



# 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 BAS 22.0034X** Page 1 of 5 [Certificate history:](#)  
Status: **Current** Issue No: 1 [Issue 0 \(2023-02-08\)](#)  
Date of Issue: 2025-03-25  
Applicant: **Rochester Sensors Europe Limited**  
Unit 118 Shannon Industrial Estate  
Shannon  
Co Clare V14 XY18  
Ireland  
Equipment: **TEK 643, TEK 822, TEK 825 Dataloggers**  
Optional accessory:  
Type of Protection: **Intrinsic Safety – “Ex i”**  
Marking: **Ex ia IIC T4 Ga (-30 °C ≤ Tamb ≤ +55 °C)**  
**Ex ia IIC T4 Ga (-30 °C ≤ Tamb ≤ +50 °C)**  
**Ex ia IIB T4 Ga (-30 °C ≤ Tamb ≤ +55 °C)**  
**Ex ia IIB T4 Ga (-30 °C ≤ Tamb ≤ +50 °C)**

Approved for issue on behalf of the IECEx  
Certification Body:

**D Brearley**

Position:

**Lead Certification Engineer**

Signature:  
(for printed version)

25/3/2025

Date:  
(for printed version)

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Certificate issued by:

**SGS UK Limited**  
**Rockhead Business Park**  
**Staden Lane**  
**Buxton, Derbyshire SK17 9RZ**  
**United Kingdom**





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Manufacturer: **Rochester Sensors Europe Limited**  
Unit 118 Shannon Industrial Estate  
Shannon  
Co Clare V14 XY18  
**Ireland**

Manufacturing locations: **Rochester Sensors Europe Limited**  
Unit 118 Shannon Industrial Estate  
Shannon  
Co Clare V14 XY18  
**Ireland**

**Tekelek Electronics (Shenzhen) Limited**  
Unit 201, Level 2, Building A3  
Silicon Valley Power Automotive Park  
No 334 Guiyue Road, Dafu  
Community, GuanLan Street  
LongHua District  
Shenzhen City 518110  
**China**

**Rochester Sensors S.A DE C.V.**  
Calle 26 A No. 6, Col. Parque Industrial  
Vallejo, Tlalnepantla de Baz  
Estado de Mexico, C.P. 54170  
**Mexico**

## See following pages for more 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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

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/BAS/ExTR22.0209/00](#)

[GB/SGS/ExTR25.0005/00](#)

Quality Assessment Reports:

[GB/BAS/QAR17.0013/05](#)

[GB/BAS/QAR17.0014/05](#)

[US/ETL/QAR21.0010/03](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The TEK 643, TEK 822 and TEK 825 are data collection and logging device for use in hazardous areas. They are self-contained, self-powered and is intended to operate autonomously for several years. They can be connected to a variety of suitable-certified remote sensing devices including:

- Pulse counting meters
- 4-20 mA sensors
- Pressure sensors
- Capacitive level sensors
- Hall Effect sensors
- Magnetostrictive level sensors
- Ultrasonic level sensors.
- Temperature sensors.

At pre-determined intervals, a transceiver activates and uploads the collected data to a remote server via the mobile communications network. The unit has glands for cable entry into the unit.

The difference between the models are limited to construction changes for specific application and software control.

Refer to the certificate Annex for information regarding the electrical parameters

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

1. The unit is not connected to any external or internal voltage source which will lead to the battery being charged in the event of a single fault or abnormal operation.
2. Servicing of the circuitry involving the batteries and replacement of the lithium batteries must be performed by a trained technician.
3. Only battery pack part numbers 4-5355, 4-5356 or 4-5430 are permitted when the ambient temperature range is  $-30\text{ }^{\circ}\text{C} \leq T_{amb} \leq +55\text{ }^{\circ}\text{C}$ .
4. Only battery pack part numbers 4-5484, 4-5355, 4-5356 or 4-5430 are permitted when the ambient temperature range is  $-30\text{ }^{\circ}\text{C} \leq T_{amb} \leq +50\text{ }^{\circ}\text{C}$ .
5. Under certain extreme circumstances, exposed plastic and unearthed metal parts of the enclosure may store an ignition capable level of electrostatic charge. The equipment must not be installed in a fast-flowing dust laden atmosphere and cleaned only with a damp cloth.



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

### Variation 1.1

To permit the addition of alternative manufacturing locations.

### Variation 1.2

To permit the change in applicant name from "Tekelek Europe Limited" to "Rochester Sensors Europe Limited"

ExTR: **GB/SGS/ExTR25.0005/00**

File Reference: **24/0071**



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Additional manufacturing locations:

**Rochester Sensors S.A DE C.V.**

Calle Poniente 116 N° 509, Colonia Industrial  
Vallejo, Alcaldía Azcapotzalco  
C.P. Ciudad de Mexico 02300  
**Mexico**

**Rochester Sensors S.A DE C.V.**

Calle Juan Fernandez Albarrán N° 32, Colonia  
Ceylán Ixtacala° 32, Colonia Ceylán Ixtacala,  
Tlalnepantla  
Estado de México, C.P. 54162  
**Mexico**

**Annex:**

[IECEX BAS 22.0034X Annex.pdf](#)

### Equipment Marking

The equipment has been assessed to a number of different markings. The equipment may be marked with not more than one of the following:

- Ex ia IIC T4 Ga (-30 °C ≤ Ta ≤ +55 °C)
- Ex ia IIC T4 Ga (-30 °C ≤ Ta ≤ +50 °C)
- Ex ia IIB T4 Ga (-30 °C ≤ Ta ≤ +55 °C)
- Ex ia IIB T4 Ga (-30 °C ≤ Ta ≤ +50 °C)

The differing ambient temperatures are dependent on the battery packs that are permitted to be fitted to the equipment. Refer to the specific conditions of use for further details.

### Entity Parameters

Electrical ratings are dependent on the build specified by the applicant. The four construction dependent terminal parameters are as follows:

#### TEK 643 Original Build Terminal Parameters

<u>Group IIB Atmospheres</u>	<u>Group IIC Atmospheres</u>
U <sub>o</sub> = 7.20 V	U <sub>o</sub> = 7.20 V
I <sub>o</sub> = 1.44 A	I <sub>o</sub> = 1.44 A
P <sub>o</sub> = 655 mW	P <sub>o</sub> = 655 mW
C <sub>o</sub> = 200 μF	C <sub>o</sub> = 1.95 μF
L <sub>o</sub> = 68.39 μH	L <sub>o</sub> = 16.95 μH

#### TEK 822 / TEK 825 Standard Build Terminal Parameters

<u>Group IIB Atmospheres</u>	<u>Group IIC Atmospheres</u>
U <sub>o</sub> = 6.60 V	U <sub>o</sub> = 6.60 V
I <sub>o</sub> = 185 mA	I <sub>o</sub> = 185 mA
P <sub>o</sub> = 404 mW	P <sub>o</sub> = 404 mW
C <sub>o</sub> = 490.40 μF	C <sub>o</sub> = 10.45 μF
L <sub>o</sub> = 2.36 mH	L <sub>o</sub> = 591.86 μH

#### Contrako Build Terminal Parameters (Type C)

<u>Group IIB Atmospheres</u>	<u>Group IIC Atmospheres</u>
U <sub>o</sub> = 6.60 V	U <sub>o</sub> = 6.60 V
I <sub>o</sub> = 25 mA	I <sub>o</sub> = 25 mA
P <sub>o</sub> = 141 mW	P <sub>o</sub> = 141 mW
C <sub>o</sub> = 490.40 μF	C <sub>o</sub> = 10.45 μF
L <sub>o</sub> = 19.65 mH	L <sub>o</sub> = 4.90 mH

**SGS Baseefa Limited**  
Rockhead Business Park  
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United Kingdom



ANNEX to IECEx BAS 22.0034X

Issue No. 0

Date: 2023-02-02

**TEK 825 Terminal Parameters (Pressure Sensor)**

**Group IIB Atmospheres**

$U_o = 6.60 \text{ V}$

$I_o = 88.89 \text{ mA}$

$P_o = 246 \text{ mW}$

$C_o = 490.40 \text{ } \mu\text{F}$

$L_o = 6.408 \text{ mH}$

**Group IIC Atmospheres**

$U_o = 6.60 \text{ V}$

$I_o = 88.89 \text{ mA}$

$P_o = 246 \text{ mW}$

$C_o = 10.45 \text{ } \mu\text{F}$

$L_o = 1.59 \text{ mH}$

The TEK 822 may be supplied as a standalone unit with the terminal parameters given previously. Where no specific construction is stated then terminal parameters shall take precedence in deciding the suitability of attached sensors.