BA_W5-001_EN

• General

The electric heating plate EHP 50, EHP 200 T4, T3 is equipment and protective system intended for use in potentially explosive atmospheres.
The heating plate can be used in areas in which an explosive atmosphere occurs in operation occasionally (Zone 1). The mixture can either be consisting of air together with flammable substances in the form of gas/vapor or with a cloud of combustible dust (G/D).

EU-Type Examination Certific.	: EPS 15 ATEX 1041
IECEx Certificate of Conformity	: IECEx EPS 15.0055
EAC Ex Certificate	: RU C-DE.EX01.B.00032/19
Marking: CE 2004 Ex	II 2 G Ex db IIC T4 / T3 Gb
Ex	II 2 D Ex tb IIIC T135°C / T200°C Db

• Function

The electric heating plate EHP 50, EHP 200 is intended for heating manifolds, protection boxes or small enclosures. Inside the heating plate there are several PTC heating elements or a cartridge heater with self-limiting temperature characteristic. A continuous temperature control is attained due to increasing ohmic resistance with increasing temperatures.
An internal thermal cut-off fuse prevents the heater from exceeding the maximum allowable surface temperature defined by the specified temperature class.

The following options are available:
R = Cooling fins and mounting brackets
F = Failure switch T < 5°C (250VAC, 5A)
B = Cooling fins, mounting brackets and failure switch
Armoured cable or other options on request

• Technical Data

Rated voltage:	110-250VAC
Max. Rated current:	EHP 50 0,5A, EHP 200 2A
Rated Power:	EHP 50 T4: 50W, EHP 50 T3: 80W, EHP 200 T4/T3: 200W
Connection cable:	SIHF 3 x or 5 x 1 mm², 3 m long
Dim. EHP 50:	L x W x H 160 x 30 x 60 mm without fins
Dim. EHP 200:	L x W x H 190 x 30 x 90 mm without fins
Weight EHP 50:	0,8 kg
Weight EHP 200:	1,5 kg
Ambient temp.:	-60°C to +80°C
Operating temp.:	T4: -60°C to +120°C, T3: -60°C to +180°C
Protection degree:	IP 68

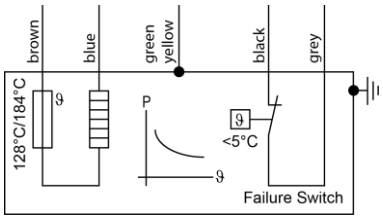
For installation and operation it is essential to follow this Manual and the relevant national regulations in addition to generaly accepted good engineering practice and the IEC 60079/14 "Electrical installation design, selection and eraction".
The specified rated data on the type plate of the heater must always be taken in account.

• Mounting

The electric heating plate EHP can be mounted with the attached mounting brackets or with the slots and holes onto the object to be heated. The mounting position can be randomly chosen.
During disassembly, turn off the power supply, remove the electrical connections and remove the mounting screws.

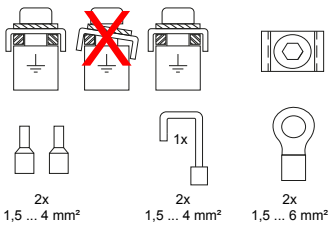
• Commissioning

The electric heating plate EHP is delivered operable from the manufacture. The connecting cable of the EHP is foreseen to be joined in a junction box according to wiring diagram. The junction box must com- ply with the requirements of an approved type of protection according to IEC 60079-0, if the connection is in a hazardous area.
The EHP is intended for stationary installation, so the connection cable must be protected against mechanical damage.
The equipotential bonding and earthing shall be ensured by connecting the EHP to the entire system.



• Electrical Protection

Line and short circuit protection
The switch-off and electrical isolation of all circuit power supply conductors including the neutral should be done by Miniature Circuit Breaker (MCB) in a switchgear. The rated current should be limited to 32A (max. cable length 3m).
Residual current circuit breakers and insulation monitoring
To limit the heating effect due to earth-fault and earth-leakage currents the additional protection is required:
In a TT or TN system a residual current device (RCD) with a rated residual operation current not exceeding 100mA shall be used. Preference should be given to RCDs with a rated residual operating current of 30mA.
Residual current circuit breakers with overcurrent protection
In a TT or TN system also a compact protection device (RCBO) which combine the overcurrent function of a MCB with the earth fault functions of a RCD can be used.
Overcurrent protection
The rated current and the tripping characteristic of an overcurrent protection must be matched to the rated current of the switching or control device possibly used.
Potential equalization
At the metallic housing of the EHP is a protective conductor connection for connecting to the external potential equalization. The potential bonding conductor shall be connected as shown. When connecting two conductors, they must have the same size.



• Operation, Maintenance

Devices in hazardous area must be installed, supervised, maintained and kept in good conditions by the owner of the plant. For information, refer to IEC 60079-17. Only skilled workers are allowed to do maintenance and the elimination of disturbance work. Do not perform any independent repair of defective heating plates, but send it back to SCHRAMM. Unauthorized repairs and disassembly will automatically eliminate warranties and liabilities.

(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

EPS 15 ATEX 1 041 **Revision 0**

(4) Equipment: Electrical heating plate type EHP50 and EHP200

(5) Manufacturer: Schramm GmbH

(6) Address: Flinschstrasse 18a, 60388 Frankfurt am Main, Germany

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

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 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 15TH0291.

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

EN 60079-0:2012 **EN 60079-1:2014**

EN 60079-31:2014

(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 d IIC T4/T3 Gb
II 2D Ex tb IIIC T135°C/T200°C Db

Certification department of explosion protection

D. Zitzmann

Nuremberg, 27.11.2015

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(13) # Annex

(14) **EC-Type Examination Certificate EPS 15 ATEX 1 041** **Revision 0**

(15) Description of equipment:

The electric heating plate EHP50, EHP200 is intended for heating manifolds, protection boxes or small enclosures. Inside the heating plate there are several PTC heating elements or a cartridge heater with self-limiting temperature characteristic. A continuous temperature control is attained due to increasing ohmic resistance with increasing temperatures.

An internal thermal cut-off fuse prevents the heater from exceeding the maximum allowable surface temperature defined by the specified temperature class.

Ambient temperature range: -60°C to +80°C

Operating temperature range: -60°C to +180°C (120°C for T4)

Electrical data:

U_n = 110 - 250 VAC

P_n = 50, 80, 200W

(16) Test report: 15TH0291

(17) Special conditions for safe use:

none

(18) Essential health and safety requirements:

Met by standards.

Certification department of explosion protection Nuremberg, 27.11.2015

ZERTIFIZIERSTELLE BUREAU VERITAS Bureau Veritas CPS Germany GmbH 1828

D. Zitzmann

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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 EPS 15.0055	Issue No: 0	Certificate history: Issue No. 0 (2015-11-27)
Status:	Current	Page 1 of 3	
Date of Issue:	2015-11-27		
Applicant:	Schramm GmbH Flinschstrasse 18a, 60388 Frankfurt am Main, Germany		
Electrical Apparatus: *Optional accessory:*	Electrical heating plate type EHP50 and EHP200		
Type of Protection:	db, tb		
Marking:	Ex d IIC T4/T3 Gb Ex tb IIIC T135°C/T200°C Db		

Approved for issue on behalf of the IECEx Certification Body: Dieter Zitzmann

Position: Certification manager

Signature:
(for printed version)

Date: 2015-11-27

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.

Certificate issued by:

Bureau Veritas Consumer Products Services Germany GmbH
Businesspark A96
86842 Türkheim
Germany

IECEx Certificate of Conformity

Certificate No:	IECEx EPS 15.0055	Issue No: 0
Date of Issue:	2015-11-27	Page 2 of 3
Manufacturer:	Schramm GmbH Flinschstrasse 18a, 60388 Frankfurt am Main Germany	
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 electrical 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

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:

DE/EPS/ExTR15.0030/00

Quality Assessment Report:

DE/EPS/QAR14.0015/00

IECEx Certificate of Conformity

Certificate No: IECEx EPS 15.0055 Issue No: 0

Date of Issue: 2015-11-27 Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The electric heating plate EHP50, EHP200 is intended for heating manifolds, protection boxes or small enclosures. Inside the heating plate there are several PTC heating elements or a cartridge heater with self-limiting temperature characteristic. A continuous temperature control is attained due to increasing ohmic resistance with increasing temperatures.
An internal thermal cut-off fuse prevents the heater from exceeding the maximum allowable surface temperature defined by the specified temperature class.

Electrical Data
Un = 110 - 250 VAC
Pn = 50, 80, 200W

Ambient temperature range: -60°C to +80°C
Operating temperature range: -60°C to +180°C (120°C for T4)

CONDITIONS OF CERTIFICATION: NO

EU-Konformitätserklärung
EU-Declaration of Conformity

Wir/We	**Schramm GmbH** **Flinschstr. 18 a** **60388 Frankfurt am Main** **Germany**
erklären in alleiniger Verantwortung, dass das Produkt	**Elektrische Heizplatte** **Typ EHP50, EHP200**
bearing sole responsibillity, hereby declare that the product	Electrical heating plate Type EHP50, EHP200

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) übereinstimmt. Auch wenn die in der EU-Baumusterprüfbescheinigung angewandten Normen nicht den neuesten Ausgaben der heute gültigen Normen entsprechen, erfüllt das Produkt die Grundlegenden Sicherheits- und Gesundheitsanforderungen der Richtlinie.

which is the subject of this declaration, is in conformity with the following standards or normative documents. As well the named standards of the EU-Type-Examination Certificate are not the newest issue of the standard which is valid today, the equipment fulfils the Essential Health and Safety Requirements of the Directive

Bestimmung der Richtlinie Provisions of the directive	**Titel und/oder Nummer sowie Ausgabe der Norm(en)** Titel and/or No. and class of issue of the standard(s)
2014/34/EU: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen 2014/34/EU: Equipment and protective systems intended for use potentially explosive atmospheres	**EN IEC 60079-0:2018** **EN 60079-1:2014** **EN 60079-31:2014**
EU Baumusterprüfbescheinigung: EU-Type-Examination Certificate:	**EPS 15 ATEX 1041** Bureau Veritas, 2004
Kennzeichnung: Marking:	**II 2 G Ex db IIC T4/T3 Gb** **II 2 D Ex tb IIIC T135°C/T200°C Db**
Qualitätssicherung Produktion: Production Quality Assessment:	**Bureau Veritas, benannte Stelle 2004** Bureau Veritas, notified body 2004
2014/30/EU: **Elektromagnetische Verträglichkeit** 2014/30/EU: Electromagnetic compatibillity	**EN 61000-6-4:2007 + A1:2011**
Frankfurt, 16.07.2021 **Ort und Datum** Place and Date	Dipl. Ing. Robin Schramm **Qualitätsleitung** Quality Management