



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

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 17 ATEX 0136 X**
- (4) Product: Level probe, Type: JUMO MAERA S29 SW
- (5) Manufacturer: JUMO GmbH & Co. KG
- (6) Address: Moritz-Juchheim-Strasse 1, 36039 Fulda, Germany
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-11:2012
EN IEC 60079-0:2018

Except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign «U» is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:



II 2G Ex ib IIC T6...T4 Gb
II 2D Ex ib IIIC T70 °C ...T100 °C Db

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 17 ATEX 0136 X

(15) **Description of product**

The level probe JUMO MAERA S29 SW made of stainless steel or titanium serves for converting a physical measured quantity (pressure) into a standardised electrical signal (current signal 4 .. 20 mA). It is intended for use within potentially explosive areas.

The intrinsically safe circuit is connected with a non-detachable cable.

Measuring and supply circuit with the type of protection intrinsic safety

Ex ib IIC

Ex ib IIIC

Only for connection to a certified intrinsically safe circuit.

Maximum values for electrical connection with non-detachable cable titanium type with FEP-cable (404393/***-***-***-***-60-25-***):

$$U_i \leq 28 \text{ V}$$

$$I_i \leq 100 \text{ mA}$$

$$P_i \leq 750 \text{ mW}$$

$$C_i \leq 10.4 \text{ nF} + 0.192 \text{ nF/m} \cdot \text{cable length}$$

$$L_i \leq 0.22 \text{ uH/m} \cdot \text{cable length}$$

Maximum values for electrical connection with non-detachable cable stainless steel type with PUR-cable (404393/***-***-***-***-20-16-***):

$$U_i \leq 28 \text{ V}$$

$$I_i \leq 100 \text{ mA}$$

$$P_i \leq 750 \text{ mW}$$

$$C_i \leq 10.4 \text{ nF} + 0.22 \text{ nF/m} \cdot \text{cable length}$$

$$L_i \leq 1.09 \text{ uH/m} \cdot \text{cable length}$$

Classification of installation and use..... : Stationary

Ingress protection IP68

Rated ambient temperature range (°C): Equipment protection level Gb

Ambient temperature:

T4: -40 °C to +85 °C

T5: -40 °C to +70 °C

T6: -40 °C to +55 °C

Equipment protection level Db
maximum surface temperature:

T100 °C: -40 °C to +85 °C

T85 °C: -40 °C to +70 °C

T70 °C: -40 °C to +55 °C

Rated ambient temperature range (°C) for Ex Components : N/A

Type designation:

Example of type designation 404393/000 - 417 - 405 - 770 - 60 - 25 - 005 / 000
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) Basic type

404393 JUMO MAERA S29 SW

(2)* Basic type extension

000 None
 062 Shipbuilding approval (only available in titanium version [process connection material 60])
 362 Explosion protection
 662 Shipbuilding approval and explosion protection (only available in titanium version [process connection material 60])
 999 Special version

(3)* Input

301 0 to 1 mH₂O
 302 0 to 1.6 mH₂O
 303 0 to 2.5 mH₂O
 304 0 to 4 mH₂O
 305 0 to 6 mH₂O
 306 0 to 10 mH₂O
 414 0 to 100 mbar relative pressure
 415 0 to 160 mbar relative pressure
 417 0 to 250 mbar relative pressure
 424 0 to 400 mbar relative pressure
 419 0 to 600 mbar relative pressure
 454 0 to 1 bar relative pressure
 455 0 to 1,6 bar relative pressure
 456 0 to 2,5 bar relative pressure
 535 0 to 4 bar sealed gauge
 536 0 to 6 bar sealed gauge
 537 0 to 10 bar sealed gauge
 487 0 to 0,6 bar absolute pressure
 488 0 to 1 bar absolute pressure
 489 0 to 1,6 bar absolute pressure
 490 0 to 2,5 bar absolute pressure
 491 0 to 4 bar absolute pressure
 492 0 to 6 bar absolute pressure
 493 0 to 10 bar absolute pressure
 997 Special measuring range for sealed gauge
 998 Special measuring range for absolute pressure
 999 Special measuring range for relative pressure

(4) Output

405 4 to 20 mA, 2-wire

(5)* Process connection

759 Mounted protection cage D95 mm
 770 Front-flush process connection with protective cap

(6) Process connection material

20 Stainless steel (only available with PUR cable)
 60 Titanium (only available with FEP cable)



(7) Electrical connection type

- 16 PUR cable, black, shielded (only available in stainless steel version [process connection material 20])
- 25 FEP cable, black, shielded, UV-resistant (only available in titanium version [process connection material 60])

(8)* Length of connecting cable

- 002 2 m
- 005 5 m
- 010 10 m
- 015 15 m
- 020 20 m
- 030 30 m
- 040 40 m
- 050 50 m
- 060 60 m
- 070 70 m
- 080 80 m
- 090 90 m
- 100 100 m

(9)* Extra codes

- 000 None

*) The numerical type keys can be extended with values not named here in the sense of the basic test. These extensions have no effect on the explosion protection and general safety.

(16) Specific conditions of use

For details concerning the admissible ambient temperatures and temperature classes please refer to the user's manual.

The probe with titanium enclosure must be installed protected against impact and friction.

(17) Essential health and safety requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(18) Drawings and Documents

See test report "Manufacturer's Documents"