



EU Declaration of Conformity

pH and Conductivity Probe

The Equipment:

Sensor Series TB2 Two-electrode, TB404 Toroidal, TB4 Four-Electrode and
TB5 / TBX5 pH / ORP / pION

The Manufacturer:

ABB Inc.

The Address of:

3400 Rue Pierre-Ardouin Québec, QC G1P 0B2, Canada

The Conformity:

Directive **2011/65/EU** of June 8, 2011 for restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), including Decision No. 768/2008/EC of July 9, 2008, and in accordance with the applicable conformity standard EN50581:2012 and Technical File Sensors-RoHS_TF170722 to demonstrate the fulfilment of the essential requirements specified in Article 4 of the directive. Conformity to Directive 2011/65/EU shall not apply to sensors with glass including lead, as defined in subpart 1a of Annex IV for applications exempted from the restriction in Article 4(1) specific to monitoring and control instruments.

Directive **2014/30/EU** of February 26, 2014 for Electromagnetic Compatibility (EMC); Industrial Environment, in accordance with the applicable conformity standard EN61326:2013 when properly installed with a compatible pH and Conductivity Transmitter;

Directive **2014/35/EU** of February 26, 2014 for electrical equipment designed for use within certain voltage limits, commonly known as the Low Voltage Directive (LVD). The equipment described herein is constructed in accordance with the principles of good engineering practices with regard to safety matters, and provides adequate protection against other hazards specific to the Essential Health and Safety Requirements for electrical equipment for measurement, control, and laboratory use in accordance with the applicable conformity standard EN 61010-1:2010 when properly installed with a compatible pH and Conductivity Transmitter;

The equipment described herein provides adequate protection against other hazards regarding the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, when properly installed with a compatible TB8x or AxA592 pH or Conductivity Transmitter. Further conformity conditions for safe use regarding the Directive **2014/34/EU** of February 26, 2014 for Potentially Explosive Atmospheres (ATEX) are described in the TB82 EC-Type Examination Certificate LCIE 02ATEX 6115X, and including Voluntary Examination Certificate ACA592 / APA592 Type Examination Certificates LCIE 11ATEX 1005X for II3GD, along with EC-Type Examination Certificates LCIE 11ATEX 3057X for II2GD and LCIE 11ATEX 3058X for II1GD.

The Sensor is considered a Simple Apparatus, in accordance with edition 6 of the conformity standard EN 60079-11 for equipment protection by intrinsic safety, and as defined in clause 5.7 of this applicable standard as being a passive component, a simple circuit and a source that does not generate more than 1.5V, 100mA and 25mW. Therefore, the Sensor is exempt from the requirements for Ex marking.

The examination of the TB82 Transmitter, EC-Type Examination certificate LCIE 02ATEX 6115X, includes II1G equipment marking: Ex ia IIC T4 Ga. The EC-Type Examination certificate for the TB82 Transmitter conveys the specific parameters of the concerned protection mode as:

TB82EC/TB82PH/TB82TC/TB82TE: $U_i = 42V$; $I_i = 200mA$; $P_i = 1.2W$; $C_i = 5.2nF$; $L_i = 0.4mH$;
Foundation Fieldbus Version: $U_i = 24V$; $I_i = 380mA$; $P_i = 5.32W$; $C_i = 0nF$; $L_i = 0mH$;

The examination of the ACA592 / APA592 Transmitter, Type Examination Certificate 11ATEX 1005X includes II3GD equipment marking: Ex nA IIC T4 and Ex tD A22 IP66 T135°C, EC-Type Examination certificate LCIE 11ATEX 3057X includes II2GD equipment marking: Ex d IIC T4 and Ex tD A21 IP66 T135°C, and, EC-Type Examination certificate LCIE 11ATEX 3058X includes II1GD equipment marking: Ex ia IIC T4 and Ex iaD 20 IP66 T135°C. The EC-Type Examination certificate LCIE 11ATEX 3058X for the ACA592 / APA592 conveys a Special Condition For Safe Use as:

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

Furthermore, the electrical parameters of the ACA592 / APA592 Transmitter, which are detailed in the Description of Equipment or Protective System provides specific parameters for the intrinsic safety protection as:

$U_i = 30V$; $I_i = 160mA$; $P_i = 0.8W$; $C_i = 5nF$; $L_i = 0.5mH$;
 $U_o = 11.8V$; $I_o = 5mA$; $P_o = 15mW$; $C_o = 1.45 \mu F$; $L_o = 1H$

ABB Inc.



The Declaration, issued under the sole responsibility of the manufacturer on November 10, 2020:

The manufacturer hereby declares that the process control equipment described herein is intended for use in a potentially explosive atmosphere and the object of the declaration is in conformity with the relevant Union harmonization Legislation for the Directives set forth. Furthermore, the manufacturer attests that this equipment aligns with the New Legislative Framework (NLF) and satisfies the necessary requirements for equipment marking CE.

Marc Corriveau
General Manager

Jean-François Ferland
EX Responsible Person

Nikodem Siwek
Product Manager

This controlled compliance document is subject to change without notice. Refer to the equipment manual for installation, operation, maintenance and service instructions. Refer also to ABB website for the latest version of all documents.

ABB Inc.