



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

Certificate No.: IECEx SIR 18.0049X

Issue No: 0

Certificate history:

Issue No. 0 (2018-10-11)

Status: **Current**

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Date of Issue: **2018-10-11**

Applicant: **Detectronic Ltd.**
Regent St. Whitewalls Ind. Est.
Colne BB8 8LJ
Lancashire
United Kingdom

Equipment: **Q-Flow 25**

Optional accessory:

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:

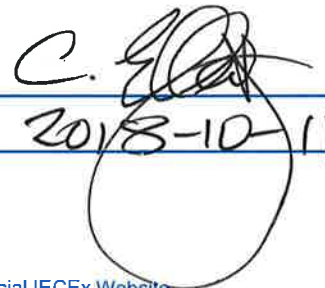
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Position:

Deputy Certification Manager

Signature:
(for printed version)

Date:


2018-10-11

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](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

sira
CERTIFICATION





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Date of Issue: 2018-10-11 Page 2 of 3
Manufacturer: **Detectronic Ltd.**
Regent St. Whitewalls Ind. Est.
Colne BB8 8LJ
Lancashire
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 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:

IEC 60079-0 : 2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0
IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

*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/ExTR18.0174/00](#)

Quality Assessment Report:

[GB/SIR/QAR08.0019/08](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Q-Flow 25 is an IECEx certified intelligent area x velocity flowmeter for use in flow monitoring applications (e.g. dirty water, sewage, etc.). It's designed and certified for installation and use within hazardous areas. The unit provides connections to suitably-approved intrinsically safe sensors and interfaces.

The equipment comprises of a certified DI-2.5 board housed in an ABS enclosure. All external connections are made using military style, locking, non-interchangeable connectors. The entity parameters are shown in the Annexe.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The exposed metal parts are not earthed and have a capacitance of up to 8pF with respect to an earthed conductor. Under certain extreme circumstances, exposed plastic and unearthed metal 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.
2. Port 2 of the equipment Q-Flow 25 shall be connected to a resistive supply with a source resistance of 4.431Ω minimum.
3. The circuit ground is deliberately connected to the connector shells of the Velocity port and Depth port, so the equipment does not meet the requirements of the 500V dielectric strength test in accordance with IEC 60079-11. This shall be taken into consideration during installation.

Annex:

[IECEX SIR 18.0049X Annexe Iss 0.pdf](#)

Annexe to: IECEx SIR 18.0049X Issue 0

Applicant: Detectronic Ltd

Apparatus: Q-Flow 25



The entity parameters are as follows:

Q-Flow 25	Ui (V)	Ii (A)	Pi (W)	Ci (µF)	Li (mH)	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)
Port 2 (supply) When Port 6 (A & B) not used	12.6	2.708	6.142	0	0.019	0				
Port 2 (supply) When Port 6 (A & B) used	12.6	2.708	6.142	0	0.019mH + total Li of external modules including cables connected to port 6 (pins A & B)	0				
Port 4 (Velocity, Tx & Rx)	0					8.61	270	799	50	1.0
Port 5 (depth/pressure)	0					8.61	270	799	50	0.9
Port 1 (output)	5.88	-	-	0	0	4.16	17	18	54	492
Port 3 (PC Port) (Pins D & F)	0	-	-	0	0.9	8.61	36	76	50	108
Port 3 (Volt Free Port)(Pin A)	5.5					8.61	1	2	50	1422 21
Port 6 (SDI-12) (Pins D & F)	5.5	-	-	0	0	6.93	15	26	54	632
Port 6 (power) (Pins A & B)	0					12.6	93.3	294	7.4	16.31
Port 7 (RS485)	4.2	-	-	0	0	6.93	30	52	54	158

Conditions of Manufacture

- i. The equipment Q-Flow 25 incorporates a previously certified component DI-2.5 board, as listed below. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device. The manufacturer shall inform Sira of any modifications to the device that may impinge upon the explosion safety design of the Q-Flow 25.

DI-2.5 board			
Manufacturer	Type	Certificate No.	Code
Detectronic Ltd. Regent St. Whitewalls Ind. Est. Colne, BB8 8LJ, Lancashire, UK	DI-2.5 board	IECEX SIR 18.0023U	Ex ia IIB Ga