



(1) EC-TYPE-EXAMINATION CERTIFICATE (Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 04 ATEX 2054



(4) Equipment: Remote I/O-unit, type S900-CB220S (basic device)

(5) Manufacturer: ABB Automation Products GmbH

(6) Address: Borsigstraße 2, 63755 Alzenau, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the 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 the confidential report PTB Ex 04-24049 .

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014:1997 + A1 + A2 EN 50019:2000 EN 50020:2002 EN 50028:1987

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

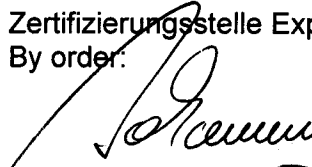
(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

 **II 2(1)G EEx em ib/ia IIC T4**

Zertifizierungsstelle Explosionsschutz

By order:


Dr.-Ing. U. Johannsmeyer
Regierungsdirektor



Braunschweig, June 10, 2004

SCHEDULE

(13)

(14) **EC-TYPE-EXAMINATION CERTIFICATE PTB 04 ATEX 2054**

(15) Description of equipment

The modular remote I/O-unit, type S900-CB220S is designed as basic device for application in hazardous areas (category 2G). The letter "S" within the type designation characterizes the variant of category 2 G. The equipment is used for the bi-directional processing of binary and analog signals of intrinsically safe field devices (remote I/O-units).

The equipment consists of the basic unit (field housing with termination unit), a power supply unit (type SA911S) and a communication interface (bus coupler, type CI920S) for connection to the external field bus and the internal CAN-bus.

The basic unit is intended to accommodate up to 4 S-modules as a maximum. These are associated, separately certified S-modules for the input and output of signals to intrinsically safe field circuits of type of protection EEx ia IIC/IIB. The S-modules realize the connection of peripheral equipment to sensors or actuators in the field by means of intrinsically safe circuits.

The type of protection of the equipment is:  II 2(1)G EEx em ib/ia IIC T4

The range of the ambient temperature is: -20 °C ... +60 °C

Electrical data:

System external circuits

Supply circuit, external
terminals DC (+), DC (-)

type of protection Increased Safety EEx e
 $U_{in} = 18...32$ V DC
Maximum voltage $U_m = 60$ V

PA circuit
(terminal)

not used internally

Communication interface (type CI920S)

The electrical data of PTB 00 ATEX 2201 apply.

terminals	:	A↑, A↑	input
		B↓, B↓	output
		AT, BT	termination

Modules

Field circuits

type of protection Intrinsic Safety EEx ib/ia IIB/IIC
For safety relevant maximum values reference is made to the EC-type examination certificates of the respective modules listed below.

Module 1: terminals M1

11, 12, 13, 14
21, 22, 23, 24
31, 32, 33, 34
41, 42, 43, 44

Module 2: terminals M2

11, 12, 13, 14
21, 22, 23, 24
31, 32, 33, 34
41, 42, 43, 44

Module 3: terminals M3

11, 12, 13, 14
21, 22, 23, 24
31, 32, 33, 34
41, 42, 43, 44

Module 4: terminals M4

11, 12, 13, 14
21, 22, 23, 24
31, 32, 33, 34
41, 42, 43, 44

Modules which are already certified by an EC-type examination certificate are listed in the following table.

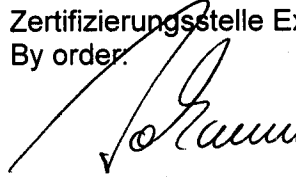
type	variant	EC-type examination certificate	supplement
DX910S	DIO8-Ex FI2-Ex	PTB 00 ATEX 2180	1. + 2.
DO910S	DO4-Ex	PTB 01 ATEX 2048	1.
AO920S	AO4I-Ex	PTB 00 ATEX 2200	1.
AO910S	AO4-Ex	PTB 02 ATEX 2029	1.
AO930S	AO4H-Ex	PTB 02 ATEX 2029	1.
AI950S	TI4-Ex	PTB 00 ATEX 2182	
AI930S	AI4H-Ex	PTB 00 ATEX 2058 X	1.
AI910S	AI4-Ex		
AI931S	AI4H-Ex		

All field circuits – with the exception of those belonging to one and the same module – are safely electrically isolated from each other up to peak voltage of 60 V and from ground up to a peak voltage of 30 V. For electrical isolation with modules providing several intrinsically safe field circuits reference is made to the respective EC-type examination certificates.

- (16) Test report PTB Ex 04-24049
- (17) Special conditions for safe use
none
- (18) Essential health and safety requirements
met by compliance with the standards mentioned above

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