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(1) **EC-Type Examination Certificate**

(2) **Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – Directive 94/9/EC**

(3) **EC Type Examination Certificate Number**

**EPS 12 ATEX 1 430 X**

**Revision: 0**

(4) **Equipment:** Level switches type B..., type I..., type IE9... and type Z...

(5) **Manufacturer:** Besta AG

(6) **Address:** Ackerstr. 45 8610 Uster/Switzerland

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23<sup>rd</sup> 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential report 12TH0178.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2009**

**EN 60079-1:2007**

**EN 60079-11:2012**

**EN 60079-26:2007**

**EN 60079-7:2007**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

(12) The marking of the equipment shall include the following:



II 1/2G Ex e d IIC T5...T6 Ga/Gb

II 1/2G Ex ia IIC T6...T2 Ga/Gb

Certification department of explosion protection

Türkheim, July 11, 2013

D. Zitzmann





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(13)

## **Annexe**

(14) **EC-Type Examination Certificate EPS 12 ATEX 1 430 X**

(15) Description of equipment:

The Trimod Besta level switches are used for control and monitoring of liquid levels of tanks in hazardous locations. The construction is made by different modules (switch module, flange module and float module) with different construction. The float module can be used in locations with EPL Ga. The flange module therefore is used for separation between EPL Ga and EPL Gb. The switch module is situated in EPL Gb zone.

The type I is actuated by magnets transferring the level value to a certified intrinsic safe sensor. The connection of the sensor is made by certified intrinsic safe supply.

For type Z the level value is also transferred by magnets but the switch action is made by a component certified switch in type of protection "flameproof enclosure d" which is situated in the switch module (type of protection "increased safety").

The type B includes a micro switch (simple apparatus) which is operated by certified intrinsic safe supply.

### Electrical data:

The maximum electrical values for measure and supply circuit for the type I...8, and IE9...8, sensors are documented in the relevant manufacturer documentation and the component certificates of the sensors. Also the maximum ambient temperatures and temperature class must be considered in accordance with the sensor maximum values.

The rated supply values for type Z...8 switch can be found in manufacturers documents and component certificate

The type B...8 series is only intended for use with certified intrinsic safe circuits with max. values:

$I_i = 0.5 \text{ A}$

$C_i \approx 0 \text{ nF}$

$L_i \approx 0 \text{ }\mu\text{H}$



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(16) Test report: 12TH0178

(17) Special conditions for safe use:

Only the float module and flange module are allowed for use in category 1 application. They must be included in the routine pressure test of the installation.

For the installation and mounting of components (sensors, switches connectors, cable and cable glands) only those are admitted who technically at least meet the standard specified on the cover sheet and for which a separate certificate is present. The specific conditions for use and ambient conditions must comply with the intended use of the final equipment. For use next to heating sources it must be considered that the maximum surface temperature and the operational temperature of components and materials is not exceeded.

For installation in vertical position it must be assured that the float bar of the vertical float module is secured against sidewise movement.

(18) Essential health and safety requirements:

Met by standards.

Certification department of explosion protection

Türkheim, July 11, 2013



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