



Marine & Offshore

Certificate number: 13756/C0 BV

File number: AP3580

Product code: 3896H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

NORIS AUTOMATION GmbH

Nürnberg - GERMANY

for the type of product

MEASURING DEVICE TRANSDUCERS

Limit Value Switches Series 5

Measuring Transducers Series 5

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33C

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate is a renewal of certificate N° 13756/B0 BV expiring on 25/03/2018

This certificate will expire on: 25 Mar 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 09 Feb 2018,

Dirk Hoepfner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **Series 5** consist of Limit Value Switches and Measuring Transducers for the installation on DIN rail.

1.1 Main characteristics:

Power supply: 24V DC

Degree of protection: IP 20

1.2 Variants of Limit Value Switches Series 5:

Family	Input	Type number
RH5..	NTC	RH51, RH52, RH51-A, RH52-A
RP5..	Pt100	RP51, RP52, RP51-A, RP52-A
RPT5..	Pt1000	RPT51, RPT52, RPT51-A, RPT52-A
RI5..	I (mA DC)	RI51, RI52, RI51-A, RI52-A
RG5..	U (V DC)	RG51, RG52, RG51-A, RG52-A
RG51-S	U (VDC)	RG51-S
RF50..	F (Hz)	RF500-R1, RF500-R2, RF500-A1, RF500-A2, RF501-R1, RF501-R2, RF501-A1, RF501-A2, RF502-R1, RF502-R2, RF502-A1, RF502-A2
RTK5..	NiCr-Ni	RTK58, RTK59, RTK58-A, RTK59-A
RW5..	U (V AC)	RW53, RW54, RW55, RW53-A, RW54-A, RW55-A
RW5.-S	U (V AC)	RW53-S, RW54-S, RW55-S

Variants of Measuring Transducers Series 5:

Family	Input	Type number
VP5..	Pt100	VP51-I1, VP51-I2, VP51-G1, VP51-G2 VP52-I1, VP52-I2, VP52-G1, VP52-G2 VP511-I1, VP511-I2, VP511-G1, VP511-G2
VPT5..	Pt1000	VPT51-I1, VPT51-I2, VPT51-G1, VPT51-G2 VPT52-I1, VPT52-I2, VPT52-G1, VPT52-G2 VPT511-I1, VPT511-I2, VPT511-G1, VPT511-G2
VF50..	F (Hz)	VF500-I1, VF500-I2, VF500-G1, VF500-G2, VF501-I1, VF501-I2, VF501-G1, VF501-G2, VF502-I1, VF502-I2, VF502-G1, VF502-G2, VFS500-I1, VFS500-I2, VFS500-G1, VFS500-G2, VFS501-I1, VFS501-I2, VFS501-G1, VFS501-G2, VFS502-I1, VFS502-I2, VFS502-G1, VFS502-G2, VFG500-I1, VFG500-I2, VFG500-G1, VFG500-G2, VFG501-I1, VFG501-I2, VFG501-G1, VFG501-G2, VFW500-I1, VFW500-I2, VFW500-G1, VFW500-G2, VFW501-I1, VFW501-I2, VFW501-G1, VFW501-G2
VTK5..	NiCr-Ni	VTK58-I1, VTK58-I2, VTK58-G1, VTK58-G2 VTK59-I1, VTK59-I2, VTK59-G1, VTK59-G2

2. DOCUMENTS AND DRAWINGS:

- General specifications, ref. KM10 E, ed.1, dated 01/07/00.
- Detailed information per family: as filed in AP 3580.

3. TEST REPORTS:

EMCC DR. RASEK:

- EMCC-840080VB, dated 2001-03-16

LGA:

- 471 1173, dated 10 Mai 2001; 25 1249 RP1 dated 20.Mai 2005

NORIS:

- P444, dated March 8, 2001

4. APPLICATION / LIMITATION:

- 4.1 - Bureau Veritas Rules for the Classification of Steel Ships.
4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
4.3 - The devices are for the installation in the General Power Distribution Zone.
4.4 - Bureau Veritas Environmental Category, **EC Code: 33C**.
4.7 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above mentioned devices are to be supplied by **NORIS Automation GmbH** in compliance with the type described in this certificate.
5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
5.3 - **NORIS Automation GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

NORIS Automation GmbH
Muggenhoferstrasse 95
90429 Nürnberg
GERMANY

- 5.4 - Each equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT:

- Manufacturer's name or trademark.
- Date of manufacture and/or serial number.
- Equipment type or model identification under which it was type-tested.

7. OTHERS:

- 7.1 - It is the responsibility of **NORIS Automation GmbH** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
7.2 - This certificate supersedes the Type Approval Certificate N° 13756/B0 BV issued on 25 Mar 2013 by the Society.

*** END OF CERTIFICATE ***