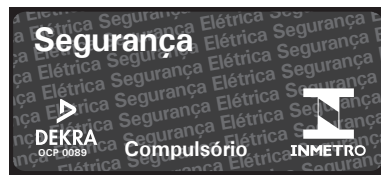
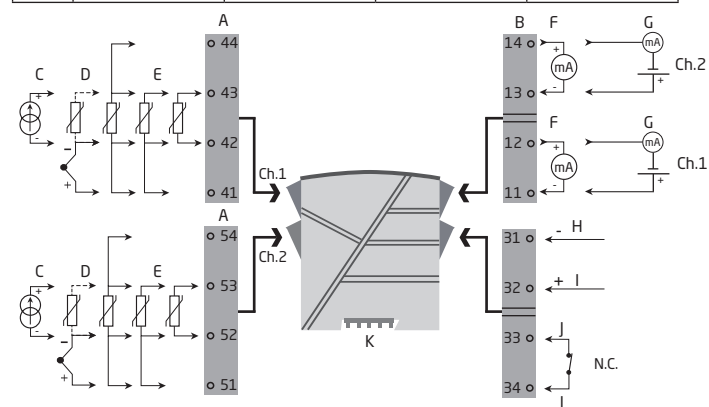


9113A / 9113B



| | 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 PR45xx:
- Indsæt tappene på 45xx i hullerne øverst på modulet.
 - Sving 45xx på plads.
 - Aftagning af 45xx:
 - Tryk på udløserknop i bunden af 45xx og sving 45xx op.

- UK** Mounting of PR45xx:
- Insert the tabs of the PR 45xx into the holes at the top of the device.
 - Hinge the PR 45xx down until it snaps into place.
 - Demounting of the PR 45xx
 - Push the release button on the bottom of the PR 45xx and hinge the PR 45xx out and up.
 - With the PR 45xx hinged up, remove from holes at the top of the device.

- FR** Montage du PR45xx:
- Insérez les crochets du 45xx dans les trous en haut du module.
 - Poussez le bas du 45xx vers le module.
 - Démontage du 45xx:
 - Appuyez sur le bouton de déclenchement en dessous du 45xx, puis tirez le 45xx vers le haut.

- DK** Montering på power rail / DIN-skinne.
- UK** Mounting on power rail / DIN rail.
- FR** Montage sur rail d'alimentation / rail DIN.
- DE** Montage auf Power Rail / DIN-Schiene.

DK Frigørelse fra power rail / DIN-skinne. Husk først at demontere tilslutningsklemmerne med farlig spænding. Modulet frigøres fra skinnen ved at løfte i den nederste lås.

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

FR Démontage du rail d'alimentation / rail DIN. Tout d'abord, n'oubliez pas de démonter les connecteurs ou régner des tensions dangereuses. Débloquez le verrou inférieur pour déloger le module du rail.

DE Lösen von Power Rail / DIN-Schiene. Zunächst ist gefährliche Spannung von den Anschlüssen zu trennen. Das Gerät wird von der Schiene gelöst, indem man den unteren Verschluss löst.

DK En eller to ledninger med (min...max.) ledningskvadrat 0,13...2,08 mm² / AWG 26...14 flerkoret ledning. Maks. klemmskræftspændingsmoment 0,5 Nm.

UK One or two wires with (min...max.) wire size 0.13...2.08 mm² / AWG 26...14 stranded wire. Max. screw terminal torque 0.5 Nm.

FR Une ou deux fils avec taille des fils (min...max.) 0,13...2,08 mm² / AWG 26...14 fils multibrins. Pression max. avant déformation de la vis 0,5 Nm.

DE Ein oder zwei Leiter mit (min...max.) Leitungsquerschnitt 0,13...2,08 mm² / AWG 26...14 Litzenadrt. Max. Klemmschraubenzugsmoment 0,5 Nm.



- DK** Benforbindelser.
- UK** Pin connections.
- FR** Raccordement des bornes.
- DE** Klemmenanschluss.

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

PR electronics AS, Lerbakken 10, 8410 Rønde
 www.prelectronics.com, Phone +45 8637 2677, Denmark, 91135203

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

31: Supply 19.2 to 31.2 VDC
 32: Supply + max. 3 W
 33: Status Relay N.C.
 34: Status

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

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

IECEx [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
 KEMA 07ATEX0148X Installation Drawing: 9113QA01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 E233311 Installation Drawing: 9113QU01
 Install in CL I Div. 2, Gr. A-D T4 or CL I, Zone 2, AEx/Ex na nC IIC T4

Sequence [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
 DEKRA 16.0003X Installation Drawing: 9113QB01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
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41: Input ch1 4W / 3W ITC
 42: Input ch1 4W / 3W / 2W / mA / TC
 43: Input ch1 4W / 3W / 2W / mA
 44: Input ch1

31: Supply 19.2 to 31.2 VDC
 32: Supply + max. 3 W
 33: Status Relay N.C.
 34: Status

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

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

IECEx [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
 KEMA 07ATEX0148X Installation Drawing: 9113QA01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 E233311 Installation Drawing: 9113QU01
 Install in CL I Div. 2, Gr. A-D T4 or CL I, Zone 2, AEx/Ex na nC IIC T4

Sequence [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
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 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01

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

31: Supply 19.2 to 31.2 VDC
 32: Supply + max. 3 W
 33: Status Relay N.C.
 34: Status

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

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

IECEx [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
 KEMA 07ATEX0148X Installation Drawing: 9113QA01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 E233311 Installation Drawing: 9113QU01
 Install in CL I Div. 2, Gr. A-D T4 or CL I, Zone 2, AEx/Ex na nC IIC T4

Sequence [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I
 DEKRA 16.0003X Installation Drawing: 9113QB01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01
 FM19US0059X / FM19CA0032X
 Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4
 DEKRA 16.0003X Installation Drawing: 9113QB01

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

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 adslagsfare.

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.

DK ADVARSEL

FARLIG SPENDING 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 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. Modulene indeholder ingen DIP-switches eller jumpere.

DK SIKKERHEDSREGLER

Mottagelse og udpakning Udpak modulet uden at beskadige det. Kontrollér ved mottagelsen, at modulytperen 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 Foreningsgrad 2. Modulene er designet til at være sikker mindst op til en højde af 2000 m.

Installation Modul 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 ledningstilbehør.

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 forsynings-spændingen 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 berøringfare, 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.

DK 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. effekttab, 1 / 2 kanaler..... | ≤ 0,8 W / 1,4 W |
| Sikring..... | 400 mA T / 250 VAC |
| Isolerationspændinger, test / drift: | |
| Indgang til alle..... | 2,6 kVAC/300 VAC forstærkt |
| Analog udgang til forsyning..... | 2,6 kVAC/300 VAC forstærkt |
| Statusrelæ til forsyning..... | 1,5 kVAC/150 VAC forstærkt |
| Kalibreringstemperatur..... | 20...28°C |
| EMC-immunitetspåvirkning..... | ≤ ±0,5% af span |
| Udvædet EMC-immunitet: | |
| NAMUR NE21, A.krit. gñstistål..... | < ±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 |

DK Indgang for RTD-typer:

PI10, PI20, PI50, PI100, PI200, PI250, PI300, PI400, PI500, PI1000, NI50, NI100, NI120, NI1000

DK Indgang for TC-typer:

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

DK Strømindgang:

Programmerbare måleområdet..... 0...20 og 4...20 mA

Indgangsmodstand..... Nom. 20 Ω ± PTC 50 Ω

DK Strømdugang:

Programmerbare signalmåder..... 0...20/4...20/20...0/20...4 mA

Belastningsstabilitet..... ≤ 0,01% af span / 100 Ω

Færdigfejlsreaktion..... 0 / 3,5 / 23 mA / ingen

NAMUR NE43 Upscale/Downscale..... 23 mA / 3,5 mA

Strømgrensning..... ≤ 28 mA

DK Godkendelser:

DNV-GL, Ships & Offshore..... TAA00000JD

ClassNK..... TA18527M

c UL us, UL 61010-1..... E314307

EAC..... TR-CU 020/2011

EAC LVD..... TR-CU 004/2011

EAC Ex..... TR-CU 012/2011

SIL..... IEC 61508

DK Overholdte myndighedskrav

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

| | 9113Bxx | 9113Axx |
|----------------------------|--|--|
| IECEx | [Ex ia Ga] IIC/IB/IIA Ex na nC IIC T4 Gc [Ex ia Ma] I | IECEx KEM 09.0052 X Installation Drawing: 9113QA01 Ex na nC IIC T4 Gc IECEx KEM 09.0052 X Installation Drawing: 9113QA01 |
| 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 07ATEX0148X Installation Drawing: 9113QA01 II 3 G Ex na nC IIC T4 Gc KEMA 07ATEX0148X Installation Drawing: 9113QA01 |
| FM | Install in CL I Div. 2, Gr. A-D T4 Provides IS circuits to CL I-HI Div. 1/2, Gr. A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4 | FM19US0059X / FM19CA0032X Installation Drawing: 9113QA01 Install in CL I, Div. 2, Gr. A-D T4 or CL I, Zone 2, AEx/Ex na nC IIC T4 FM19US0059X / FM19CA0032X Installation Drawing: 9113QA01 |
| IMMETRO | [Ex ia Ga] IIC/IB/IIA [Ex ia Da] IIC / [Ex ia Ma] I Ex na nC IIC T4 Gc | - - |
| UL (9113Ax-U9 / 9113Bx-U9) | Install in CL I Div2 GP A-D T4 provides IS circuits to CL I-HI Div. 1 GP A-G or CL I, Zn2 AEx/Ex na nC [Ia] IIC T4 | E233311 Installation Drawing: 9113QU01 Install in CL I Div. 2, Gr. A-D T4 or CL I, Zone 2, AEx/Ex na nC IIC T4 E233311 Installation Drawing: 9113QU01 |

- 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
 O: 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

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

HAZARD-VOULTAGE 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.

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 become 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.

UK Electrical specifications

| | |
|---------------------------------------|-----------------------------|
| Specifications range..... | -20°C to +60°C |
| Supply voltage..... | 19,2...31,2 VDC |
| Max. required power, 1 / 2 ch..... | ≤ 0,8 W / 1,4 W |
| Max. power dissipation, 1 / 2 ch..... | ≤ 0,8 W / 1,4 W |
| Fuse..... | 400 mA 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 |
| | |

ATEX Installation drawing 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.

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 07ATEX 0148 X

Marking 9113Bx: II (1) G Ex ia Ga IIC/IIA
II 3 G Ex na nC IIC T4 Gc
II (1) D Ex ia Ma IIC
I (M1) Ex ia Ma I

Marking 9113Ax: II 3 G Ex na nC IIC T4 Gc

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.

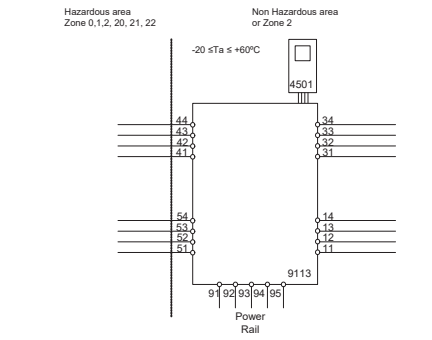
Do not separate connectors when energized and an explosive gas mixture is present. Do not mount or remove modules from the Power Rail when an explosive gas mixture is present. Disconnect power before servicing. The wiring of unused terminals is not allowed.

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:



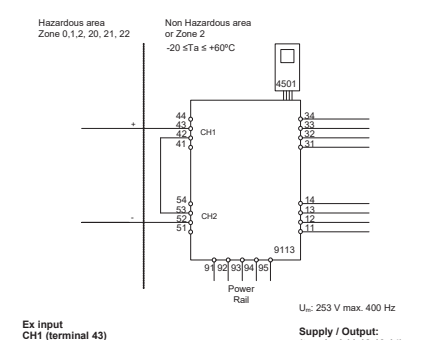
Ex input
CH1 (terminal 41, 42, 43, 44)
CH2 (terminal 51, 52, 53, 54)
U_c: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
Lo/Ro: 892 µH/Ω

| IC | IIB | IIA or I |
|----------------|--------|----------|
| C ₁ | 5 µF | 50 µF |
| C ₂ | 100 mH | 300 mH |

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

Supply / Output:
(terminal 11, 12, 13, 14)
(terminal 31, 32, 33, 34)
(terminal 91, 92, 93, 94, 95)

9113Ax Installation:



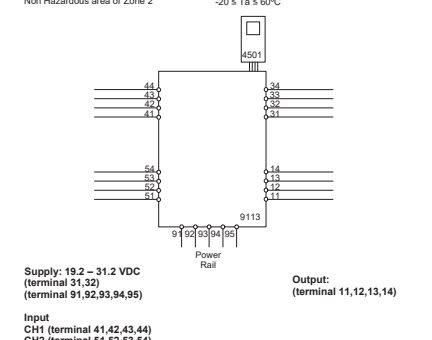
Ex input
CH1 (terminal 43)
CH2 (terminal 52 -)
U_c: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
Lo/Ro: 445 µH/Ω

| IC | IIB | IIA or I |
|----------------|--------|----------|
| C ₁ | 0.3 µF | 1.6 µF |
| C ₂ | 80 mH | 250 mH |

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

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)
U_c: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
Lo/Ro: 445 µH/Ω

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

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 – 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.

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 08.0052 X

Marking 9113Bx: [Ex ia Ga] IIC/IIA
Ex na nC IIC T4 Gc
[Ex ia Da] IIC
[Ex ia Ma] I

Marking 9113Ax: II 3 G Ex na nC IIC T4 Gc

Standards: IEC60079-0:2011, 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.

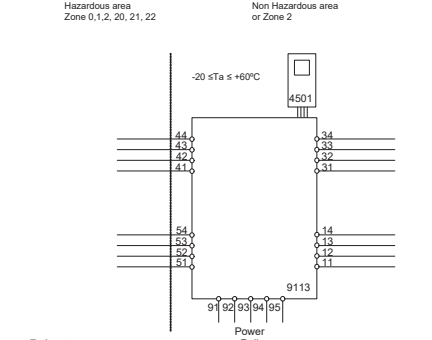
Do not separate connectors when energized and an explosive gas mixture is present. Do not mount or remove modules from the Power Rail when an explosive gas mixture is present. Disconnect power before servicing. The wiring of unused terminals is not allowed.

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 08.0052X) is allowed.

9113Bx Installation:



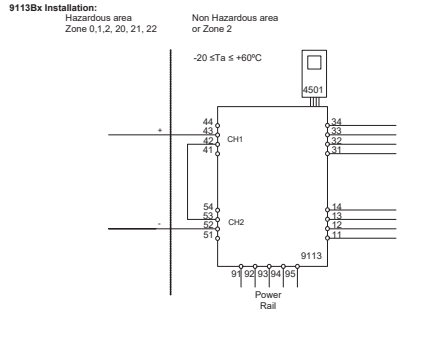
Ex input
CH1 (terminal 41, 42, 43, 44)
CH2 (terminal 51, 52, 53, 54)
U_c: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
Lo/Ro: 892 µH/Ω

| IC | IIB | IIA or I |
|----------------|--------|----------|
| C ₁ | 5 µF | 50 µF |
| C ₂ | 100 mH | 300 mH |

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

Supply / Output:
(terminal 11, 12, 13, 14)
(terminal 31, 32, 33, 34)
(terminal 91, 92, 93, 94, 95)

9113Bx Installation:



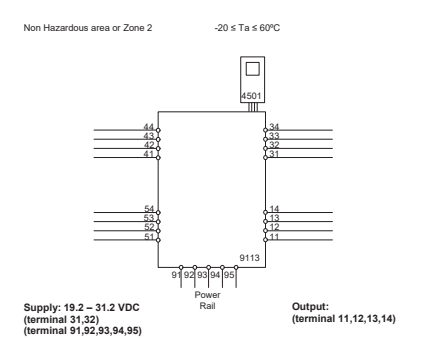
Ex input
CH1 (terminal 43 +)
CH2 (terminal 52 -)
U_c: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
Lo/Ro: 445 µH/Ω

| IC | IIB | IIA |
|----------------|--------|--------|
| C ₁ | 0.3 µF | 1.6 µF |
| C ₂ | 80 mH | 250 mH |

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

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)
U_c: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
Lo/Ro: 445 µH/Ω

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

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 08.0052X) 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.

UL Installation drawing 9113QU01-V1R0

For safe installation of associated apparatus 9113Bx-U9 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.

For installation in Div2/Zone2 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.

Marking: Proc. Cont. Eq. for Use in Haz. Loc. The 9113Bx-U9 is a galvanic isolation associated apparatus for installation in non-hazardous locations or Class I, Division 2, Groups A – D hazardous locations with intrinsically safe connections to Class I, II and III hazardous locations.

Marking: Proc. Cont. Eq. for Use in Haz. Loc. The 9113Ax-U9 is intended for installation in non-hazardous locations or Class I, Division 2, Groups A – D or Zone 2 Group IIC hazardous locations.

Standards: UL 1212:2011 NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2 AND CLASS II, DIVISIONS 1 AND 2 HAZARDOUS (CLASSIFIED) LOCATIONS - Edition 3 - Issue Date 2018/08/31

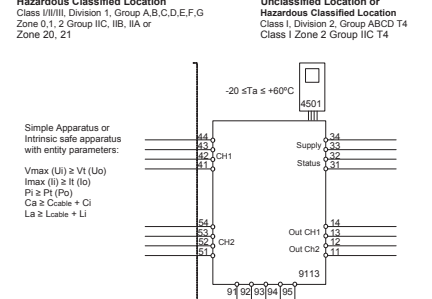
CSA C22.2 NO. 213 NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2 AND CLASS II, DIVISIONS 1 AND 2 HAZARDOUS (CLASSIFIED) LOCATIONS - Edition 3 - Issue Date 2017/08/01

UL 913 STANDARD FOR INTRINSICALLY SAFE APPARATUS AND ASSOCIATED APPARATUS FOR USE IN CLASS I, II, III, DIVISION 1, HAZARDOUS (CLASSIFIED) LOCATIONS - Edition 8 - Revision Date 2015/10/16

CSA C22.2 NO. 60079-0 EXPLOSIVE ATMOSPHERES — PART 0: EQUIPMENT — GENERAL REQUIREMENTS - Edition 3 - Issue Date 2015/10/01

CSA C22.2 NO. 60079-11-14 EXPLOSIVE ATMOSPHERES — PART 11: EQUIPMENT PROTECTION BY INTRINSIC SAFETY - Edition 2 - Issue Date 2014/02/01

9113Bx-U9 Installation



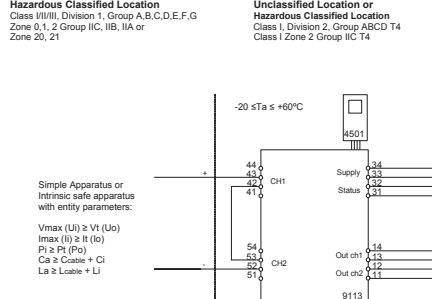
Ex input
CH1 (terminal 41, 42, 43, 44)
CH2 (terminal 51, 52, 53, 54)
U_c: 8.7 V
I_c: 18.4 mA
P_c: 40 mW
Lo/Ro: 892 µH/Ω

| IC or A/B | IIB or C.E.F. | IIA or D/G |
|----------------------------------|---------------|------------|
| C ₁ or C ₂ | 5 µF | 50 µF |
| L ₁ or L ₂ | 100 mH | 300 mH |

V_{max} or U_c: 10 V
I_{max} or I_c: 30 mA
C_c: 30 nF
L_c: 820 nH

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

9113Bx-U9 Splitter Installation



Ex input
CH1 (terminal 43 +)
CH2 (terminal 52 -)
U_c: 17.4 V
I_c: 18.4 mA
P_c: 80 mW
Lo/Ro: 445 µH/Ω

| IC or A/B | IIB or C.E.F. | IIA or D/G |
|----------------------------------|---------------|------------|
| C ₁ or C ₂ | 0.3 µF | 1.6 µF |
| L ₁ or L ₂ | 80 mH | 250 mH |

V_{max} or U_c: 10 V
I_{max} or I_c: 30 mA
C_c: 15 nF
L_c: 1.7 µH

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

Installation notes 9113Ax-U9 and 9113Bx-U9:

The module must be installed in a tool-secured enclosure suitable for the application in accordance with the National Electrical Code (ANSI/NFPA 70) for installation in the United States, the Canadian Electrical Code for installations in Canada, or other local codes, as applicable.

The module is galvanically isolated and does not require grounding. Install in pollution degree 2, overvoltage category II, in accordance with IEC 60664-1. Use minimum 75 °C copper conductors with wire size AWG: (28-14).

There are no serviceable parts in the equipment and no component substitution is permitted. Warning: Substitution of components may impair intrinsic safety. Avertissement: La substitution de composants peut compromettre la sécurité intrinsèque.

Warning: To prevent ignition of the explosive atmosphere, disconnect power before servicing and do not separate connectors, install or remove module from Power Rail when energized and an explosive gas mixture is present. Avertissement: Pour éviter l'inflammation d'atmosphère explosive, déconnecter l'alimentation avant les opérations d'entretien. Ne montez pas ou n'enlevez pas les connecteurs quand le module est sous tension et en présence d'un mélange de gaz. Ne montez pas ou n'enlevez pas les modules du rail d'alimentation en présence d'un mélange de gaz.

Installation notes 9113Bx-U9:
Associated Equipment (Appareillage Associé) [Ex ia]

The Ex output current of this associated apparatus is limited by a resistor such that the output voltage-current plot is a straight line drawn between open-circuit voltage and short-circuit current. Selected intrinsically safe equipment must be third party listed as intrinsically safe for the application, and have intrinsically safe entry parameters conforming with Table 1 below.

| U.S. Equipment | Associated Apparatus |
|---------------------------------------|--|
| V _{max} (or U _c) | ≥ Voc or V _{oc} (or U _{oc}) |
| I _{max} (or I _c) | ≥ Isc or I _{sc} (or I _{sc}) |
| P _c max | ≥ Po |
| C ₁ + Cable | ≤ Ca (or Co) |
| L ₁ + Cable | ≤ La (or Lo) |

The module may also be connected to a simple apparatus as defined in Article 504.2 and installed and temperature classified in accordance with Article 504.10(D) of the National Electrical Code (ANSI/NFPA 70), or other local codes, as applicable.

Capacitance and inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1. Cable capacitance, Cable, plus intrinsically safe equipment capacitance, C₁ must be less than the marked capacitance, Ca (or Co), shown on any associated apparatus used. The same applies for inductance (Lable, L₁ and L₂ or L_o, respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used: Cable = 66 pF/ft., L_{able} = 0.2 µH/ft.

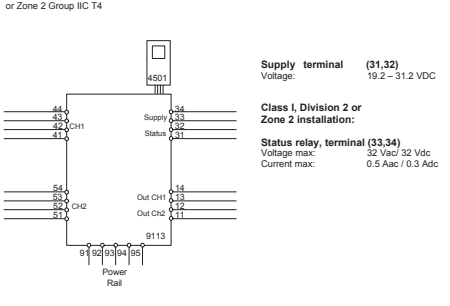
Where multiple circuits extend from the same piece of associated apparatus, they must be installed in separate cables or in one cable having suitable insulation. Refer to Article 504.30(B) of the National Electrical Code (ANSI/NFPA 70) and Instrument Society of America Recommended Practice ISA RP12.06 for installing intrinsically safe equipment.

Intrinsically safe circuits must be wired and separated in accordance with Article 504.20 of the National Electrical Code (ANSI/NFPA 70) or other local codes, as applicable.

The 9113B has not been evaluated for use in combination with another associated apparatus. There are no serviceable parts in the equipment and no component substitution is permitted.

For installations in which both the C₁ and U_c of the intrinsically safe apparatus exceeds 1% of the Ca (or Co) and La (or Lo) parameters of the associated apparatus (excluding the reduced, but 50% of Ca (or Co) and La (or Lo) parameters are applicable and shall not be exceeded). The cable capacitance shall not be greater than 1 µF for Groups C and/or D, and 600 nF for Groups A and B. The values of Ca (or Co) and La (or Lo) determined by this method shall not be exceeded by the sum of all C₁ plus cable capacitance and the sum of all of the L₁ plus cable inductances in the circuit respectively.

9113Ax-U9 and 9113Bx-U9 Installation:
Non Hazardous area or Class I, Division 2, Group ABCD T4 or Zone 2 Group IIC T4



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

Status relay, terminal (33,34)
Voltage max: 32 Vac / 32 Vdc
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 KEMA 07ATEX0152 X) is allowed.

INMETRO Desenhos para Instalação-V5R0

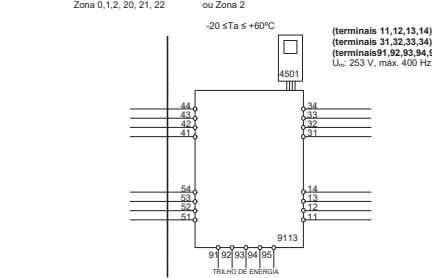
Para instalação segura do 9113B o manual seguinte deve ser observado. O módulo deve ser instalado somente por profissionais qualificados que estão familiarizados com as leis nacionais e internacionais, diretivas e normas que se aplicam a esta área. Ano de fabricação pode ser obtido a partir dos dois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

INMETRO Certificado: DEKRA 16.0003X

Marking: [Ex ia Ga] IIC/IIA
[Ex ia Ma] IIC
[Ex ia Ma] I

Normas: ABNT IEC 60079-0:2013, ABNT NBR IEC60079-11:2013, ABNT NBR IEC60079-15:2012.



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

Status relay, terminal (33,34)
Voltage max: 32 Vac / 32 Vdc
Current max: 0.5 A AC / 0.3 ADC

Installation notes:
Install in pollution degree 2, overvoltage category II as defined in IEC60664-1.