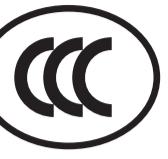


9410 电源模块
丹麥製造佩勒電子（上海）有限公司
云嶺東路 651 号 305 室
普陀區，上海 200062 中國**DK****ADVARSEL**

Dette modul er beregnet for tilslutning til livsfarlige elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig lejembseskadigelse eller mekanisk ødelæggelse.
For at undgå fare 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 beskyttelsesforskrifter.

FARLIG SPØNDING

Der må ikke tilsluttes farlig spænding til modulet, før dette er fastmonteret, og følgende operationer bør kun udføres på modulet i spændingslös tilstand og under ESD-sikre forhold:

Installation, ledningsmontage og -demontage. Fejfindning på modulet.

Reparation af modulet og udskiftning af skringer må kun foretages af PR electronics A/S.

SIKKERHEDSREGLER

Modtagelse og udpakning
Udpak modulet uden at beskadige det. Kontroller ved modtagelsen, 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 styrrelser og stød, og udgas ikke modulet for regn eller kraftig fugt. Om nødvendigt skal opvarmning, ud over de oprindelige grænser for omgivelstemperatur, forhindres ved hjælp af ventilation.

Alle moduler kan anvendes i Mål- / overspændingskategori II og Forureningsgrad 2. Modulene er designet til at være sikker mindst op til en højde af 2000 m.

Installation
Modulet må kun tilsluttes af kvalificerede teknikere, som er medvirkende med de tekniske udtryk, advarsler og instruktioner i installationsvejledningen, og som vil følge disse.

Hvis der er tvivl om modulets rette håndtering, skal der rettes henvendelse til den lokale forhandler eller alternativt direkte til PR electronics A/S.

Det er ikke tilladt at betynde flerkoret ledning ved tilslutning af forsyningsspænding med mindre ledningsenderne er forsynet med ledningsstyrler.

Beskrivelse af indgang / udgang og forsyningsforbindelser findes i produktdokumentet og på sideskillet.

Modulet er forsynet med skrueterminaler og skal forsynes fra en dobbeltisolert/ forsterket isoleret spændingsforsyning. En afbryder placeres til tilgængeligt og tæt ved modulet. Afbryder 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 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 sikkerhedsmaßigt 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 el. lignende, så betjeninger ikke medfører fare for liv eller materiel. Dvs., at der ikke er berøringsfare, og at modul er placeret, så det er let at betjene.

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

Elektriske specifikationer
Specifikationsområde -20°C til +60°C

Forsyningsspænding og backup-forsyning 21.6...26.4 VDC
Max. forbrug 96 W

Relativ luftfugtighed < 95% RH (ikke kond.)

Mål (H x B x D) 109 x 23.5 x 104 mm

Kapslingsklasse IP20

Udgang:
Udgangsspænding Indgangsspænding-0.5 VDC (ved 4 A)

Udgangsfejlt. 96 W (max.)

Udgangsstrøm 4 A (max.)

Godkendelser:

DNV 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

Overholde myndighedskrav

EMC 2014/30/EU

LVD 2014/35/EU

ATEX 2014/34/EU

RoHS 2011/65/EU

EU DECLARATION OF CONFORMITY

(9410DoC_103)



As manufacturer

PR electronics A/S, Lerbakken 10, DK-8410 Rønde

herdeklarer at følgende produkter:

Type: 9410

Name: Power control unit

From serial no.: 201566120

is in conformity with the following directives and standards:

The EMC Directive 2014/30/EU and later amendments

EN 61326-1 : 2013

Immunity test requirements for equipment intended to be used in an industrial electromagnetic environment. For specification of the acceptable EMC performance level, refer to the electrical specifications for the device.

The Low Voltage Directive 2014/35/EU and later amendments

EN 61010-1 : 2010

The ATEX Directive 2014/34/EU and later amendments

EN IEC 60079-0 : 2018, EN 60079-7 : 2015 + A1 : 2018 and EN 60079-15 : 2019

ATEX certificate: KEMA 07ATEX0152 X

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, 13 August 2020

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.

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.

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 and backup supply 21.6...26.4 VDC

Max. consumption 96 W

Relative humidity < 95% RH (non-cond.)

Dimensions (HxWxD) 109 x 23.5 x 104 mm

Protection degree IP20

Output:

Output voltage Input voltage-0.5 VDC (at 4 A)

Output power 96 W (max.)

Output current 4 A (max.)

Approvals:

DNV, 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

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****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 l'électricité, 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 par le fabricant, la garantie 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.

CONSIGNES DE SECURITE**Reception et déballage**

Déballez le module sans l'endommager. Il est recommandé de conserver l'emballage du module tant que ce dernier n'est pas définitivement monté. A la réception du module, vérifiez que le type de module correspond à celui que vous avez commandé.

Environnement

ATEX Installation drawing 9410QA01-V4R0

9410
For safe installation of 9410 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.

9410 Power Control Unit

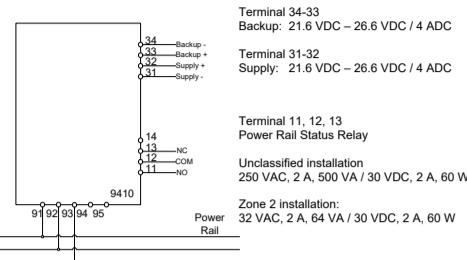
ATEX Certificate KEMA 07ATEX0152X

Marking: II 3G Ex ec nC IIC T4 Gc

Standard: EN60079-0:2018, EN60079-7:2015+A1, EN60079-15:2010

Non Hazardous Area or Zone 2

T4: -20 °C <Ta < +60°C



9410 Power Control with backup.

Use Endcaps to prevent the Power Rail from being short circuit by the outer enclosure.

Use 9400 Cover to prevent open Power Rail from unintentional short circuit.

Redundant 9410 Power Control with Backup.

Power is supplied to the Power Rail from two 9410 Power Control Modules. Both modules have connections for Normal Supply and Backup Supply.

General

The 9410 must be supplied from a Power Source with Double or Reinforced insulation to Mains.

Terminal blocks:

Wire size: 0.13-2.08 mm² / AWG 26-14 stranded wire

Screw terminal torque: 0.5 Nm

For installation in Zone 2

The Power Control Unit Type 9410 and Power Rail Type 9400 shall be installed in a controlled environment with suitably reduced pollution, limited to pollution degree 2 or better.

The circuit shall be limited to overvoltage category III as defined in EN60664-1.

The 9410 Power Control Unit and 9400 Power Rail must be installed in an outer enclosure having an IP protection of at least IP54 conforming to the requirements of explosion protection Ex-n or Ex-e.

Transients are suppressed by an internal transient protection device, which is set to a level not exceeding 40% of the rated voltage.

WARNING: Do not separate connectors when energized and an explosive gas mixture is present.

WARNING: Do not install or remove modules from the Power Rail unless Area is known to be Non Hazardous.

WARNING: Terminals 91,92,93,94,95 may only be connected to Power Rail 9400.

IECEx Installation drawing 9410QI01-V4R0

9410
For safe installation of 9410 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.

9410 Power Control Unit

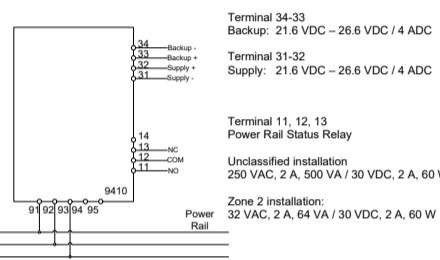
IECEx Certificate IECEx KEM 08.0025 X

Marking: Ex ec IIC T4 Gc

Standards: IEC60079-0:2017, IEC60079-15:2017, IEC60079-7:2017

Non Hazardous Area or Zone 2

T4: -20 °C <Ta < +60°C



9410 Power Control with backup.

Use Endcaps to prevent the Power Rail from being short circuit by the outer enclosure.

Use 9400 Cover to prevent open Power Rail from unintentional short circuit.

Redundant 9410 Power Control with Backup.

Power is supplied to the Power Rail from two 9410 Power Control Modules. Both modules have connections for Normal Supply and Backup Supply.

Installation notes:

General

The 9410 must be supplied from a Power Source with Double or Reinforced insulation to Mains.

Terminal blocks :

Wire size: 0.13-2.08 mm² / AWG 26-14 stranded wire

Screw terminal torque: 0.5 Nm

For installation in Zone 2

The Power Control Unit Type 9410 and Power Rail Type 9400 shall be installed in a controlled environment with suitably reduced pollution, limited to pollution degree 2 or better.

The circuit shall be limited to overvoltage category III as defined in IEC 60664-1.

The 9410 Power Control Unit and 9400 Power Rail must be installed in an outer enclosure having an IP protection of at least IP54, conforming to the requirements of explosion protection Ex-n or Ex-e.

Transients are suppressed by an internal transient protection device, which is set to a level not exceeding 40% of the rated voltage.

WARNING: Do not separate connectors when energized and an explosive gas mixture is present.

WARNING: Do not install or remove modules from the Power Rail unless Area is known to be Non Hazardous.

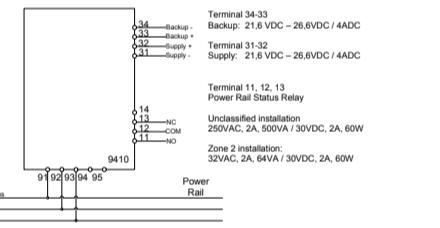
WARNING: Terminals 91,92,93,94,95 may only be connected to Power Rail 9400.

FM Installation drawing 9410QF01-V3R0

9410
For safe installation of 9410 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.

Non Hazardous Area or Division 2 / Zone 2

T4: -20 °C <Ta < +60°C



9410 Power Control with backup.

Use Endcaps to prevent the Power Rail from being short circuit by the outer enclosure.

Use 9400 Cover to prevent open Power Rail from unintentional short circuit.

Redundant 9410 Power Control with Backup.

Power is supplied to the Power Rail from two 9410 Power Control Modules. Both modules have connections for Normal Supply and Backup Supply.

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 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.

Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application, including a tool removable cover.

Install in pollution degree 2 or better.

Substitution of components may impair the suitability for division 2 / zone 2 installation.

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 install or remove modules from the Power Rail and do not remove connectors from the module unless Area is known to be Non Hazardous.

INMETRO Desenhos para Instalação 9410QB01-V5R0

9410
Para instalação segura do 9410 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.
A no fabricação pode ser obtido a partir dos dois primeiros dígitos do número de série.number.

9410 Unidade de Controle de Potência

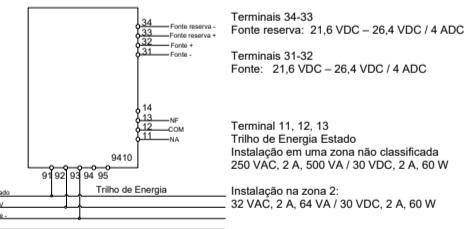
INMETRO Certificado DEKRA 16.0007X

Marcas: Ex ec nC IIC T4 Gc

Normas: ABNT NBR IEC60079-0:2013/2016, ABNT NBR IEC60079-15:2012, ABNT NBR IEC60079-07:2018

Área não classificada ou Zone 2

T4: -20 °C <Ta < +60°C



9410 Controle de Potência com reserva.

Use Tampas para evitar que o trilho de alimentação entre em curto-circuito com invólucro externo.

Use a capa do 9400 para prevenir que a abertura do trilho de energia e causar curto-circuito não intencional

Controle de Potência 9410 redundante com reserva.

A energia é fornecida ao dispositivo de alimentação de dois módulos de controle de energia 9410. Ambos os módulos têm conexões para a fonte de alimentação normal e a fonte de reserva.

Notas para Instalação:

Geral

O 9410 deve ser energizado por uma fonte de alimentação com isolamento duplo ou reforçado vindo da rede elétrica.

Blocos de terminais :

Tamanho do fio 0,13-2,08 mm² / AWG 26-14 encalhado

Torque terminal < 0,5 Nm

Para instalação em Zona 2

A unidade de controle de potência Modelo 9410 e Trilho de Alimentação Modelo 9400 deve ser instalado dentro de um invólucro adequado em conformidade com o tipo de proteção 'Ex n' ou 'Ex e', fornecendo no mínimo grau de proteção IP54.

Transientes são suprimidos por um dispositivo interno, que é definido para um nível não superior a 40% da tensão nominal.

Atenção: Não desconecte conectores quando energizado e uma mistura explosiva de gás estiver presente.

Atenção: Não instalar ou remover os módulos do trilho de energia a menos que área seja conhecida como área não classificada.

Atenção: Terminais 91, 92, 93, 94 e 95 só podem ser conectados ao Trilho de Energia Tipo 9400.

UL Installation drawing 9410QU01-V1R0

For safe installation of the Process Control Equipment 9410-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.

Model: 9410-U9 Power Control Unit

Marking:

UL 12101 NONINCENDIVE ELECTRICAL EQUIPMENT FOR USE IN CLASS I AND II, DIVISION 2 AND CLASS III, DIVISIONS 1 AND 2 HAZARDOUS (CLASSIFIED) LOCATIONS Edition 9 - Revision Date 2018/08/31

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

E233311

TI 9410-U9 equipment intended for installation in non-classified locations or Class I Division 2, Groups A-D or Zone 2 Group IC hazardous locations.

Installation notes 9410-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 Canada, or other local codes, as applicable.

Install in pollution degree 2, overvoltage category II in accordance with IEC 60664-1.

Use minimum 75 °C copper conductors with wire size AWG: (26-14)

There are no serviceable parts in the equipment and no component substitution is permitted

Warning: To prevent ignition of the explosive atmosphere, disconnect power before servicing and do not separate connectors, install or remove modules from Power Rail when energized and an explosive gas mixture is present.

Avissement : Pour éviter l'inflammation d'atmosphères explosives, déconnectez l'alimentation avant les opérations d'entretien. Ne montez pas ou n'enlevez pas les connecteurs lorsque 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'une atmosphère explosive.

The 9410-U9 must be supplied from a Power Source with Double or Reinforced insulation to Mains.

Non Hazardous Area or Zone 2

T4: -20 °C <Ta < +60°C

Terminals 34-33

Fonte reserva: 21,6 VDC – 26,4 VDC / 4 ADC

Terminals 31-32

Fonte: 21,6 VDC – 26,4 VDC / 4 ADC

Terminal 11, 12, 13

Trilho de Energia Estado

Instalação em uma zona não classificada

250V AC,