

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pressure Transmitter**

with type designation(s)

8264 - Picotrans NPN, 8298/8488 - Pressure Transmitter EPN/EPNCR

Issued to

Trafag AG**Bubikon, ZH, Switzerland**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	B

Issued at **Hamburg** on **2019-09-03**for **DNV GL**This Certificate is valid until **2024-09-02**.DNV GL local station: **Augsburg**Approval Engineer: **Dariusz Lesniewski****Joannis Papanuskas**
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.



Product description

Pressure Transmitter Series 8264 – Picotrans NPN and 8298/8488 – Pressure Transmitter EPN/EPNCR, covering the following combinations:

Type	Pressure range	Sensor type	Pressure connection	Execution	Output	Accessories
8264	74 to 85 **74 **85	23 25	10 17 18	04 78	19	40 *41 43 45 46 56 57 74 V3 1M 3M 5M
8298	75 to 90	23 25	17	04 25 78	19 23	40 43 45 46 56 92 1M 3M 5M
8488	0..1 bar to 0...40 bar		19 28 29			

* Only available for pressure ranges 75 to 81 (up to 40 bar)

** Only available for pressure connection 10

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Initial Type Approval 2006, extension 2010, extension 2019:

Documentation	Reference numbers
Data sheet:	H72313o, H72312r
Instructions:	H73311a
Assembly Drawings:	<u>Type 8264:</u> B62200c, B62339d, C10751c, C12398h, C12880j, C13936c, M91471f; C15988d <u>Type 8298/8488:</u> B62120m, B62300d, B62420i, B62440c, B63590d, C10751c, C12253f, C12398h, C12880j, M91458f, M91469d, M91866/1
Test Reports:	Trafag V-0605 (2006-04-12), V-0554 (2005-07-19), V-0647 (2006-05-17), V-07109 (2008-03-07), V-08055 (2008-04-01), V-08101 (2008-08-04), V-08102 (2008-08-13), V-08113 (2008-08-27), V-16089 (2016-10-10); EMC-Testcenter EMCCK689 Index A; Mettler-Toledo 20051228.A02.03, 20061027.A05.01; Electrosuisse 08-IK-0248.01 dated 2008-08-27 (IP enclosure test); Trafag protokoll dated 2008-08-11 (Hydrostatic pressure test);

Job Id: **262.1-001727-5**
Certificate No: **TAA0000280**

Documentation	Reference numbers
	Trafig EMV-Test 8298 ratiometrisch dated 2006-10-17 (EMC tests acc. to MTU spec. M91180); SPEKTRA 80430.A.1.1 (2008-07-29), 80430.B.1.1 (2008-07-29), 80430.C.1.1 (2008-07-29).
Other documents:	Drawing: E01472(c), BV Certificate no. 22646/B0 BV Drawing: E00213(c) Drawing: E01047(c) Drawing: E00849(a) Drawing: E00891(e)
Survey report:	Type approval renewal assessment report issued at Augsburg on 2018-12-21

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
Execution 04 and 25 (connector) subjected to IP65 test according to EN/IEC 60529 (Sept. 2000).
Execution 78 (cable) subjected to IP69K test according to DIN 40053:93.
Hydrostatic pressure test at 6950 bar for 8298 model rated up to 2500 bar.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE