

**DK****ADVARSEL**

GENERELT
Denne modul er beregnet for tilslutning til farlig elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig legemedskadelige eller mekanisk ødeleggelser.

Ført at undgå fare for elektrisk stød og brand skal sikkerhedsregler 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 modullets beskyttelsesforanstaltninger.

ADVARSEL

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

- Installation, ledningsmontage og -demontage.
- Fejlfinding på modulet.
- Reparation af modulet og udskiftning af sikringer må kun foretages af PR electronics A/S.

ADVARSEL

Før at overholde sikkerhedsafstande må moduler med to indbyggede relæer ikke tilsluttes både farlig og ikke-farlig spænding på samme moduls relækontakter. SYSTEM 2200 monteres i sokkel type S3B Releco (bestillings-nummer 7023).

Hvis PR 2231 benyttes med strømtransformator, skal denne være med intern beskyttelse for afbrydelse eller monteret med anden ekstern måleshunt.

SIKKERHEDSREGLER

Modtagelse og udpakning
Udpak modulet uden at beskadige det. Kontrollér ved modtagelsen, at modulene 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 udset ikke modulet for regn eller kraftig fugt. Om nødvendigt skal opvarmning ud over de opgivne grænser for omgivelsetstemperatur, forhindres ved hjælp af ventilation.

Modulet skal installeres i forureningsgrad 2 eller bedre. Modulet er designet til at være sikert mindst op til en højde af 2000 m.

Modulet 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, som også 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.

Installation og tilslutning af modulet skal følge landets gældende regler for installation af elektrisk materiel bl.a. med hensyn til ledningstværtis, for-sikring og placering.

Beskrivelse af indgang / udgang og forsørgerforbindelser findes i produktmanualen og på sidesiderne.

For moduler, som er permanent tilsluttet farlig spænding, gælder:

Før-sikringer maksimale størrelse er 10 A, og den skal sammen med en afbryder placeres let tilgængeligt og tæt ved modulet. Afbryderen skal markeres således, at der ikke er tvivl om, at den afbryder spændingen til modulet.

Før optimal afkøling af modulet anbefales det, at montere enheden i lodret stilling og at holde en afstand på mindst 10 mm til nabomoduler.

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.

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

DIP-switch-programmering
Følgende moduler kan programmes via interne DIP-schitve:

2224, 2231, 2255, 2261, 2281 & 2289.

Man får adgang til DIP-schitvene ved at åbne huset (se billede 1). Modullets bagplade friges fra huset ved hjælp af en skruetrækker.

Derefter kan bagpladen udtrækkes sammen med printet (billede 2), men vær opmærksom på printets placering i huset, da det er muligt at isætte dette i flere positioner. Træk ikke udad i ledningerne, men tag fat i printet.

Nu kan switche og jumpere ændres. Det er vigtigt, at ingen ledninger kommer i klemme, når bagplade og huset samles.

Benforbindelser
Benforbindelser er vist på sideskiltet på produktet. For yderligere information kan den fulde produktmanual downloades fra www.prelectronics.dk.

Elektriske specifikationer
Specifikationsområde: -20°C til +60°C
Forsyningsspænding: 19.2...28.8 VDC
Universel forsyningsspænding (hus disponibel): 21.6...253 VAC / 19.2...300 VDC

*Isolationsspænd., test/defr.: 3.75 kVAC / 250 VAC

**Isolationsspænd., test/defr.: 1.4 kVAC / 150 VAC

Kalibreringstemperatur: 20...28°C

Relativ luftfugtighed: < 95% RH (ikke-kond.)

Mål (HxBxD): 80.5 x 35.5 x 84.5 mm

Kapslingsklasse: IP50

Relæudgang - 2255

Max. spænding: 150 VRMS

Max. strøm: 2 A / AC

Max. AC-effekt: 300 VA

Godkendelses

DNV, Ships & Offshore*: TAA0000101

Overholdte myndighedskrav

EMC: 2014/30/EU & UK SI 2016/1091

LVD: 2014/35/EU & UK SI 2016/1101

RoHS: 2011/65/EU & UK SI 2012/3032

PELV/SELV*: IEC634-4-4 / EN 60742

EAC: TR-CU 020/2011

* Gælder kun for 2231

** Gælder kun for 2255

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

Until the device is fixed, do not connect hazardous voltages to the device.

The following operations should only be carried out on a disconnected device and under ESD safe conditions:

- General mounting, connection and disconnection of wires.
- Troubleshooting the device.
- Repair of the device and replacement of circuit breakers must be done by PR electronics A/S only.

WARNING

To keep the safety distances, devices with two built-in relays must not be connected to both hazardous and non-hazardous voltages on the same device's relay contacts. SYSTEM 2200 must be mounted in socket type S3B Releco (order no 7023).

If PR 2231 is used with a current transformer, this must be internally protected against disconnection or mounted with an alternative external measuring shunt.

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.

The device must be installed in pollution degree 2 or better. The device is designed to be safe up to an altitude of 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.

Mounting and connection
Mounting and connection of the device should comply with national legislation for mounting of electric materials, i.e. wire cross section, protective fuse, and location. Descriptions of input/output and supply connections are shown in the product manual and on the side label.

The following apply to fixed hazardous voltages-connected devices:

The max. size of the protective fuse is 10 A and, together with a power switch, it should be easily accessible and close to the device. The power switch should be marked with a label indicating that it will switch off the voltage to the device.

To achieve maximum cooling of the device, mounting in a vertical position at a distance of minimum 10 mm between neighbouring units is recommended.

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.

DIP-switch programming

The following devices are all DIP-switch programmable:

2224, 2231, 2255, 2261, 2281 & 2289.

The programming can only be carried out by opening the housing (see picture 1). The back panel of the device is detached from the housing by way of a screw driver.

After this, the back panel can be pulled out together with the PCB (picture 2), but please notice the position of the PCB as there is a number of different positions in the house. Do not pull the wires unnecessarily, instead pull the PCB.

Switches and jumpers can now be moved. When assembling the back plate and housing, please make sure no wires are stuck.

Pin connections

Pin connections are shown on the product side label. For detailed information please download the full product manual from www.prelectronics.com.

Electrical specifications

Specifications range: -20°C to +60°C
Supply voltage: 19.2...28.8 VDC

Universal supply voltage (if available): 21.6...253 VAC / 19.2...300 VDC

*Isolation voltage, test/defr.: 3.75 kVAC / 250 VAC

**Isolation voltage, test/defr.: 1.4 kVAC / 150 VAC

Calibration temperature: 20...28°C

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

Dimensions (HxWxD): 80.5 x 35.5 x 84.5 mm

Protection degree: IP50

Relay outputs - 2255

Max. voltage: 150 VRMS

Max. current: 2 A / AC

Max. AC power: 300 VA

Approvals

DNV, Ships & Offshore*: TAA0000101

Observed authority requirements

EMC: 2014/30/EU & UK SI 2016/1091

LVD: 2014/35/EU & UK SI 2016/1101

RoHS: 2011/65/EU & UK SI 2012/3032

PELV/SELV*: IEC634-4-4 / EN 60742

EAC: TR-CU 020/2011

* Valid for 2231 only

** Valid for 2255 only

FR**AVERTISSEMENT**

Ce module est conçu pour supporter une connexion à des tensions électriques dangereuses. Si vous ne tenez pas compte de cet avertissement, cela peut causer des dommages corporels ou des dégâts mécaniques.

Pour éviter les risques d'électrocution et d'incendie, conformez-vous aux consignes de sécurité et suivez les instructions mentionnées dans ce guide. Vous devez vous limiter aux spécifications indiquées et respecter les instructions d'utilisation de ce module, telles qu'elles sont décrites dans ce guide. Il est nécessaire de lire attentivement avant de mettre ce module en marche. L'installation de ce module est réservée à un personnel qualifié (techniciens). Si la méthode d'utilisation de l'équipement diffère de celle décrite par le fabricant, la protection assurée par l'équipement risque d'être altérée.

AVERTISSEMENT

Tant que les tensions ne sont pas fixé, ne le mettez pas sous tensions dangereuses. Les opérations suivantes doivent être effectuées avec le module débranché et dans un environnement exempt d'écharges électrostatiques (ESD):

- montage général, raccordement et débranchement des fils et recherche de pannes sur le module.

AVERTISSEMENT

Afin de conserver les distances de sécurité, les modules à deux relais intégrés ne doivent pas être mis sous tensions dangereuses et non dangereuses sur les mêmes contacts du relais du module. Il convient de monter l'appareil SYSTEME 2200 sur un support du type S3B Releco (numéro de référence 7023). Si vous utilisez le PR 2231 avec un transformateur de courant, ce dernier doit être équipé d'un système de protection interne contre la mise hors circuit ou monté avec un shunt de mesure externe.

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. À la réception du module, vérifiez que le type de module reçu correspond à celui que vous avez commandé.

Environnement

N'exposez pas votre module aux rayons directs du soleil et choisissez un endroit à humidité modérée et à l'abri de la poussière, des températures élevées, des chocs et des vibrations mécaniques et de la pluie. Le cas échéant, des systèmes de ventilation permettent d'éviter qu'une pièce soit chauffée au-delà des limites prescrites pour les températures ambiantes. L'appareil doit être installé en degré de pollution 2 ou meilleur. L'appareil est conçu pour fonctionner en toute sécurité sous une altitude inférieure à 2 000 m.

Montage

Il est conseillé de réserver le raccordement du module aux techniciens qualifiés qui connaissent les termes techniques, les avertissements et les instructions de ce guide et qui sont capables d'appliquer ces dernières.

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

EU DECLARATION OF CONFORMITY
(2224DoC_102)



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

hereby declares that the following product:

Type: 2224
Name: Valve controller
From serial no.: 171437001

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022

EU DECLARATION OF CONFORMITY
(2231DoC_103)



As manufacturer

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

hereby declares that the following product:

Type: 2231
Name: Trip amplifier
From serial no.: 191057001

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022

EU DECLARATION OF CONFORMITY
(2261DoC_102)



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

hereby declares that the following product:

Type: 2261
Name: mV transmitter
From serial no.: 171549001

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022

EU DECLARATION OF CONFORMITY
(2281DoC_102)



As manufacturer

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

hereby declares that the following product:

Type: 2281
Name: Ramp generator
From serial no.: 171543001

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022

EU DECLARATION OF CONFORMITY
(2255DoC_103)



As manufacturer

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

hereby declares that the following product:

Type: 2255
Name: t/t - t/t converter
From serial no.: 191356001

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022

EU DECLARATION OF CONFORMITY
(2289DoC_102)



As manufacturer

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

hereby declares that the following product:

Type: 2289
Name: Signal calculator
From serial no.: 171705000

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 RoHS2 Directive 2011/65/EU and later amendments

EN IEC 63000 : 2018

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

Stig Lindemann, CTO
Manufacturer's signature

Rønde, 15 August 2022