DNV·GL

Certificate No:
TAA00001RX

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Level Switches

with type designation(s)
Rosemount 2120 and 2130 M & E models

Issued to
Rosemount Measurement Limited
SLOUGH, BERKSHIRE, United Kingdom

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	**B**
Humidity	**B**
Vibration	**A**
EMC	**A**
Enclosure	**B (IP66 / IP67)**

Issued at **Høvik** on **2018-03-23**
This Certificate is valid until **2022-11-25**.
DNV GL local station: **Southampton**

Approval Engineer: **Nils Jarem**

for **DNV GL**

Odd Magne Nesvåg
Head of Section

Job Id: **262.1-027440-1**
Certificate No: **TAA00001RX**

Product description

Rosemount 2120 and 2130 models M & E Vibrating Fork Liquid Level Switch

Maximum working pressure:	100bar at 50°C type 2120, 100bar at 20°C type 2130
Ambient temperature:	max.: 80°C, min.: - 40°C
Process temperature:	2120: max. 150°C, min -40°C 2130 model M: max. 180°C, min -40°C 2130 model E: max. 260°C, min -70°C
Power supply:	24 V to 260 V AC 50/60 Hz, 24 to 60 V DC or 9-30 V DC (depending on the electrical connection)
Electrical Connections:	Direct load switching (two-wire) Solid state PNP output for direct interface to PLC's (three wire) SPCO Alarm and Fault relays for voltage free contacts DPCO relay for voltage free contacts Intrinsically Safe (IS) NAMUR Intrinsically Safe (IS) 8/16 mA
Process connection:	flange type or thread type
Material housing:	Al alloy ASTM B85 A360.0 Stainless steel 316C12 Glass Filled Nylon 66
Insert length:	max. 4m, supported at 1m intervals
Degree of protection:	IP66 / IP67

Software Release:

	2120	2130
2-wireversion:	2.1x	2.1x
PNP version:	1.0x	2.1x
Relay version:	1.0x	1.0x
Namur version:	2.1x	2.1x
8/16mA version	1.0x	1.0x
Fault Relay version	--	1.0x

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Ex-certification is not covered by this Certificate.
Approvals according to ATEX realized by Sira Certification.

Type Approval documentation

Tests carried out

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

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number
- power supply ratings

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