



EU RO MR Production Quality Assurance Certificate
No. EMR502024CS

This is to certify that RINA did undertake the examination of the equipment identified below with the criteria for the Production Quality Assurance set-up in the "Rules for Testing and Certification of Marine Materials and Equipment" and the "EU RO Framework Document for the Mutual Recognition of Type Approval"

<i>Description</i>	Sensors
<i>Product</i>	Level sensor
<i>Manufacturer</i>	EUROSWITCH S.R.L.
<i>Address</i>	VIA PROVINCIALE 15 25057 Sale Marasino (BS) ITALY
<i>Reference standards</i>	EU RO MR TR - Level Switch

Issued in **Genoa** on **May 5, 2025**. *This Certificate is valid until* **May 5, 2030**

RINA Services S.p.A.
Luigi Benedetti

This certificate consists of this page and 1 enclosure



Product:

Level sensor

Manufacturer

EUROSWITCH S.R.L.

Place of Manufacturer

Via Quintino Sella n.6, Riva Presso Chieri (TO)
ITALY

Technical documentation

Intended Service	It is intended for: a) Switches operated by a sensor able to detect the presence of a liquid at given levels - b) Power supply system characteristics as per IEC 60092-101, sub-clause 4.8 - c) Installation in spaces or areas according to the required environmental categories of the RO classing the ship.
Ratings	As per Datasheet Euroswitch S.R.L, Electromagnetic Level switch
Restrictions	a) Explosion proof 'Ex' certification is not within the scope of this Technical Requirement (TR) - b) This Technical Requirement is applicable to liquid level switches intended to be used in control and monitoring systems on board ships, with exceptions as per SOLAS Ch. I, Reg. 3. - c) d) e) f) restrictions to be read on TR

Notes	The Level Switches have been verified for compliance with EU Mutual Recognition Technical Requirements for LEVEL SWITCHES version 0.2
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Product Information

Product:

Electromagnetic Level sensor P3x family and IMx family

Description:

Electromagnetic level gauges use the force of a magnet in the float to change the electrical status of a reed switch.

Rating and main characteristics:

Electromagnetic Level Sensor IMx:

Use	Water - Oil - Acids - Fuels
Fixing	AISI 304 (316 on request)
Stem	Inox aisi 304 (316 on request)
Float	Inox aisi 316 - NBR - PA
Seeger	Inox aisi 316
O-Ring	NBR - FKM - HNBR
Type of contact	Reed N.A./N.C. (SPDT)
Max switch. capacity	40 W - (3 W SPDT)
Max. switch. current	1 A - (0,25A SPDT) (1)
Max. switch. voltage	250 Vac (50 Vac SPDT) (2)
Working temperature	-20°C/+100°C (HT -20°C/+200°C) (3)
Fluid specific weight	>0,8
Protection degree	IP65 with connector according to UNI EN 175301-803 (DIN43650)
Weight	220 gr (L=100 mm)

(1) UL Version Max. switch. current: 0,189 A (0,25 A SPDT)

(2) UL Version Max switch. voltage 250 Vac (125 Vac SPDT)

(3) UL Version Surrounding temperature: -20°C/+90°C

Electromagnetic Level Sensor P3x:

Use	Mineral oils - Fuels - Water
Fixing	Anodized aluminum - BRASS
Stem	Brass
Float	Foamed nylos (for pressure > 1 bar use NBR float execution) - NBR
Seeger	Phosphorous bronze
O-Ring	NBR - FKM - HNBR
Type of contact	Reed N.O/N.C. (SPDT) + thermostat execution
Max switch. capacity	80 W - (50 W SPDT)
Max. switch. current	1 A - (1 A SPDT)
Max. switch. voltage	250 Vac (220 Vac SPDT)
Working temperature	-20°C/+100°C
Fluid specific weight	>0,75
Protection degree	IP65 with connector according to UNI EN 175301-803 (DIN43650)
Weight	160 gr (for L=100 mm)

Datasheet IMx Family, Level Sensor IMx family (09/09/2024)

Datasheet P3x Family, Level Sensor P3x family (09/09/2024)

Test reports:

Test Report TR 2024-0541-00 (31/01/2025)

Test Report TR 2024-0540-00 (31/01/2025)

Certificate ISO 9001:2015 n. 10000383048-MSC-ACCREDIA-ITA (15/12/2023)



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When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- *American Bureau of Shipping (ABS);*
- *Bureau Veritas (BV);*
- *China Classification Society (CCS);*
- *Croatian Register of Shipping (CRS);*
- *DNV;*
- *Indian Register of Shipping (IRS);*
- *Korean Register (KR);*
- *Lloyd's Register Group Ltd. (LR);*
- *Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);*
- *Polish Register of Shipping (PRS);*
- *RINA Services S.p.A. (RINA).*



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The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).

Notes:

- 1) Refer to the agreed MR Technical Requirements for additional MR TAC information that may be specifically applicable to certain products - <https://www.euomr.org/technical-requirements> ;
- 2) List of MR TACs issued by the EU ROs can be found by <https://www.euomr.org/links-to-mrcertificates> .
- 3) As per clause 9 of the Terms & Conditions for Mutual Recognition of Type Approval, the manufacturer will be required to agree that it will fulfil the obligations arising out of its quality assurance scheme as approved during production. The manufacturer certifies it has kept the accredited certification body and the EU RO that issued the MR TAC duly informed of any intended design changes or updating of the production quality assurance scheme for its consideration with regard to the validity of the MR TAC. The manufacturer will apply annually for periodical assessment by the EU RO to show that the production under the MR TAC and the quality assurance scheme are being satisfactory maintained;
- 4) The manufacturer should notify the RO issued the EU RO MR Certificate of any modification or changes to the equipment/ Firmware/ Operational System Software Version in order to obtain a valid Certificate.
- 5) MR TACs are valid for a maximum of 5 years as per clause 10 of the Terms & Conditions for Mutual Recognition of Type Approval;
- 6) For more information on the factors affecting the validity of MR TACs, see clause 11, 12 and 13 of the Terms & Conditions of Mutual Recognition of Type Approval.
- 7) For implementation of the amendments to Appendix I of Version 10.0 of the Framework Document by the EU ROs into their internal procedures and MR TAC templates, an application period of 6 months as from 1 July 2019 applies.

Genoa May 5, 2025