

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Measurement Converter**with type designation(s)
LVDT

Issued to

Parker Hannifin Manufacturing Germany GmbH & Co.KG
Chemnitz, Sachsen, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:****Temperature D**
Humidity B
Vibration A
EMC B
Enclosure B/IP54Issued at **Hamburg** on **2018-08-29**This Certificate is valid until **2023-08-28**.DNV GL local station: **Essen**for **DNV GL**Approval Engineer: **Heinz Scheffler**

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.



Product description

LVDT is a displacement transducer for linear movement.

Technical data:

- Supply voltage: 18V...30V, ripple 10%
- Output voltage: 2.5V...9.5V
- Output current: 5mA...19mA
- Linearity Tolerance: $\pm 1\%$
- Max. working temperature range: -25...+80°C
- Temperature drift: 0.05%/K

The sensor is delivered in two types of executions:

- Material No.: 1450062:
 - Flange lengths: 84mm
- Material No.: 1450063:
 - Flange lengths: 99mm

Application/Limitation

Two ferrites (e.g. Würth 742 700 44) have to be installed, one on each end of the cable.
The connects cable has to be shield.

Additional test:

- Dry Heat test performed at 80°C for 16 hours.
- Cold test performed at -25°C for 16 hours.

Type Approval documentation

Name	Number	Date/Revision
Environmental Test Report	U180285E1	24.05.2018
Environmental Test Report	U180285E2	24.05.2018
Environmental Test Report	U180285E3	28.05.2018
EMC Test Report	U180285E1, 2 nd version	16.05.2018
Drawing	Go13697	31.01.2018/b
Drawing	Go13698	25.01.2018/b
Datasheet	MSG30-3246/UK	08/2018

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

- Material No.: 1450062 or 1450063
- Company name: Parker
- Serial number: WW/JJ xxx

Job Id: **262.1-028944-1**
Certificate No: **TAA00001Z8**

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE