

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pressure Transmitter

with type designation(s)
3051S

Issued to

Rosemount Inc.
Chanhassen MN, United States

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	D
Humidity	B
Vibration	A
EMC	A
Enclosure	D / IP66 / IP68

This Certificate is valid until **2021-07-15**.

Issued at **Hamburg** on **2016-07-16**

for **DNV GL**

DNV GL local station: **New York**

Approval Engineer: **Andrea Grün**

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Duy Nam Le
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.

Job Id:
Certificate No: **TAA00000K9**

Product description

Rosemount Pressure Transmitters comprising the following models:

3051S – Pressure Transmitter
3051S MV – Pressure Transmitter – MultiVariable
3051S AL – Pressure Transmitter – Liquid Level
3051S AM – Pressure Transmitter – Electronic Remote Sensor
3051S FA – Pressure Transmitter – Differential Flow, Annubar
3051S FC – Pressure Transmitter – Differential Flow, Compact Orifice
3051S FP – Pressure Transmitter – Differential Flow, Integral Orifice

Place of manufacture

Rosemount Inc.
8200 Market St. Chanhassen
MN 55317, USA

Rosemount Inc.
6021 Innovation Blvd
Shakopee, MN 55379, USA

Emerson Process Management Ltda.
Av. Hollingsworth, 325 – Iporanga
18087-105 – Sorocaba – SP, Brazil

Emerson Process Management Asia Pacific Pte. Ltd.
(Rosemount Measurement)
1 Pandan Crescent, Singapore 128461, Republic of Singapore

Beijing Rosemount Far East Instrument Co., Ltd.
(Emerson (Beijing) Instrument Co., Ltd.)
No.6 North Street, Hepingli, Dong Cheng District, Beijing 100013, P.R. China

Application/Limitation

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

3051S FA/C/P Direct Mount Installations, where the transmitter is bolted directly to the sensor, is not recommended due to possibility for excessive vibrations. Remote Mount Installation is recommended in areas where vibrations may be expected.

Type Approval documentation

Rosemount 3051S:	
Reference manual	00809-0100-4801, Rev. FA, October 2010 – (HART® Protocol)
Reference manual	00809-0100-4803, Rev. CA, May 2011 – (MultiVariable™ Transmitter)
Reference manual	00809-0100-4804, Rev. AA, January 2011 – (Electronic Remote Sensors)
Reference manual	00809-0200-4801, Rev. CA, July 2010 – (Foundation™ Fieldbus Protocol)
Product data sheet	00813-0100-4801, Rev. PA, April 2011

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Quick installation guide	00825-0100-4801, Rev. KB, December 2010 – (3051S/SF HART® Protocol)
Quick installation guide	00825-0100-4803, Rev. BA, April 2011 – (3051S/SF MultiVariable™ Transmitter)
Quick installation guide	00825-0100-4804, Rev. AB, January 2011 – (3051S ERS HART® Protocol)
Quick installation guide	00825-0100-4805, Rev. DA, March 2009 – (3051S/SF Foundation™ Fieldbus Protocol)
Quick installation guide	00825-0300-4801, Rev. AA, July 2010 – (3051S/SF Advanced HART® Diagnostics)
EC Declaration of Conformity	RMD 1044 Rev. L, 2011-06-21 – (3051S, 3051SF)
EC Declaration of Conformity	RMD 1072 Rev. A, 2008-08-29 – (3051SMV)
Environmental test report	Bureau Veritas EL2078-1 Issue 2, 2012-06-07 – (3051S)
Enclosure test report	FM Approvals Project ID 3008216, 2003-04-30 – (3051S)

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, November 2015.
Enclosure tested for IP66, and IP68 down to 5m, according to IEC 60529:2001.

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