DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13064**

This is to certify that the
Peripheral Equipment

with type designation(s)
937X-Fieldbus Barriers

Manufactured by
Measurement Technology Ltd
Luton Bedfordshire, **United Kingdom**

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C***

***Tested to IP66**

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2013-12-03**

DNV local station: **Newcastle-upon-Tyne**

Approval Engineer: **Nils Jarem**

for **Det Norske Veritas AS**

Digitally Signed By: Sneen, Ståle
Location: DNV Høvik, Norway
Signing Date: 2013-12-03, on behalf of

Odd Magne Nesvåg
Head of Section

Product description

937X-Fieldbus Barriers:

Product	Description
9371-FB-PS-SS	Fieldbus barrier system, 6-spur, stainless steel enclosure, pluggable screw terminal connectors
9371-FB-PC-SS	Fieldbus barrier system, 6-spur, stainless steel enclosure, pluggable spring clamp connectors
9372-FB-PS-SS	Fieldbus barrier redundant, stainless steel enclosure, pluggable screw terminal connectors
9372-FB-PC-SS	Fieldbus barrier redundant, stainless steel enclosure, pluggable spring clamp connectors
9373-FB-PS-SS	Fieldbus barrier system, 12-spur, stainless steel enclosure, pluggable screw terminal connectors
9373-FB-PC-SS	Fieldbus barrier system, 12-spur, stainless steel enclosure, pluggable spring clamp connectors

Compass Safe distance: Standard Compass: 60 cm
Steering Compass: 40 cm

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Data Sheet : EPS 9372-RD-2 200612, 9372-FB Series Data Sheet
EPS 9370-FB-6 200612, 9370-FB Series Data Sheet
Test reports: TL1667, Test Report TL1667 MTL (EMC), dated 2012-09-03
TL1667, Test Report TL1667 MTL (ENV), dated 2012-09-03
TL1667, Test Report TL1667 Salt Mist, dated 2012-10-03
Instructions INM9370-RD-1, 9372-FB-Px-yy - Instruction manual, dated 07-2012
DNV Newcastle Initial assessment report dated 2013-08-23

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.

For the bridge mounted components the 'Acoustic noise and signals' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4th edition (2002).

Marking of product

Marking according to data sheet.

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