

**DK****ADVARSEL**

GENERELT
Dette modul er beregnet for tilslutning til livsfarlige elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig legemandsbeskadigelse eller mekanisk ødelæggelse.

Før for at undgå fare for elektriske stød og brand skal sikkerhedsreglerne overholdes, og vedligeholdningen 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.

FARLIG SPÆNDING
I applikationer, hvor farlig spænding er tilsluttet modullets ind-/udgang, skal det sikres, at der er tilstrækkelig afstand eller isolationsrum mellem ledninger, klemmer og kabinet til omgivelserne (inkl. nabomoduler) til at opnetholde beskyttelsen mod elektriske støder.

Før moduler med relækontakter gælder følgende: For at overholde sikkerhedsafstanden må der ikke tilsluttes både farlig og ikke-farlig spænding på modullets relækontakter.

ADVARSEL

Modullets frontplade må ikke åbnes, da dette vil medføre skade på stofbeklædningen til kommunikationsenhederne i PR 4500-serien. Modullet indeholder ingen DIP-switches eller jumpers.

System 4000 skal monteres på DIN-skine efter DIN 60715.

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 stov 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 omgivelstempertatur, forhindres ved hjælp af ventilation. Modulet skal installeres i forureningsgrad 2 eller bedre.

Modulet er designet til at være sikret mindst op til en højde af 2000 m. Modulet er konstrueret til indenders brug.

Installation
Modullet 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 modullets rette håndtering, skal der rettes henvendelse til den lokale forhandler eller alternativt direkte til **PR electronics A/S**.

Installation og tilslutning af modullet skal følge landets gældende regler for installation af elektrisk materiel bl.a. med henvis til ledningstværsnit, for-sikring og placering.

Flerkontakt ledning skal installeres med en afsolningslangde på 5 mm eller via en egnlig isoleret terminal som f.eks. en dupsok.

Beskrivelse af indgang / udgang og forsyningsforbindelser findes i installationsvejledningen og på sideskiltet.

For moduler, som er permanent tilsluttet farlig spænding, gælder: For-sikrings maksimale storlelse 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.

UL-installationskrav
Brug kun 60/75°C kobberledninger.

Må kun anvendes i forureningsgrad 2 eller bedre.

Max. omgivelstempertatur 60°C

Max. ledningskvadrat AWG 26-14

UL fil-nummer, 4114, 4116 & 4131.. E231911

UL fil-nummer,

4104, 4179, 4179B, 4184 E248256

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 værktøj og instrumenter.

Betjening under normal drift

Operatør må kun installere 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 fugtet med destillert vand.

Elektriske specifikationer

Anvendelsestemperatur -20 til +60°C

Oprebningstemperatur -20°C to +85°C

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

Kapslingsklasse IP20

Mål (HxBxD) 109 x 23,5 x 104 mm

Forsyningsspænding, universel 21,6...253 VAC, 50...60 Hz

eller 19,2...300 VDC

Max. forbrug:

4179B 1,4 W

4179 1,8 W nom.

4114, 4131 2,0 W

4104, 4116, 4184 2,5 W

Max. effektstab:

4179B 1,9 W

4114, 4131, 4184 2,0 W

4104, 4116, 4179 2,5 W

Sikring:

Intert modstandsdiagram (4179B). < 80 s, 2 A

Isolationsspænding, test / drift 2,3 kVAC / 250 VAC (fortækket isolation)

Isolationsspænding, drift

relai til relæ (4179B) 125 VAC (fortækket isolation)

EMC-immunitetsprøvkning

NAMUR NE 21, A-krit, gniststøj, < ±1% af spen

Ledningsbånd emission,

klasser A (4184) 150 kHz...10 MHz

Overholde myndighedskrav

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

LVD 2014/35/EU & UK SI 2016/1091

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

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

In applications where hazardous voltage is connected to in-/outputs of the device, sufficient spacing or isolation from wires, terminals and enclosure to surroundings (incl. neighboring devices), must be ensured to maintain protection against electric shock.

To keep the safety distances, the relay contacts on the device (where applicable) must be connected to both hazardous and non-hazardous voltages at the same time.

WARNING

Do not open the front plate of the device as this will cause damage to the connector for the PR 4500 communication interfaces. This device contains no DIP-switches or jumpers.

SYSTEM 4000 must be mounted on a DIN rail according to DIN 60715.

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 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**.

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.

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 this installation guide and on the side label.

The following apply to fixed hazardous voltages connected devices: The max. protective fuse is 10 A. 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.

UL installation requirements

Use 60/75°C copper conductors only.

For use only in pollution degree 2 or better.

Max. ambient temperature 60°C

Max. wire size AWG 26-14

UL file number, 4114, 4116 & 4131.. E231911

UL file number,

4104, 4179, 4179B, 4184 E248256

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.

Normal operation

Operators are only allowed to adjust and operate devices that are safely fixed to panels, etc., thus avoiding the danger of personal injury and damage. This means there is no electrical shock hazard, and the device is easily accessible.

Cleaning

When disconnected, the device may be cleaned with a cloth moistened with distilled water.

Electrical specifications

Temperature range -20°C to +60°C

Storage temperature -20°C to +85°C

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

Protection degree IP20

Dimensions (HxWxD) 109 x 23,5 x 104 mm

Supply voltage/universal 21,6...253 VAC, 50...60 Hz

or 19,2...300 VDC

Max. required power:

4179B 1,4 W

4179 1,8 W nom.

4114, 4131 2,0 W

4104, 4116, 4184 2,5 W

Max. power dissipation:

4179B 1,9 W

4114, 4131, 4184 2,0 W

4104, 4116, 4179 2,5 W

Fuse:

Internal fusible resistor (4179B). < 80 s, 2 A

EMC immunity influence 125 VAC (reinforced)

Isolation voltage - working, relay to relay (4179B) < 80 s, 2 A

Isolation voltage - working, relay to relay (4179B) < 80 s, 2 A

Resistive fuse intern (4179B) 125 VAC (reinforced)

Tension d'isolation, test / oper. 2,3 kVCA / 250 Vca (isolation renforcée)

Tension dissolusion, opération relais à relais (4179B) 125 VCA (isolation renforcée)

Immunité CEM < ±0,5% of the EC

NAMUR NE 21, critère A, burst < ±1% of the EC

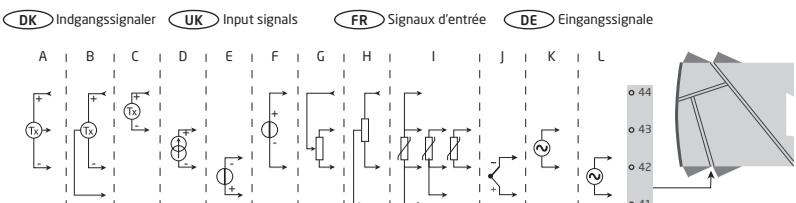
Emission par conduction, classe A (4184) 150 kHz...10 MHz

Comptabilité avec les normes

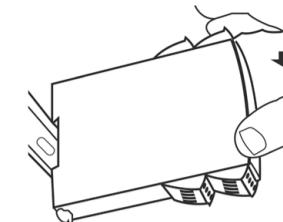
EMC 2014/30/EU & UK SI 2016/1091

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

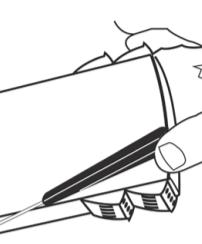
RoHS 2011/6



	DK	UK	FR	DE	4104	4114	4116	4131	4179	4179B	4184
A	3-tråds Tx, strøm	3-wire current Tx	Tx de courant 3-fils	3-Draht Tx, Strom	x					x	
B	3-tråds Tx, spænding	3-wire voltage Tx	Tx de tension 3-fils	3-Draht Tx, Spannung	x					x	
C	2-tråds Tx	2-wire Tx	Tx 2-fils	2-Draht Tx	x	x	x	x	x		x
D	Strøm, DC	DC current	Courant cc	DC-Strom	x	x	x	x	x		x
E	Spænding, DC	DC voltage	Tension cc	DC-Spannung	x						x
F	Spænding, DC	DC voltage	Tension cc	DC-Spannung	x	x	x	x			
G	Potentiometer	Potentiometer	Potentiomètre	Potentiometer							x
H	Potentiometer	Potentiometer	Potentiomètre	Potentiometer							
I	RTD og lin.R	RTD and lin. R	RTD et R lin.	WTH und lin. R	x	x	x				
J	TC	TC	TC	TE	x	x	x				
K	Strøm, AC	AC current	Courant ca	AC-Strom				x	x		
L	Spænding, AC	AC voltage	Tension ca	AC-Spannung				x	x		



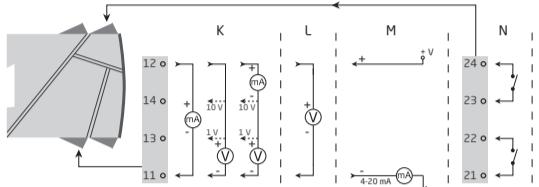
- DK** Montering på DIN-skinne. Mounting on DIN rail.
- UK** Montage sur rail DIN.
- FR** Montage auf DIN-Schiene.
- DE** Montage auf DIN-Schiene.



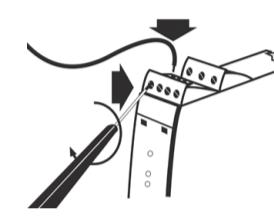
- DK** Frigørelse fra DIN-skinne Husk først at demonte tilslutningsklemmerne med farlig spænding. Modulet friges fra DIN-skinnen ved at løfte den i den nederste lås.
- UK** Demounting from DIN rail First, remember to demount the connectors with hazardous voltages. Detach the device from the DIN rail by lifting the bottom lock.
- FR** Démontage du rail DIN Tout d'abord, n'oubliez pas de démonter les connecteurs où régnent des tensions dangereuses. Débloquez le verrou inférieur pour dégager le module du rail DIN.

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

DK Udgangssignaler **UK** Output signals **FR** Signaux de sortie **DE** Ausgangssignale



	DK	UK	FR	DE	4104	4114	4116	4131	4179	4179B	4184
K	Strøm / spænding	Current / voltage	Courant / tension	Strom / Spannung	x	x	x		x		x
L	Bufferet spænding	Buffered voltage	Tension direct	Gepufferter Spannung							x
M	2-tråds strøm	2-wire current	Courant 2-fils	2-draht Strom	x			x	x		x

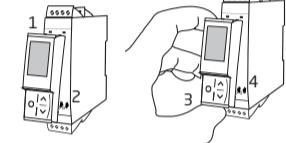


Ledningskvadrat: 0,13...2,08 mm² / AWG 26...14
flerkort ledning.
Klemmekræftspændingsmoment 0,5 Nm.

UK Wire size: 0,13...2,08 mm² / AWG 26...14 stranded wire.
Screw terminal torque 0,5 Nm.

FR Taille des fils: 0,13...2,08 mm² / AWG 26...14 fil multibrins.
Pression max. avant déformation de la vis 0,5 Nm.

DE Leitungsquerschnitt: 0,13...2,08 mm² / AWG 26...14 Litzendraht.
Klemmschraubenanzugsmoment 0,5 Nm.



- DK** Påsættning af PR 4500:
1: Indsæt tappene på PR 4500 i hullerne øverst på modulet.
2: Sving PR 4500 på plads.
Aftagning af PR 4500:
3/4: Tryk på udlesenknap i bunden af PR 4500 og sving PR 4500 op.

- UK** Mounting of PR 4500:
1: Insert the tabs of the PR 4500 into the holes at the top of the device.
2: Hinge the PR 4500 down until it snaps into place.
Demounting of the PR 4500:
3: Push the release button on the bottom of the PR 4500 and hinge the PR 4500 out and up.
4: With the PR 45 hinged up, remove from holes at the top of the device.

- DE** Anbringung des PR 4500:
1: Einbringen der beiden Fixierstifte des PR 4500 in die Öffnungen an der oberen Frontplatte des Gerätes.
2: Das Display PR 4500 an der Unterkante einrasten lassen.
Entfernen des PR 4500:
3/4: Die Entriegelung des PR 4500 an der Unterkante betätigen und das Gerät vorsichtig abnehmen.

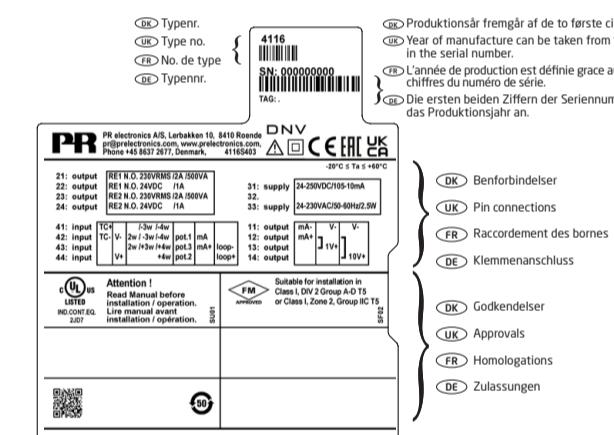
- FR** Montage du PR 4500:
1: Insérez les crochets du PR 4500 dans les trous en haut du module.
2: Poussez le bas du PR 4500 vers le module.
Démontage du PR 4500:
3/4: Appuyez sur le bouton de déclenchement en dessous du PR 4500, puis tirez le module vers le haut.

DK	Hazardous Substances				
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr VI)	Polybrominated diphenyl ethers (PBDE)
Printed circuit board	X	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					

The product's Environmentally Friendly Use Period (EFUP) is 50 years



DK Sideskilt **UK** Side label **FR** Etiquette **DE** Typenschild



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

EU DECLARATION OF CONFORMITY (4104DoC_103)



EU DECLARATION OF CONFORMITY (4114DoC_103)



EU DECLARATION OF CONFORMITY (4116DoC_103)



As manufacturer PR electronics A/S, Lerbakken 10, DK-8410 Rønde hereby declares that the following product:

Type: 4104 Name: Universal uni- / bipolar signal transmitter From serial no.: 191056001

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.

Rønde, 28 March 2022

Rønde, 28 March 2021

Rønde, 28 March 2022

As manufacturer PR electronics A/S, Lerbakken 10, DK-8410 Rønde hereby declares that the following product:

Type: 4114 Name: Universal transmitter From serial no.: 192103901

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.

Rønde, 28 March 2022

Rønde, 28 March 2022

Rønde, 28 March 2022

As manufacturer PR electronics A/S, Lerbakken 10, DK-8410 Rønde hereby declares that the following product:

Type: 4116 Name: Universal trip amplifier From serial no.: 191019001

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

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The Low Voltage Directive 2014/35/EU and later amendments EN 61010-1 : 2