

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Temperature Switch**

with type designation(s)  
**474 - Picotherm M**

Issued to

**Trafag AG**  
**Bubikon, Switzerland**

is found to comply with  
**Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**

**Application :**

**Location classes:**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>Not relevant</b>
<b>Enclosure</b>	<b>B</b>

This Certificate is valid until **2018-12-31**.

Issued at **Høvik** on **2014-08-29**

DNV GL local station: **Augsburg**

Approval Engineer: **Nils Jarem**



for **DNV GL**  
 Digitally Signed By: Sneen, Ståle  
 Location: DNV GL Høvik, Norway  
 Signing Date: 2014-08-29, on behalf of

**Odd Magne Nesvåg**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

Certificate No: **A-13908**  
 File No: **895.20**  
 Job Id: **262.1-001447-3**

## Product description

Type approval of Picotherm M covers the following combinations:

	Type	Micro-switch	Range	Sensor-type	Mounting Executions		Protection tube	Accessories
					B	K		
<b>Order No.</b>	474	03	20 23 31	322	00 Max L= 3m	14	8316 1416	58 V3

## Place of manufacture

Trafag spol s.r.o.  
 CZ-34701 Tachov

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

## Type Approval documentation

Documentation	Ref. No.
Data sheet:	H72113h, 2010/06
Instructions:	H73113g, 2007/01
Assembly Drawings:	R93261-issue c, R93262-issue c
Test Reports:	Trafag: Picotherm2.xls, dtd. 2001-09-13
	Trafag: Vibration Test Report, dtd. 2002-01-24

DNVGL Augsburg periodical assessment report for A-11961, dated 2014-07-30

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE