

Operating Instructions

SL FLATTHERM DC.A

1 General	3
2 Use	3
3 Special conditions for safe use	3
4 Explanation of symbols for warnings and signal words	3
5 Safety information	4
6 Technical Data	4
7 Installation	4
8 Connection.....	5
9 Commissioning	7
10 Maintenance.....	7
11 Troubleshooting	7
12 Deinstallation	8
13 Disposal	8
14 Declaration of Conformity	8
15 Further information and service	8
16 Certificate CCC	9
16.1 CCC certificate SL ...THERM No. 2020322312003002 valid_20251026.....	9

Operating Instructions SL FLATTHERM DC.A



1 General

These operating instructions describe the safe and proper way to work with the device. The safety information and instructions given as well as the local accident prevention regulations and general safety regulations valid in the area of application must be complied with.

These instructions are a constituent part of the instrument and need to be kept in the immediate vicinity of the device accessible to personnel at all times.



Follow these instructions for proper and safe use.
Keep for future reference.

These instructions are intended for personnel who have the necessary qualifications to carry out the work described.

Untrained or unqualified persons are prohibited from carrying out any work.

Before starting any work, the operating instructions should be read in full.

2 Use

The SL..THERM heaters are manufactured according to standard GB/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.31-2021 and are licensed for direct heating through flange-mounting (conduction) or for room heating (convection) in Ex-zone 1 and Zone 2 for instrument categories G/ D in temperature classes T3 to T6. You will find the temperature class for your device on the label. See Technical Data section.

The areas of application are:

- Frost protection
- Condensation protection
- Maintaining temperature

As an option, thermostats can be integrated in the connecting cable. If a TAE is used, the respective operating instructions must be complied with.

Product approval GYJ22.1962X with appendices and supplements.

See <http://www.intertec.info>

3 Special conditions for safe use

- When installing, using and maintaining this heater, the user must follow this operating instructions and the following standards:

GB/T 3836.1-2021 : Explosive atmospheres - Part 1:
Equipment – General requirements

GB/T 3836.2-2021 : Explosive atmospheres - Part 2:
Equipment protection by flameproof enclosures “d”

GB/T 3836.31-2021 : Explosive atmospheres - Part 31:
Equipment dust ignition protection by enclosure “t”

- This heater is equipped with a ground terminal and must be connected to the equipotential bonding rail/grounding.
- At the installation site it must be prevented getting the heater in contact with gases which could corrode the aluminum alloy.
- Please also note the requirements in Certificate CCC [► Page 9].

4 Explanation of symbols for warnings and signal words

The safety information warns the user about risks and provide information on how risks can be avoided.

Safety information can be found at the start of the chapter before the instructions which may lead to a hazardous situation. Additional safety information can be found at the beginning of this manual.

Safety instructions which must be adhered to are highlighted as follows:

DANGER

DANGER

This sign is warning about an extremely hazardous situation which, if not heeded, will lead to death or serious irreversible injury.

WARNING

WARNING

This sign is warning about a hazardous situation which, if not heeded, may lead to death or serious irreversible injury.

CAUTION

NOTICE

This sign is warning about a hazardous situation which, if not heeded, may lead to slight, reversible injury.



Operating Instructions SL FLATTHERM DC.A



NOTICE

NOTE

It is essential to pay attention to this safety advice as you may otherwise incur material damage.

i INFO

Important notes and useful additional information.

5 Safety information

⚠ CAUTION

Risk of burns from a hot surface

Attainable highest temperatures:

- Max. 160°C with T3 heating systems
- Max. 100°C with T4 heating systems
- Max. 70°C with T5 heating systems
- Max. 50°C with T6 heating systems

Do not touch device during operation! Before working on the device, allow it to cool down first.

i INFO

Wear personal protective equipment (PPE) when working

For information on the type and scope of personal protective equipment, please refer to the local regulations and guidelines.

Action in the event of injury

In the event of injury, first aid must be administered and qualified medical assistance must be consulted.

6 Technical Data

Protection class	IP66/IP68 1bar/30min
Rated voltage	110 to 250 V AC or DC
Permitted operating voltage	110 to 265 V
Rated current (in compliance with VDE 0298)	max 10 A
Ambient temperature	- 60 to + 60 °C
Max. permitted operating temperature	- 60 to + 180 °C

Switching capacity of fault alarm (AM)	10 A / 265 V AC
Connecting cable	Silicone hose cable, notch- and oil resistant, 3 x 1,5 mm ²
Connecting cable AM	Silicone hose cable, notch- and oil resistant, 3 x 1,0 mm ² Ø8,5 mm
Material	Seawater-proof aluminium, black anodized
Mean Time Before Failure	50.000 h
Storage temperature	- 60 to + 80 °C

Profile type "P" Height x Width x Depth	220 x 200 x 30	mm
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i INFO

You will find the precise technical data for your instrument on the label. You will find information on the heating output on the data sheet.

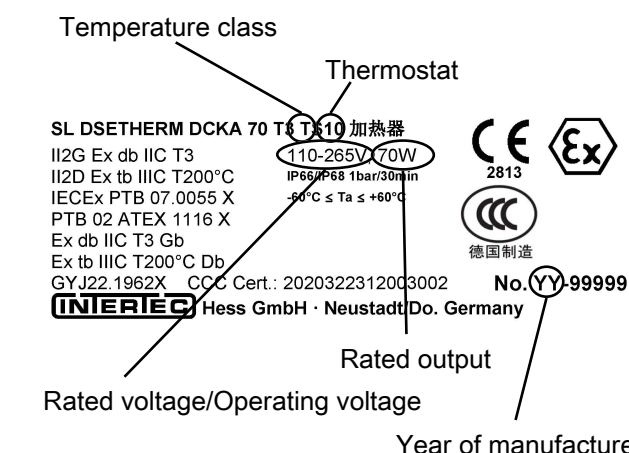


Illustration 1: Example: SL FLATTHERM DCPA 150 T3 TS40 label

7 Installation

NOTICE

Carefully remove

When removing from the packaging and during transport, the connection line must not be stressed or bent.

Repairs may only be carried out by the manufacturer.



Operating Instructions SL FLATTHERM DC.A

To optimally route the heat, the FLATTHERM should be mounted if possible in full surface contact on a metal surface. The boreholes required for this can be placed individually. Please keep the necessary safety distance from the profile core. Refer to the following drawing.

The label needs to remain legible.

The label needs to remain legible.

Please make sure that the absolute heat transfer coefficient of the surrounding housing is not smaller than 0.5 W/K.

To ensure operational safety, the heater must operate under temperature conditions which will NOT exceed the trigger temperature of the limiter.

The operating temperatures must be adhered to.

The connection cable must be permanently installed up to the inlet into the on-site junction box, taking the permissible bending radius = 5 x outer diameter into consideration.

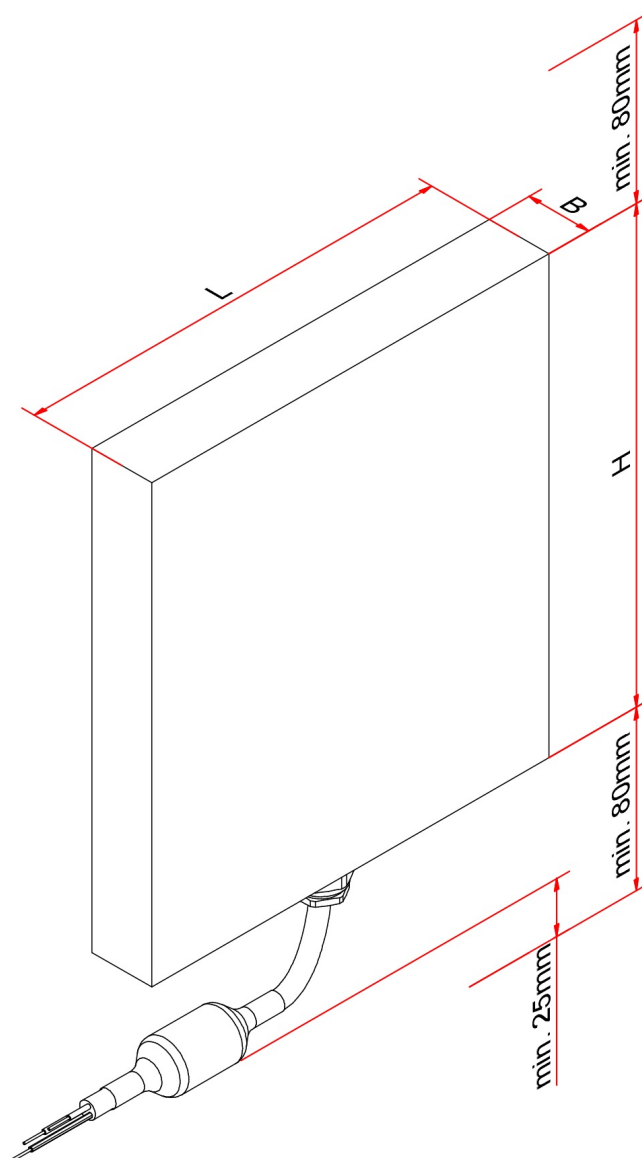


Illustration 2: Installation example FLATTHERM with TS and with clearance

Additional installation material, such as rails or panels and also junction boxes, are not included in the standard scope of delivery (see Installation accessories) and must be ordered additionally.

8 Connection

i INFO

The device may only be connected up and secured by a trained person, taking into account the "rated voltage" and "rated current" specified on the nameplate.



Operating Instructions SL FLATTHERM DC.A



Where operating voltage = measured voltage (rated voltage), then the heater is at its rated output. Mains voltage fluctuations up to 10 % are then permissible.

Each heater with integrated TS thermostat must be preceded by a 10 A fuse or a motor protection switch with short-circuit and thermal quick release (set to 10 A) as short-circuit protection. When using a heater without integrated thermostat, the fuse protection can be selected according to the cross-section of the supply cable.

Additional equipotential bonding is required. The terminal block designated for this purpose has the ground sign.

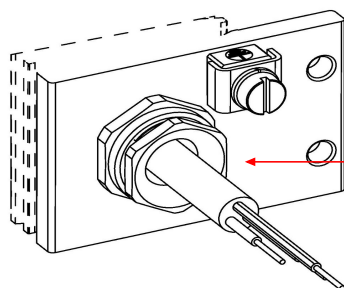


Illustration 3: Example heater with KLE connection

⚠ CAUTION

NOTICE: Do not remove adapter/ cable connection to connect up the heater!

This would cause irreversible damage to the heater and this would mean that the explosion protection can no longer be warranted.

The illustration may deviate from the heater.

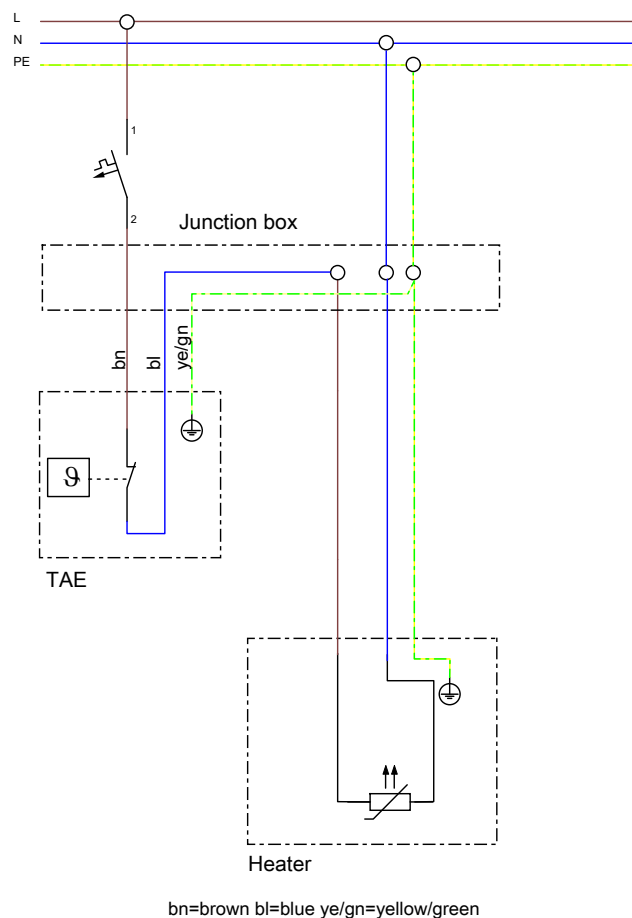


Illustration 4: SL ..THERM with TAE

Operating Instructions SL FLATTHERM DC.A

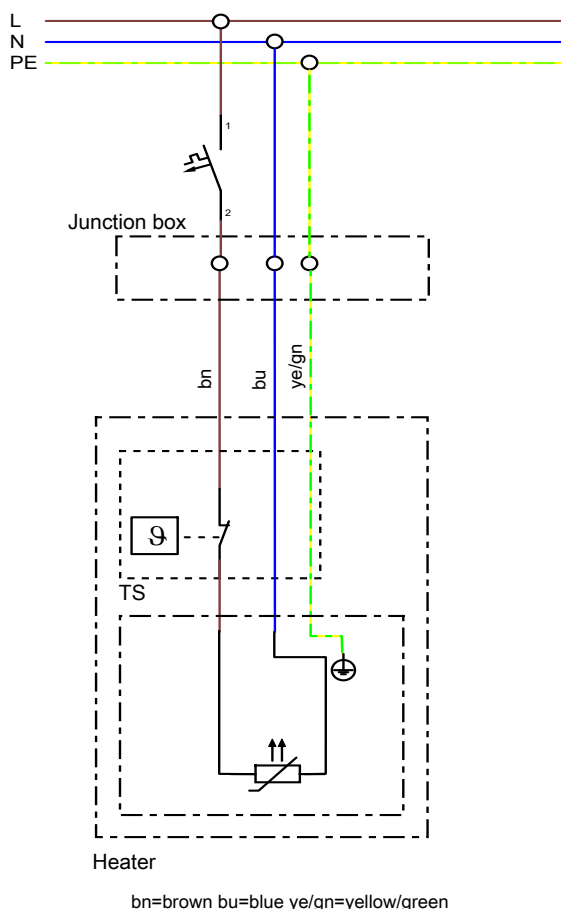


Illustration 5: SL ..THERM with TS

Check heater and all mounting parts for tight fit.

Check heater, supply lines, any thermostats and junction boxes for safety-relevant damage. Consult factory upon any visible damage.

The installation is not safe if the following is present:

- Insulation and seals are damaged
- Live parts are exposed
- Protective earthing is no longer functional

9 Commissioning

If the heater is installed in accordance with the notes in the Installation [►Page 4] section and Connection [►Page 5] sections, then the radiator may be commissioned.

⚠ CAUTION

Sufficient heat dissipation must be ensured.

Unauthorized covers must be removed as otherwise there is the risk of the heater overheating.

The heating circuit is permanently disconnected by a temperature melt fuse which can't be reset if these installation instructions are not adhered to.

10 Maintenance

The design of the device does not require any maintenance.

NOTICE

NEVER retighten the KLE type cable gland. The cable gland is maintenance-free and has been tightened to the required torque at the factory.

Retightening the KLE cable gland can cause damage to seals and cable.

Function and safety test intervals can be freely selected by the operator in accordance with the applicable regulations.

Drilling may only be carried out as described in section Installation [►Page 4]. Further modifications and repairs may only be carried out by the manufacturer in the factory.

Check heater and all mounting parts for tight fit.

Check heater, supply lines, any thermostats and junction boxes for safety-relevant damage. Consult factory upon any visible damage.

The installation is not safe if the following is present:

- Insulation and seals are damaged
- Live parts are exposed
- Protective earthing is no longer functional

All components have to be kept clean and free of dust and harmful substances that could lead to excessive temperature rise.

Use a soft/medium brush for cleaning. Vacuum away all removed debris.

In the dust Ex area, the applicable requirements of GB/T 3836.13-2021 must be complied with.

11 Troubleshooting



Operating Instructions SL FLATTHERM DC.A

If the heater fails, check the installation. Carry out a continuity test on the heating circuit. Pay attention to the connection diagram and switching point of the thermostat!

12 Deinstallation

Disassembly may only be carried out by a trained person.

DANGER

Risk of fatal injury from electric current!

If contact is made with live components, there is the risk of fatal injury.

For this reason, switch off the voltage supply, secure against being switched on again and check that no more voltage is present.

Disconnect connection line from the clamps and from the connection socket, disconnect device from bracket and remove it.

13 Disposal



Disposal according to WEEE 2012/19/EU

Disassemble the components of the product, taking the applicable local labour protection and environmental regulations into consideration and make sure that the components are recycled:

- Scrap metal
- Send plastic elements to recycling
- Sort other components according to their material properties and dispose of them.

Or return your old device to us for professional disposal. For further information, please contact INTERTEC-Hess GmbH at +49 9445 9532-0.

NOTICE

Environmental damage may be caused if disposed of incorrectly!

Electrical scrap and electronics components are subject to hazardous waste treatment and must only be disposed of by certified specialists!

The local community authorities or specialist waste disposal companies can provide information on environmentally friendly disposal.

14 Declaration of Conformity

The manufacturer, INTERTEC-Hess GmbH, Raffineriestrasse 8, 93333 Neustadt/Donau, Germany, hereby declares in sole responsibility that the product

Product / Type designation:

SL FLATTHERM

was manufactured according to and complies with the following standards:

GB/T 3836.1-2021

GB/T 3836.2-2021

GB/T 3836.31-2021

Marking:

Ex db IIC T6...T3 Gb

Ex tb IIIC T85°C/T100°C/T135°C/T200°C Db

CCC cert. no. : 2020322312003002

Neustadt, April 5th, 2024

Dipl.-Ing. Martin Hess, Managing Director

15 Further information and service

If the information contained in this instruction manual should not be sufficient in any way, then INTERTEC would be glad to be at your disposal to provide further information and service.

Please contact your INTERTEC contact person or directly contact

INTERTEC-Hess GmbH

Raffineriestr. 8

93333 Neustadt/Donau

Germany

Phone: +49 9445 9532-0

e-mail: info@intertec.info

Website: www.intertec.info

Warranty

The legally defined warranties and warranty periods of 24 months are applicable to our scope of supply and services.



Operating Instructions SL FLATTHERM DC.A



You will find more detailed information in the manufacturer warranty from INTERTEC for heating systems and accessories.



These instructions do not claim to take all designs, options or changes into consideration, even in association with installation, operation or maintenance. INTERTEC does not accept responsibility for providing information about changes made retrospectively.

16 Certificate CCC

See also

📄 CCC certificate SL ...THERM No. 2020322312003002 valid_20251026 [▶ 9]

16.1 CCC certificate SL ...THERM No. 2020322312003002 valid_20251026



Operating Instructions SL FLATTHERM DC.A



中国国家强制性产品认证证书

SITIAs
Worldwide Access

证书编号: 2020322312003002

认证委托人名称: Intertec Hess GmbH
认证委托人地址: Schroeplerstrasse 37, 85053, Ingolstadt, Germany
生产者名称: Intertec Hess GmbH
生产者地址: Schroeplerstrasse 37, 85053, Ingolstadt, Germany
生产企业名称: Intertec Hess GmbH
生产企业地址: Raffineriestrasse 8, 93333, Neustadt/Donau, Germany

产品名称: 加热器
系列、规格、型号: SL...THERM a C b c d e f
标准: GB 3836.1-2010、GB 3836.2-2010、GB 12476.1-2013、
GB 12476.5-2013

上述产品符合强制性产品认证实施规则 CNCA-C23-01:2019 的要求, 特发此证。

发证日期: 2020 年 10 月 27 日 有效期至: 2025 年 10 月 26 日

首次发证日期: 2020 年 10 月 27 日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书的相关信息可通过国家认监委网站 www.cnca.gov.cn 查询

批准:



上海仪器仪表自控系统检验测试所有限公司

<http://www.sitiias.com.cn>

中国·上海·漕宝路103号200233

电话: +86 21 64510844

S 0003105



Operating Instructions SL FLATTHERM DC.A



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION



CERTIFICATE NO: 2020322312003002

APPLICANT: Intertec Hess GmbH
ADDRESS: Schroeplerstrasse 37, 85053, Ingolstadt, Germany
MANUFACTURER: Intertec Hess GmbH
ADDRESS: Schroeplerstrasse 37, 85053, Ingolstadt, Germany
FACTORY: Intertec Hess GmbH
ADDRESS: Raffineriestrasse 8, 93333, Neustadt/Donau, Germany

PRODUCTNAME: Heater

SERIES,SPECIFICATION,MODEL: SL...THERM a C b c d e f

STANDARDS: GB 3836.1-2010、GB 3836.2-2010、GB 12476.1-2013、
GB 12476.5-2013

This is to certify that the above mentioned product(s) complies with the requirements of implementation rules for compulsory certification (REFNO. CNCA-C23-01:2019).

Valid from: October 27, 2020

Valid until: October 26, 2025

Date of original certification: October 27, 2020

The validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

This certificate is available through CNCA's website: www.cnca.gov.cn



APPROVAL:

Xu JianPing



Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

<http://www.sitiias.com.cn>

Building 9, 103 Cao Bao Road, Shanghai 200233, China

Tel: +86 21 64510844

S 0002021



Operating Instructions SL FLATTHERM DC.A



中国国家强制性产品认证证书

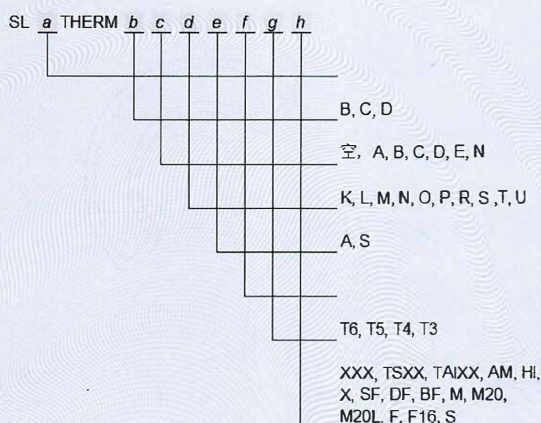

SITIIS
Worldwide Access

证书编号: 2020322312003002

附 件

产品名称: 加热器

型号规格:



防爆标志: Ex db IIC T6~T3 Ex tD A21 IP66/IP68 T85°C / T100°C / T135°C / T200°C

电气参数:

最高额定电压

265V

最高额定电流

10A

批 准:



上海仪器仪表自控系统检验测试所有限公司

http://www.sitiias.com.cn

中国·上海·漕宝路103号200233

电话: +86 21 64510844

第 1 页 共 1 页