



9203 电磁阀/警报灯驱动器
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



ADVARSEL
Dette modul er beregnet til tilslutning til lavsæregne elektriske spændinger. Hvis denne advarsel ignoreres, kan det føre til alvorlig legemedskadelse eller mekanisk ødeleggelse.
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 moduels beskyttelsesforanstaltninger.

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

ADVARSEL
Modulets frontplate må ikke åbnes, da dette vil medføre skade på stikforbindelsen til display / programmeringsfronten PR 45xx. Modulerne indeholder ingen DIP-switch eller jumper.

SIKKERHEDSREGLER

Mottagelse og opkøb
Udpak modulet, uden at beskadige det. Kontroller ved mottagelsen, at modultypen svare til den bestilte. Indpakningen bør følge modulet, indtil dette er monteret på blivende plads.

Miljøforhold
Undgå direkte sollys, kraftig støv eller varme, mekaniske rystelser og stød, og udsæt ikke modulet for regn eller kraftig fugt. Om nødvendigt skal opvarmning, ud over de oprindelige grænser for omgivelsetemperatur, forhindres ved hjælp af ventilation.

Alle moduler kan anvendes i Måle- / overspændings-kategori II og Forureningsgrad 2. Modulerne er designet til at være sikre mindst op til en højde af 2000 m.

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 flerkort ledning ved tilslutning af forsyningsspænding med mindre ledningssendene er forsynet med ledningsstyrer.

Beskæftig med indgang og udgang og forsyningssforbindelserne findes i produktionsmaterialet på sideskiltet.

Modulet er forsynet med skruemontage og skal forsynes fra en dobbeltisolert forstørket isoleret spændingsforlyng. En afbryder placeres let tilgangeligt og tæt ved modulet. Afbryder skal markeres således, at der ikke er tvivl om, at den afbryder spændingen til modulet.

Ved installation på Power Rail 9400 bliver forsyningsspændingen levereret 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 værkørsel 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 spændingsløst tilstand, rengøres med en klud moistened med destilleret vand.

Elektriske specifikationer

Specifikationsområde -20°C til +60°C

Forsyningsspænding 19,2...31,2 VDC

Max. forbrug:

1 kanal, lav strøm / høj strøm ≤ 1,9 W / ≤ 2,5 W

2 kanaler, lav strøm ≤ 3,1 W

Max. effektståb:

1 kanal, lav strøm / høj strøm ≤ 1,1 W / ≤ 1,7 W

2 kanaler, lav strøm ≤ 2,0 W

Sikring 9203 1,25 A / 250 VAC

Isolationsspænding, test / drift 2,6 KVAC / 300 VAC

Isolation - udgang 1 til udgang 2 1,5 KVAC / 150 VAC

Isolation - udgang 1 til forstørket isolation 1,5 KVAC / 150 VAC

Isolation - relæ til forsyning 1,5 KVAC / 150 VAC (forstørket isolation)

Kalibreringstemperatur 20...28°C

EMC-immunitetspåvirkning < ±0,5% af spænd

Udvidet EMC-immunitet:

NAMUR NE21, A-krit, grinstøjs ±1% af spænd

2-trådsforlyng (Klemme 44...43) 25...16 VDC / 0...20 mA

Relativ luftfugtighed 95% RH (ikke kond.)

Mål, med 4501/451x (HxBxD) 109x23,5x116/131 mm

Mål, uden 4501/451x (HxBxD) 109x23,5x104 mm

Kapslingsklasse IP20

PNP-indgang

Trig-niveau LOW < 0,8 VDC

Trig-niveau HIGH > 10,0 VDC

Max. ekstern spænding 28 VDC

Udgang

Lav strøm 9023x1xx 35 mA

Hej strøm 9203x2xx 60 mA

Gokendelsel

DNV-GL, Ships & Offshore TAA00000JD

ClassNK TA18527M

c UL us, UL 61010-1 E314307

EAC TR-CU 020/2011

EAC LVD TR-CU 004/2011

EAC Ex TR-CU 012/2011

SIL IEC 61508

Overholte myndighedskrav

EMC 2014/30/EU

LVD 2014/35/EU

ATEX 2014/34/EU

RoHS 2011/65/EU

EU DECLARATION OF CONFORMITY

(9203DoC_102)

As manufacturer

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

hereby declares that the following product:

Type: 9203

Name: Solenoid / alarm driver

From serial no.: 161117051

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 60079-0 : 2012 + A11, EN 60079-11 : 2012 and EN 60079-15 : 2010

ATEX certificate: KEMA 07ATEX0147 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 RoHS 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

PR electronics A/S • Lerbakken 10 • DK-8410 Rønde • Tel. +45 8637 2677 • Fax +45 8637 3085 • www.prelectronics.com

Rønde, 9 May 2018

Stig Lindemann, CTO

Manufacturer's signature

J. Lindemann

Signature

9203DoC_102

ATEX Installation drawing 9203QA01-V6R0

For safe installation of 9203 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.

The 4501 programming module is to be used solely with PR electronics modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

ATEX Certificate: KEMA 07ATEX 0147 X

Marking 9203B II (1) (Ex ia Ga) IIC/IB/IIA
II 2G Ex nA IIC IIC T4 Gc
Ex ia IIC IIC T4 Gc
(M1) (Ex ia) I

Marking 9203A II 3G Ex nA nC IIC T4 Gc

Standards EN 60079-0: 2012, EN 60079-11: 2012, EN 60079-15: 2010

Type	Installation	Current Output	Channels	Input
9203	Non Ex / Zone 2	A	Low current	1 Single A Standard :-
			Double B	PNP : 1
	Ex-Barrier / Zone 2	B	High current	2 Single A PNP : 2

Installation notes.

Install in pollution degree 2, overvoltage category II as defined in EN60664-1.

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

Do not install or remove modules from the Power Rail when an explosive gas mixture is present.

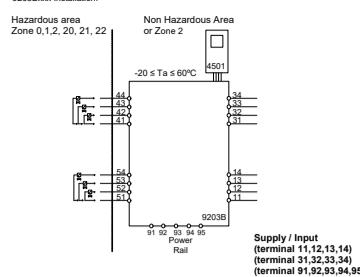
Discarded power before servicing.

The wiring of unused terminals is not allowed.

In type of protection (Ex ia) the parameters for intrinsic safety for gas group IB are applicable.

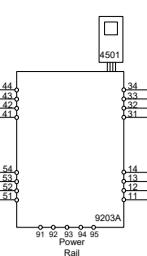
For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex p, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.

For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (Type Examination Certificate KEMA 07ATEX1052 X) is allowed.



9203Bxx Installation:		9203B1A, 9203B1B Terminal 41-2/51-52		9203B2A Terminal 41-42	
Hazardous area Zone 0,1,2,20,21,22		Co Lo Lo/Ro		Co Lo Lo/Ro	
Uo 28V IIC 80nF 4.2mH	Io 93mA IIB 640nF 16.8mH	Uo 28V IIC 80nF 2.6mH	Io 115mA IIB 640nF 10.8mH	Uo 28V IIC 80nF 4.49µH/D	Io 125mA IIB 640nF 16.9mH
Po 0.65W IIA 2.1µF 32.6mH 436µH/D	Io 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Po 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Io 1.376W IIA 2.1µF 20.8mH 35.3µH/D	Po 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Io 1.376W IIA 2.1µF 20.8mH 35.3µH/D
Uo 28V IIC 80nF 3.5mH	Io 100mA IIB 640nF 14.2mH	Uo 28V IIC 80nF 2.9mH	Io 135mA IIB 640nF 7.8mH	Uo 28V IIC 80nF 4.49µH/D	Io 125mA IIB 640nF 9.1mH
Po 0.70W IIA 2.1µF 27.6mH 436µH/D	Io 0.88W IIA 2.1µF 17.6mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 17.6mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 17.6mH 30.1µH/D
Uo 28V IIC 80nF 2.9mH	Io 10mA IIB 640nF 11.8mH	Uo 28V IIC 80nF 2.9mH	Io 135mA IIB 640nF 7.8mH	Uo 28V IIC 80nF 4.49µH/D	Io 125mA IIB 640nF 9.1mH
Po 0.77W IIA 2.1µF 22.8mH 369µH/D	Io 0.95W IIA 2.1µF 15.1mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 15.1mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 15.1mH 30.1µH/D

9203Ax Installation:
Non Classified area or Zone 2



9203Bxx Installation:		9203B1A, 9203B1B Terminal 41-2/51-52		9203B2A Terminal 41-42	
Hazardous area Zone 0,1,2,20,21,22		Co Lo Lo/Ro		Co Lo Lo/Ro	
-20 s Ta s 60°C	5501	Uo 28V IIC 80nF 4.2mH	Io 93mA IIB 640nF 16.8mH	Uo 28V IIC 80nF 2.6mH	Io 115mA IIB 640nF 10.8mH
Supply Power max. 3.5 W		Po 0.65W IIA 2.1µF 32.6mH 436µH/D	Io 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Po 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Io 1.376W IIA 2.1µF 20.8mH 35.3µH/D
Supply Power max. 3.5 W		Uo 28V IIC 80nF 3.5mH	Io 100mA IIB 640nF 14.2mH	Uo 28V IIC 80nF 2.9mH	Io 125mA IIB 640nF 9.1mH
Supply Power max. 3.5 W		Po 0.70W IIA 2.1µF 27.6mH 436µH/D	Io 0.88W IIA 2.1µF 17.6mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 17.6mH 30.1µH/D
Supply Power max. 3.5 W		Uo 28V IIC 80nF 2.9mH	Io 10mA IIB 640nF 11.8mH	Uo 28V IIC 80nF 2.9mH	Io 125mA IIB 640nF 9.1mH
Supply Power max. 3.5 W		Po 0.77W IIA 2.1µF 22.8mH 369µH/D	Io 0.95W IIA 2.1µF 15.1mH 30.1µH/D	Po 0.95W IIA 2.1µF 22.8mH 369µH/D	Io 1.376W IIA 2.1µF 15.1mH 30.1µH/D

Installation notes.

Install in pollution degree 2, overvoltage category II as defined in EN60664-1.

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

Do not install or remove modules from the Power Rail when an explosive gas mixture is present.

Discarded power before servicing.

The wiring of unused terminals is not allowed.

In type of protection (Ex ia) the parameters for intrinsic safety for gas group IB are applicable.

For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex p, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.

For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (IECEx Certificate of Conformity KEMA 08.0035X) is allowed.

IECEx Installation drawing 9203QI01-V6R0

For safe installation of 9203 the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.

Year of manufacture can be taken from the first two digits in the serial number.

For installation in Zone 2 (Division 2) the following must be observed.

The 4501 programming module is to be used solely with PR electronics modules. It is important that the module is undamaged and has not been altered or modified in any way. Only 4501 modules free of dust and moisture shall be installed.

IECEx Certificate: IECEx KEM 09.0001X

Marking 9203Bxx [Ex ia] Ga IIC/IB/IIA
Ex ia IIC IIC T4 Gc
Ex ia IIC IIC T4 Gc
Ex ia IIC IIC T4 Gc

Marking 9203A Ex ia nC IIC T4 Gc

Standards IEC60079-0: 2010, IEC60079-11: 2010, IEC60079-15: 2011

Type	Installation	Current Output	Channels	Input
9203	Non Ex / Zone 2	A	Low current	1 Single A Standard :-
			Double B	PNP : 1
	Ex-Barrier / Zone 2	B	High current	2 Single A PNP : 2

Installation notes.

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

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

Do not install or remove modules from the Power Rail when an explosive gas mixture is present.

Discarded power before servicing.

The wiring of unused terminals is not allowed.

In type of protection (Ex ia) the parameters for intrinsic safety for gas group IB are applicable.

For installation in Zone 2, the module shall be installed in an enclosure in type of protection Ex n or Ex p, providing a degree of protection of at least IP54. Cable entry devices and blanking elements shall fulfill the same requirements.

For installation on Power Rail in Zone 2, only Power Rail type 9400 supplied by Power Control Unit type 9410 (IECEx Certificate of Conformity KEMA 08.0035X) is allowed.



9203Bxx Installation:		9203B1A, 9203B1B Terminal 41-2/51-52		9203B2A Terminal 41-42	
Hazardous area Zone 0,1,2,20,21,22		Co Lo Lo/Ro		Co Lo Lo/Ro	
-20 s Ta s 60°C	5501	Uo 28V IIC 80nF 4.2mH	Io 93mA IIB 640nF 16.8mH	Uo 28V IIC 80nF 2.6mH	Io 115mA IIB 640nF 10.8mH
Supply Power max. 3.5 W		Po 0.65W IIA 2.1µF 32.6mH 436µH/D	Io 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Po 0.81W IIA 2.1µF 20.8mH 35.3µH/D	Io 1.376W IIA 2.1µF 20.8mH 35.3µH/D
Supply Power max. 3.5 W		Uo 28V IIC 80nF 3.5mH	Io 100mA IIB 640nF 14.2mH	Uo 28V IIC 80nF 2.9mH	Io 125mA IIB 640nF 9.1mH
Supply Power max. 3.5 W		Po 0.70W IIA 2.1µF 27.6mH 436µH/D	Io 0.88W IIA 2.1µF 17.6mH 30		