DNV·GL

Certificate No:
MRA000001S

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

SIKA Dr. Siebert & Kühn GmbH & Co. KG

KAUFUNGEN, Germany

for
Temperature Gauges/Sensors/Transmitters

with type designation(s)
See SIKA-Art.Nr. or MAN-Art.Nr.

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Temperature Gauges and Transmitters

Intended service
Applicable for a ship as defined in Mutual Recognition Provisions Article 10 Regulation on Common Rules and Standards For Ship Inspection and Survey Organizations.

Temperature [°C]:	**-25°C ~ +70°C**
Vibration:	**± 1,6mm/± 4.0g at 2-25Hz/25-100Hz**
EMC:	**N/A (no active components)**
IP Code:	**see Product description**

This Certificate is valid until **2023-04-26**.

Issued at **Hamburg** on **2018-04-27**
DNV GL local station: **Hamburg** for **DNV GL**

Approval Engineer: **Didier Girardin**

Joannis Papanuskas
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.

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Job Id: **262.4-000081-1**
Certificate No: **MRA000001S**

Product description

Resistance thermometer for water, oil and crankshaft temperature monitoring

SIKA-Art.Nr.	MAN-Art.Nr.	Range[1)]
Resistance thermometer for water and oil temperature monitoring		
Drawing 430-3667	Rev. b	
W063A24050-0042M	11.99011-0042	2x PT 1000/A/2 -20/+200
W063A24100-0043M	11.99011-0043	
Resistance thermometer for water and oil temperature monitoring		
Drawing 430-3679	Rev. b	
W063A24050-0041M	11.99011-0041	2x PT 1000/A/2 0/+200
Resistance thermometer for water and oil temperature monitoring		
Drawing 430-2986	Rev. f	
W651P120320XXGMN	51.27421-0306	1x PT 1000/B/2 0/+130
Resistance thermometer for water and oil temperature monitoring		
Drawing 430-3668	Rev. b	
W083P24050-0045M	11.99011-0045	
W083P24100-0051M	11.99011-0051	2x PT 1000/B/2 -20/+200
W083P24050-0081M	11.99011-0081	
W083P24100-0082M	11.99011-0082	
Crankshaft temperature monitoring		
Drawing 430-3610	Rev. f	
W853P24020-0038M	11.99011-0038	
W853P24020-0040M	11.99011-0040	
W853P24020-0073M	11.99011-0073	2x PT 1000/B/2 0/+200
W853P24020-0077M	11.99011-0077	
Crankshaft temperature monitoring		
Drawing 430-2918	Rev. e	
W083P24020-0976M	11.99011-0976	
W083P24020-1038M	11.99011-1038	
W083P24020-1039M	11.99011-1039	2x PT 1000/B/2 0/+200
W083P24020-1040M	11.99011-1040	
W083P24020-1041M	11.99011-1041	
Crankshaft temperature monitoring		
Drawing 430-2721	Rev. f	
W853P24020-0917M	11.99011-0917	
W853P24020-0919M	11.99011-0919	
W853P24020-0933M	11.99011-0933	
W853P24020-0946M	11.99011-0946	2x PT 1000/B/2 0/+200
W853P24020-0947M	11.99011-0947	
W853P24020-0950M	11.99011-0950	
W853P24020-0951M	11.99011-0951	
Crankshaft temperature monitoring		
Drawing 430-2072	Rev. h	
W853P21020-0830M	11.99011-0830	1x PT 100/B/2 0/+200
W853P21020-0867M	11.99011-0867	

[1)]Temperature resistance region A: 200°C
Temperature resistance region B: 100°C
Sensor 2x Pt1000, IEC 751, class B
Degree of protection IP44
Flame retardant DIN EN 60695-11-5**:** 2017-12 / DIN EN 60332-1-2:2017-06

Manufactured by

SIKA Dr. Siebert & Kühn GmbH & Co. KG

Application/Limitation

The Type Approval covers hardware listed under type designation.

Applicable for a ship as defined in Mutual Recognition Provisions Article 10 Regulation on Common Rules and Standards for Ship Inspection and Survey Organizations.

Type Approval documentation

Assembly drawings:

430-3667	Rev. b	2x PT 1000/A/2 -20/+200
430-3679	Rev. b	2x PT 1000/A/2 0/+200
430-2986	Rev. f	1x PT 1000/B/2 0/+130
430-3668	Rev. b	2x PT 1000/B/2 -20/+200
430-3610	Rev. f	2x PT 1000/B/2 0/+200
430-2918	Rev. e	2x PT 1000/B/2 0/+200
430-2721	Rev. f	2x PT 1000/B/2 0/+200
430-2072	Rev. h	1x PT 100/B/2 0/+200

Test Reports:

Doc Ref.	Rev.	issuing date

Doc-ID: 328505 Rev. 0 20.02.2018
Environmental and insulation resistance EU RO Mutual Recognition 180220 - DNV GL signed

Doc-ID: 328506 Rev. 0 21.12.2017
Vibration and impact test EU RO Mutual Recognition 171221- DNV GL signed

Doc-ID: 328507 Rev. 0 22.02.2018
High voltage an insulation test EUR Mutual Recognition - DNV GL signed

Doc-ID: 328508 Rev. 0 22.02.2018
Vibration and impact test Retest of W063A24100-0043M EU RO Mutual Recognition 180220- DNV

Doc-ID: 328509 Rev. 0 15.03.2018
Environmental and insulation resistance 18-10053-BE-W063A24100-0043M

Doc-ID: 328510 Rev. 0 21.12.2017
Visual inspection and performance test EU RO MutualRecognition 171220 - DNV GL signed

Doc-ID: 328481 Rev. 0 06.02.2018
17-9914-BE-IP 44 Sensoren (SIKA) - DNV GL signed

Doc-ID: 328511 Rev. 1 19.03.2018
Brandschutzprüfung DIN EN 60332-1-2 Bericht 20180436-01

Doc-ID: 328512 Rev. 1 19.03.2018
Brandschutzprüfung DIN EN 60332-1-2 Bericht 20180436-02

Doc-ID: 328513 Rev. 0 21.12.2017
Flame Retardant test EU RO Mutual Recognition 171221

Marking of product

The products to be marked with:
- manufacturer name:
- model name: **SIKA-Art.Nr. or MAN-Art.Nr.**

- unique serial number

Other Conditions

The PT100/Pt1000 resistance thermometer have been verified for compliance with EU Mutual Recognition Technical Requirements for Temperature gauges and transmitters version 0.1, dated 2016-04-01

Environmental test parameters:			DNV GL location classes.
Temperature	IEC 60068-2-1/ -2-2	-25°C ~ +70°C	D
Vibration	IEC 60068-2-6 Test Fc,	± 1,6mm/± 4.0g at 2-25Hz/25-100Hz	B
Humidity	IEC 60068-2-30 test D b	93% to 98%RH, +55°C, 48 h	B
EMC:	N/A (no active components)		
Enclosure	IEC 60529	IP44	B

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 annually and at renewal of this certificate.

END OF CERTIFICATE