

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>NORIS Automation GmbH</b>
<b>Address</b>	Muggenhofer Strasse 95, Nuernberg, 90429, Germany
<b>Type</b>	Transmitters/Transducers
<b>Description</b>	Thermocouples for diesel exhaust gas and Resistance thermometers PT100, PT1000 (with single resistance or double resistance)  Refer to the Appendix for details.
<b>Trade Name</b>	TF48, TN48, TP43, TP430, 2TP43, 2TP430, MX8
<b>Application</b>	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV4 as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – 1996.
<b>Specified Standard</b>	IEC 60584-1 (2013) IEC 60751 (2008)
<b>Ratings</b>	Refer to the Appendix for details.
<b>Additional Tests</b>	Dry heat test +80°C/16 hours

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## Type Approval Certificate

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. HTS/ETS 40604-20/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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