



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx SIR 19.0026X** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2019-03-22)

Status: **Current** Issue No: 1

Date of Issue: 2021-03-11

Applicant: **Automation Products Group**  
1025 West 1700 North  
Logan  
Utah 84321  
**United States of America**

Equipment: **Magnetostrictive Level Sensors models MPI and MPXI**

Optional accessory:

Type of Protection: **Intrinsically Safe ia and Flameproof db**

Marking: Ex ia IIB T4 Ga for model MPI;  
Ex ia/db IIB T4 Ga/Gb for model MPXI  
Ta = -40°C to +85°C

Approved for issue on behalf of the IECEx  
Certification Body:

**N Jones**

Position:

**Technical Manager**

Signature:  
(for printed version)

Date:

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\_\_\_\_\_

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**Unit 6, Hawarden Industrial Park**  
**Hawarden, Deeside, CH5 3US**  
**United Kingdom**

**sira**  
CERTIFICATION





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Manufacturer: **Automation Products Group**  
1025 West 1700 North  
Logan  
Utah 84321  
**United States of America**

Additional  
manufacturing  
locations:

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 equipment 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

**IEC 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-26:2014-10** Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga  
Edition:3.0

This Certificate **does not** indicate compliance with 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 Reports:

[GB/SIR/ExTR19.0088/00](#)

[GB/SIR/ExTR20.0215/00](#)

Quality Assessment Report:

[NL/DEK/QAR13.0027/05](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The MPI / MPXI Series Magnetostrictive Level sensor is used for level readings of liquid level measurement applications. The device transmits an electrical pulse down a ferromagnetic wire which, when encountering a magnetic field, causes a torsion on the wire, resulting in part of the transmitted pulse being reflected back up the wire. This reflected pulse is then picked up by a coil input into the circuit. The on-board processor calculates the distance based on the time of flight of the return echo. An on-board temperature sensor, as well as temperature sensors in the stem, allow for temperature compensation. The model MPI is comprised of an aluminium enclosure that houses a PCA and internal wiring, and a stem, which houses the ferromagnetic wire and the digital temperature sensors.

The model MPXI is similar in construction to the model MPI with the difference that model MPXI incorporates built in internal IS barrier providing intrinsically safe connections to the level sensor.

The equipment is housed in the flame proof enclosure manufactured by Limatherm S.A. models XD-I or XD-I80 certified under IECEx FTZU 12.0017U and IECEx FTZU 13.0026U respectively intended to be installed in Zone 1 with the intrinsically safe probe intended to be installed in Zone 0 attached to the enclosure.

Refer to the Annexe for Entity parameters and coding.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

1. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
2. The enclosure is manufactured from Aluminium. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.
3. Model MPXI shall be installed as per drawing 9006113.
4. Unused entries of model MPXI shall be closed with blanking elements maintaining explosion proof properties and ingress protection rating of the enclosure.
5. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.



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

**This issue, Issue 1, recognises the following changes; refer to the certificate annex to view a comprehensive history:**

1. Modifications to model MPI with RS485 communication option;
2. Addition model MPI with 4-20 mA communication option;
3. Addition of model MPXI with marking Ex ia/db IIB T4 Ga/Gb as a consequence IEC 60079-1: 2014 Ed 7 and IEC 60079-26:2014 Ed 3 were added to the list of standards

## **Annex:**

[IECEx SIR 19.0026X Issue 1 Annexe.pdf](#)

Annexe to: I ECEX SI R 19.0026X Issue 1

Applicant: Automation Products Group

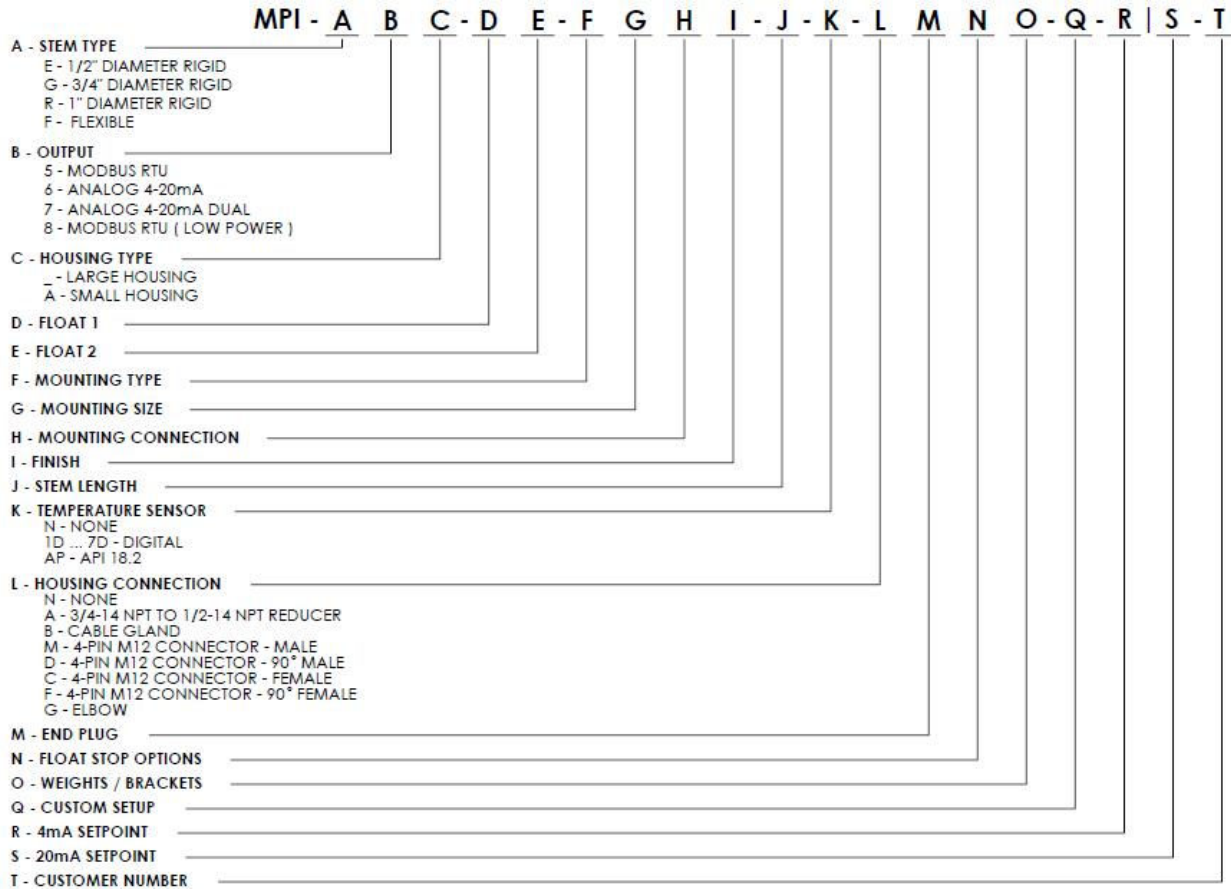
Apparatus: Magnetostrictive Level Sensor Models  
MPI and MPXI



**Models MPI :**

**Entity Parameters:**  $U_i = 28V$ ,  $I_i = 280mA$ ,  $P_i = 0.850W$ ,  $L_i = 3.50\mu H$ ,  $C_i = 0.374\mu F$

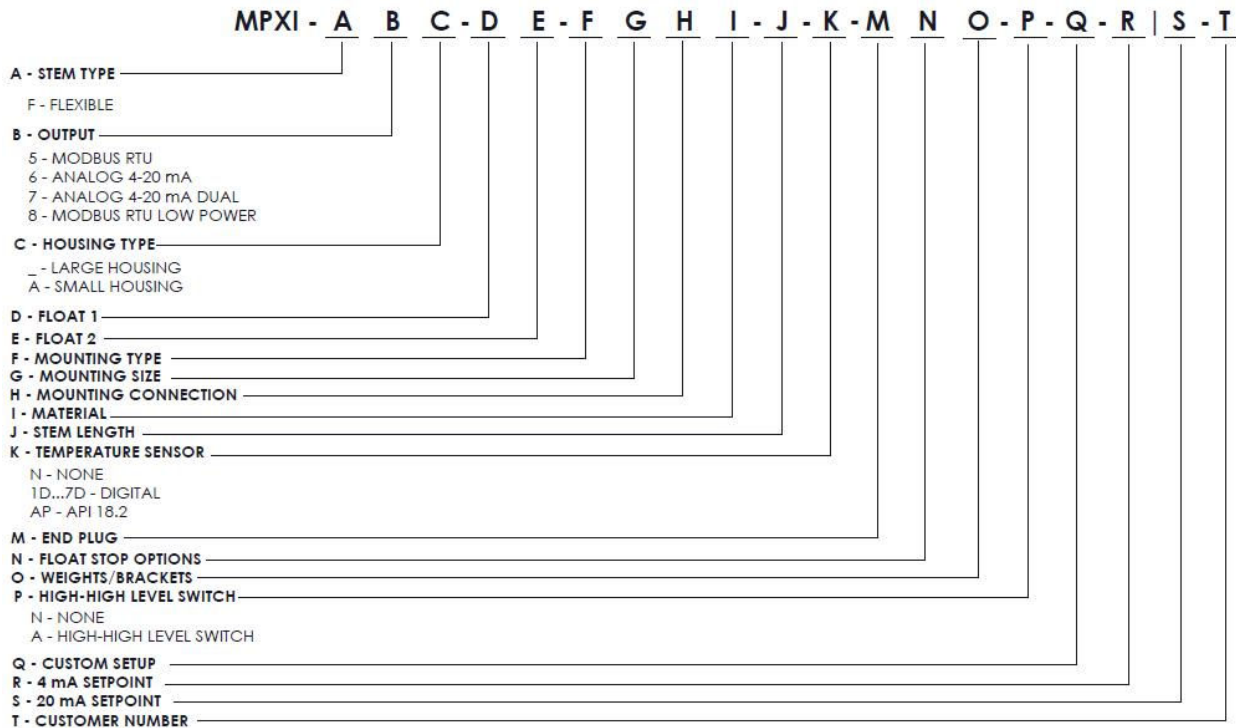
**Model Configuration Coding**



**Annexe to:** IECEx SI R 19.0026X Issue 1  
**Applicant:** Automation Products Group  
**Apparatus:** Magnetostrictive Level Sensor Models MPI and MPXI



**Models MPXI :  
Model Configuration Coding**



**Full certificate change history**

**Issue 1** – this Issue introduced the following changes:

- i. Modifications to model MPI with RS485 communication option;
- ii. Addition model MPI with 4-20 mA communication option;
- iii. Addition of model MPXI with marking Ex ia/db IIB T4 Ga/Gb as a consequence IEC 60079-1: 2014 Ed 7 and IEC 60079-26:2014 Ed 3 were added to the list of standards