

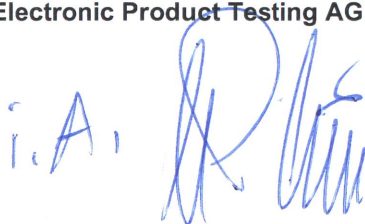


- (1) **EU-Type Examination Certificate**
- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 21 ATEX 0537 X**
- (4) Product: Pressure transducer Type: JUMO MIDAS S22 Ex 404720 / 000 - *** - 405 - *** - 20 - **
- (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 20CH-01639.X01
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:
- EN IEC 60079-0:2018**
EN 60079-11:2012
- 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

Rahel Nydegger
Product Certification



(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 21 ATEX 0537 X

(15) **Description of product**

The pressure transducer JUMO MIDAS S22 Ex type 404710 / 000 - *** - 405 - *** - 20 - ** 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 length in plain text) or circular connector M12 x 1.

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.

Classification of installation and use:	stationary
Ingress protection:	IP65
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
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Rating:

Input and supply circuits:
With type of protection intrinsic safety Ex ib IIC and IIIC.
Only for connection to certified intrinsically safe circuit.

Maximum values for circular connector M12x1 and special electrical connection:

- U_i ≤ 28 V
- I_i ≤ 100 mA
- P_i ≤ 750 mW
- C_i = 10.4 nF (effective internal capacitance)
- L_i ≈ 0 uH (effective internal inductance)

Maximum values for electrical connection with non-detachable cable:

- U_i ≤ 28 V
- I_i ≤ 100 mA
- P_i ≤ 750 mW
- C_i ≤ 10.4 nF + 107 pF/m • cable length
- L_i ≤ 1 uH/m • cable length

Type designation:

Example of type designation 404720/000 - 543 - 405 - 507 - 20 - 36 / 000
 (1) (2) (3) (4) (5) (6) (7) (8)

(1) Basic type

404720 JUMO MIDAS S22 Ex – Pressure transducer for use in potentially explosive atmospheres

(2) Basic type changes

/000 None

(3)* Pressure rated measuring range

- 480 -1 to +1.5 bar relative pressure
- 481 -1 to +3 bar relative pressure
- 482 -1 to +5 bar relative pressure
- 483 -1 to +9 bar relative pressure
- 456 0 to 2.5 bar relative pressure
- 457 0 to 4 bar relative pressure
- 458 0 to 6 bar relative pressure
- 459 0 to 10 bar relative pressure
- 460 0 to 16 bar relative pressure
- 461 0 to 25 bar relative pressure
- 462 0 to 40 bar relative pressure
- 463 0 to 60 bar relative pressure
- 464 0 to 100 bar relative pressure
- 463 0 to 60 bar relative pressure
- 464 0 to 100 bar relative 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
- 494 0 to 16 bar absolute pressure
- 495 0 to 25 bar absolute pressure
- 505 0 to 40 bar absolute pressure
- 506 0 to 60 bar absolute pressure
- 507 0 to 100 bar absolute pressure
- 998 special measuring range for absolute pressure
- 999 special measuring range for relative pressure

(4) Electrical output

405 4 to 20 mA. two-wire

(5)* Process connection

- 480 M12x1 inside
- 481 M12x1 with protection cap
- 502 G 1/4 according to DIN EN 837
- 507 M14x0.75 flush with front
- 530 M8 (x1) according to DIN 3852-1
- 531 M10 (x1) according to DIN 3852-2
- 532 M12 (x1.5) according to DIN 3852-3
- 544 7/16-20 UNF-2A
- 561 G 1/4 flush with front, two-times sealing
- 562 7/16-20 UNF SAE J514
- 999 according to customer specification

(6) Material of process connection

20 CrNi (stainless steel)

(7) Electrical connection

- 11 attached cable
- 36 round plug M12x1

(8)* Additional options

- 000 without
- 462 inverted output signal
- 591 choking coil in pressure channel
- 624 free from oil and grease
- 630 widened pressure channel

*) 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) **Special conditions for safe use:**

- For details concerning the admissible ambient temperatures and temperature classes please refer to the user's manual.
- The pressure transducer shall be supplied by a circuit of Overvoltage category I.

(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"