



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-11280  
This Certificate consists of 3 pages

*This is to certify that the*  
**Pressure Transmitter**  
*with type designation(s)*  
**PTM/Ex;PTM/N/Ex**

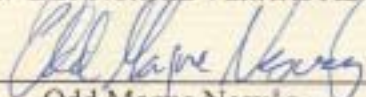
*Manufactured by*  
**STS Sensor Technik Sirnach AG**  
Sirnach, Switzerland

*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:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
PTM/Ex	D	B	B	B	Required protection according to DNV Rules shall be provided upon installation on board
PTM/N/Ex	D	B	B	B	Required protection according to DNV Rules shall be provided upon installation on board

*Place and date*  
Høvik, 2009-05-01  
for DET NORSKE VERITAS AS

  
Odd Magne Nesvåg  
Head of Section



Local Office  
DNV Essen

*This Certificate is valid until*  
2013-06-30

  
Kjell Myhrsveen  
Surveyor *one*

**Notice:** 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 proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: A-11280  
File No.: 892.10  
Job ID: 262.1-006699

## Product description

STS pressure transmitters PTM/Ex and PTM/N/Ex.

## Application/Limitation

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.

The cable installation has to be carried out according to the rules for classification for ships with respect to routing, fixing, protection, penetration of decks/bulkheads and the use of cable pipes. Fixing of cable above sensor shall be provided.

Ex installations 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.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV.

Information on Ex-Certification received from manufacturer – Not verified by DNV		
Equipment	Certified	Certificate No.
PTM/Ex PTM/N/Ex	⊕ II 1G Ex ia IIB/IIC T3 ... T6 or ⊕ II 1D Ex iaD 20 IP6x T80 ... T125 °C	SEV 08 ATEX 0142

## Type Approval documentation

Model	Scope	Documentation
PTM/Ex	Environmental tests	- Test report 6.58.0828.A version 1.0 dated 2009-02-06, signed Michael Herzog at STS Sensor Technik Simach AG - Test report 20081283.A02.01 dated 2008-12-22, signed Marcel Cattin at Mettler Toledo GmbH (salt mist) - Test report 20091008.A02.01 dated 2009-01-22, signed Marcel Cattin at Mettler Toledo GmbH (vibration)
	EMC tests	- Test report 15542 dated 2009-02-02, signed E.Hohl/H.M.Vetter at Montena EMC AG
	Product data	- GA/outline drawing, 6.10.0832.B dated 2008-09-09 - Datasheet DD053/10.00.0277.A dated 2008/11 - User manual, PTM DD003C dated 2008-02-19



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PTM/N/Ex	Environmental tests	- Test report 6.58.0828.A version 1.0 dated 2009-02-06, signed Michael Herzog at STS Sensor Technik Simach AG - Test report 20081283.A02.01 dated 2008-12-22, signed Marcel Cattin at Mettler Toledo GmbH (salt mist) - Test report 20091008.A02.01 dated 2009-01-22, signed Marcel Cattin at Mettler Toledo GmbH (vibration)
	EMC tests	- Test report 15547 dated 2009-02-02, signed E.Hohl/H.M.Vetter at Montena EMC AG
	Product data	- GA/outline drawing, 6.10.0831.B dated 2008-09-09 - Datasheet DD054/10.00.0281.A dated 2008/11 - User manual, PTM DD003C dated 2008-02-19

### Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.

### Marking of product

See product description above.

### Certificate retention survey

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE