



**TYPE APPROVAL CERTIFICATE  
N. ELE273013CS**

This is to certify that the product below is found to be in compliance with the applicable requirements of the RINA type approval system.

|                          |                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <i>Description</i>       | <b>Pressure switches</b>                                                                                                 |
| <i>Type</i>              | <b>PICOSTAT 9B4 (PST4B)<br/>PICOSTAT 9M4 (PST4M)<br/>PICOSTAT 9K4 (PST4K)</b>                                            |
| <i>Applicant</i>         | <b>Trafag AG<br/>Industriestrasse 11<br/>CH-8608 Bubikon<br/>Switzerland</b>                                             |
| <i>Manufacturer</i>      | <b>Trafag spol. s.r.o.<br/>Vilemovska 2129<br/>CZ-34701 Tachov<br/>Czech Republic</b>                                    |
| <i>Testing Standards</i> | <b>Rules for the Classification of Ships - Part C - Machinery,<br/>Systems and Fire protection - Ch.3, Sect.6, Tab.1</b> |

Issued in **Genova** on **December 17, 2013**

This certificate is valid until **December 17, 2018**

**RINA Services S.p.A.**

*Valerio Bonanni*

**Genova, December 17, 2013**

**1/3**



## TYPE APPROVAL CERTIFICATE N. ELE273013CS

### PICOSTAT 9B4 Main features

Sensor type: bellow

Measuring range: - 0.6 ...3,4 to 4 ... 40 bar

Output: floating change-over contact

Switching differential : not adjustable

Repeatability:  $\pm 0,5$  % F.S. typ.

Mechanical protection: IP65

Microswitches type 42 (silver plated) / 84 (golden plated)

| Bellow sensor<br>(bar)   | Measuring Range |         |         |          |          |          |          |
|--------------------------|-----------------|---------|---------|----------|----------|----------|----------|
|                          | -0,6 ... 3,4    | 0 ... 4 | 0 ... 6 | 1 ... 10 | 1 ... 16 | 2 ... 25 | 4 ... 40 |
| Microswitch differential | 0,3             | 0,3     | 0,3     | 0,6      | 0,6      | 1,5      | 1,8      |
| Max. pressure            | 12              | 12      | 12      | 24       | 24       | 40       | 50       |

### Technical Description:

Trafag Data Sheet: Trafag - 9B4 Picostat PST4B \_ doc. n. H72367a (06/2012)

Trafag Instructions: doc. n. H73367 ; Trafag Drawings: C20784b, E01301, E01304

### Test Reports:

Trafag report n. V- 08125 (24/10/2008) ; Trafag report n. V- 11140 (20/06/2012)

ENL report n° 20081211.A02.01 (14/10/2008)

### PICOSTAT 9M4 Main features

Sensor type: Membrane

Measuring range: 1 ...10 to 10 ...100 bar

Output: floating change-over contact

Switching differential : not adjustable

Repeatability:  $\pm 2.0$  % F.S. typ.

Mechanical protection: IP65

Microswitches type 42 (Silver plated ) / 84 (golden plated )

| Membrane sensor<br>(bar) | Measuring Range |             |             |             |          |            |
|--------------------------|-----------------|-------------|-------------|-------------|----------|------------|
|                          | 1 ... 10        | 1 ... 16    | 2 ... 25    | 4 ... 40    | 6 ... 60 | 10 ... 100 |
| Microswitch              | 0,4 ... 1,7     | 0,4 ... 1,7 | 1,2 ... 4,5 | 1,2 ... 4,5 | 4 ... 16 | 4 ... 16   |
| Max Pressure             | 200             | 200         | 200         | 200         | 200      | 200        |

### Technical Description:

Trafag Data Sheet: Trafag – 9M4 Picostat PST4M \_ doc. n. H72368a (08/2013)

Trafag Drawings: C22667 rev. b

### Test Reports:

Trafag report n. V- 12072 (21/05/2013)

Genova, December 17, 2013

2/3



## TYPE APPROVAL CERTIFICATE N. ELE273013CS

### PICOSTAT 9K4 Main features

Sensor type: Piston

Measuring range: 1 ...10 to 40 ...400 bar

Output: floating change-over contact

Switching differential : not adjustable

Repeatability:  $\pm 1.0$  % F.S. typ.

Mechanical protection: IP65

Microswitches type 42 (Silver plated ) / 84 (Golden plated )

| Piston sensor<br>(bar) | Measuring Range |            |          |          |          |            |            |            |            |
|------------------------|-----------------|------------|----------|----------|----------|------------|------------|------------|------------|
|                        | 1 ... 10        | 1 ... 16   | 2 ... 25 | 4 ... 40 | 6 ... 60 | 10 ... 100 | 16 ... 160 | 25 ... 250 | 40 ... 400 |
| Microswitch            | 0,8 ...2,4      | 0,8 ...2,4 | 2 ... 6  | 2 ... 6  | 5 ...15  | 5 ... 15   | 12 ... 40  | 12 ...40   | 15 ... 50  |
| Max<br>Pressure        | 100             | 100        | 100      | 100      | 200      | 200        | 400        | 400        | 1000       |

### Technical Description:

Trafag Data Sheet: Trafag – 9K4 Picostat PST4K \_ doc. n. H72369a (08/2013)

### Test Reports:

Trafag report n. V- 12072 (21/05/2013)