



(1) **EU-Baumusterprüfbescheinigung**

- (2) Geräte und Schutzsysteme zur bestimmungsgemässen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 2014/34/EU**
- (3) Prüfbescheinigungsnummer: **SEV 04 ATEX 0124 X**
- (4) Produkt: Temperatursensoren, Typ: Series XW*** resp. XT*** resp. XM*** resp. XTM***
- (5) Hersteller: ROTH+Co. AG
- (6) Anschrift: Wiesentalstrasse 20, 9242 Oberuzwil, Switzerland
- (7) Die Bauart dieses Produktes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Prüfbescheinigung festgelegt.
- (8) Eurofins, benannte Stelle Nr. 1258 nach Artikel 17 der Richtlinie 2014/34/EU des Parlaments der europäischen Gemeinschaften und des Rates vom 26. Februar 2014, bescheinigt die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Produkten zur bestimmungsgemässen Verwendung in explosionsgefährdeten Bereichen gemäss Anhang II der Richtlinie.
Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht 22CH-00101.X04 festgehalten.
- (9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit:

EN IEC 60079-0:2018
EN 60079-11:2012
EN 60079-31:2014

Ausgenommen sind die Bedingungen welche unter Punkt 18 aufgeführt sind.

- (10) Falls «X» hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Produktes in der Anlage zu dieser Bescheinigung hingewiesen. Falls «U» hinter der Bescheinigungsnummer steht, sind die zertifizierten Geräte oder Schutzsysteme unvollständig. Solche Teilzertifizierungen können als Basis für Geräte- oder Schutzsystem-Zertifizierungen verwendet werden.
- (11) Diese EU-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Bau des festgelegten Produktes. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen des Produktes, diese sind jedoch nicht Gegenstand dieser Bescheinigung.
- (12) Die Kennzeichnung des Produktes muss die folgenden Angaben enthalten:



II 1G Ex ia IIC T1...T6 Ga
II 1D Ex ta IIIC T200 XXX °C Da

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Produktzertifizierung



(13)

Anlage

(14)

EU-Baumusterprüfbescheinigung SEV 04 ATEX 0124 X

(15) **Beschreibung des Produktes**

Die Temperatursensoren "ROTH" Serie XW *** bzw. XT *** bzw. XM *** wie Widerstands-Sensoren, Thermoelement-Sensoren und Mantelthermoelement-Sensoren dienen zur Messung der Temperatur innerhalb von explosionsgefährdeten Bereichen von flüssigen und gasförmigen Medien sowie Stäuben.

Die Speisung und Auswertung erfolgt über bescheinigte, eigensichere Stromkreise.

Die Temperaturfühler bestehen aus einer Schutzarmatur mit verschiedenen Prozessanschlüssen, einem Anschlusskopf oder einem Kabel. Je nach Ausführung ist der Messeinsatz auswechselbar. Zur Messwertübertragung mit Einheitssignal, z.B. 4...20 mA, kann ein Messumformer in den Anschlusskopf eingebaut werden.

Installations- und Gebrauchsart:	stationär
Schutzart:	IP65
Umgebungstemperatur (°C):	-20 °C bis +XX °C

(16) **Prüfbericht**

22CH-00101.X04

(17) **„Besondere Bedingungen“ / „Einschränkungen“**

Das Anschlusskabel des Sensors muss zugentlastet und fix verlegt sein.

Die zulässige untere Umgebungstemperatur beträgt -20 °C.

Metallische Gehäuse sind mit dem gemeinsamen Potentialausgleich der Anlage zu verbinden. Durch geeignete Massnahmen ist sicherzustellen, dass auf der ganzen Länge des Leitungszuges Potentialausgleich erreicht wird.

Bei der Installation und im Betrieb sind im Weiteren auch die Abschnitte 5.1, 5.2 & 5.3 dieser BA zu beachten.

(18) **Grundlegende Sicherheits- und Gesundheitsanforderungen**

Zusätzlich zu den grundlegenden Sicherheits- und Gesundheitsanforderungen, welche durch die unter Punkt 9 aufgeführten Normen erfüllt sind, sind noch folgende im Testbericht überprüften Bedingungen relevant:

Paragraph	Thema
Keine	

(19) **Zeichnungen und Dokumente**

Siehe Testbericht „Hersteller Dokumente“



(1) **Attestation d'Examen UE de Type**

- (2) Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles - **Directive 2014/34/UE**
- (3) Numéro de l'attestation d'examen: **SEV 04 ATEX 0124 X**
- (4) Produit: Capteurs de température, Type: Series XW*** resp. XT*** resp. XM*** resp. XTM***
- (5) Fabricant: ROTH+Co. AG
- (6) Adresse: Wiesentalstrasse 20, 9242 Oberuzwil, Switzerland
- (7) Le type de ce produit ainsi que toute autre variante acceptable de celui-ci sont spécifiés dans l'annexe de cette attestation d'examen.
- (8) Eurofins, comme organisme notifié n° 1258, conformément à l'article 17 de la Directive 2014/34/UE du Parlement des Communautés européennes et du Conseil du 26 février 2014, certifie que les Exigences Essentielles de Santé et de Sécurité relatives à la conception et à la construction de produits destinés à être utilisés en atmosphères explosibles, telles qu'énoncées à l'Annexe II de la directive, sont remplies.
Les résultats de l'examen sont consignés dans le rapport d'essai confidentiel. 22CH-00101.X04
- (9) Les Exigences Essentielles de Santé et de Sécurité sont remplies par la conformité à:
- EN IEC 60079-0:2018**
EN 60079-11:2012
EN 60079-31:2014
- Les conditions spécifiées au point 18 constituent une exception.
- (10) Lorsque le numéro de l'attestation est suivi du signe « X », celui-ci renvoie aux conditions spéciales de sécurité d'utilisation du produit, telles que spécifiées dans l'annexe de cette attestation. Le signe « U » figurant après le numéro d'attestation indique qu'il ne faut pas considérer la présente attestation comme une attestation destinée à un appareil ou système de protection. Cette certification partielle peut servir de base à la certification d'un appareil ou d'un système de protection.
- (11) La présente attestation d'examen UE de type porte exclusivement sur la conception et la construction du produit spécifié. D'autres exigences de cette directive s'appliquent à la fabrication et à la mise sur le marché du produit, celles-ci ne font cependant pas l'objet de cette attestation.
- (12) Le produit portera un marquage incluant les éléments suivants:



II 1G Ex ia IIC T1...T6 Ga
II 1D Ex ta IIIC T200 XXX °C Da

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Certification de produit



(13)

Annexe

(14)

Attestation d'Examen UE de Type no. SEV 04 ATEX 0124 X

(15) **Description du produit**

Les capteurs de temperature « ROTH » des series XW ***, XT ***, XM *** comme les capteurs à resistance, les capteurs à thermocouple et les capteurs a thermocouple chemise servent à la mesure en zone explosible de la temperature de medias fluides et gazeux, de meme que des poussières.

L'alimentation et la mesure sont effectues par l'intermediaire de circuits electriques certifies, à protection propre.

Les capteurs de temperature sont composes d'une armature de protection avec differents raccordements de process, une tete de raccordement ou d'un câble. Selen la version, l'unité de mesure est échangeable. Un convertisseur de mesure peut etre incorpore dans la tete de raccordement pour la transmission de la valeur de mesure avec un signal unifie, par ex. 4...20 mA.

Classification de l'installation et utilisation:	fixe
Indice de protection:	IP 65
Plage de température ambiante nominale:	-20 °C jusque à +XX °C

(16) **Rapport d'essai** 22CH-0101.X04

(17) **„Conditions spéciales“ / „Restrictions“**

Le câble de raccordement de la sonde doit comporter une décharge de traction ; il doit etre fixe.

La temperature inferieure admissible est de -20 °C.

Les boitiers metalliques doivent etre connectes à la compensation de potentiel commune de l'installation.

Garantir la compensation de potentiel sur toute la longueur des lignes par des mesures adequates. En outre, pour l'installation et l'exploitation, observer les sections 5.1, 5.2 & 5.3 du present mode d'emploi.

(18) **Exigences Essentielles de Santé et de Sécurité**

Outre les Exigences Essentielles de Santé et de Sécurité remplies par les normes spécifiées au point 9, les conditions suivantes, prises en compte dans le rapport d'essai, sont également importantes:

Paragraphe **Thème**

Aucune

(19) **Dessins et documents**

Voir rapport d'essai « Documents du fabricant »



(1) **EU-Type Examination Certificate**

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 04 ATEX 0124 X**
- (4) Product: Temperature sensors, Type: Series XW*** resp. XT*** resp. XM*** resp. XTM***
- (5) Manufacturer: ROTH+Co. AG
- (6) Address: Wiesentalstrasse 20, 9242 Oberuzwil, Switzerland
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no 22CH-00101.X04
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018
EN 60079-11:2012
EN 60079-31:2014

Except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:



II 1G Ex ia IIC T1...T6 Ga
II 1D Ex ta IIIC T200 XXX °C Da

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification



(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 04 ATEX 0124 X

(15) **General product information**

Temperature Sensors "ROTH" series XW*** resp. XT***, resp. XM***, resp. XTM*** as resistance sensors, thermocouples and sheated thermocouples are used to measure temperatures in hazardous areas with liquid gas or dust atmospheres.

Supply and measurement has to be performed by separately certified intrinsic safe circuits.

The sensors consist out of a protective fitting with process connections, a connection head or a cable. Depending of the layout the measurement insertion might be exchangeable. For measurement result transmission with 4 to 20 mA a separately certified measurement converter can be installed into the connecting head.

Classification of installation and use:	stationary
Ingress protection:	IP65
Rated ambient temperature range (°C):	-20 °C to +xx °C

(16) **Report number** 22CH-00101.X04

(17) **"Special conditions for safe use" / "Schedule of limitations"**

When installing a sensor with an aluminium head in EPL Ga, it must be protected against impact and friction.

Metallic enclosures must be equipotentially connected with the assembly.

The admissible minimum ambient temperature is -20 °C.

The connection cable of the sensor must pass a strain relief clamp and the cabling must be fixed. Metallic housings must be connected to the common potential compensation of the system. Take appropriate measure to ensure potential compensation for the entire length of the cabling. Please consult sections 6, 7 & 8 of the Operating Instructions, they provide additional information on installation and operation.

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**

See test report "Manufacturer's Documents"



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

Certificate No.: **IECEx SEV 22.0037X**

Page 1 of 3

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2022-10-05

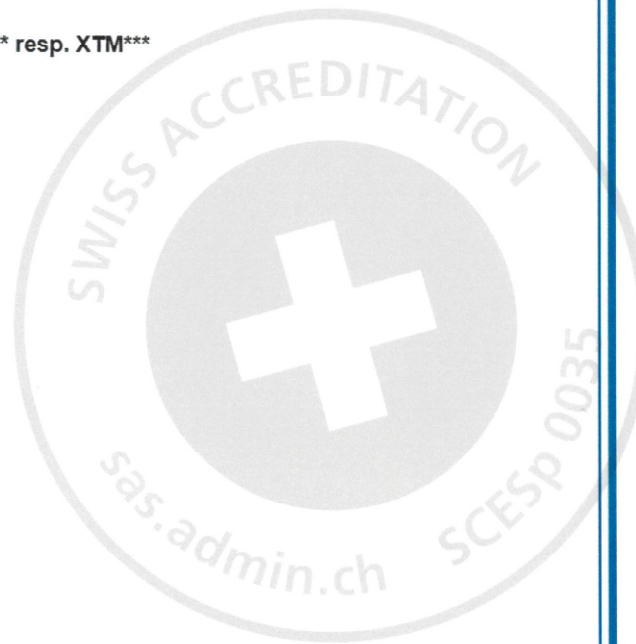
Applicant: **Roth+Co. AG**
Wiesentalstrasse 20
9242 Oberuzwil
Switzerland

Equipment: **Temperature sensors, Series XW*** resp. XT*** resp. XM*** resp. XTM*****

Optional accessory:

Type of Protection: **i, t**

Marking: **Ex Ia IIC T1...T6 Ga**
Ex ta IIIC T200XXX °C Da



Approved for issue on behalf of the IECEx
Certification Body:

Martin Plüss

Position:

Manager Product Certification

Signature:
(for printed version)

Date:
(for printed version)

2022-10-14

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.
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Eurofins Electric & Electronic Product Testing AG
Luppenstrasse 3
8320 FEHRALTORF .
Switzerland



E&E



IECEX Certificate of Conformity

Certificate No.: **IECEX SEV 22.0037X**

Page 2 of 3

Date of issue: 2022-10-05

Issue No: 0

Manufacturer: **Roth+Co. AG**
Wiesentalstrasse 20
9242 Oberuzwil
Switzerland

Manufacturing
locations: **Roth+Co. AG**
Wiesentalstrasse 20
9242 Oberuzwil
Switzerland

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

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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 Report:

CH/SEV/ExTR22.0038/00

Quality Assessment Report:

CH/SEV/QAR21.0003/00



IECEX Certificate of Conformity

Certificate No.: **IECEX SEV 22.0037X**

Page 3 of 3

Date of issue: 2022-10-05

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Temperature sensors, Series XW*** resp. XT*** resp. XM*** resp. XTM***

Temperature Sensors "ROTH" series XW*** resp. XT***, resp. XM***; resp. XTM*** as resistance sensors, thermocouples and sheathed thermocouples are used to measure temperatures in hazardous areas with liquid gas or dust atmospheres.

Supply and measurement has to be performed by separately certified intrinsic safe circuits.

The sensors consist out of a protective fitting with process connections, a connection head or a cable. Depending of the layout the measurement insertion might be exchangeable. For measurement result transmission with 4 to 20 mA a separately certified measurement converter can be installed into the connecting head.

Rating:

With type of protection "Intrinsic safety Ex ia IIC" for use in hazardous areas subject to gas explosion.

Only for connection to a certified intrinsically safe circuit.

Maximum values:

$U_i \leq 30 \text{ V}$

$I_i \leq 215 \text{ mA}$

$P_i \leq 750 \text{ mW}$

C_i = low, negligible

L_i = low, negligible

With type of protection "Protection by housing" for use in hazardous areas subject dust explosion.

Base values for calculation:

$U_{max.} \leq 30 \text{ V}$

$I_{max.} \leq 215 \text{ mA}$

$P_{max.} \leq 750 \text{ mW}$

For calculation of maximum permissible ambient temperature, temperature class and maximum surface temperature refer to the Operating Instructions.

SPECIFIC CONDITIONS OF USE: YES as shown below:

When installing a sensor with an aluminium head in EPL Ga, it must be protected against impact and friction.

Metallic enclosures must be equipotentially connected with the assembly.

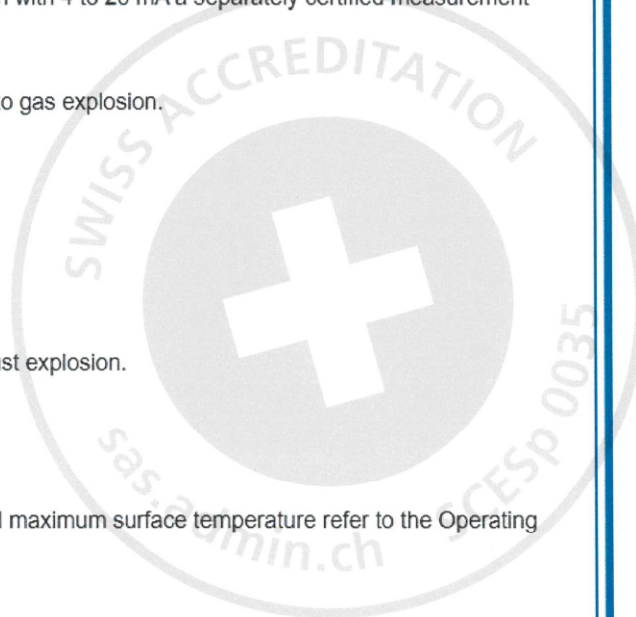
The admissible minimum ambient temperature is $-20 \text{ }^{\circ}\text{C}$.

The connection cable of the sensor must pass a strain relief clamp and the cabling must be fixed.

Metallic housings must be connected to the common potential compensation of the system.

Take appropriate measure to ensure potential compensation for the entire length of the cabling.

Please consult sections 6, 7 & 8 of the Operating Instructions, they provide additional information on installation and operation.



UK Type Examination Certificate CML 22UKEX3731X Issue 0**United Kingdom Conformity Assessment**

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **Temperature Sensors, Type: Series XW** resp. XT*** resp. XM*** resp. XTM*****
- 3 Manufacturer **ROTH+Co. AG**
- 4 Address **Wiesentalstrasse 20,
9242 Oberuzwil
Switzerland**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Refer to attached certificate SEV 04 ATEX 0124X, Issue 03 for specific marking of explosion protection symbols.

Refer to attached certificate SEV 04 ATEX 0124X, Issue 03 for marked code and ambient temperature range.



CML 22UKEX3731X
Issue 0

11 Description

For product description refer to attached certificate SEV 04 ATEX 0124X, Issue 03.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31 Jan 2023	R16007A/00	Issue of the prime certificate. SEV 04 ATEX 0124X, Issue 03 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate SEV 04 ATEX 0124X, Issue 03.

Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate SEV 04 ATEX 0124X, Issue 03.

Certificate Annex

Certificate Number CML 22UKEX3731X
Equipment Temperature Sensors, Type: Series XW** resp. XT***
resp. XM*** resp. XTM***
Manufacturer ROTH+Co. AG



The following documents describe the equipment defined in this certificate:

Issue 0

For drawings describing the equipment, refer to attached certificate SEV 04 ATEX 0124X. In addition to the drawings listed on SEV 04 ATEX 0124X, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
9.248.EX.01	1 of 1	00	31 Jan 2023	Ex-Etikette