



# 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 SIR 14.0013X

issue No.: 0

[Certificate history:](#)

Status:

Current

Date of Issue:

2014-03-19

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Applicant:

**Detectronic Limited**  
Regent Street  
Whitewalls Industrial Estate  
Colne  
Lancashire BB8 8LJ  
United Kingdom

Electrical Apparatus:  
*Optional accessory:*

**Pressure Transducer Interface (PTI)**

Type of Protection:

**Intrinsically Safe**

Marking:

Ex ia IIB T4 Ga  
Ta = -40°C to +60°C

Approved for issue on behalf of the IECEx  
Certification Body:

A G Boyes

Position:

Certification Support Officer

Signature:  
(for printed version)

Date:

2014-03-19

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:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **Detectronic Limited**  
Regent Street  
Whitewalls Industrial Estate  
Colne  
Lancashire BB8 8LJ  
United Kingdom

Additional 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 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-26 : 2006</b> Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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:

[GB/SIR/ExTR14.0045/00](#)

Quality Assessment Report:

[GB/SIR/QAR08.0019/04](#)



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## Schedule

### EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Pressure Transducer Interface (PTI) together with the pressure transducer allows the measurement of external pressures, principally in the form of depths of dirty water. The PTI is designed to be connected to the encoder type input on separate, external, intrinsically safe equipment. The electronic circuit is fully encapsulated within the enclosure, which is manufactured from thermoplastic polymers. The PTI is permanently connected by an integral cable to one of the following types of separate, previously certified DRUCK pressure transducers:

Equipment	IECEX certificate
UNIK 5000 Pressure Sensor	IECEX BAS 10.0103X
PMP version	
PDCR Version (Passive)	
PDCR Version (Linearised)	

Refer to EQUIPMENT (continued) for Entity parameters and additional information

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

1. The user/installer shall install the equipment taking into account any restrictions or special conditions for safe use/conditions for certification that are applicable to the previously certified pressure transducers. Advice about installation and copies of the relevant certification is available from the manufacturer of the PTI.
2. When supplied from the Port 8 (JP6, encoder input) of the Cello I.S. GSM Data Logger, the user/installer shall install the equipment taking into account any restrictions or special conditions for safe use/conditions for certification associated with Cello I.S. GSM Data Logger. Advice about installation and copies of the relevant certification is available from the manufacturer of the PTI.
3. Under certain extreme circumstances, exposed plastic parts of the enclosure may store an ignition-capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the build up of electrostatic charge, e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present and clean with a damp cloth.
4. The enclosure may have external fittings that are manufactured from light metal alloys including aluminium, magnesium, titanium and zirconium. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.



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## EQUIPMENT(continued):

The PTI has the following entity parameters at the input port J2:

$U_i = 7.14 \text{ V}$        $I_i = 261 \text{ mA}$        $P_i = 291 \text{ mW}$        $C_i = 0 + 10.2 \text{ nF}^*$        $L_i = 0 + 51 \text{ } \mu\text{H}^*$

\* - maximum total capacitance (Cc) and inductance (Lc) of the integral cable.

The PTI has been additionally assessed and approved when supplied from the Port 8 (JP6)

The output parameters of the PTI have been assessed as compliant with the attached DRUCK pressure transducers listed above, including consideration of the cable capacitance and inductance. Therefore the output parameters of the PTI are not required, but are listed below for reference only (port J1):

$U_o = 7.14 \text{ V}$        $I_o = 261 \text{ mA}$        $P_o = 291 \text{ mW}$        $C_o = 239.6 \text{ } \mu\text{F}$        $L_o = 2 \text{ mH}$

### Conditions of manufacture

The Manufacturer shall comply with the following:

1. The manufacturer shall take all reasonable steps to ensure that the user / installer complies with the special conditions for safe use / conditions for certification and restrictions associated with the previously certified pressure transducers and, in addition, where requested the manufacture shall provide the user / installer with an appropriate copy of the certificate for each certified pressure transducer.
2. The PTI has been additionally assessed and approved when supplied from the Port 8 (JP6, encoder input) of the Cello I.S. GSM Data Logger (approved under IECEx SIR 06.0003X) with  $I_o = 341.1 \text{ mA}$ , taking into account the implied source resistance of  $20.9 \text{ } \Omega$  for further current limitation. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device, and the manufacturer shall inform Sira of any modifications of the device that may impinge upon the output parameters at Port 8 (JP6, encoder input).