

Certificate No:

**A-13872**

File No:

**899.60**

Job Id:

**262.1-016286-2**

## TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Peripheral Equipment**

with type designation(s)

**FCS 9512 X1231 SXA**

Issued to

**Measurement Technology Ltd  
Luton, 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:**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>C</b>

This Certificate is valid until **2018-06-30**.Issued at **Høvik** on **2014-07-17**DNV GL local station: **London**Approval Engineer: **Nils Jarem**for **DNV GL**

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**Odd Magne Nesvåg**  
**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.

If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million.

In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

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## Product description

F304 4-port Megablock with screw terminals with F97 terminator  
F308 8-port Megablock with screw terminals with F97 terminator  
F312 12-port Megablock with screw terminals with F97 terminator

With Crouse-Hinds Type 3GFB S1303015LB enclosure.

Compass safe distance:

Steering compass: 40 cm  
Standard compass: 60 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 EPS F300 rev. 5, technical data sheet, F300 Megablock series  
Test reports: TL13076, Report TL13076 MTL Instruments Ltd, dated 2013-09-17  
TL13076-ENV, Report TL13076-ENV MTL Instruments Ltd, dated 2013-09-18  
TL1667, TL1667 Issue 01Saltmist, dated 2012-10-03  
Instructions: INM F300-2, F300 Megablock Series, Instruction Manual, dated Jan 2012  
INM FCS9512-X1231SXA, MEGABLOCK Field Enclosure, Instruction Manual,  
dated June 2014.

## 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

The products to be marked with model name, manufacturer name and serial number.

## 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