



EU RO MR Production Quality Assurance Certificate
No. EMR363324CS

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>	Level Gauges/Trasmitters
<i>Product</i>	TFC-S-MR TFS-S-MR TFS-O-MR TFS-S-MR-BL
<i>Manufacturer</i>	TRAFAG ITALIA S.R.L.
<i>Address</i>	VIA CREMONA 1 20025 Legnano (MI) ITALY
<i>Reference standards</i>	EURO MR Level Gauges/Transmitters

Issued in **Genoa** on **September 2, 2024**. *This Certificate is valid until* **September 2, 2029**

RINA Services S.p.A.
Luigi Benedetti

This certificate consists of this page and 1 enclosure



Product:

TFC-S-MR; TFS-S-MR; TFS-O-MR; TFS-S-MR-BL

Manufacturer

TRAFAG ITALIA S.R.L.

Place of Manufacturer

Via Cremona 1
20025 Legnano (MI)
ITALY

Technical documentation

Intended Service	Level gauging applications for non-essential systems that provide control, monitoring, alarm or safety functions. Specified in the certificate
Ratings Restrictions	These technical requirements apply to Level Gauges/Transmitters intended for marine use.

Notes	The LEVEL GAUGES have been verified for compliance with EU Mutual Recognition Technical Requirements for LEVEL GAUGES version 0.2
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Linear TFC-S float level transmitters:

The principle of operation is of potentiometric type, based on the gradual shutdown of a magnetic reed switch chain, placed inside of the guiding rod. Magnetic reed switches are actuated by a magnetic float moving along the measuring rod.

Floats (AISI 316 L) model: S29, S32, S41, S52, S100.

Stainless steel - AISI 316 L

- Measuring resolution 5-10-20 mm
- Potentiometric signal output
- 4/20 mA analog output
- 0/5/0/10V analog output
- Up to 6m length (additional rod clamping device to be provided)
- Degree of protection: to be in relation with the installation point (W1, W2, C, P1 and S1 Housing)

Datasheet: H20040x



ATTACHMENT TO
No. EMR363324CS
Page 2 of 3

Multipoint TFS-S-MR, TFS-O-MR float level switches:

The principle of operation is based on the drive of one or more magnetic reed switches, placed inside of the measuring rod, by one or more floats. Magnetic reed switches are actuated by a magnetic float moving along the measuring rod.

Floats (AISI 316 L) model S: S29, S32, S41, S52, S100

Floats model O: B13, B28, B15, B20, B45, B44

- Stainless steel - AISI 316 L - Brass
- Up to 6 switch points
- Up to 6m length (additional rod clamping device to be provided)
- Degree of protection: to be in relation with the installation point (W1, W2, C, P1 and S1 - S2 Housing)

Simple TFS-S-BL-MR float level switch:

The principle of operation is based on the drive of one magnetic reed switches, placed inside of the measuring rod, by one floats. Magnetic reed switches are actuated by a magnetic float moving along the measuring rod.

Float (AISI 316 L) model: S29-S41-S52-S100

- Stainless steel - AISI 316 L
- Up to 6 switch points
- Up to 6m length
- Degree of protection: min IP65

Datasheet: H20041x

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).*



**ATTACHMENT TO
No. EMR363324CS
Page 3 of 3**

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.euromr.org/technical-requirements> ;
- 2) List of MR TACs issued by the EU ROs can be found by <https://www.euromr.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 September 2, 2024