

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Test and Calibration Equipment**

with type designation(s)

Digital Manometer Reference Type D2(0.1) and E2(0.5)

Issued to

SIKA Dr. Siebert & Kühn GmbH & Co. KG
KAUFUNGEN, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****The instruments are only approved for use as portable pressure test and calibration instruments.****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2018-04-04**for **DNV GL**This Certificate is valid until **2022-10-04**.DNV GL local station: **Magdeburg**Approval Engineer: **Marco Rinkel**.....
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.



Job Id: **262.1-015376-2**
Certificate No: **TAA00001CJ**
Revision No: **1**

Product description

SIKA Digital Manometer Reference Type D2(0.1) and E2(0.5) comprising the following variants:

Reference Type / Accuracy [%]		Pressure Range [bar]	
D2	E2	Min.	Max.
0,1	0,5	-1,000	3,000
0,1	0,5	-1,000	5,000
0,1	0,5	-1,000	10,000
0,1	0,5	-1,000	16,000
0,1	0,5	-1,000	20,000
0,1	0,5	0,00	40,00
0,1	0,5	-1,00	40,00
0,1	0,5	0,0	60,0
0,1	0,5	-1,00	60,00
0,1	0,5	0,00	100,00
0,1	0,5	0,00	160,00
0,1	0,5	0,0	250,0
0,1	0,5	0,0	400,0
0,1	0,5	0,0	350,0
0,1	0,5	0,0	600,0
0,1	0,5	0,0	700,0
0,1	0,5	0,0	1000,0

The manometers are battery operated, 2 x LR6 AA 1.5V.
Pressure connection is male thread G1/4.

Place of manufacture

Parker Hannifin Manufacturing Germany GmbH & Co. KG
Am Metallwerk 9
D-33659 Bielefeld
Germany

Application/Limitation

The instruments are only approved for use as portable pressure test and calibration instruments.
The Type Approval is only valid for units with valid calibration certificate(s). The validity of the calibration is one year after calibration certificate date of issue if no other date is set.

Type Approval documentation

Documents for type approval of SIKA Digital Manometer Reference Type E2(0.5) and D2(0.1) ver. 00-02.
Operating manual Digital Manometer Reference Types E2/D2 dated 08/2017.
Test report E132454E1 dated 2013-06-13 (Radiated EMC).
Test report 4689/04 dated 2004-06-21 (IP / Vibration / Shock).
1500 bar static pressure test report for SIKA Ref D2 1000 bar, 0.1% version dated 2013-08-12.
Type approval initial assessment report for A-13430, DNV Essen 2013-08-12.
Type approval renewal assessment report issued at Magdeburg on 2017-05-17.

Tests carried out

Radiated emission test according to DNV GL CG-0339:2016, EMC class B limits.
Vibration test Fc according to IEC 60068-2-6, 10-500Hz, test level 5g, and test level $\pm 12\text{mm} / 10\text{g}$.
Shock test Ea according to IEC 60068-2-27, 3 repetitions in 6 directions, test level 25g / 11ms and test level 50g / 11ms.
150% static pressure test (1500 bar).

Marking of product

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- Manufacturer SIKA
- Reference type D2 (0.1%) or E2 (0.5%)
- Range as listed under product description
- Unique serial number, displayed during startup of the device

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 at least every second year and at renewal of this certificate.
END OF CERTIFICATE