group A,B,C,D,T4
or Class I, Zone 2 Group IIC T4

Intrinsically safe apparatus
entity parameters:

V_{max} (U_i) ≥ V_t (U_o)
I_{max} (I_i) ≥ I_t (I_o)
P_i ≥ P_o
C_a ≥ C_{min} + C_i
L_a ≥ L_{min} + L_i
The sum of capacitance and inductance of cable and intrinsic safe equipment must be less or equal to C_a and L_a



Ex input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)
U_i (U_o): 8.7 V
I_c (I_o): 18.4 mA
P_c: 40 mW
LoRo: 892 µHΩ

	IIC / Group A,B	IIB / Group C,E,F	IIA / Group D,G
C _s / C _i	5 µF	50 µF	1000 µF
L _s / L _i	100 mH	300 mH	700 mH

U_i: 10 V
I_c: 30 mA
C_c: 30 nF
L_c: 820 nH

Status Relay, terminal (33,34)

Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

Zone 2 installation:
Voltage max: 32 VAC / 32 VDC
Power max: 16 VA / 32 W
Current max: 0.5 A AC / 1 ADC

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 when 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, overvoltage category II.

The module must be installed in an enclosure suitable for the environment for which it is used.

For installation in Zone 2 or Division 2, the module must be installed in a suitable outer enclosure according to the regulations in the CEC for Canada or NEC for USA.

The module is galvanic isolated and does not require grounding.

Use 60 / 75 °C Copper Conductors with wire Size AWG: (26-14).

Warning: Substitution of components may impair intrinsic safety.

Warning: To prevent ignition of the explosive atmospheres, disconnect power before servicing and do not separate connectors when energized and an explosive gas mixture is present.

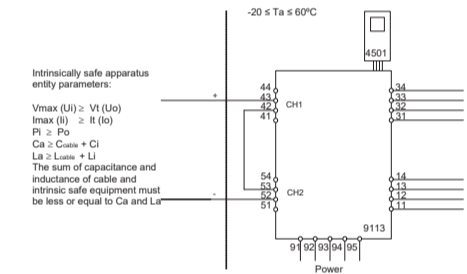
Warning: Do not mount or remove modules from the Power Rail when an explosive gas mixture is present.

Hazardous Classified Location

Class I/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



Ex input
CH1 (terminal 42,43)
CH2 (terminal 52,53)
U_i (U_o): 17.4 V
I_c (I_o): 18.4 mA
P_c: 80 mW
LoRo: 445 µHΩ

	IIC / Group A,B	IIB / Group C,E,F	IIA / Group D,G
C _s / C _i	0.3 µF	1.6 µF	8 µF
L _s / L _i	80 mH	250 mH	600 mH

U_i: 10 V
I_c: 30 mA
C_c: 15 nF
L_c: 1.7 µH

(terminal 11,12,13,14)
(terminal 31,32,33,34)
(terminal 91,92,93,94,95)
U_o: 253 V, max 400 Hz

9113Ax Installation:



Supply: 19.2 – 31.2 VDC
(terminal 31,32)
(terminal 91,92,93,94,95)

Input
CH1 (terminal 41,42,43,44)
CH2 (terminal 51,52,53,54)

Status Relay, terminal (33,34)
Voltage max: 125 VAC / 110 VDC
Power max: 62.5 VA / 32 W
Current max: 0.5 A AC / 0.3 ADC

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 IECEx KEM 08.0025X) is allowed.

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.

INMETRO Desenhos para Instalação-V5R0

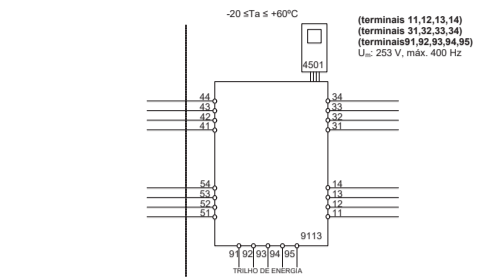
Para instalação segura do 9113B o manual seguinte deve ser observado. O módulo deve ser instalado somente por profissionais qualificados que estão familiarizados com as leis nacionais e internacionais, diretivas e normas que se aplicam a esta área.
Ano de fabricação pode ser obtido a partir dos dois primeiros dígitos do número de série.

4501
Para a instalação na Zona 2 o seguinte deve ser observado. O módulo de programação de 4501 deve ser utilizado apenas com os módulos PR electronics. É importante que o módulo esteja intacto e não tenha sido alterado ou modificado de qualquer maneira.
Apenas os módulos 4501 livres de poeira e umidade devem ser instalados.

ATEX Certificate: KEMA 16.0003X
Marking: [Ex ia Ga] IIC/IIA/IIA
Ex nA nC IIC T4 Gc
[Ex ia Da] IIC
[Ex ia Ma] I

Standards: ABNT NBR IEC 60079-0:2013, ABNT NBR IEC 60079-11:2013, ABNT NBR IEC 60079-15:2012

Instalação 9113Bx 2 Circuitos



Entrada Ex
CH1 (terminais 41,42,43,44)
CH2 (terminais 51,52,53,54)
U_i: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
LoRo: 892 µHΩ

	IIC	IIB	IIA	I
C _s	5 µF	50 µF	1000 µF	1000 µF
L _s	100 mH	300 mH	700 mH	700 mH

U_i: 10 V
I_c: 30 mA
C_c: 30 nF
L_c: 820 nH

Relô de estado, terminais (33,34)

Voltagem máx.: 125 VAC / 110 VDC
Potência máx.: 62.5 VA / 32 W
Corrente máx.: 0.5 A AC / 0.3 ADC

Instalação Zona 2:
Voltagem máx.: 32 VAC / 32 VDC
Potência máx.: 16 VA / 32 W
Corrente máx.: 0.5 A AC / 1 ADC

Notas de instalação:

Instalação em grau de poluição 2, categoria de sobretensão II conforme definido no IEC 60664-1.

Os circuitos não intrinsecamente seguros só podem ser conectados para sobretensão limitado ao categoria III como definido no IEC 60664-1.

Não separe conectores quando energizado ou quando uma mistura de gás explosivo estiver presente.

Não monte ou remova módulos do trilho de alimentação quando uma mistura explosiva de gás estiver presente.

Desligue a alimentação antes da manutenção.

A fiação de terminais sem uso não é permitida.

Para a instalação em Zona 2, o módulo deve ser instalado em um invólucro conformidade com o tipo de proteção Ex n ou Ex e, fornecendo no mínimo grau de proteção IP54.

Dispositivos de entrada de cabo e elementos de vedação devem cumprir com