



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEX LCI 11.0050X** issue No.:1  
Status: **Current**  
Date of Issue: **2011-09-08** Page 1 of 4

Certificate history:  
Issue No. 1 (2011-9-8)  
Issue No. 0 (2011-8-2)

Applicant: **ABB Inc.**  
843 N. Jefferson Street  
Lewisburg, WV 24901  
**United States of America**

Electrical Apparatus: **pH/ORP/pION transmitter APA592 and conductivity transmitterACA592**  
Optional accessory:

Type of Protection: **Ex ia and Ex iaD**

Marking: **ABB Address: ...  
Type: AxA592  
Serial number: ... Year of construction: ...  
Ex ia IIC T4 Ex iaD 20 IP66 T135°C  
Tamb: from -20°C to +60°C  
IECEX LCI 11.0050X  
Ui = 30V ; li = 160mA ; Pi = 0.8W ;  
Ci = 5nF ; Li = 0.5mH  
Uo = 11.8V ; Io = 5mA ; Po = 15mW ;  
Co = 1.45µF ; Lo = 1H**

Approved for issue on behalf of the IECEx  
Certification Body:

Marc GILLAUX

Position:

Certification Manager

Signature:  
(for printed version)

**Michel EQUI**

Date:

**08 SEP. 2011**

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

**Laboratoire Central des Industries Electriques (LCIE)  
33 Avenue du General Leclerc  
FR-92260 Fontenay-aux-Roses  
France**





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Manufacturer: **ABB Inc.**  
843 N. Jefferson Street  
Lewisburg, WV 24901  
**United States of America**

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2004</b> Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2006</b> Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 61241-0 : 2004</b> Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
<b>IEC 61241-11 : 2005</b> Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'ID'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:  
FR/LCI/ExTR11.0051/00

Quality Assessment Report:

NL/KEM/QAR09.0015/01



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Apparatus APA592 is a pH/ORP/pION transmitter and ACA592 is a conductivity transmitter. They deliver a current in the range 4-20mA proportional to the level detected by sensor. The ambient temperature range is -20°C to +60°C.

Transmitter is supplied by a DC voltage source 30V max. and has a maximum current draw of 23 mA.

Intrinsic safety parameters:

$U_i = 30V$  ;  $I_i = 160mA$  ;  $P_i = 0.8W$  ;

$C_i = 5nF$  ;  $L_i = 0.5mH$

$U_o = 11.8V$  ;  $I_o = 5mA$  ;  $P_o = 15mW$  ;

$C_o = 1.45\mu F$  ;  $L_o = 1H$

### CONDITIONS OF CERTIFICATION: YES as shown below:

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

The apparatus shall only be connected to an intrinsically safe certified equipment (see electrical parameters above). This combination must be compatible as regard the intrinsic safety rules.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: correction of presentation.

## IECEX Technical Report: FR/LCI/ExTR11.0051/00 details

### ExTR :

ExTR Reference Number *: (automatic numbering)	FR/LCI/ExTR11.0051/00
Status*:	Issued
ExTR Free Reference Number*:	106457-611095
Date of Issue*: (yyyy-mm-dd)	2011-08-02
List of Standards Covered*:	IEC 60079-0 (Ed.4.0); IEC 60079-11 (Ed.5); IEC 61241-0 (Ed.1); IEC 61241-11 (Ed.1)
Issuing ExTL*:	LCI - Laboratoire Central des Industries Electriques (LCIE)
Endorsing ExCB*:	LCI - Laboratoire Central des Industries Electriques (LCIE)
Manufacturer*:	ABB Inc. 843 N.Jefferson Street Lewisburg, WV 24901
Country of Manufacture*:	United States of America
Ex Protection*:	Ex ia and Ex iaD
Ratings:	Voltage < 30VDC, current < 23 mA
Product*:	pH/ORP/plON transmitter APA and conductivity transmitter ACA
Model Reference*:	APA592 and ACA592
Related IECEx Certificates:	<a href="#">IECEX LCI 11.0050X issue: 0 [Current]</a> <a href="#">IECEX LCI 11.0050X issue: 1 [Current]</a>
Comment:	Intrinsic safety parameters: U <sub>i</sub> = 30V ; I <sub>i</sub> = 160mA ; P <sub>i</sub> = 0.8W ; C <sub>i</sub> = 5nF ; L <sub>i</sub> = 0.5mH U <sub>o</sub> = 11.8V ; I <sub>o</sub> = 5mA ; P <sub>o</sub> = 15mW ; C <sub>o</sub> = 1.45uF ; L <sub>o</sub> = 1H
Attachment:	