



Installation, Operating and Maintenance Instructions for

**Jola immersion probes
TSR/.../.../Ex d../Ex-M  I M2 Ex d I Mb
or
TSR/.../.../Ex d../Ex-1G  II 2 G
Ex d IIB T3 or T4 or T5 or T6 Gb**

**These Installation, Operating and Maintenance
Instructions must always be handed over to the
fitter/operator/service personnel
of our products together with all other user
documentation and information!**

**They should be stored in a safe place together
with all other user documentation and information
so they can be consulted again when necessary at
any time!**

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1. Area of application


The immersion probes

JOLA
D-67466 Lambrecht

CE 0080

TSR/..././Ex d./Ex-M  I M2 Ex d I Mb

or

TSR/..././Ex d./Ex-1G  II 2 G Ex d IIB T3 or T4 or T5 or T6 Gb

(serial number)
(production year)

Tamb : - 20°C to + 60°C or to + 75°C or to + 110°C or to + 125°C

INERIS 03ATEX0163X



Installation:

The cable of the immersion probe must be permanently fixed. The installing/operating company must ensure that adequate strain and twisting relief is provided.

Repair:

The thread of the screw cover of the connection head of the immersion probe has the following dimensions: M 38 x 1.5 (length min. 9 mm).
The thread of the cable entry has the following dimensions:
M 16 x 1.5 or M 20 x 1.5 (length min. 13 mm).
However, because of a resin filling inside the connection head of the immersion probe, no repair is possible.
All alterations to the immersion probe must therefore be performed in the manufacturer's facility. Under no circumstances may other individuals or companies perform unauthorised alterations or repair.

are binary contact devices for use

- ◆ in underground areas in mines as well as in above-ground areas of mines which could be at risk due to firedamp and/or flammable dusts:
TSR/..././Ex d./Ex-M  I M2
- ◆ in above-ground areas which could be at risk due to a potentially explosive atmosphere:
TSR/..././Ex d./Ex-1G  II 2 G: in Zone 1 or 2



The immersion probe **TSR/..././Ex d./Ex-** with **1 built-in reed contact** serves as an **individual switch** that gives off an alarm signal when the liquid level reaches a certain point (e.g. high-level alarm or low-level alarm).

The immersion probe **TSR/..././Ex d./Ex-** with **2 built-in reed contacts** serves to control a pump, for example (ON-OFF via a suitable downstream external pump controller) or a solenoid valve (OPEN-CLOSE via a suitable downstream external solenoid valve controller).

The use of an immersion probe **TSR/..././Ex d./Ex-** with **more than 2 built-in reed contacts** allows you to perform more complex switching tasks (e.g. overflow protection, high-level alarm, pump ON, pump OFF, low-level alarm, run-dry protection etc.).

The immersion probes are designed **for mounting from above**.

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If there is a risk of any kind that **adhesive residues or solid particles** might impair the function of the immersion probes, then the probes are not suitable for the application in question.

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All the **technical parameters of the immersion probe** are listed in this brochure and the accompanying product description. **You must always observe and follow all the instructions relating to these parameters.** The probes may not be used for applications outside the specified parameter range.

If the product description is not supplied with the product or is lost, **you must always request a copy of the description prior to installation, connection or start-up and ensure that it is read and observed by the suitably qualified specialist personnel.** Otherwise the immersion probe(s) may not be installed, connected and started up.

2. Preconditions for safe use of the immersion probes TSR/..././Ex d./Ex-

Maximum supply values:

U	I	P
AC/DC 250 V	2 A (0.4 A)	100 VA

Installation:

The cable of the immersion probe must be permanently fixed. The installing/operating company must ensure that adequate strain and twisting relief is provided.

Repair:

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The thread of the cable entry has the following dimensions:

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However, because of a resin filling inside the connection head of the immersion probe, no repair is possible.

All alterations to the immersion probe must therefore be performed in the manufacturer's facility. Under no circumstances may other individuals or companies perform unauthorised alterations or repair.

3. Additional conditions for safe operation

Admissible temperature application range:

The admissible temperature application range for the probe tube and the float and the ambient temperature at the metallic interface unit of the immersion probes is for the models

-for the types Ex d IIB T6: between - 20°C and + 60°C,

-for the types Ex d IIB T5: between - 20°C and + 75°C,

-for the types Ex d IIB T4: between - 20°C and + 110°C and

-for the types Ex d IIB T3: between - 20°C and + 125°C.

The operating temperatures must always be within this range.

Admissible pressure application range:

The immersion probe TSR/..././Ex d./Ex-.. may only be used under atmospheric conditions.

Chemical et mechanical resistance:

Before using the immersion probe TSR/..././Ex d./Ex-., you must ensure that the materials used in the screw-in nipple, the probe tube, the float(s) and the collar(s) are sufficiently chemically and mechanically resistant to the liquid to be monitored and that all other parts are sufficiently chemically and mechanically resistant to all external influences.

In case of doubt, consult a suitably trained expert prior to use. Do not use the product before these questions have been fully clarified.

4. Installation, connection, start-up and maintenance, general regulations

Installation, connection, start-up and maintenance of the immersion probes may only be performed by suitably qualified specialist personnel in line with all the information material and documentation supplied with the probes and following all instructions contained therein.

The qualified specialist personnel must ensure that they are familiar with all valid standards, regulations, local requirements and specific conditions, in particular

the standards, regulations, local requirements and specific conditions relating to explosion protection – and must proceed accordingly.

In potentially explosive atmospheres with gas hazards, the entire installation set-up of the immersion probe(s) TSR/..././Ex d./Ex- must always comply with the standard EN 60 079-14 resp. the replacing standard.

You must always read – and adhere to the instructions outlined in - the yellow DIN A 5 leaflet "User information/Instructions for use with mounting, operating and maintenance instructions for the product...". If the leaflet is not supplied with the product or is lost, you must always request a replacement leaflet from Jola.

5. Installation of the immersion probes TSR/..././Ex d./Ex-

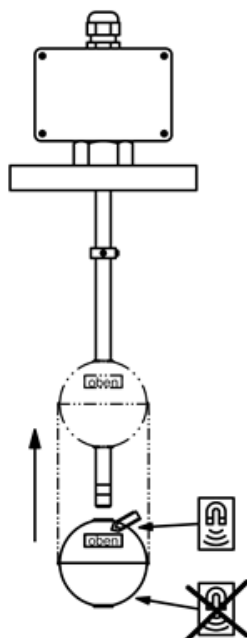
General:

The immersion probes TSR/..././Ex d./Ex- must be installed **by qualified specialist personnel.**

Installation is not allowed if an explosive atmosphere is present. The absence of explosive atmosphere has to be verified by qualified and competent personnel.

The cable of the immersion probe must be permanently fixed. The installing/operating company must ensure that adequate strain and twisting relief is provided.

In order to avoid electrostatic charges, it is essential that the magnet of the float is always situated in the upper part of the float. This position allows a permanent inclination of the float and creates consequently a direct contact between immersion tube and float.



The float side carrying the magnet is marked by the label "TOP" or a marking "O" on the float. In case the label should be lost and the marking "O" not anymore be present on the float, the float side carrying the magnet can easily be recognized by means of a little metallic object (e.g. metallic paper clip, little screw driver etc.).

Mechanical mounting:

When mounting the immersion probes TSR/..././Ex d./Ex-, follow the instructions concerning the mechanical installation of TSR immersion probes. These instructions are delivered with the immersion probes.

6. Connection

Circuit diagram:

Connect the **contact(s) of the immersion probes TSR/..././Ex d./Ex-** as shown in the supplied circuit diagram.

Connection to the protection earth and potential equalization:

Connection to the protection earth and potential equalization is necessary with immersion probes TSR/..././Ex d./Ex-:

Connect the green-yellow conductor of the cable of the unit to the protection earth.

Connect the external earth connection terminal on the screw-in nipple or on the flange of the unit to the potential equalization system.

Connection to the protection earth and to the potential equalization system is essential for safe operation and must never be neglected.

For correct connection to the protection earth, refer to the standards relating to the Low Voltage Directive 2014/35/EU resp. the replacing directive.

For correct connection to the potential equalization system, refer to the standards relating to protection against explosion hazards:

In potentially explosive atmospheres with gas hazards, the entire installation set-up must always comply with the standard EN 60 079-14 resp. the replacing standard.

7. Start-up

Prior to start-up, you must re-check the mounting position, the mechanical fastening and the electrical connection.

In addition, you must also check and verify that there is no possibility whatsoever of hazardous conditions occurring due to non-adherence to any of the relevant instructions, standards or official regulations.

Only then may the unit in question be started up electrically.

8. Maintenance

No action of maintenance is allowed if an explosive atmosphere is present. The absence of explosive atmosphere has to be verified by qualified and competent personnel.

The immersion probes TSR/..././Ex d./Ex- are maintenance-free when used in low-viscosity, non-adhesive liquids that are free of solids and do not attack the component materials.

To rule out any risks, however, the immersion probe must be sight-checked and function-tested by qualified specialist personnel at least once a year.

Where risks cannot be ruled out, you should adhere to an inspection frequency suited to the application in question and laid down in consultation with the relevant supervisory authorities.

If the immersion probe is installed as a safety element within a system, it must always be inspected and checked at intervals to be agreed with the local supervisory authorities.

Prior to all maintenance work, the qualified specialist personnel must inform themselves of all valid standards, regulations, local guidelines and special conditions, in particular standards, regulations, local guidelines and special conditions concerning explosion protection and proceed accordingly.

9. Repair

The thread of the screw cover of the connection head of the immersion probe has the following dimensions:
M 38 x 1.5 (length min. 9 mm).

The thread of the cable entry has the following dimensions:
M 16 x 1.5 or M 20 x 1.5 (length min. 13 mm).

However, because of a resin filling inside the connection head of the immersion probe, no repair is possible.

All alterations to the immersion probe must therefore be performed in the manufacturer's facility. Under no circumstances may other individuals or companies perform unauthorised alterations or repairs.

10. Disposal

The units must be disposed of by depositing them in conformity with the law at an appropriate collection point for electrical and electronic devices.



Jola Spezialschalter GmbH & Co. KG
Klostergartenstr. 11
67466 Lambrecht (Germany)

declares as manufacturer under its sole responsibility that the following products, which are new and designed for use in potentially explosive atmospheres,

Immersion probe

TSR/..././Ex d./Ex-1G  II 2 G Ex d IIB T3 or T4 or T5 or T6 Gb

complies with

the directive 2014/34/EU (ATEX directive),
the directive 2014/30/EU (EMC directive) and
the directive 2011/65/EU (RoHS directive)

and the standards

EN 60079-0:2009,

EN 60079-1:2007 and

DIN EN 60730-1 (VDE 0631-1):2012-10, EN 60730-1:2011

Sections 23, H.23, Annex ZD,

DIN EN 61000-6-3 (VDE 0839-6-3):2011-09, EN 61000-6-3:2007+A1:2011,

DIN EN 61000-6-2 (VDE 0839-6-2):2006-03, EN 61000-6-2:2005

and the design types (according to annex III of directive 94/9/EC or 2014/34/EU) of EC type examination certificate no. 03ATEX0163X and its five addendums, issued by INERIS, rue J. Taffanel, 60550 Verneuil-en-Halatte (France), notified body with the number 0080.

The standard EN 60079-0:2009 is not harmonised any more. Neither the changes of the type classified as “extension” nor the changes of the type classified as “major technical changes” of the standard EN 60079-0:2012, of the standard EN 60079-0:2012+A11:2013 and the new harmonized standard EN IEC 60079-0:2018 have, however, an impact on the conformity of the equipment.

The standard EN 60079-1:2007 is not harmonised any more. Neither the changes of the type classified as “extension” nor the changes of the type classified as “major technical changes” of the new harmonised standard EN 60079-1:2014 have, however, an impact on the conformity of the equipment.

The production facility in Lambrecht has got the quality assurance notification n° 03ATEXQ405 for the production according to annex IV and VII of directive 94/9/EC or 2014/43/EU. The approval was issued by INERIS, rue J. Taffanel, 60550 Verneuil-en-Halatte (France), notified body with the number 0080.

Lambrecht, 19 May 2022

Volker Mattil, Product manager