9410

9410 电源模块
丹麥製造
佩勒电子（上海）有限公司
云岭东路 651 号 305 室
普陀区, 上海 200062 中国

DK

ADVARSEL

GENERELT

Dette modul er beregnet for tilslutning til livsfarlige elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig legemsbeskadigelse eller mekanisk ødelæggelse.
For at undgå faren for elektriske stød og brand skal sikkerhedsreglerne overholdes, og vejledningerne skal følges.
Specifikationerne må ikke overskrides, og modulet må kun benyttes som beskrevet i det følgende.
Installationsvejledningen skal studeres omhyggeligt, før modulet tages i brug. Kun kvalificeret personale (teknikere) må installere dette modul. Hvis modulet ikke benyttes som beskrevet i denne installationsvejledning, så forringes modulets beskyttelsesforanstaltninger.

ADVARSEL

FARLIG SPÆNDING

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

SIKKERHEDSREGLER

Modtagelse og udpakning
Udpak modulet uden at beskadige det. Kontrollér 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 rystelser og stød, og udsæt ikke modulet for regn eller kraftig fugt. Om nødvendigt skal opvarmning, ud over de opgivne grænser for omgivelsestemperatur, forhindres ved hjælp af ventilation.
Alle moduler kan anvendes i Måle- / overspændings-kategori II og Forureningsgrad 2. Modulerne er designet til at være sikker mindst op til en højde af 2000 m. Eheden er konstrueret til indendørs brug.
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 der rettes henvendelse til den lokale forhandler eller alternativt direkte til **PR electronics A/S.**
Det er ikke tilladt at benytte flerkoret ledning ved tilslutning af forsyningsspænding med mindre ledningsenderne er forsynet med ledningstyller.
Flerkoret ledning skal installeres med en afisoleringslængde på 5 mm eller via en egnet isoleret terminal som f.eks. en dupsko.
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 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 el. lignende, så betjeningen ikke medfører fare for liv eller materiel. Dvs., at der ikke er berøringsfare, 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.

Eletriske 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	Indgangspænding-0,5 VDC (ved 4 A)
Udgangseffekt	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

Overholdte myndighedskrav

EMC	2014/30/EU & UK SI 2016/1091
LVD	2014/35/EU & UK SI 2016/1101
ATEX	2014/34/EU & UK SI 2016/1107
RoHS	2011/65/EU & UK SI 2012/3032

UK

WARNING

GENERAL

This device is designed for connection to hazardous electric voltages. Ignoring this warning can result in severe personal injury or mechanical damage.
To avoid the risk of electric shock and fire, the safety instructions of this guide must be observed and the guidelines followed. The specifications must not be exceeded, and the device must only be applied as described in the following. Prior to the commissioning of the device, this installation guide must be examined carefully.
Only qualified personnel (technicians) should install this device. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

WARNING

HAZARDOUS VOLTAGE

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 2 000 m. The device is designed for indoor use.
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.
Stranded wire should be installed with an insulation stripping length of 5 mm or via a suitable insulated terminal such as a bootlace ferrule.
Descriptions of input / output and supply connections are shown in the product manual and on the side label.
The device is provided with field wiring terminals and shall be supplied from a Power Supply having double / reinforced insulation. A power switch shall be easily accessible and close to the device. The power switch shall be marked as the disconnecting unit for the device.
For installation on Power Rail 9400 the power is supplied by Power Control Unit 9410.
Calibration and adjustment
During calibration and adjustment, the measuring and connection of external voltages must be carried out according to the specifications of this installation guide. The technician must use tools and instruments that are safe to use.
Cleaning
When disconnected, the device may be cleaned with a cloth moistened with distilled water.

Electrical specifications

Specifications range	-20°C to +60°C
Supply voltage 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 (@ 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

Observed authority requirements

EMC	2014/30/EU & UK SI 2016/1091
LVD	2014/35/EU & UK SI 2016/1101
ATEX	2014/34/EU & UK SI 2016/1107
RoHS	2011/65/EU & UK SI 2012/3032

FR

AVERTISSEMENT

INFORMATIONS GENERALES

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

TENSION DANGEREUSE

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.
Recherche de pannes sur le module.
Seule PR electronics SARL est autorisée à réparer le module et à remplacer les fusibles.

CONSIGNES DE SECURITE

Réception 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 reçu correspond à celui que vous avez commandé.
Environnement
N'exposez pas votre module aux rayons directs du soleil et choisissez un endroit à l'humidité modérée et à l'abri de la poussière, des températures élevées, des chocs et des vibrations mécaniques et de la pluie. Le cas échéant, des systèmes de ventilation permettent d'éviter qu'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. L'appareil est conçu pour une utilisation à l'intérieur.
Montage
Il est conseillé de réserver le raccordement du module aux techniciens qualifiés qui connaissent les termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.
Si vous avez un doute quelconque quant à la manipulation du module, veuillez contacter votre distributeur local. Vous pouvez également vous adresser à **PR electronics 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 fils multibrins doivent être installés avec une longueur de dénudage de 5 mm ou au moyen d'une borne isolée appropriée, par exemple un embout de câblage. Les connexions des alimentations et des entrées / sorties sont décrites dans le manuel du produit et sur l'étiquette de la face latérale du module.
Les appareils sont équipés de borniers à vis et doivent être raccordés à une alimentation qui a une isolation double ou renforcée. L'interrupteur doit être à proximité du module et facile d'accès. Ce bouton doit être étiqueté avec la mention : peut couper la tension du module.
Pour une installation sur le rail d'alimentation 9400, le module sera alimenté par le contrôleur d'alimentation 9410.
Etalonnage et réglage
Lors des opérations d'étalonnage et de réglage, il convient d'effectuer les mesures et les connexions des tensions externes en respectant les spécifications mentionnées dans ce guide. Les techniciens doivent utiliser des outils et des instruments pouvant être manipulés en toute sécurité.
Maintenance et entretien
Une fois le module hors tension, prenez un chiffon imbibé d'eau distillée pour le nettoyer.

Spécifications

Plage de température	-20° à +60°C
Tension d'alimentation et alimentation de secours	21,6...26,4 Vcc
Consommation max.	96 W
Humidité relative	< 95% HR (sans cond.)
Dimensions (HxLxP)	109 x 23,5 x 104 mm
Degré de protection	IP20

Sortie :

Tension de sortie	Tension d'entrée-0,5 Vcc (à 4 A)
Puissance de sortie	96 W (max.)
Courant de sortie	4 A (max.)

Approbations :

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

Compatibilité avec les normes :

CEM	2014/30/UE & UK SI 2016/1091
DBT	2014/35/UE & UK SI 2016/1101
ATEX	2014/34/EU & UK SI 2016/1107
RoHS	2011/65/UE & UK SI 2012/3032

DE

WARNUNG

ALLGEMEINES

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

WARNUNG

GEFÄHRLICHE SPANNUNG

Vor dem abgeschlossenen festen Einbau des Gerätes darf daran keine gefährliche Spannung angeschlossen werden, und folgende Maßnahmen sollten nur in spannungslosem Zustand des Gerätes und unter ESD-sicheren Verhältnisse 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.

SICHERHEITSREGELN

Empfang und Auspacken
Packen Sie das Gerät aus, ohne es zu beschädigen, und kontrollieren Sie beim Empfang, ob der Gerätetyp Ihrer Bestellung entspricht. Die Verpackung sollte beim Gerät bleiben, bis dieses am endgültigen Platz montiert ist.
Umgebungsbedingungen
Direkte Sonneneinstrahlung, starke Staubentwicklung oder Hitze, mechanische Erschütterungen und Stöße sind zu vermeiden; das Gerät darf nicht Regen oder starker Feuchtigkeit ausgesetzt werden. Bei Bedarf muss eine Erwärmung, welche die angegebenen Grenzen für die Umgebungstemperatur überschreitet, mit Hilfe eines Kühlgebläses verhindert werden.
Alle Geräte können für Mess- / Überspannungskategorie II und Verschmutzungsgrad 2 benutzt werden. Das Gerät ist so konzipiert, dass es auch in einer Einsatzhöhe von bis zu 2000 m noch sicher funktioniert. Das Gerät ist auf den Gebrauch in Innenräumen ausgelegt.
Installation
Das Gerät darf nur von qualifizierten Technikern angeschlossen werden, die mit den technischen Ausdrücken, Warnungen und Anweisungen in dieser Installationsanleitung vertraut sind und diese befolgen.
Sollten Zweifel bezüglich der richtigen Handhabung des Gerätes bestehen, sollte man mit dem Händler vor Ort Kontakt aufnehmen. Sie können aber auch direkt mit **PR electronics GmbH** Kontakt aufnehmen.
Der Einsatz von Litzendrähte ist nicht erlaubt außer die Enden sind mit Aderendhülsen versehen. Die Litzendrähte sollten mit einer 5 mm Abisolierlänge oder mit einer entsprechend isolierten Klemme, wie beispielsweise einer Aderendhülse, installiert werden.
Eine Beschreibung von Eingangs- / Ausgangs- und Versorgungsanschlüssen befindet sich a im Produktmanual und auf dem Typenschild.
Das Gerät ist mit Feldverdrahtungsklemmen ausgestattet und wird von einem Netzteil mit doppelter / verstärkter Isolierung versorgt. Der Netzschalter sollte leicht zugänglich und in der Nähe des Gerätes sein. Der Netzschalter sollte mit einem Schild gekennzeichnet sein, auf dem steht, dass durch Betätigung dieses Schalters das Gerät vom Netz genommen wird.
Für den Anschluss auf der Power Rail 9400 wird das Gerät über das Power Control Unit 9410 versorgt.
Kalibrierung und Justierung
Während der Kalibrierung und Justierung sind die Messung und der Anschluss externer Spannungen entsprechend dieser Installationsanleitung auszuführen, und der Techniker muss hierbei sicherheitsmäßig einwandfreie Werkzeuge und Instrumente benutzen.
Reinigung
Das Gerät darf in spannungslosem Zustand mit einem Lappen gereinigt werden, der mit destilliertem Wasser leicht angefeuchtet ist.

Elektrische Daten

Umgebungstemperatur	-20°C bis +60°C
Versorgungsspannung und Backup-Versorgung	21,6...26,4 VDC
Max. Verbrauch	96 W
Relative Luftfeuchtigkeit	< 95% RH (nicht kond.)
Abmessungen (HxBxT)	109 x 23,5 x 104 mm
Schutzart	IP20

Ausgang:

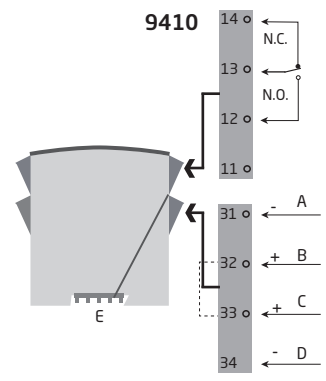
Ausgangsspannung	Eingangsspannung-0,5 VDC (@ 4 A)
Ausgangsleistung, max.	96 W
Ausgangsstrom, max.	4 A

Zulassungen:

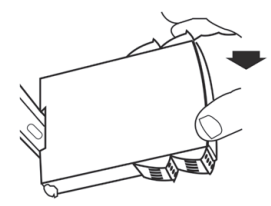
DNV, Ships & Offshore	TAA00000JD
ClassNK	TA18527M
c UL us, UL 61010-1	E314307
EAC	TR-CU 020/2011
EAC LVD	TR-CU 004/2011
EAC Ex	TR-CU 012/2011

Eingehaltene Behördenvorschriften:

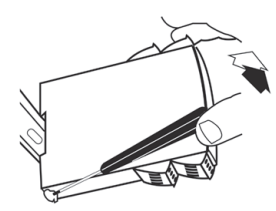
EMV	2014/30/EU & UK SI 2016/1091
LVD	2014/35/EU & UK SI 2016/1101
ATEX	2014/34/EU & UK SI 2016/1107
RoHS	2011/65/EU & UK SI 2012/3032



	DK	UK	FR	DE
A	Gnd	Gnd	Masse	Erde
B	Forsyning +21,6...26,4 VDC	Power supply +21.6...26.4 VDC	Alimentation +21,6...26,4 Vcc	Versorgung +21,6...26,4 VDC
C	Backup-forsyning +21,6...26,4 VDC	Backup supply +21.6...26.4 VDC	Alimentation de secours +21,6...26,4 Vcc	Backup-Versorgung +21,6...26,4 VDC
D	Backup-forsyning, Gnd	Backup supply, Gnd	Alimentation de secours, masse	Backup-Versorgung, Erde
E	Forsyning via power rail	Power supply via power rail	Alimentation par rail	Versorgung über Power Rail
N.O.	Normalt åben	Normally open	Normalement ouvert	Schließer
N.C.	Normalt lukket	Normally closed	Normalement fermé	Öffner



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.

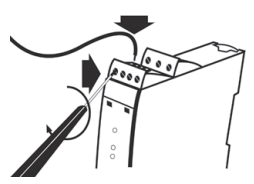


DK **Frigørelse fra power rail / DIN-skinne**
Husk først at demontere tilslutningsklemmerne med farlig spænding. Modulet frigøres fra skinnen ved at løfte i den nederste lås.

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 où règnent des tensions dangereuses. Débloquez le verrou inférieur pour dégager le module du rail.

DE **Lösen von Power Rail / DIN-Schiene**
Zunächst ist gefährliche Spannung von den Anschlussklemmen 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.
Max. klemskruetilspændingsmoment 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 Litzendraht.
Max. Klemmschraubenanzugsmoment 0,5 Nm.

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

	9410	
IECEx	[Ex ia Ga] IIC/IIB/IIA Ex ec nC IIC T4 Gc [Ex ia Da] IIIC / [Ex ia Ma] I	IECEx KEM 08.0025X Installation Drawing: 9410QI01
ATEX	II (1) G [Ex ia Ga] IIC/IIB/IIA II 3G Ex ec nC IIC T4 Gc I (1) D [Ex ia Da] IIIC / I (M1) [Ex ia Ma] I	KEMA 07ATEX 0152 X Installation Drawing: 9410QA01
UKEX	II 3 G Ex ec nC IIC T4 Gc	DEKRA 21UKEX0169 X Installation Drawing: 9410QA01
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	FM19US0056X / FM19CA0029X Installation Drawing: 9410QF01
INMETRO	[Ex ia Ga] IIC/IIB/IIA [Ex ia Da] IIIC / [Ex ia Ma] I Ex ec nC IIC T4 Gc	DEKRA 16.0007X Installation Drawing: 9410QB01
UL (9410-U9)	Install in CL I DIV2 GP A-D T4 or CL I Zn2 Gp IIC T4	E233311 Installation Drawing: 9410QU01
CCC	Ex nA nC IIC T4 Gc	2020322303003230
KCs (9410-KCs)	Ex ec nC IIC T4 GC Ex nA nC IIC T4	21-AV4BO-0185X

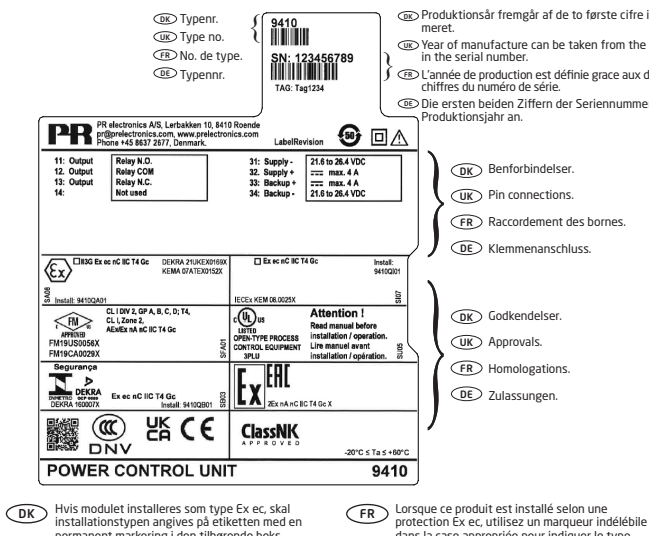
DK Kina RoHS UK China RoHS FR RoHS chinois DE China-RoHS

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	O	O	O	O	O

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

DK Sideskilt UK Side label FR Etiquette DE Typenschild



DK Hvis modulet installeres som type Ex ec, skal installationstypen angives på etiketten med en permanent markering i den tilhørende boks.

UK When this product has been installed as Ex ec, use a permanent marker in the appropriate box to indicate the type of installation on the label.

FR Lorsque ce produit est installé selon une protection Ex ec, utilisez un marqueur indélébile dans la case appropriée pour indiquer le type d'installation sur l'étiquette.

DE Wenn dieses Produkt mit der Schutzart Ex ec installiert wurde, verwenden Sie einen Permanentmarker im entsprechenden Feld, um die Verwendungsart der Installation auf dem Etikett zu kennzeichnen.

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.

PR electronics A/S • Lerbakken 10 • DK-8410 Rønde • Tel. +45 8637 2677 • www.prelectronics.com
UK importer: PR electronics (UK) Ltd • Middle Barn, Oak Lane • Apuldram, Chichester • West Sussex, PO20 7FD • Tel. +44 (0) 1243 776 450

ATEX/UKEX Installation drawing 9410QA01-V5R0

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

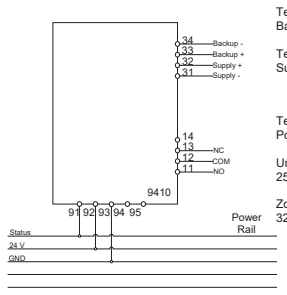
ATEX Certificate KEMA 07ATEX0152X
UKEx Certificate DEKRA 21UKEX0169 X

Marking: Ex 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 ºC <Ta < +60ºC



Terminal 34-33
Backup: 21.6 VDC – 26.6 VDC / 4 ADC

Terminal 31-32
Supply: 21.6 VDC – 26.6 VDC / 4 ADC

Terminal 11, 12, 13
Power Rail Status Relay

Unclassified installation
250 VAC, 2 A, 500 VA / 30 VDC, 2 A, 60 W

Zone 2 installation:
32 VAC, 2 A, 64 VA / 30 VDC, 2 A, 60 W

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 Installation Instructions
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
Wire stripping length 5mm
alternatively using bootlace ferrules or similar

Specific Condition of Use
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 I/II 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-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

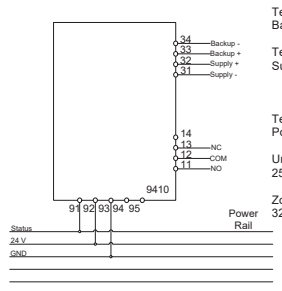
IECEx Certificate IECEx KEM 08.0025 X

Marking: Ex ec nC IIC T4 Gc

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

Non Hazardous Area or Zone 2

T4: -20 ºC <Ta < +60ºC



Terminal 34-33
Backup: 21.6 VDC – 26.6 VDC / 4 ADC

Terminal 31-32
Supply: 21.6 VDC – 26.6 VDC / 4 ADC

Terminal 11, 12, 13
Power Rail Status Relay

Unclassified installation
250 VAC, 2 A, 500 VA / 30 VDC, 2 A, 60 W

Zone 2 installation:
32 VAC, 2 A, 64 VA / 30 VDC, 2 A, 60 W

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 I/II 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.

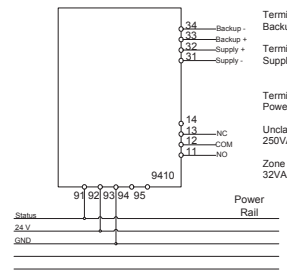
WARNING: Terminals 91,92,93,94,95 may only be connected to Power Rail 9400.

FM Installation drawing 9410QF01-V3R0

9410 Power Control Unit
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 ºC <Ta < +60ºC



Terminal 34-33
Backup: 21,6 VDC – 26,6VDC / 4ADC

Terminal 31-32
Supply: 21,6 VDC – 26,6VDC / 4ADC

Terminal 11, 12, 13
Power Rail Status Relay

Unclassified installation
250VAC, 2A, 500VA / 30VDC, 2A, 60W

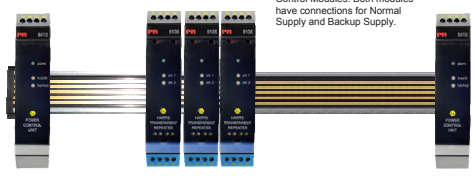
Zone 2 installation:
32VAC, 2A, 64VA / 30VDC, 2A, 60W

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 atmospheres, 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.
Ano de fabricação pode ser obtido a partir dos dois primeiros dígitos do número de série.number.

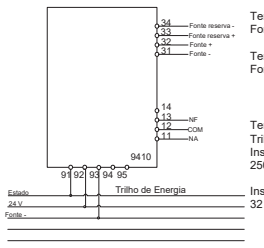
9410 Unidade de Controle de Potência

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 ºC <Ta < +60ºC



Terminais 34-33
Fonte reserva: 21,6 VDC – 26,4 VDC / 4 ADC

Terminais 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
250 VAC, 2 A, 500 VA / 30 VDC, 2 A, 60 W

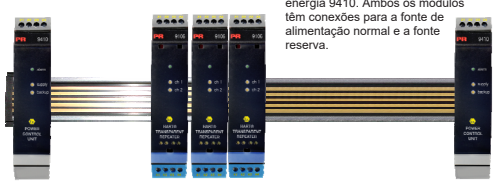
Instalação na zona 2:
32 VAC, 2 A, 64 VA / 30 VDC, 2 A, 60 W

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 Potencia 9410 redundante com reserva.



A energia é fornecida ao barramento de alimentação de dois módulos de controle de energia 9410. Ambos os módulos têm conexões para a fonte de alimentação normal e a fonte 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 tipo 9410 e o tipo de trilho de energia 9400 devem ser instalados em um ambiente controlado com poluição adequadamente reduzida, limitada ao grau de poluição 2 ou melhor.

O circuito deve ser limitado à categoria de sobretensão I / II, conforme definido na IEC 60664-1.

O 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 proteçao IP54.

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

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

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

Atençao: Terminais 91, 92, 93, 94 e 95 só podem ser conectados ao Trilho de Energia Typo 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:

c UL us LISTED
E233311

Proc. Cont. Eq. for Use in Haz. Loc.
Install in CL I DIV2 GP A-D T4
or CL I Zn2 Gp IIC T4
Installation Drawing: 9410QU01

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

Standards:
- UL 121201 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 2017/09/01

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 installations in Canada, or other local codes, as applicable.

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

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

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

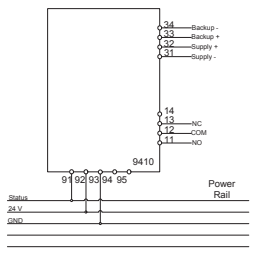
Warning: To prevent ignition of the explosive atmospheres, disconnect power before servicing and do not separate connectors, install or remove modules from Power Rail when energized and an explosive gas mixture is present.

Avertissement : Pour éviter l'inflammation d'atmosphères explosibles, déconnectez 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..

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 ºC <Ta < +60ºC



Terminal 34-33
Backup: 21,6 VDC – 26,4VDC / 4ADC

Terminal 31-32
Supply: 21,6 VDC – 26,4VDC / 4ADC

Terminal 11, 12, 13
Power Rail Status Relay

Unclassified installation
250VAC, 2A, 500VA / 30VDC, 2A, 60W

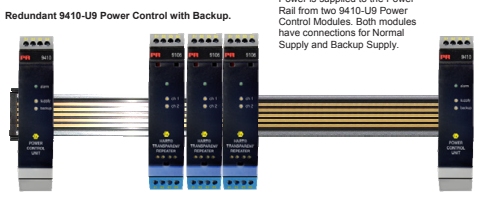
Zone 2 installation:
32VAC, 2A, 64VA / 30VDC, 2A, 60W

9410 –U9 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-U9 Power Control with Backup.



Power is supplied to the Power Rail from two 9410-U9 Power Control Modules. Both modules have connections for Normal Supply and Backup Supply.

IECEx 설치 도면 9410QI01-V4R0

9410
9410의 안전한 설치를 위해 다음 사항을 준수해야 합니다. 이 모듈은 이 지역에 적용되는 국내 및 국제 법률, 지침 및 표준에 정통한 유자격자만 설치해야 합니다.
제조연도는 일련번호의 처음 두 자리입니다.

9410 전력 제어 장치

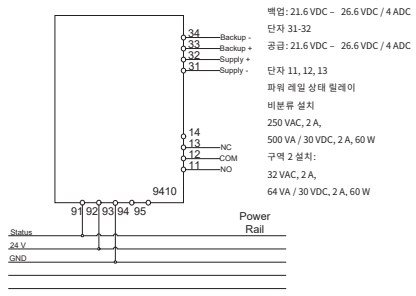
IECEx 인증서 IECEx KEM 08.0025 X

마킹: Ex ec nC IIC T4 Gc

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

비위험 지역 또는 구역 2

T4: -20 ºC <Ta < +60ºC



단자 34-33
백업: 21.6 VDC – 26.6 VDC / 4 ADC
단자 31-32
공급: 21.6 VDC – 26.6 VDC / 4 ADC
단자 11, 12, 13
파워 레일 상태 릴레이
비분류 설치
250 VAC, 2 A,
500 VA / 30 VDC, 2 A, 60 W
구역 2 설치:
32 VAC, 2 A,
64 VA / 30 VDC, 2 A, 60 W

백업 기능이 있는 9410 전력 제어.

외부 인클로저에 의해 파워 레일이 단락되는 것을 방지하려면 엔드 캡을 사용하십시오.

파워 레일이 의도치 않게 단락되는 것을 방지하려면 9400 커버를 사용하십시오.

백업 기능이 있는 이중 9410 전력 제어.

전원은 2개의 9410 전력 제어 모듈에서 파워 레일로 공급됩니다. 두 모듈이 모두 정상 공급 및 백업 공급을 위한 연결을 갖고 있습니다.

설치 참고 사항:

일반 사항
9410은 주 전원에 대하여 이중 또는 강화 절연이 있는 전원으로부터 공급받아야 합니다.

단자 블록:
와이어 크기 0.13-2.08 mm² / AWG 26-14 연선
나사 단자대 토크 0.5 Nm

구역 2에 설치하는 경우
전력 제어 장치 유형 9410 및 파워 레일 유형 9400은 오염이 적절히 감소된 통제된 환경(오염도 2 이상으로 제한)에 설치해야 합니다.
회로는 IEC 60664-1에 정의된 대로 과전압 범주 I/II로 제한해야 합니다.

9410 전력 제어 장치 및 9400 파워 레일은 방폭 Ex-n 또는 Ex-e의 요구 사항을 준수하는 IP 보호가 IP54 이상인 외부 인클로저에 설치해야 합니다.

과도 현상은 정격 전압의 40%를 초과하지 않는 수준으로 설정된 내부 과도 보호 장치에 의해 억제됩니다.

경고: 전원이 공급되고 폭발성 가스 혼합물이 있는 경우, 커넥터를 분리하지 마십시오.

경고: 지역이 위험하지 않은 것으로 알려진 경우가 아니면 파워 레일에 모듈을 설치하거나 제거하지 마십시오.

경고: 단자 91,92,93,94,95는 파워 레일 9400에만 연결할 수 있습니다.

EU DECLARATION OF CONFORMITY

CE

(9410DoC_104)

As manufacturer
PR electronics A/S, Lerbakken 10, DK-8410 Rønde
hereby declares that the following product:
Type: **9410**
Name: **Power control unit**
From serial no.: **222089100**
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 + A1 : 2019

The ATEX Directive 2014/34/EU and later amendments
EN 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 IEC 63000 : 2018

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

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Rønde, 2 February 2023

Stig Lindemann, CTO
Manufacturer's signature

UKCA DECLARATION OF CONFORMITY

UK CA

(9410DoC_UKCA_100)

As manufacturer
PR electronics A/S, Lerbakken 10, DK-8410 Rønde
hereby declares that the following product:
Type: **9410**
Name: **Power control unit**
From serial no.: **222089100**
is in conformity with the following statutory requirements:

The Electromagnetic Compatibility Regulations 2016 (UK SI 2010/1091) 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 Electrical Equipment (Safety) Regulations 2016 (UK SI 2010/1101) and later amendments
EN 61010-1 : 2010 + A1 : 2019

The Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (UK SI 2016/1107) and later amendments
EN IEC 60079-0 : 2018, EN 60079-7 : 2015 + A1 : 2018 and EN 60079-15 : 2019
UK type examination certificate: DEKRA 21UKEX0169 X

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (UK SI 2010/3032) and later amendments
EN IEC 63000 : 2018

This declaration of conformity is issued under the sole responsability of the manufacturer.

Rønde, 2 February 2023

Stig Lindemann, CTO
Manufacturer's signature