

CERTIFICATE

(1) EC-Type Examination

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **DEKRA 12ATEX0192** Issue Number: 1

(4) Equipment: **Profibus RS485-IS bus coupler Model COMbricks 1CH485-IS and Model COMbricks 1CH485-IS SCOPE**

(5) Manufacturer: **Exalon Delft B.V.**

(6) Address: **Rotterdamseweg 183C, 2629 HD Delft, The Netherlands**

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

(8) DEKRA Certification B.V., notified body number 0344 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 confidential test report number 215498200.

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

EN 60079-0 : 2012

EN 60079-11 : 2012

(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 according 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) G [Ex ia Gb] IIC

This certificate is issued on 8 January 2013 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

DEKRA Certification B.V.



T. Pijpker
Certification Manager

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate DEKRA 12ATEX0192**

Issue No. 1

(15) **Description**

Profibus RS485-IS Bus Coupler Model COMbricks 1CH485-IS provides an intrinsically safe RS 485 interface for a COMbricks system, that consists of various modules, connected to a backplane that provides power and communication to the modules.
The Bus Coupler provides galvanic isolation between the backplane and the RS 485 Profibus.

Profibus RS 485-IS Bus Coupler Model COMbricks 1CH485-IS SCOPE additionally provides an option to connect an oscilloscope to monitor the A and B lines of the RS 485 Profibus

The Bus Couplers are intended to be installed outside the hazardous area or in an enclosure with a suitable type of protection.

Ambient temperature range -20 °C to +60 °C.

Electrical data

Supply and communication signals (backplane connector CN1):

$U_N = 5,75 \text{ V}$

$P \leq 3 \text{ W}$

$U_m = 250 \text{ V}$

RS 485 Profibus Interface (front connector CN2):

in type of protection intrinsic safety Ex ia IIC, with following maximum values:

$U_o = 4,2 \text{ V}$; $I_o = 149 \text{ mA}$ (resistive); $P_o = 115 \text{ mW}$; $C_o = 6,8 \mu\text{F}$; $L_o = 1,7 \text{ mH}$;

$U_i = 4,2 \text{ V}$, $C_i = 0 \mu\text{F}$; $L_i = 0 \mu\text{H}$.

The intrinsically safe RS 485 Profibus Interface complies with the specifications of clause 22.2.4 of EN 61158-2: 2010.

For a safe use of the Profibus RS 485-IS Bus Coupler, a reliable connection to the potential equalizing system shall be assured.

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.

(16) **Test Report**

No. 215498200.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 215498200.