

(1) EC-TYPE-EXAMINATION CERTIFICATE

ZELM ex

- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**
- (3) EC-TYPE-EXAMINATION CERTIFICATE Number:

ZELM 11 ATEX 0476 X

- (4) Equipment: **Hand Held Communicator type DHH805A**
- (5) Manufacturer: **ABB SpA**
- (6) Address: **Via Statale 113, I-22016 Lenno (Co)**
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The Prüf- und Zertifizierungsstelle ZELM Ex, notified body No. 0820 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 ZELM Ex 1771028910.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2009 EN 60079-11:2012 EN 60079-26:2007**
- (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 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 this Certificate.
- (12) The marking of the equipment shall include the following:



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Braunschweig, 2012-06-26

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**Zertifizierungs-
stelle**

Zertifizierungsstelle ZELM ex
Dipl.-Ing. Harald Zelm



Sheet 1 of 3

EC-type-examination Certificates without signature and stamp are not valid. The certificates may only be circulated without alteration. Extracts or alterations are subject to approval by the Prüf- und Zertifizierungsstelle ZELM ex. The English version is based on the German text. In the case of dispute, the German text shall prevail.

ZELM ex
Prüf- und Zertifizierungsstelle
Siekgraben 56 · D-38124 Braunschweig

(14) EC-TYPE-EXAMINATION CERTIFICATE ZELM 11 ATEX 0476 X

(15) Description of equipment

The Hand Held Communicator DHH805A is a hand held device used to configure, calibrate and troubleshoot smart transmitters via the HART protocol. The hand held communicator can be used either directly at the device or via a remote connection. The device is suitable for the use in explosive hazardous areas which require category 1.

permissible temperature range during charging: $10^{\circ}\text{C} \leq T_a \leq 35^{\circ}\text{C}$

permissible temperature range during USB connection: $10^{\circ}\text{C} \leq T_a \leq 40^{\circ}\text{C}$

permissible temperature range during use: $-10^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$

Electrical Data

Supply: from the associated built-in battery pack type AU3153.
The internal circuit is intrinsic safe.
outside the explosion hazardous area, the use of battery pack type AU3160 is permitted.

HART Interface only for connection to a certified intrinsic safe circuit with the following maximum values:

$$\begin{aligned} U_i &= 30 \text{ V} \\ I_i &= 215 \text{ mA} \\ P_i &= 0,85 \text{ W} \\ L_i &\sim 0 \text{ }\mu\text{H} \\ C_i &\sim 0,04 \text{ }\mu\text{F} \end{aligned}$$

resp.

$$\begin{aligned} U_o &= 2,6 \text{ V} \\ I_o &= 18 \text{ mA} \end{aligned}$$

charging connector only for connection of the battery charger type EV3030
outside of the explosion hazardous area
maximum r.m.s. a.c. voltage $U_M = 250 \text{ V}$

USB connector only for connection to USB-circuit outside of the explosion
hazardous area
maximum r.m.s. a.c. voltage $U_M = 250 \text{ V}$

**Schedule
to EC-Type-Examination Certificate ZELM 11 ATEX 0476 X**

ZELM ex

(16) Report No.

ZELM Ex 1771028910

(17) Special conditions for safe use

1. The Hand Held Communicator DHH805A must be charged outside the explosion hazardous area. During charging the reduced temperature range must be adhered.
2. The Hand Held Communicator DHH805A must be used with the battery pack type AU3153 inside the explosion hazardous area. The battery pack of type AU3160 may be used only outside the explosion hazardous area.
3. The connection of the USB-communication must be done outside the explosion hazardous area. During USB-communication the reduced temperature range must be adhered.
4. The HART interface shall be used only in parallel connection to avoid voltage addition.
5. The use of the protection rubber is permitted inside the explosion hazardous area. The use of the elastic band is not permitted inside the explosion hazardous area.

(18) Essential Health and Safety Requirements

met by standards

Braunschweig, 2012-06-26

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Sheet 3 of 3

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