



# CERTIFICATE OF COMPLIANCE

**Certificate Number:** SGSNA/22/CA/00014X

**Contract Number:** 800912  
**Certificate Project Number:** SUW-CERT220700116

**Certified Product:** Data Logger Devices  
**Trademarks:** 

**Model(s):** TEK 643, TEK 822 / TEK 825 Standard Build, TEK 825 Type C "Contrako", TEK 825 Pressure Sensor

**Technical Data:** Refer to Product Description

**Certificate Holder:** Rochester Sensors Europe Limited  
 Unit 118 Shannon Industrial Estate, Shannon, Co Clare, V14 XY18, Republic of Ireland

*This certificate supercedes previous certificates issued with the same certificate number. Certification is valid when products are indicated on the SGS directory of certified products at [www.sgs.com](http://www.sgs.com) or using the QR code below. The product is certified according to ISO/IEC Guide 17067, Conformity assessment - Fundamentals of product certification, System 3, and in accordance with:*

ANSI/ISA 61010-1 (82.02.01): 12	Safety requirements for electrical equipment for measurements, control and laboratory use – Part 1: General requirements.
CAN/CSA C22.2 No. 61010-1: 12	Safety requirements for electrical equipment for measurements, control and laboratory use – Part 1: General requirements; Edition 3, April 2016
UL 60079-0	Explosive Atmospheres – Part 0: Equipment – General Requirements – 7th Edition – Revision: March 26, 2019.
UL 60079-11	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i" – 6th Edition – Revision: February 15, 2013.
CAN/CSA C22.2 No. 60079-0:19	Explosive Atmospheres – Part 0: Equipment – General Requirements (IEC 60079-11: 2017, MOD) – Revision: February 2019.
CAN/CSA C22.2 No. 60079-11:14	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i" (IEC 60079-11, MOD) – Revision: February 2014.
UL 913	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations – 8th Edition

Authorized by:



David Brearley  
 Certifier

Effective date: 24 March 2025



**Certification Body**

Connectivity & Products, a division of SGS North America Inc.  
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## Product description

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 are intended to operate autonomously for several years. They can be connected to a variety of suitably 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 units have glands for cable entry into the enclosure.

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

## Equipment Marking

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

Class I, Zone 0, AEx ia IIC T4 Ga (-30 °C ≤ Ta ≤ +50 °C)  
Ex ia IIC T4 Ga (-30 °C ≤ Ta ≤ +50 °C)  
Class I, Division 1 Groups A, B, C and D T4

Class I, Zone 0, AEx ia IIC T4 Ga (-30 °C ≤ Ta ≤ +55 °C)  
Ex ia IIC T4 Ga (-30 °C ≤ Ta ≤ +55 °C)  
Class I, Division 1 Groups A, B, C and D T4

Class I, Zone 0, AEx ia IIB T4 Ga (-30 °C ≤ Ta ≤ +50 °C)  
Ex ia IIB T4 Ga (-30 °C ≤ Ta ≤ +50 °C)  
Class I, Division 1 Groups C and D T4

Class I, Zone 0, AEx ia IIB T4 Ga (-30 °C ≤ Ta ≤ +55 °C)  
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The differing ambient temperatures is 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 Listee. 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

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## TEK 825 Terminal Parameters (Pressure Sensor)

<u>Group IIB Atmospheres</u>	<u>Group IIC Atmospheres</u>
Uo = 6.60 V	Uo = 6.60 V
Io = 88.89 mA	Io = 88.89 mA
Po = 246 mW	Po = 246 mW
Co = 490.40 µF	Co = 10.45 µF
Lo = 6.408 mH	Lo = 1.59 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.

### Conditions of Acceptability

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  $-30\text{ °C} \leq T_{amb} \leq +55\text{ °C}$ .
4. Only battery pack part numbers 4-5484, 4-5355, 4-5356 or 4-5430 are permitted when the ambient temperature range is  $-30\text{ °C} \leq T_{amb} \leq +50\text{ °C}$ .
5. Under certain extreme circumstances, exposed plastic and unearthened 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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