DNV·GL

Certificate No:
MRA000000E

EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

Daeyang Instrument Co., Ltd.

PUSAN PUSAN, Republic of Korea

for
Sensors

with type designation(s)
Pressure Transmitter (MCP-1)

The product is found to comply with
Type Approval Programme for EU RO MR for Sensors

Intended service
Applicable for a ship as defined in Mutual Recognition provisions Artical 10 Regulation on Common Rules and Standards for Ship Inspection and Survey Organizations.
Sensors intended for a wide range of process and electrical connections.

This Certificate is valid until **2020-11-25**.

Issued at **Busan** on **2015-11-26**

for **DNV GL**

DNV GL local station: **Pusan**

Approval Engineer: **Dong Ho Park**

Baeg Soon Choi
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: **262.4-000007-1**
Certificate No: **MRA000000E**

Product description

Pressure Transmitter, MCP-1
Supply voltage: 24Vdc, Max. 36Vdc and Min.11Vdc between terminal + and –
Output signal: DC 4–20mA
Load impedance: 550 Ohm at 24Vdc
Accuracy: ±1.0% FS (at ambient temp. 23±2°C & source 24Vdc ±1.0)
Temperature drift: ±0.03% FS/°C
Performance temperature: 0 ~ 60°C
Enclosure: IP 66
Housing material : ALDC8
Weight: 0.53kg
Cable gland: Cable OD Min.12mm, Max.18mm
Process connection: PF 3/8”

Manufactured by

DAEYANG INSTRUMENT CO., LTD.
45-10, Noksansandan 261-ro, 14beon-gil,Gangseo-gu,
Busan KOREA 618-819

Application/Limitation

The Type Approval covers hardware listed under type designation.

1. Applicable for a ship as defined in Mutual Recognition provisions Article 10 Regulation on Common Rules and Standards for Ship Inspection and Survey Organizations
2. Not applicable for a mobile offshore drilling unit(MODU)
3. Not applicable for a fishing vessel

Type Approval documentation

Marking of product

The products to be marked with:
- Manufacturer name
- Model name
- Serial no.

Other Conditions

The sensors have been verified for compliance with EU Mutual Recognition Technical Requirements version 0.1, dated 2014-01-31.

Environmental test parameters
Temperature : -25°C ~ +70°C
Vibration : ±1.6mm/4.0g
Humidity : 95% @55°C
EMC : All locations except bridge and open deck
Enclosure : IP66(according to IEC 60529)

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