

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: **DEMKO 99 ATEX 126257**

[4] Equipment or Protective System: **Ex-solenoid/Alarm driver 5203B...**

[5] Manufacturer: **PR electronics A/S**

[6] Address: **Lerbakken 10, DK-8410 Rønde, Denmark.**

[7] This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. 126257

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 E incl. A1+A2, EN 50020: 2002 E, EN 50281-1-1:1998 incl. A1

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.


[11] This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

⊕ II (1)GD [EEx ia] IIC

On behalf of UL International Demko A/S

Herlev, 1999-09-16
Revised 2003-12-04


Karina Christiansen
Certification Manager

UL International Demko A/S

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Certificate: 99 ATEX 126257

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[13]

Schedule

[14]

EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 99 ATEX 126257

[15]

Description of Equipment or protective system:

The Ex-solenoid/Alarm driver 5203B_ _ _ is designed for mounting on a DIN rail in safe area. Input, output and power supply are galvanic separated from each other by means of opto-couplers and a transformer.

Type variants comprised by the certificate:

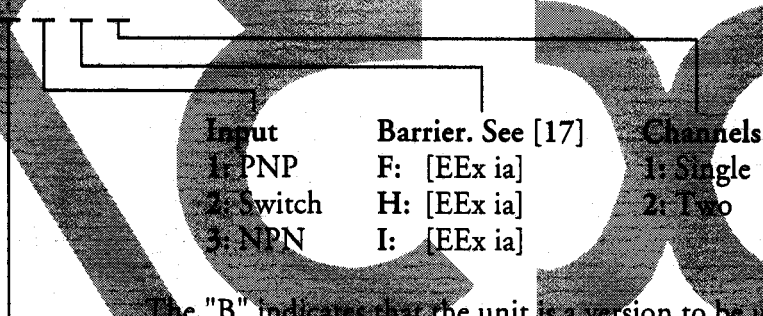
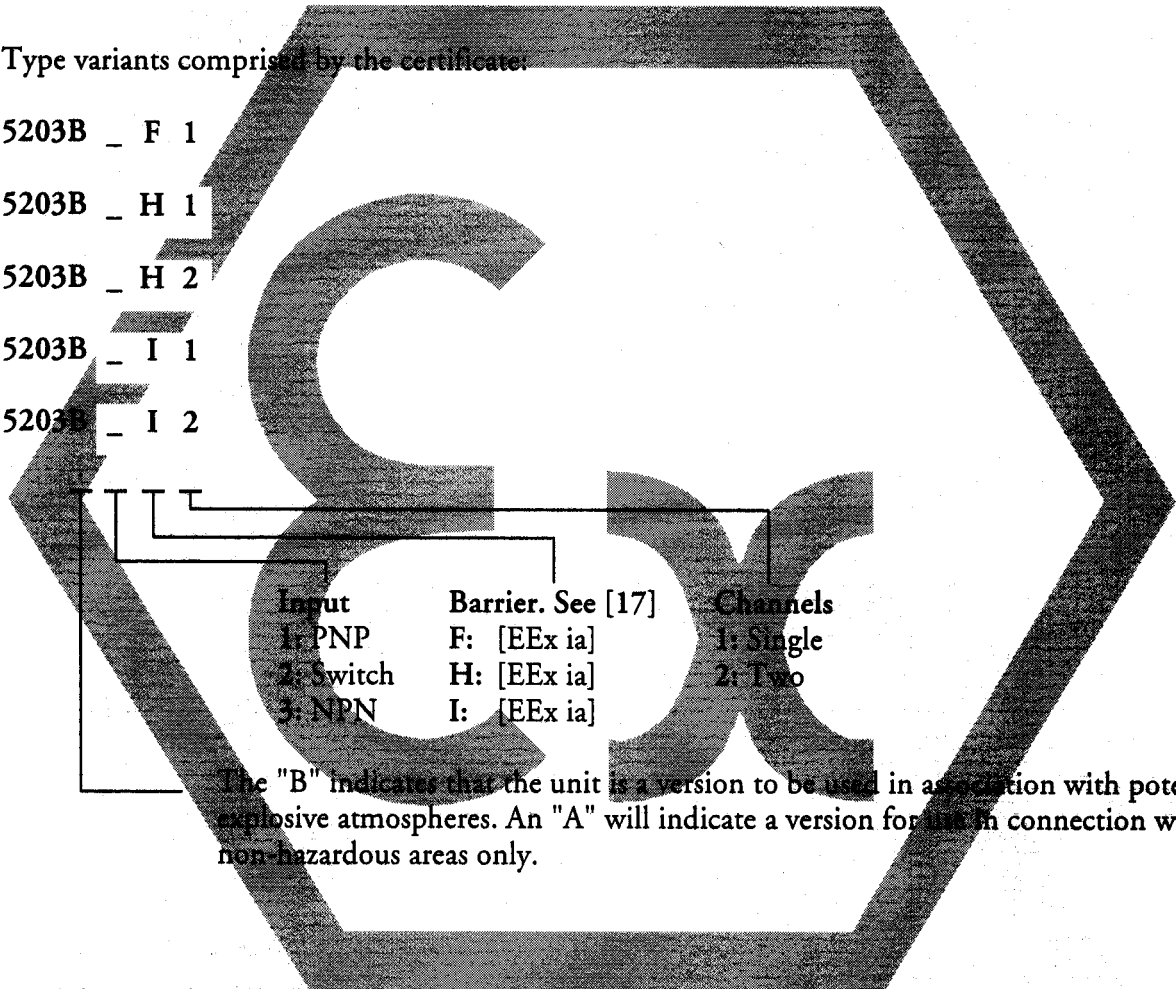
5203B _ F 1

5203B _ H 1

5203B _ H 2

5203B _ I 1

5203B _ I 2



The "B" indicates that the unit is a version to be used in association with potentially explosive atmospheres. An "A" will indicate a version for use in connection with non-hazardous areas only.

- The Ex-solenoid/Alarm driver 5203B_ _ _ has been evaluated according to EN 50281-1-1: 1998 in order to include D (dust) in this certificate. Therefore the marking plate include the following:
 II (1) GD

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- For correct use and installation the manufacturers manual must be followed.
- Temperature range: $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
- Intrinsically safe specifications:

All Type numbers:

Terminals 31 to 33, 11 to 12, and 21 to 22: $U_m: 250\text{ V}$

Terminals 41 to 43 and 51 to 53: Depending on type number the following specifications apply to the

Type number 5203B_F1	Type number 5203B_H_	Type number 5203B_I_
$U_o: 28\text{ VDC}$	$U_o: 28\text{VDC}$	$U_o: 28\text{VDC}$
$I_o: 115\text{ mA DC}$	$I_o: 110\text{ mA DC}$	$I_o: 93\text{ mA DC}$
$P_o: 0,81\text{ W}$	$P_o: 0,77\text{ W}$	$P_o: 0,65\text{ W}$
$L_o: 2\text{ mH}$	$L_o: 2,6\text{ mH}$	$L_o: 3\text{ mH}$
$C_o: 0,08\text{ }\mu\text{F}$	$C_o: 0,08\mu\text{F}$	$C_o: 0,08\mu\text{F}$

[16] Report No.:

~~126257-Report-99-02218~~
~~126257-Report-99-04069 EN50014~~
~~126257-Report-99-04069 EN50020~~
~~126257-Report-1226257-03 EN 50020~~
~~126257-04 Report~~
~~126257-05 Report~~
 Project is updated to EN 50014:1997 E incl. A1+A2 and EN 50020: 2002 E
~~126257-06 Report~~

Drawings:

Number	Date	Description
Common to all type numbers:		
5203 - 9104	2003-10-02	PCB layout (track 1)
5203 - 9004	2003-10-02	PCB layout (track 2)
5203 - 3104	2003-10-02	PCB layout (comp. location 1)
5203 - 3004	2003-10-02	PCB layout (comp. location 2)
5203 - 3104D	2003-10-02	PCB layout (segregation 1)
5203 - 3004D	2003-10-02	PCB layout (segregation 2)
5203 - 1004 (p. 1 of 6)	2003-10-02	Diagram. 5203 Block
5203 - 1004 (p. 2 of 6)	2003-10-02	Diagram. 5203 Power
5203 - 1004 (p. 3 of 6)	2003-10-02	Diagram. 5203 Input Channel 1
5203 - 1004 (p. 4 of 6)	2003-10-02	Diagram. 5203 Output Channel 1
5203 - 1004 (p. 5 of 6)	2003-10-02	Diagram. 5203 Input Channel 2
5203 - 1004 (p. 6 of 6)	2003-10-02	Diagram. 5203 Output Channel 2
5203 - X001	1999-08-26	EEx Instructions for Functional test
5203B - Yxx	1999-25s	Data Sheet 5203B
5203 - 50xx		Test-specification
5203B - Vxx		Manual 5203B

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Specific for the Type number 5203B_F1

5203 - Q1F4 (p. 1-10)	2003-10-03	EEx Technical description
5203 - 5CF5 (p. 1-2)	2003-10-03	EEx Routine Test specification
5203BF1	2003-11-08	Part-list. Sol/Al. Dr. 1 Ch. ATEX II (1) G
5203-F1 (p. 1-2)	2003-10-03	Part-list. Leaded. 1 Ch.
5203SMDF1 (p. 1-4)	2003-10-03	Part-list. SMD. 1 Ch.
5203 - S604	2003-09-29	Label. Marking of 5203B.F

Common to the Type numbers 5203B_H_

5203 - Q1H3 (p. 1-10)	2003-10-03	EEx Technical description for 5203B_H_
5203 - 5CH3	2003-10-03	EEx Routine Test specification 5203B_H_
5203 - S904	2003-09-29	Label. Marking of 5203B.H

Specific for the Type number 5203B_H1

5203BH1	2003-11-08	Part-list. Sol/Al. Dr. 1 Ch. ATEX II (1) G
5203-H1 (p. 1-2)	2003-10-03	Part-list. Leaded. 1 Ch.
5203SMDH1 (p. 1-3)	2003-10-03	Part-list. SMD. 1 Ch.

Specific for type no. 5203B_H2

5203BH2	2003-11-03	Part-list. Sol/Al. Dr. 2 Ch. ATEX II (1) G
5203-H2 (p. 1-2)	2003-10-03	Part-list. Leaded. 2 Ch.
5203SMDH2 (p. 1-4)	2003-10-03	Part-list. SMD. 2 Ch.

Common to the Type numbers 5203B_I_

5203 - Q1I3(p. 1-11)	2003-10-03	EEx Technical description for 5203B_I_
5203 - 5CI3	2003-10-03	EEx Routine Test specification 5203B_I_
5203 - SA04	2003-09-29	Label. Marking of 5203B.I

Specific for the Type number 5203B_I1

5203BI1	2000-11-03	Part-list. EX Vent./Alarm Dr. 1 Ch. ATEX II (1) G
5203-I1 (p. 1-2)	2003-10-03	Part-list. Leaded. 1 Ch.
5203SMDH1 (p. 1-4)	2003-10-03	Part-list. SMD. 1 Ch.

Specific for type no. 5203B_I2

5203BI2	2000-11-08	Part-list. EX Vent./Alarm Dr. 2 Ch. ATEX II (1) G
5203-I2 (p. 1-2)	2003-10-03	Part-list. Leaded. 2 Ch.
5203SMDH2 (p. 1-4)	2003-10-03	Part-list. SMD. 2 Ch.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

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[17] Special conditions for safe use:
None

[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

On behalf of UL International Demko A/S

Herlev, 2003-11-28

Karina Christensen
Certification Manager



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