

[Ex] Submersible magnetic sensor TK-307/0

Mounting- and Operating Instructions

Ex-Zone 0 Category 1

Important safety instructions please read and note

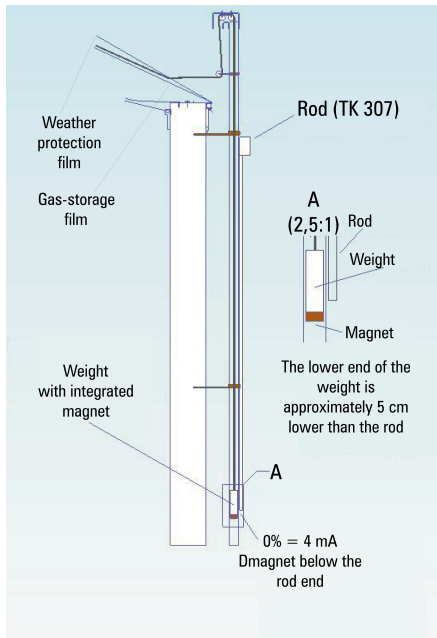
If the submersible magnetic sensor is to operate smoothly and safely, it is vital that it is transported, stored and assembled appropriately, installed and commissioned correctly, used only as intended and repaired as required. These actions should only be performed by individuals with the required specialist knowledge and corresponding qualifications.

The applicable safety regulations for the erection and operation of electrical systems in explosion risk areas shall be observed. Your particular attention is drawn to the erection provisions in accordance with **EN 60079-14** for electrical plants in areas subject to explosion hazards. The attached EC-type examination certificate **TÜV 02 ATEX 1795X** respectively **IECEx TUN 17.0036X** must also be observed. Should the information contained in the instructions below prove to be inadequate in any way, please contact the manufacturer.

Application


The TK-307/0 models are designed for application in Zone 0. A resistance chain is used in the sensor tube for the continuous fill level measurement of the TK-307/0... sensors. This chain functions as a voltage divider. Tapping is performed through reed switches that are operated by the magnets installed in the float.

Example of use



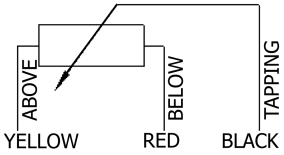
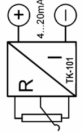
Caution: no magnetisable fasteners may be used!

Technical Data See also datasheet heading 11, 11-04-02 (www.elb-bensheim.de)

Connection housing	Aluminium: H 30 x W 50 x D 45 mm Polyester: H 55 x W 80 x D 75 mm	System of protection EN 60529	Box: IP 65 Plug: IP 65
Guide tube length	Max. 6000 mm	Operating temperature	Max. 130 °C
Resolution	7,5 mm, 10 mm, 15 mm, 20 mm or 1 %, 2 %, 5 % depends on model		
CE marking	See conformity explanation		
 Characteristic labeling	See EC-Type Examination Certificate TÜV 02 ATEX 1795X, IECEx TUN 17.0036X		

Electrical connection

The intrinsically safe circuits must be installed in accordance with the applicable erection provision under the terms of EN 60079-14 and the EC-type examination certificate **TÜV 02 ATEX 1795X** respectively **IECEx TUN 17.0036X**. The electrical connection must be made without power.

Connection housing		
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>TK-307/0 With TK-101 SN: xxxx</p>  <p style="font-size: small;">must be controlled intrinsically safe</p> </div>	<p>Connection TK-101 see separate manual</p>

Mounting/Handling/Maintenance

- The probe will mounted laterally using stainless steel clamps (see example of use).
- An external PE connector is fitted to the sensor's screw joint. This connection needs to be connected to the external PE system. For information regarding the PE connection: see EN 60079-14.
- Depending on the particular embodiments of device categories, please refer the maximum permissible ambient and media temperatures and the maximum power Pi out of the certificate **TÜV 02 ATEX 1795X** respectively **IECEx TUN 17.0036X**.
- Environmental temperature of the sockets: max. 100 °C !
- The submersible sensor must not be damaged during installation. Impacts and blows etc. or any other external influences that could impair the smooth functioning of the submersible sensor must be avoided.
- Vibrations, oscillations and/or impacts can result in functional impairment. If such stresses can be expected for the given conditions, appropriate measures must be taken (in the form of supports, for example).
- Long sensors must, in addition to the above-mentioned supports, be supported on their lower end.
- Vessels that contain magnetisable substances can impair the functioning of the submersible magnetic sensors.
- For safe operation only non-magnetic parts / brackets are allowed (austenitic stainless steel) in the immediate vicinity of the probe / core tube.
- The weight's functional path must remain unrestricted.

Caution: avoid electrostatic charge!

The submersible magnetic sensor must not be subjected to any strong magnetic fields. Influences such as those described above can result in functional impairment or in the sensor being destroyed.

The maintenance is restricted to general inspection / functional checks of the electrical system.