



TYPE APPROVAL CERTIFICATE

Polish Register of Shipping certifies that the undernoted product type

LEVEL SWITCHES

ERH-...

issued to

APLISENS S.A.
Ul. Morelowa 7
03-192 Warszawa
Poland

is approved as complying with the requirements of the

PRS Rules and is suitable for use on board of ships classified by PRS
 or in appliances with PRS certificates.

Certificate No. **TE/1070/883400/23**

Expiry date **2028-03-22**

Issued at

Gdańsk, 2023-04-11



C/020/57

Signature

Polski Rejestr Statków S.A.
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Continued overleaf

Product description:

Two-term level switches for indication or control of liquid level. Switches are provided with float mechanism indicating presence of liquids. They can be installed in open or closed tanks. For tanks where explosion atmosphere exist Ex notation applies.

Type designation details:

See Appendix

Technical data:

Ambient temperature range (permissible): from -25 up to +70 °C (up to +80 °C for ERH-xx-20);
 Rated switching voltage: max 230V A.C. or 220V D.C. (max 400V A.C. or 220V D.C. for ERH-xx-06)
 Enclosure protection degree: IP66 (IP68 for ERH-xx-07, ERH-xx-16.1 and ERH-xx-20);
 Explosion-proof designation: II 1/2G c Ex de IIB T4 Ga/Gb for ERH-xx-16 and ERH-xx-16.1; II 2G Ex db IIC T3÷T6 Gb for ERH-xx-20;
 Operational nominal pressure: 4 MPa (1,6MPa for ERH-04; 1,0MPa for ERH-xx-20; 0,2MPa for ERH-xx-07 and ERH-xx-16.1);
 Mounting type: side or top.

Basis of approval

1. The technical documentation approved by PRS on 2023-03-24.
2. The Quality Management System Certificate (ISO9001) No. 274131-2018-AQ-POL-RvA issued by DNV.
3. The inspection of the production process and quality control system carried out on 2023-03-20/21.
4. Tests carried out in PRS Surveyor presence on 2023-03-21.
5. PRS Survey Report No. SZC/PW/7/23 issued on 2023-03-22.
6. Reports from Environmental tests carried out acc. to PRS Publication 11/P (Edition July 2021).
7. The previous PRS Type Approval Certificate No. TE/2171/883400/18.

Additional conditions and remarks:

1. Each product is to be marked with: manufacturer name, type, serial number, enclosure protection degree (IP), explosion-proof designation (where applicable).
2. The condition for maintain validity of this Certificate is to maintain validity of a.m. ISO9001 Certificate.
3. Ex certification is not covered by this Type Approval.
4. Place of manufacture: Aplisens S.A. Branch Controlmatica, ul. Krotoszyńska 35, 63-400 Ostrów Wielkopolski, Poland.

Notes

- 1 The approval is valid only when the product is used in accordance with the manufacturer's conditions.
- 2 Changes of product design and materials which influence product quality are to be agreed with PRS.
- 3 Type Approval Certificate will be cancelled in the case of dissatisfactory service results, modifications made in the product structure or materials without PRS' consent, not advising PRS of the manufacturer's name change.

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Appendix to PRS Type Approval Certificate No. TE/1070/883400/23

Type designation details:

ERH-xx-yy-z-K (flange connection 92x92)

ERH - main type;

xx: 01/02/03/04 switching hysteresis fixed (01 and 02) or adjustable (03 and 04); float's protective bellow (02);

yy: 06/07/16/16.1 different enclosure protection degree (06 and 16 - IP66, 07 and 16.1 - IP68); explosion-proof design (16 and 16.1);

z: 1/2/3/4 - different switching hysteresis (1, 2 and 3); broken float's arm (4);

K: stainless steel grade 1.4401 (316) design

ERH-xx-yy-z-K (thread connections 2")

ERH - main type;

xx: 07/08/09 different thread connections (07 - R2", 08 - G2", 09 - 2"NPT); fixed switching hysteresis;

yy: 06/07/16/16.1 different enclosure protection degree (IP66: 06 and 16, IP68: 07 and 16.1); explosion-proof design (16 and 16.1);

z: 1/2/3 - different switching hysteresis;

K: stainless steel grade 1.4401 (316) design

ERH-xx-yy-K/S (small version)

ERH - main type;

xx: 01/02/07/08/09 flange connection 92x92 (01 and 02) or thread connections 2" (07, 08 and 09); fixed switching hysteresis; float's protective bellow (02);

yy: 06/07/16/16.1 different enclosure protection degree (06 and 16 - IP66, 07 and 16.1 - IP68); explosion-proof design (16 and 16.1);

K: stainless steel grade 1.4401 (316) design;

S: small float's version

ERH-xx-20/A/B/C-y-z/Ex (magnetic level switches)

ERH - main type;

xx: 02/04/06/09 different flange connections (02, 04, 06) or thread connection (09);

A/B/C: 1, 2 or 3 switching points (value in mm);

y: different electric connectors;

z: additional options (K - stainless steel grade 1.4401 design; P - float's protection pipe; T - sensor Pt100);

Ex: explosion-proof design

ERH-11-20/H-2-z (magnetic level switches)

ERH - main type;

11: magnetic level switch with mounting clamp;

H: switching point approximately in the middle of tube length;

2: electric connector with cable;

z: additional options (Y - yoke; P - float's protection pipe)