



Marine &amp; Offshore

Certificate number: 14604/C0 BV

File number: AP 3670

Product code: 3812H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**TRAFAG AG**

Bubikon - SWITZERLAND

*for the type of product*

**TEMPERATURE SENSORS / PROBES / TRANSDUCERS**

THERMOSTAT - PICOTHERM 474 (ISP/ISPT)

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships.

EC Code: 33

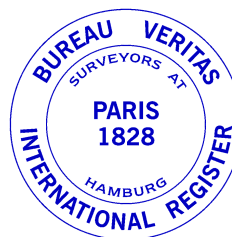
*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 29 Jun 2022**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 29 Jun 2017,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

**THERMOSTAT - PICOTHERM 474 (ISP / ISPT)** series are temperature switches with fixed switching differential.

#### **Main characteristics:**

Model:	ISPT: Compact thermostat (K type) ISP: Thermostat with remote sensor and capillary (B type)
Temperature range:	+5..95°C, +20...110°C, +20...150°C
Repeatability:	± 1% FS
Scale accuracy:	± 4% FS
Microswitch:	Silver contacts (type 03)
Rating:	250VAC - 3A (1A) or 24VDC - 2A (1A) Value between () is for inductive load
Index of protection:	IP 65

#### **Variants:**

Sensor Type: 474 .03**aa** . **bbb** . **cc** . **dddd** . **eeee** . **ff**

**aa = Measuring range:**

20, 23, 31

**bbb = Sensor:**

322, 342

**cc = Pressure connection:**

00, 14

**dddd = Protection tube, Thermowell:**

1416, 1419, 8316, 8319

**eeee = Protection tube length:**

0065, 0150

**ff = Accessories:**

58, 77, 90, V3

### 2. DOCUMENTS AND DRAWINGS:

- Data sheet: H72113h dated 06/2010
- Assembly drawings R93261 Rev. c and R93262 Rev. c.
- For C0 certificate: Data sheet: H72113m dated 06/2016

### 3. TEST REPORTS:

#### **Trafag AG:**

- Prototype test report Picotherm2.xls dated 13/09/2001.
- Vibration test reports dated 24/01/2002.

### 4. APPLICATION / LIMITATION:

- 4.1 - Bureau Veritas Rules for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - To be fitted in thermowell.
- 4.4 - Bureau Veritas Environmental Category, **EC Code: 33.**

### 5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The temperatur switches of type **PICOTHERM 474 (ISP / ISPT)** are to be supplied by **TRAFAG AG - SWITZERLAND** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **TRAFAG AG - SWITZERLAND** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

**TRAFAG, spol. s r.o.**  
**Vilemovska 2129**  
**34701 Tachov**  
**CZECH REPUBLIC**

**6. MARKING OF PRODUCT:**

- Maker's name or trade mark.
- Date of manufacture and/or serial number.
- Equipment type or model identification.

**7. OTHERS:**

7.1 - It is **TRAFAG AG - SWITZERLAND** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 14604/B0 BV issued on 21 June 2012 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***