

Instructions for Installation and Operation



ATEX heating jackets type **WEXH...**



Important safety information for the use of ATEX heating jackets



Please read the instructions for Installation and Operation very carefully before using ATEX heating jackets. Observe the data on the type plate and any possible warnings on the product. The instructions for Installation and Operation are part of the Explosion Protection Document in accordance with the legal requirements for operational safety (GefStoffV-Gefahrstoffverordnung) §6. These notes and instructions must always be available to everyone using or operating the equipment. You should therefore keep the instructions for Installation and Operation in a safe place for further use. Persons entrusted with installation and operation should be suitable in accordance with "EN 60079-14 Annex F - knowledge, skills and competencies of "Responsible Persons", "Operatives" and "Designers".

Please also observe the "Special conditions" listed under item 17 in the EC Type Examination Certificate (see section 10 on page 9).

The ATEX heating jackets are employed in hazardous areas where special operational requirements and conditions have to be met. Please study these requirements and regulations in advance and observe compliance in order to ensure trouble-free operation within the intended field of application.

This also includes regular cleaning of the heating jacket surface so that no dangerous dust deposits can form.

If you have any questions, or concerns, please contact us (see contact data section 9). We will always be happy to advise and assist you so that you can rely on the safe operation of our ATEX heating jackets for the intended purpose.

ATEX heating jackets are electrical apparatuses



Operation and maintenance of ATEX heating jackets may only be carried out by a qualified electrician or a person with appropriate electrical engineering training.

In order to prevent hazards due to electric current, it is necessary to carry out regular inspections and, where appropriate, maintenance of ATEX heating jackets in accordance with the applicable technical rules and standards (VDE / DGUV A3 / ...).

It is recommended to install a 30 mA RCD residual current safety device for safe operation.

The device function must be checked before initial operation and thereafter at regular intervals.

Area of application of ATEX heating jackets

For explosive gas atmospheres > in zone 1 and zone 2

For explosive dust atmospheres > in zone 21 and zone 22

Not suitable for use in zone 0 or zone 20!

Additional safety information

In case of obvious damage, the ATEX heating jackets must be taken out of operation immediately and may not be reused. The cause of the damage must be analysed and eliminated.

Mechanical damage to the outer or inner jacket > due to external force.

Mechanical damage to the connecting cables / glands > due to external force.

Brittle or broken protective jacket > thermal overload or exposure to strong solar radiation (provide UV protection).

Always take care to avoid overheating ATEX heating jackets. Observe the minimum and maximum operating temperatures and make sure that the temperature can never overshoot or undershoot these limits. Overheating may be due to a number of causes. Please check the operating and ambient conditions in advance and monitor the initial heating-up phases.



When heating pressurized gas containers, the European directive 2014/68/EU and appropriate national laws and regulations (such as TRBS 2141, TRBS 3145 / TRGS 725 in Germany) must be observed. These regulations describe special conditions as well as the maximum permitted temperatures which must not be exceeded.

Please check your application accordingly and operate the heating jacket in compliance with valid provisions and using the required safety installations.



Monitored operation using suitable temperature controllers and temperature limiters for hazardous areas (e.g., WEXRBL25-230ZE000) is a precondition for ensuring that ATEX heating jackets are operated correctly and as intended.

Directives and regulations for explosion protection

The following directives and regulations were taken into account in the design, manufacture, testing, official approval and manufacture of the ATEX heating jackets:

Directive 2014/34/EU – Equipment and protective systems intended for use in potentially explosive gas atmospheres Annex III Module – EU Type Examination Certificate

Standards / regulations for explosion protection:

EN 1127-1	Explosive atmospheres	Explosion prevention and protection - Part 1 - Basic concepts and methodology
EN 60079-0	Explosive atmospheres	Part 0: Equipment - General requirements
EN 60079-7	Explosive atmospheres	Part 7: Equipment protection by increased safety "e"
EN 60079-14	Explosive atmospheres	Part 14: Electrical installations design, selection and erection
EN 60079-18	Explosive atmospheres	Part 18: Equipment protection by encapsulation "m"
EN 60079-30-1	Explosive atmospheres	Part 30-1: Electrical resistance trace heating - General and testing requirements

Instruction for Installation and Operation of ATEX heating jackets series **WEXH...**

With ATEX heating jackets you have acquired a high-quality product suitable for use in hazardous areas with potentially explosive atmospheres (ATEX) in accordance with the relevant standards and regulations, as well as the conditions set out here. It is always our main objective to manufacture products that will function to your full satisfaction and meet the desired requirements. Please read the following notes for installation carefully and observe the instructions for operation. If you have any questions, we will be happy to assist you (section 9 – Contact data).

In the following, the ATEX heating jackets are simply referred to as “heating jackets”.



Other operating conditions deviating from those in these instructions for installation and operation or operating the heating jackets for a non-intended purpose, leads to invalidation of the warranty claim and may cause damage. Should you have any questions, please contact us on time so we can assist you further.

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10. EC type examination certificate + 1. Addition
11. EU Declaration of Conformity
12. ISO 9001:2015 Quality Management Certificate and Directive 2014/34/EU certificate Annex VII



1. General information / inspecting the heating jacket

The heating jacket must fulfil its specific purpose. Please check prior to installing the heating jacket whether the data on the type plate is identical to the ordering data (mains voltage, power, type, max. operating temperature etc.). Does the heating jacket fit well on the body to be heated? Are measures adopted against too high temperatures? Is the temperature sensor placed on the hottest place? Is it ensured that, in case of a hazard, the heating jacket can be quickly disconnected from the mains supply?

The heating jackets are generally suitable for a wide range of applications. If the heating jacket is designed especially for a certain application, which changes over the course of time, however, the user must find out from the manufacturer about the further application and operation areas. The heating jacket should be protected against chemical, mechanical and aggressive environmental conditions, as these can lead to damage of the heating jacket and therefore endanger safe operation as is intended.



The maximum operating temperatures of the heating jacket are specified on the type plate and are defined by the Ex marking. These must not be exceeded under any circumstances and at any place on the heating jacket. Two sensors are fitted for temperature control and limit. It is essential to use suitable temperature control / limit equipment approved for ATEX application (WEXRBL25-230ZE000).

2. Area of application / electrical connection

Series WEXH... heating jackets bear the following Ex marking:

for **explosive gas atmospheres**

CE 0123  **II 2G Ex eb mb IIC T3 Gb**

for **explosive dust atmospheres**

CE 0123  **II 2D Ex eb mb IIIC T120°C Db**
-40°C ≤ Ta ≤ +85°C

The heating jackets can be employed for the temperature stabilization of media in areas with explosive gas atmospheres – zone 1 and zone 2 – as well as in areas with combustible dust – zone 21 and zone 22. They are not suitable for use in zone 0 or zone 20. They can be used for frost protection, temperature maintenance, as well as for increasing temperature up to max. 180°C / 200°C (temperature class T3). The nominal operating voltage of the heating jackets is 230V as standard. Other voltages are possible upon request. The maximum permissible ambient temperature for use of the heating jackets is from -40°C to +60°C. The max. media temperature has to be ensured with the appropriate temperature control devices (controller and limiter combination). The heating power of the heating jackets depends on the construction type. You will find the exact details specified on the type plate.



Different ambient temperatures in the areas of the heating jackets will result in different internal temperatures. The decisive factor for temperature control is the ambient temperature at the sensor location, which must therefore be installed at the point where the highest ambient temperature occurs to avoid overheating the sensor. This needs to be determined in advance and taken into account during application planning. As standard, the sensor for the limiter is fitted directly on the heat conductor. The sensor location for the operating temperature can be determined specifically for the customer or application.

Since this is a product for use under special conditions in areas subject to explosion hazards, all the relevant directives, rules and regulations or other requirements must be determined, applied and monitored (EN 60079-14). This information can be found in the Explosion Protection Document for the entire plant, which should be kept by the operator in accordance with the legal requirements for operational safety ordinance (GefStoffV-Gefahrstoffverordnung) §6 para.9. In addition, it is absolutely essential to observe the following manufacturer's information (instructions for installation and operation) to ensure that the heating jackets are used properly and as intended.

Before initial operation, please check which regulations or internal works rules are additionally applicable in your case to ensure trouble-free and safe operation.

Electrical safety measures and protection against accidental contact must be implemented in accordance with DIN VDE 0100. The main's connecting cable is 3m long as standard, but can be longer or shorter depending on the design. The electrical connecting cables (supply network) must be dimensioned according to the fuse size and the max. permissible voltage drop. The cross-sectional area of the connecting cable must be appropriate for the current drawn in accordance with DIN VDE 0100. A minimum cross-sectional area of 1.0 sqmm is required, however. This requirement applies for all connecting cables for temperature control devices. If a protective earth conductor is available, this has to be included in the protective measure (the protective earth conductor has to be connected to the PE conductor).



The electrical connection of the heating system must be protected by an RCD residual current safety device (30mA) such that no hazardous contact voltage can arise on the heating system in the event of a fault.

3. Construction with heating cable (fixed resistance)

A high temperature resistant heat conductor made of a nickel alloy with double PTFE insulation is kept fixed and even at a distance in a crocheted or sewn pattern. The even placement distance avoids short circuits in the heated body and a heat build-up.

Inner structure of the heating cable:



The heating conductor material with a large surface ensures an optimal surface load of the heat conductor and consequently an even temperature distribution. Matched insulation thicknesses with high quality fibre isolation reduces the heat dissipation to the outside. The heat conductor / cold conductor connection is established with special press-fit connectors in a silicone cast PTFE connection sleeve (equipment protection Ex-e / Ex-m). All connecting cables are made of temperature resistant conducting materials with the appropriate thickness of electrical insulation.

Note on WEXHI: The construction of the **WEXHI...** insulation jackets correspond to that of the **WEXH...** heating jackets, however without a heating conductor. The insulation thickness can differ greatly depending on the application.

4. Installation / initial operation



In EN 60079-14 - Explosive atmospheres - Part 14 - Electrical installations design, selection and erection (installation standard), you will find basic information for intended operation.

Electrical heating devices have to be installed and operated such that no hazard can arise from them even if left unattended or inadvertently switched on. Suitable safety measures must be adopted for this purpose.

The heating jackets are manufactured ready for connection depending on the application and customer requirement and can be used taking the following instructions for installation into consideration and operated as intended:

The heating jackets are mechanically sensitive. They must not be pulled or placed over burrs or sharp edges. Special care must be taken when installing the heating jackets. If metal parts or metallic surfaces are heated, these have to be included in the protective measures (e.g., protective earthing). If used outdoors, the appropriate measures are required according to the applicable requirements. The connection cables of the heating jacket must not be twisted or bent. Depending on the type of connection of the heating jackets (hooks, eyes or hook and loop fasteners), these have to be securely connected with the object to be heated. Good heat transfer to the object heated must be ensured. A non-fitting heating jacket cannot transfer heat. More than one heating jackets must not be fitted over one another, as otherwise excessive temperature can arise. In places where heat cannot be conducted away, the excessive temperature arising can damage the heating jacket. Furthermore, it has to be taken into consideration that heating jackets operated with incorrectly adjusted temperature controllers and temperature sensors may exceed the prescribed temperature and thus cause damage.



For safety reasons, heating jackets in hazardous areas or plants must be operated with a temperature controller and a safety temperature limiter.

1. Check the data on the type plate. Do the type, design, mains voltage, power and operating temperature correspond to your specifications? If in doubt, compare with your documentation.
2. Does the heating jacket supplied conform to the requirements at the place of installation (Ex marking / Ex zone) and is it suitable for this purpose?
3. Are all the certificates and confirmations available and have the persons responsible for the plant (operator) carried out an inspection of the entire hazardous area installations (Explosion Protection Document)? Do the existing facilities and ambient conditions meet the requirements for the intended use? Are there any special rules and regulations applicable at the place of installation and have these been observed during installation?
4. It is essential to use suitable temperature control equipment (approved for ATEX application). Always connect both Ex-PT100 sensors (temperature sensor / limiter sensor). The limiter must switch off permanently upon reaching the set max. temperature (T range) = max. T3 200° C according to EN 60079-0, i.e., switching the system back on again should only be possible manually after successful fault diagnosis and remedy. Observe the relevant installation guidelines and connection diagrams for the temperature control units!
5. If it is necessary to extend the connection cables (mains / sensors), the corresponding Ex terminal boxes (WZX188EX for mains Ex e and WZX189EX for sensors Ex i) have to be used. Make sure that the glands are fully sealed. If this cannot be guaranteed, the heating jacket must not be put into operation
6. On the part of the operator, the electrical connection must be provided with a master switch (3mm contact gap), to function as disconnecter, and a 16A or 20A fuse corresponding to the heating power (observe cable cross-section).
7. A residual current device RCD (FI) of I_F <30mA should be used.
8. The connecting cables are ready for connection. If shortening is necessary, use suitable tools. Wire-end ferrules must be crimped onto the stripped wire ends.
9. The user must check if the material that comes into contact with the media is resistant to the media to be heated (see technical data in section 8). If you have any questions in this respect, please contact us directly for advice.
10. Always monitor the initial heating-up phases of the heating jacket very carefully so that any possible faults can be detected and, where appropriate, safety measures implemented at an early stage. Check whether any nearby objects, plant components and other parts could cause damage to the heating jacket or impair its function and, where applicable, remove or rearrange such items.
11. Accessible electroconductive parts must be included into the local equipotential bonding measures.

5. Operation / deinstallation

1. Check the initial heating-up phase exactly and monitor the further operation of the heating jacket.
2. Make sure that the object heated is not hotter than the max. permissible operating temperature of the heating jacket, otherwise the heating jacket could be damaged.
3. Extreme movements or vibrations should be avoided during operation of the heating jacket.
4. Before removing the heating jacket, make sure it is cooled down and ensure all connections to the mains power supply are disconnected.
5. The connecting cable should never be used to pull the heating jacket; it is not suitable for this purpose
6. In case of damage to the heating jacket or abnormal functioning during operation, it must be switched off as quickly as possible and all connections to the mains power supply must be disconnected. Fault cause analysis should be conducted.
7. Never open the heating jacket or ATEX terminal box during operation!
8. Avoid exposing the heating jacket to direct solar radiation or, if unavoidable, provide suitable protection. As a result of direct and prolonged solar radiation the outer cover will suffer damage, which will impair the protective effect, but only become apparent after a longer period of dynamic operation.



A heating jacket that is constantly installed and deinstalled or was not operated for a long period must be checked before recommissioning and the insulation resistance to the heated object must be remeasured.

6. Maintenance / inspections and repair



Regular maintenance and inspections of the heating jackets are necessary. In DIN EN 60079-17 - Explosive atmospheres - Part 17 - Inspection and maintenance of electrical installations you will find basic information in this regard. The maintenance and inspections must be documented accordingly.

1. Should any defects become apparent on the outside of the heating jacket or the connecting cables, the heating jacket must be disconnected immediately from the mains supply, removed and sent back to our factory for inspection. Never open the heating jacket or any of its components on your own initiative, i.e., unauthorized, because this would endanger the explosion protection (Ex). In the event of damage, the heating jacket needs to be replaced.
2. Inspection or maintenance of the heating jacket should be carried out at regular intervals in order to guarantee operational safety. The inspection intervals should be chosen in relation to the operating conditions on site. However, according to BGV A3 (safety instructions for electrical installations and equipment) inspections by a qualified electrician should take place at least every 6 months using suitable measurement and test equipment.
3. The service life of the heating jacket will depend on the actual operating conditions. Therefore, it is not possible to make a generally valid statement about the length of the service life. However, the service life will generally be shorter under severe operating conditions as opposed to occasional use under optimum conditions. For more information, please contact us directly for consulting.
4. If the limiter switches the heating jacket off, the cause has to be analysed before recommissioning the heating jacket back and appropriate measures have to be taken to prevent reoccurrence.

5. If you intend to use the heating jacket for another purpose than originally planned, please get in touch with our specialists to check if it is really suited to this. Unauthorized change of use is not permitted.
6. Any changes on the heating jacket performed by the customer will endanger the operational safety and will automatically invalidate the manufacturer's warranty.
7. If you have any problems or questions, please contact us directly for quick and competent consulting (see Contact data, section 9).

DIN VDE 0100-600 "Erection of low-voltage systems - Testing" obliges the installer of an electrical installation to ascertain prior to commissioning whether the required protective measures have been applied for the individual system components in accordance with the intended use and whether the proper function of the protective measures is ensured. This testing encompasses thorough inspection of all the system components of importance for ensuring the protective measures, as well as measurements and tests with which the effectiveness of the protective measures is proven.

DIN VDE 0701-0702 "Inspection after repair and modification and repeat tests of electrical appliances" obliges the operator of electrical systems to inspect them at regular intervals and to keep a record of the correct and safe operation of the electrical system.

Further important standards for intended operation:

EN 60079-14 "Explosive atmospheres - Part 14: planning, selecting and setting up electrical systems "

EN 60079-19 "Explosive atmospheres - Part 19: Equipment repair, overhaul and regeneration"

EN 60079-30-1 "Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General requirements and testing requirements"

EN 60079-30-2 "Explosive atmospheres - Part 30-2: Electrical resistance trace heating - General application guidelines for design, installation and maintenance"

7. Thermal insulation / temperature influence

The heating jackets are equipped with thermal insulation. The thickness of the thermal insulation depends on the heater type and application or it can vary according to customer specifications. If heating jackets without thermal insulation are used (e.g., heating mats), thermal insulation has to be fitted by the customer prior to commissioning, as otherwise the calculated heating power of the heating jacket cannot be transferred to the heated object.

It has to be ensured that burns to parts of the body or other damage is avoided. According to DIN VDE 0100-420, the relevant measures must be taken, e.g., mineral wool, foam insulation, spacing lattice.

In order to identify heated electrical system components, identification stickers with the words "ELECTRICALLY HEATED" have to be affixed to the thermal insulation.

To protect the heating jackets from overheating and to ensure a precise process temperature, the heating jacket must be operated with a controller and / or limiter. The temperature sensor must always be attached to the hottest place (please observe our "Installation and operation instructions for temperature sensors" when using external temperature sensors).

The operating temperatures specified on the type plate are the max. permissible temperatures on the heating conductor. The user has to ensure with the relevant measures that the max. operating temperature is not exceeded in any place.



Operation without temperature control / limitation is not allowed because there is a risk of overheating the heating jacket due to resistance heater.



The max. operating temperature of the heating jacket can also be exceeded by other operating conditions:

- > Heat build-up in case of heating systems not fitted on the heated body
- > Varying medium filling level or incorrectly placed temperature sensor
- > Excessive temperature built-up due to exothermic chemical processes
- > Varying ambient conditions

It also has to be considered that heating jackets operating with incorrectly coordinated temperature controllers and also temperature sensors warm up over time and the max. operating temperature can be exceeded.

8. General technical data

Ambient temperature:	-40°C to +60°C
Max. operating temperature:	180°C / 200°C (temperature class T6 ... T3)
Nominal operating voltage:	230V / 50Hz (other voltages upon enquiry)
Nominal power:	depending on the size of the heating jacket (see type plate)
Power tolerance:	+/- 10 %
Main's connection cable:	2.5m silicone cable (H05SS-F EWKF 1.5mm ² / 2,5mm ²)
Sensor connection cables:	2.5m PTFE cable (4 x 0.14mm ²)

Properties of the outer cover:

The chemical resistance of the electrically conducting outer cover depends on the temperature, the exposure time (permanent touching or occasional contact) of the chemical substance and also its concentration. It has good resistance against chemical and thermal loads and is flame retardant. The PTFE outer coating starts to decay at approx. 380°C without dripping or flames.

The maximum long-term temperature load of 287°C is well above the max. permissible application temperature of the T3 area of 200°C. However, the suitability for the individual application must be checked by the user. If you have any questions or problems in this respect, please get in touch with us for further information (see section 9, Contact data).

9. Contact data

Winkler AG
Englerstraße 24
D-69126 Heidelberg
Germany

Tel. +49-6221-3646-0
Fax +49-6221-3646-40
E-Mail: sales@winkler.eu atex@winkler.eu
www.winkler.eu



Examples of heating jackets **WEXH...**
and ATEX digital-controller-combination **WEXRBL25-230ZE000**

10. EC Type Examination Certificate TPS 11 ATEX 29587 011 X + 1. Addition

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ CERTIFICADO ◆ CERTIFICAT


 Product Service

(1) **EC Type Examination Certificate**

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – **Directive 94/9/EC**

(3) EC Type Examination Certificate Number:

TPS 11 ATEX 29587 011 X



(4) Equipment: WEXH aaaa – 230 ZE bbb – ccccXT3

(5) Manufacturer: Winkler GmbH

(6) Address: Englerstr.24, 69126 Heidelberg

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) TÜV SÜD Product Service GmbH, notified body No. 0123 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive.
The examination and test results are recorded in the confidential report 71385687.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 1127-1:2007	EN 60079-7:2007
EN 60079-0:2009	EN 60079-18:2009

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

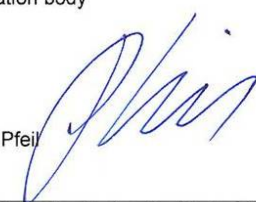
(11) This EC Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:


 II 2G Ex e mb IIC T3 Gb


 II 2D Ex e mb IIC T 120°C Db

Certification body

Andres Pfeil 



Stuttgart, 06.12.2011

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EC Type Examination Certificate without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail.
(Document no.: TPS 11 ATEX 29587 011 X)

The document is internally administrated under the following number: Ex5 11 11 29587 011

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany





Product Service

(13)

Schedule

(14) **EC Type Examination Certificate TPS 11 ATEX 29587 011 X**

(15) Description of equipment:

The Ex-Heating Jackets are used to heat mediums.

Coding of model:

WEXH aaaa – 230 ZE bbb – ccccXT3

W = Winkler

EX = Ex model

H = Heating Jacket

aaaa = Special number 0000-9999

or letter and serial code at standardised product

B = Bottle Heater and serial code 000-999

D = Drum Heater and serial code 000-999

I = Insulating Jacket and serial code 000-999

230 = Operating voltage 230 V

Z = Number of thermo couples (XX = no ; ZE = one ; ZE = two)

E = EX-PT100 thermocouple

bbb = Width / Diameter in cm

cccc = Heating Jacket in cm

XX = Free for special code (XX = 01, 02, 03)

T3 = Code for temperature class T3

Electrical data:

Rated voltage 230 V ~; 50 Hz

Load heating cable 30 W/m

(16) Test report: 71385687

(17) Special conditions for safe use:

Ambient temperature -40°C to +60°C. The Heating Jacket has to be cleaned in the Dust-Ex-Area cyclically. During operation dust layer has to be < 5 mm. The limit temperature is 200°C in the Gas-Ex-Area and 120°C in the Dust-Ex-Area. The Heating Jacket has to operate with applicable and Ex-licensed temperature controller and temperature limiter. For the Gas-Ex-Area has to be planned a maximum attitude of the temperature limiter of 190°C and a maximum attitude of the operating temperature of 180°C. For the Dust-Ex-Area has to be planned a maximum attitude of the temperature limiter 110°C and a maximum attitude of the operating temperature of 100°C.

(18) Essential health and safety requirements:

met by standards

Certification body

Stuttgart, 06.12.2011

Andreas Pfeil

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(Document no.: TPS 11 ATEX 29587 011 X)

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TÜV®



1. Addition to EC Type Examination Certificate



Product Service

(1) EC Type Examination Certificate Number

TPS 11 ATEX 29587 11 X



- (2) Equipment: WEXH aaaa – 230 ZE bbb – ccccXT3
- (3) Manufacturer: Winkler GmbH
- (4) Address: Englerstr.24, 69126 Heidelberg
- (5) Description: The Ex-Heating Jackets are used to heat mediums.
The Operating Voltage adds on 12 V ~ to 230 V ~
The maximum Heating Load from 30 W/m of the heating element persists as the basis.

The results of the Addendum are laid down in the confidential test report no. 71385687 Rev.1.

(6) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 1127-1:2007

EN 60079-7:2007

EN 60079-0:2009

EN 60079-18:2009

Certification body

Filderstadt, 27.06.2012

Andreas Pfeil



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EC Type Examination Certificate without signature and official stamp shall not be valid.

The certificates may be circulated only without alteration..

Extracts alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail.

The document is internally administrated under the following number: Ex5 11 11 29587 011

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

TÜV®

11. EU-Declaration of Conformity



EU-DECLARATION OF CONFORMITY **winkler**

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69126 Heidelberg

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atex@winkler.eu www.winkler.eu

Product group : ATEX HEATED JACKETS

Product : **Series WEXH....**

Directives : DIRECTIVES 2014/34/EU (ATEX)
"of the European Parliaments and Council of 26 February 2014 on the harmonisation of laws of Members States relating to equipment and protective systems intended for use in potentially explosive atmospheres" Annex III EU-Type-Examination

We hereby declare that in planning and manufacturing of this product the basic safety and health requirements of the EU Directives mentioned above and the up-to-date EMC / RoHS Directives have been observed.

Winkler AG maintains a quality assurance system according to Annex VII of Directives 2014/34/EU (ATEX), which is subject to a yearly audit by the notified body TÜV Süd Product Service GmbH. Certificate number **TPS 21 ATEX Q 029587 021**

Identification CE₀₁₂₃  II 2G Ex eb mb IIC T3 Gb
CE₀₁₂₃  II 2D Ex eb mb IIC T120°C Db
-40°C ≤ Ta ≤ +60°C

EU-Type Examination Certificate **TPS 11 ATEX 29587 011 X**

Further rules and technical specifications applied:

EN 1127-1:2019	EN 60079-7:2015/A1: 2018
EN 60079-0:2018	EN 60079-18:2015/A1:2017

Any modification to the product without our consent will make this declaration invalid.

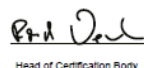
Heidelberg, March 01th 2022

Winkler AG



Andreas Zenner
CEO

12. ISO 9001:2015 quality management certificate and Directive 2014/34/EU certificate Appendix VII


CERTIFICATE
 The Certification Body
 of TÜV SÜD Management Service GmbH
 certifies that
winkler.eu
Winkler AG
 Englerstr. 24 • 69126 Heidelberg • Germany
 for the scope of application
 Development, manufacture and sales
 of heat engineering products with
 control and monitoring systems
 Kleinfeldweg 38 • 69190 Walldorf • Germany
 for the scope of application
 Manufacture of heat engineering products
 with control and monitoring systems
 has established and applies
 a Quality Management System.
 An audit was performed, Order No. 70002379.
 Proof has been furnished that the requirements
 according to
ISO 9001:2015
 are fulfilled.
 The certificate is valid from 2021-04-20 until 2024-04-19.
 Certificate Registration No.: 12 100 28096 TMS.

 Head of Certification Body
 Munich, 2021-04-12

 TÜV SÜD Management Service GmbH • Zertifizierungsstelle • Ridlerstrasse 57 • 80339 München • Germany
 www.tuv-sued.de/certificate-validity-check


CERTIFICATE
 Product Service


(1) **Certificate**
 (2) about the acceptance of the product quality assurance
 TRANSLATION
 (3) Equipment and components intended for use
 in potentially explosive atmospheres – Directive 2014/34/EU
 (4) Number of Certificate:
TPS 21 ATEX Q 029587 0021 Issue 00
 (5) Product Category:
 Heating hoses, Heating jackets,
 Controller-limiter-power-actuator-combination
 Equipment Group II, category 2 G/D
 Equipment protection "e", "f", "m", "t"
 (6) Manufacturer: Winkler AG
 (7) Address: Englerstraße 24-D-69126 Heidelberg (main factory)
 Kleinfeldweg 38; D-69190 Walldorf (second production site)
 (8) TÜV SÜD Product Service GmbH notified body No. 0123 in accordance with Article 18 of the Council
 Directive 2014/34/EU of February 26th 2016, certifies that the manufacturer maintains a quality
 assurance for the product, which conforms with Annex VII of the Directive.
 (9) This certificate is based upon the Audit Report No. 713215236/1, issued at 18.05.2021, and is valid
 until 23.05.2024.
 The certificate can be withdrawn if the manufacturer does not longer satisfy the requirements of
 appendix VII.
 The result of the quality assurance re-assessment is part of the certificate.
 (10) According to article 16 (3) of the Directive 2014/34/EU, the CE-marking shall be followed by the
 identification number 0123 identifying the notified body, involved in the production control stage. See
 also notes overleaf.
 Certification Body Explosion Protection
 Ridlerstrasse 65, 80339 München


 0123
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 Quality Assurance Certificates without signature are not valid. The certificate may be circulated only without alteration.
 Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text
 shall prevail. The document is internally administrated under the following number: EXQA 029587 0021 Rev. 00
 TÜV SÜD Product Service GmbH • Certification Body • Ridlerstrasse 65 • 80339 München • Germany
