



Lloyd's  
Register

## 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.*

This certificate is issued to:

|                        |   |
|------------------------|---|
| <b>PRODUCER</b>        | Noris Automation GmbH<br>Muggenhofer Strasse 95<br>90429 Nürnberg<br>Germany  |
| <b>DESCRIPTION</b>     | Limit value switches series 5<br>Measuring transducers series 5   |
| <b>TYPES</b>           | RH5 ①-②with ①= 1, 2 and ②= A<br>RP5 ①-②with ①= 1, 2 and ②= A<br>RPT5 ①-②with ①= 1, 2 and ②= A<br>RI5 ①-②with ①= 1, 2 and ②= A<br>RG5 ①-②with ①= 1, 2 and ②= A<br>RG51-S<br>RW5 ①-②with ①= 3, 4, 5 and ②= A<br>RW5 ①-②with ①= 3, 4, 5 and ②= S<br>RF5 ①-②with ①= 00, 01, 02 and ②= R1, R2, A1, A2<br>RFW5 ①-②with ①= 00, 01 and ②= R1, R2, A1, A2<br>RTK5 ①-②with ①= 8, 9 and ②= A<br><br>VP5 ①-②with ①= 1, 2, 11 and ②= I1, I2, G1, G2<br>VPT5 ①-②with ①= 1, 2, 11 and ②= I1, I2, G1, G2<br>VTK5 ①-②with ①= 8, 9 and ②= I1, I2, G1, G2<br>VF5 ①-②with ①= 00, 01, 02 and ②= I1, I2, G1, G2 |
| <b>Certificate No.</b> | 02/20002 (E3)   |
| <b>Issue Date</b>      | 10 April 2017   |
| <b>Expiry Date</b>     | 20 January 2022   |
| <b>Sheet</b>           | 1 of 3  |



Thorsten Wolff  
Hamburg Technical Support Office  
Lloyd's Register EMEA

Lloyd's Register EMEA  
71 Fenchurch Street, London EC3M 4BS

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**TYPES continued**

VFS5 ①-② with ①= 00, 01, 02 and ②= I1, I2, G1, G2  
 VFG5 ①-② with ①= 00, 01 and ②= I1, I2, G1, G2  
 VFW5 ①-② with ①= 00, 01 and ②= I1, I2, G1, G2

①= measuring range  
 ②= output

**APPLICATION**

Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – 2002.

**ADDITIONAL TESTS**

Low temperature (-20°C/16 hrs)

**STANDARD**

Manufacturer's specification

**RATINGS**

| Type   | Measuring range:                     |
|--------|--------------------------------------|
| RH5    | 40 - 120°C, 5 - 70°C (NTC)           |
| RP5    | 0 - 120°C, 0 - 150°C (Pt100)         |
| RPT5   | 0 - 120°C, 0 - 150°C (Pt1000)        |
| RI5    | 0 - 20 mA, 0 - 4 - 20 mA             |
| RG5    | 0 - 10 V, 0 - 2 - 10 V               |
| RG51-S | 0 - 10 Vdc                           |
| RW5    | 0 - 20 Vac, 0 - 60Vac, 0 - 90Vac     |
| RW5    | 0 - 20 Vac, 0 - 60Vac, 0 - 90Vac     |
| RF5    | 5 - 100Hz, 20Hz - 1KHz, 50Hz - 10KHz |
| RFW5   | 5 - 100Hz, 20Hz - 1KHz               |
| RTK5   | 0 - 600°C, 0 - 800°C (NiCr-Ni)       |

Output signal: normally closed contact  
 normally open contact

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**RATINGS continued**

| Type | Measuring range:                           |
|------|--|
| VP5  | 0 - 120°C, 0 - 150°C, -30 - 120°C (Pt100)  |
| VPT5 | 0 - 120°C, 0 - 150°C, -30 - 120°C (Pt1000) |
| VTK5 | 0 - 600°C, 0 - 800°C (NiCr-Ni)             |
| VF5  | NORIS standardsignal                       |
| VFS5 | 1 - 10 Vac                                 |
| VFG5 | 6 - 60 Vac                                 |
| VFW5 | terminal W of a 24 V automotive alternator |

Output signal: 0 - 10V  
 2 - 10V  
 0 - 20mA  
 4 - 20mA


*The Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.*

*If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.*

*The Design Appraisal Document No. HTS/ETS 35120-17 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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Part 3

Switches - Limit

| Producer/Licence No.  | Item Description   | Technical Details   | Category/Additional Tests  | Remarks                         | Cert. No.            |
|---|--|---|--|---------------------------------|----------------------|
| <p><b>Noris Automation GmbH</b><br/> <b>Muggenhofer Strasse 95</b><br/> <b>90429 Nürnberg</b><br/> <b>Germany</b></p> | <p>Limit value switches series 5<br/>                     Measuring transducers series 5</p> <p>Types:</p> <p>RH5 ①-②with ①= 1, 2 and ②= A<br/>                     RP5 ①-②with ①= 1, 2 and ②= A<br/>                     RPT5 ①-②with ①= 1, 2 and ②= A<br/>                     RI5 ①-②with ①= 1, 2 and ②= A<br/>                     RG5 ①-②with ①= 1, 2 and ②= A<br/>                     RG51-S<br/>                     RW5 ①-②with ①= 3, 4, 5 and ②= A<br/>                     RW5①-②with ①= 3, 4, 5 and ②= S<br/>                     RF5 ①-②with ①= 00, 01, 02 and ②= R1, R2, A1, A2<br/>                     RFW5 ①-②with ①= 00, 01 and ②= R1, R2, A1, A2<br/>                     RTK5 ①-②with ①= 8, 9 and ②= A</p> <p>VP5 ①-②with ①= 1, 2, 11 and ②= I1, I2, G1, G2<br/>                     VPT5 ①-②with ①= 1, 2, 11 and ②= I1, I2, G1, G2<br/>                     VTK5①-②with ①= 8, 9 and ②= I1, I2, G1, G2<br/>                     VF5 ①-②with ①= 00, 01, 02 and ②= I1, I2, G1, G2<br/>                     VFS5 ①-②with ①= 00, 01, 02 and ②= I1, I2, G1, G2<br/>                     VFG5 ①-②with ①= 00, 01 and ②= I1, I2, G1, G2<br/>                     VFW5 ①-②with ①= 00, 01 and ②= I1, I2, G1, G2</p> <p>①= measuring range<br/>                     ②= output</p> | <p>Measuring range:<br/>                     40 - 120°C, 5 - 70°C (NTC)<br/>                     0 - 120°C, 0 - 150°C (Pt100)<br/>                     0 - 120°C, 0 - 150°C (Pt1000)<br/>                     0 - 20 mA, 0 - 4 - 20 mA<br/>                     0 - 10 V, 0 - 2 - 10 V<br/>                     0 - 10 Vdc<br/>                     0 - 20 Vac, 0 - 60Vac, 0 - 90Vac<br/>                     0 - 20 Vac, 0 - 60Vac, 0 - 90Vac<br/>                     5 - 100Hz, 20Hz - 1KHz, 50Hz - 10KHz<br/>                     5 - 100Hz, 20Hz - 1KHz<br/>                     0 - 600°C, 0 - 800°C (NiCr-Ni)</p> <p>Output signal: normally closed contact<br/>                     normally open contact</p> <p>Measuring range:<br/>                     0 - 120°C, 0 - 150°C, -30 - 120°C (Pt100)<br/>                     0 - 120°C, 0 - 150°C, -30 - 120°C (Pt1000)<br/>                     0 - 600°C, 0 - 800°C (NiCr-Ni)</p> <p>NORIS standardsignal</p> <p>1 - 10 Vac<br/>                     6 - 60 Vac</p> <p>terminal W of a 24 V automotive alternator</p> <p>Output signal: 0 - 10V<br/>                     2 - 10V<br/>                     0 - 20mA<br/>                     4 - 20mA</p> | <p>ENV1<br/>                     ENV2<br/>                     ENV3<br/>                     ENV4<br/>                     (2002)<br/>                     Low temperature -20°C/16hrs</p> | <p>Expires: 20 January 2022</p> | <p>02/20002 (E3)</p> |