

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



JUMO dTRANS p20

Process pressure transmitter

Brief description

The device with the HART® interface combines maximum precision with simple operation. It is used to measure the system pressure of gas, steam and liquids. The built-in LCD displays measured values and device data. The device can be installed up to zone 0 in the version with explosion protection "Ex ia (intrinsically safe)".

The housing and sensor are manufactured from high-grade stainless steel. Diaphragm seals can also be connected for specific process technology applications (see data sheets 409772 to 409784).

The pressure transmitter can be programmed and can therefore be flexibly adapted for various measuring tasks. There is an easy-to-use setup program available as an accessory for operation via interfaces. A rotary knob allows for quick and easy on-site manual operation.

The pressure transmitter with 4 to 20 mA and HART® protocol was evaluated with regard to functional safety and is certified by TÜV Nord according to DIN EN 61508/-1/-2, edition 2.0. These measuring devices are suitable for monitoring process level and process pressure up to SIL2. Further details can be found in the Safety Manual.

For the "Ex d" explosion protection version, see data sheet 403026.

For the differential pressure version, see data sheet 403022.



Type 403025/0-0-1-...

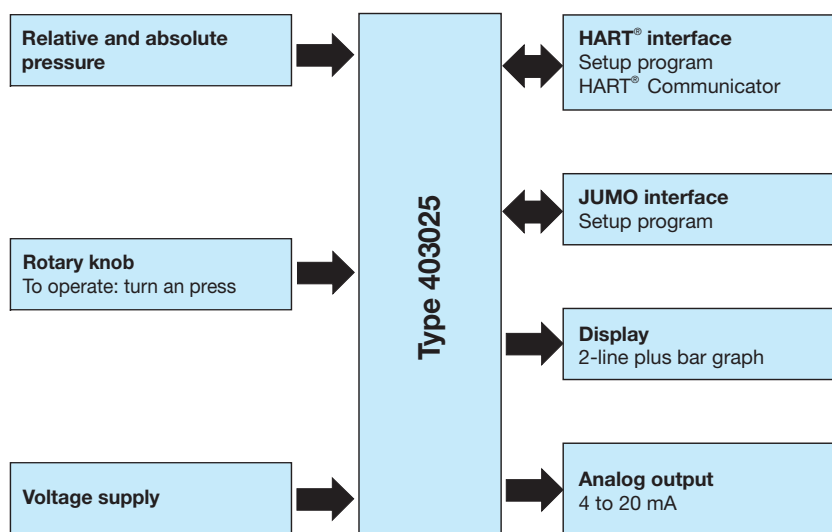


Type 403025/0-0-2-...



Type 403025/0-0-3-...

Block diagram



Special features

- Stainless steel case
- SIL certified (TÜV Nord)
- HART® interface
- Explosion protection Ex ia (gas and dust) according to ATEX, NEPSI, and EAC
- Linearity 0.05 %
- Turn down: 1:50
- Up to 200 °C medium temperature
- Simple operation with rotary knob
- Setup program
- LCD display with bar graph
- Display scaling with a choice of measuring units
- Display of sensor temperature
- Display of minimum and maximum pressures
- Current-generator function

Approvals and approval marks (see "Technical data")



JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Technical data

General Information

| | |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference conditions | DIN EN 60770 and DIN EN 61298 |
| Ambient temperature | 22 °C ±5 K |
| Air pressure | 1000 hPa (±25 hPa) |
| Voltage supply | DC 24 V |
| Burden | 50 Ω |
| Sensor system | Silicon sensor with stainless steel separating diaphragm/thin film sensor |
| Pressure transfer medium | |
| For measuring system filling medium 0 | Without transfer medium |
| For measuring system filling medium 1 | Silicon oil, FDA compliant |
| Admissible load changes | > 10 million |
| Position | |
| Mounting position | Any |
| Calibration position | Device upright, process connection at the bottom |
| Zero offset depending on position | Relative pressure: a zero offset is possible on-site or via setup. Absolute pressure: manual readjustment is possible. |
| For medium temperature 1 (up to 120 °C) | ≤ 1 mbar |
| For medium temperature 2 (up to 200 °C) | ≤ 10 mbar |
| Display ^a | LCD, two-line with bar graph |
| Alignment | Display unit rotatable in 90° steps Housing rotatable ±160° |
| Size | Display 22 × 35 mm, font size 7 mm, 5 digits |
| Color | Black |
| Portrayable measuring units | |
| Input pressure | mH ₂ O, inH ₂ O, inHg, ftH ₂ O, mmH ₂ O, mmHg, psi, bar, mbar, kg/cm ² , kPa, Torr, MPa |
| Measured value | % or scaled with freely adjustable measuring unit |
| Output current | mA |
| Sensor temperature | °C, °F |
| Additional display data | Minimum pressure, maximum pressure, error, overrange, underrange, operating hours, device parameters |
| Operation | |
| On-site | With rotary knob and LCD |
| Setup program | Via interface |
| Interface | |
| Standard | JUMO interface ^b |
| For output 410 (4 to 20 mA with HART®) | JUMO interface ^b and HART® interface |

^a optional; SIL version only available with display

^b The JUMO interface may not be used in a potentially explosive area! In such a case the device can be operated via the rotary knob or the HART® interface.

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Input

| | | | | | | |
|-------------------------|------------------|----------------|------------|----------------|-------------|----------------|
| Relative pressure | | | | | | |
| Nominal measuring range | -0.6 to +0.6 bar | -1 to +2.5 bar | | -1 to +4 bar | | -1 to +10 bar |
| Overload capability | 6 bar | 15 bar | | 30 bar | | 60 bar |
| Burst pressure | 12 bar | 30 bar | | 60 bar | | 100 bar |
| Relative pressure | | | | | | |
| Nominal measuring range | -1 to +25 bar | -1 to +100 bar | | -1 to +250 bar | | -1 to +600 bar |
| Overload capability | 150 bar | 300 bar | | 600 bar | | 1200 bar |
| Burst pressure | 250 bar | 400 bar | | 700 bar | | 2000 bar |
| Absolute pressure | | | | | | |
| Nominal measuring range | 0 to 0.6 bar | 0 to 2.5 bar | 0 to 4 bar | 0 to 10 bar | 0 to 25 bar | 0 to 100 bar |
| Overload capability | 6 bar | 15 bar | 30 bar | 60 bar | 150 bar | 300 bar |
| Burst pressure | 12 bar | 30 bar | 60 bar | 100 bar | 250 bar | 400 bar |

Output

| | |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| analog output For output 405 (4 to 20 mA) For output 410 (4 to 20 mA with HART®) Jump response time T60 Attenuation | 4 to 20 mA, 2-wire 4 to 20 mA, two-wire with HART® version 7 (optionally with HART® version 5, extra code 932, always with SIL version) ≤ 190 ms without attenuation Adjustable 0 to 100 s |
| Burden For output 405 (4 to 20 mA) For output 410 (4 to 20 mA with HART®) | $Burden \leq (U_B - 12 V) \div 0.022 A$ $Burden \leq (U_B - 12 V) \div 0.022 A$; additional: min. 250 Ω, max. 1100 Ω |

Voltage supply

| | |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For version Explosion protection 0 (without) Explosion protection 1 (ATEX Ex ia) | DC 12 to 36 V DC 12 to 28 V The voltage supply must be intrinsically safe and must not exceed the following maximum values: $U_i \leq DC 28 V$ $I_i \leq 115 mA$ $P_i \leq 750 mW$ $C_i = 6 nF$ $L_i = 105 \mu H$ |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|


JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Mechanical features

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process connection Material 20 (stainless steel) Material 82 (stainless steel) Surface | 316 L for front-flush process connections Otherwise 316 Ti 2.4819 NiMo Ra ≤ 0.8 µm |
| Process seal Process connection 571 G 3/4 front-flush) and process connection 652 (tank connection with grooved union nut) Process connection 997 (JUMO PEKA) All other process connections | FPM FDA compliant, see data sheet 409711 No seal |
| Measuring membranes Material 20 (stainless steel) Material 82 (stainless steel) Surface | 1.4542 for -1 to +250 bar relative pressure (measuring range 508) and -1 to +600 bar relative pressure (measuring range 516) Otherwise 316 L 2.4819 NiMo ^a Ra ≤ 0.8 µm |
| Housing Material Housing 1 (short, stainless steel) Housing 2 (long, stainless steel) Housing 3 (precision casting) Lid 20 (stainless steel) Lid 85 (plastic) Electrical connection 36 (round plug M12 × 1) Electrical connection 82 (cable fitting, plastic) Electrical connection 93 (cable fitting, metal) Operation 0 (without control knob) Operation 1 (with control knob) | Stainless steel 1.4404 Stainless steel 1.4404, VMQ Precision casting 1.4408 Precision casting 1.4408, seal FPM PA, seal FPM Brass nickel-plated PA Brass nickel-plated - PA |
| Explosion protection Explosion protection 0 (without) Explosion protection 1 (ATEX Ex ia) | The device is not approved for use in an Ex-area. EC type examination certificate SEV 09 ATEX 0138 X  II 1/2G Ex ia IIC T6 ... T3 Ga/Gb II 1/2D Ex ia IIC T105 °C Da/Db |
| Weight Type 403025/0-0-1 (housing short) Type 403025/0-0-2 (housing long) Type 403025/0-0-3 (housing precision casting) | Approx. 550 g Approx. 850 g Approx. 1600 g |

^a Not available in high-temperature version

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Environmental influences

| | | | | | |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------|----------------------------|----------------------------------|------------------------------------------------------------------|
| Admissible temperatures Operation | Version | Temperature class | Maximum medium temperature | Ambient temperature ^a | Expanded ambient temperature (extra code 681) ^{a, b, c} |
| | Standard | | 120 °C | -40 to +85 °C | -50 to +85 °C |
| | High temperature | | 200 °C | 10 to 85 °C ^d | Not available |
| | II 1/2G Ex ia | T6 | 60 °C | -40 to +50 °C | -50 to +50 °C |
| | | T5 | 70 °C | -40 to +65 °C | -50 to +65 °C |
| | | T4 | 115 °C | -40 to +85 °C | -50 to +85 °C |
| | | T3 ^e | 175 °C | 10 to 85 °C | Not available |
| II 1/2D Ex ia | T105 °C | 100 °C | -40 to +60 °C | -50 to +60 °C | |
| Storage | -40 to +85 °C | | | | |
| Admissible humidity Operation Storage | 100 % including condensation on the device outer case 90 % without condensation | | | | |
| Admissible mechanical load Vibration strength Shock resistance | 2 g, 10 to 2000 Hz according to DIN EN 60068-2-6 15 g for 6 ms according to IEC 60068-2-27 | | | | |
| Electromagnetic compatibility Interference emission Interference immunity | According to EN 61326 Class B ^f Industry | | | | |
| Protection type For version Explosion protection 0 (without) Explosion protection 1 (ATEX Ex ia) | IP66/67 according to DIN 60529 IP66 according to DIN 60529 | | | | |

^a Under -20 °C limited function: stationary use, increased danger of cable break, display without function; under -30 °C operation of the device not possible.

^b In the range from -40 to -50 °C the device must be permanently in operation. Furthermore, the lid with the device inspection glass must additionally be protected against mechanical impact and shocks. Please contact JUMO for further details.

^c Without SIL

^d Low ambient temperatures up to -40 °C are possible, but with limited accuracy.

^e Only for high-temperature version (medium temperature 2)

^f The product is suitable for industrial use as well as for households and small businesses.

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Accuracy

Including non-linearity, hysteresis, non-repeatability, zero point and final value deviation (corresponds to measurement deviations according to IEC 61298-2), calibrated at vertical installation position with the process connection at the bottom

| | | | | |
|------------------------------------------------------------------------|-------------------------------------------|------------------------------|------------------------------|------------------------------|
| Relative pressure | | | | |
| Nominal measuring range | -0.6 to +0.6 bar | -1 to +2.5 bar ^a | -1 to +4 bar | -1 to +10 bar ^a |
| Default measuring range | 0 to 0.6 bar | 0 to 2.5 bar | 0 to 4 bar | 0 to 10 bar |
| Smallest MSP ^b | 0.06 bar | 0.1 bar | 0.1 bar | 0.5 bar |
| Turndown ratio (r) ^c | r ≤ 20 | r ≤ 50 | r ≤ 50 | r ≤ 50 |
| Non-linearity for reference conditions ^d | 0.06 % | 0.04 % | 0.04 % | 0.04 % |
| Accuracy in % of the set MSP Range: -20 to +60 °C | r × 0.12 % for 1 ≤ r ≤ 20 | r × 0.08 % for 1 ≤ r ≤ 50 | r × 0.08 % for 1 ≤ r ≤ 50 | r × 0.08 % for 1 ≤ r ≤ 50 |
| Accuracy in % of the set MSP Range: -40 to -20 °C or 60 to 85 °C | r × 0.18 % for 1 ≤ r ≤ 20 ^e | r × 0.12 % for 1 ≤ r ≤ 50 | r × 0.12 % for 1 ≤ r ≤ 50 | r × 0.12 % for 1 ≤ r ≤ 50 |
| Long-term stability in % as of the nominal measuring range | 0.1 %/year | | | |
| Relative pressure | | | | |
| Nominal measuring range | -1 to +25 bar | -1 to +100 bar | -1 to +250 bar ^a | -1 to +600 bar ^a |
| Default measuring range | 0 to 25 bar | 0 to 100 bar | 0 to 250 bar | 0 to 600 bar |
| Smallest MSP | 0.5 bar | 5 bar | 12.5 bar | 30 bar |
| Turndown ratio (r) ^c | r ≤ 52 | r ≤ 20 | r ≤ 20 | r ≤ 20 |
| Non-linearity for reference conditions ^d | 0.04 % | 0.04 % | 0.04 % | 0.08 % |
| Accuracy in % of the set MSP Range: -20 to +60 °C | r × 0.08 % for 1 ≤ r ≤ 52 | r × 0.08 % for 1 ≤ r ≤ 20 | r × 0.08 % for 1 ≤ r ≤ 20 | r × 0.16 % for 1 ≤ r ≤ 20 |
| Accuracy in % of the set MSP Range: -40 to -20 °C or 60 to 85 °C | r × 0.12 % for 1 ≤ r ≤ 52 | r × 0.12 % for 1 ≤ r ≤ 20 | r × 0.12 % for 1 ≤ r ≤ 20 | r × 0.24 % for 1 ≤ r ≤ 20 |
| Long-term stability in % as of the nominal measuring range | 0.1 %/year | | | |

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



| | | | | |
|------------------------------------------------------------------------|-------------------------------------------|------------------------------|------------------------------|------------------------------|
| Absolute pressure | | | | |
| Nominal measuring range | 0 to 0.6 bar | 0 to 2.5 bar ^a | 0 to 4 bar | 0 to 10 bar ^a |
| Default measuring range | 0 to 0.6 bar | 0 to 2.5 bar | 0 to 4 bar | 0 to 10 bar |
| Smallest MSP ^b | 0.06 bar | 0.1 bar | 0.1 bar | 0.5 bar |
| Turndown ratio (r) ^c | r ≤ 10 | r ≤ 20 | r ≤ 40 | r ≤ 20 |
| Non-linearity for reference conditions ^d | 0.12 % | 0.04 % | 0.04 % | 0.04 % |
| Accuracy in % of the set MSP Range: -20 to +60 °C | r × 0.24 % for 1 ≤ r ≤ 10 | r × 0.08 % for 1 ≤ r ≤ 20 | r × 0.08 % for 1 ≤ r ≤ 40 | r × 0.08 % for 1 ≤ r ≤ 20 |
| Accuracy in % of the set MSP Range: -40 to -20 °C or 60 to 85 °C | r × 0.36 % for 1 ≤ r ≤ 10 ^e | r × 0.16 % for 1 ≤ r ≤ 20 | r × 0.16 % for 1 ≤ r ≤ 40 | r × 0.16 % for 1 ≤ r ≤ 20 |
| Long-term stability in % as of the nominal measuring range | 0.1 %/year | | | |
| Absolute pressure | | | | |
| Nominal measuring range | 0 to 25 bar | 0 to 100 bar | | |
| Default measuring range | 0 to 25 bar | 0 to 100 bar | | |
| Smallest MSP ^b | 0.5 bar | 5 bar | | |
| Turndown ratio (r) ^c | r ≤ 50 | r ≤ 20 | | |
| Non-linearity for reference conditions ^d | 0.04 % | 0.04 % | | |
| Accuracy in % of the set MSP Range: -20 to +60 °C | r × 0.08 % for 1 ≤ r ≤ 50 | r × 0.08 % for 1 ≤ r ≤ 20 | | |
| Accuracy in % of the set MSP Range: -40 to -20 °C or 60 to 85 °C | r × 0.16 % for 1 ≤ r ≤ 50 | r × 0.12 % for 1 ≤ r ≤ 20 | | |
| Long-term stability in % as of the nominal measuring range | 0.1 %/year | | | |

^a Without SIL

^b MSP = measuring span

^c r = span of the nominal measuring range ÷ adjusted measuring span

^d Reference conditions: ambient temperature 20 °C (±3 K), air pressure 1000 hPa (±25 hPa)

^e Only up to -30 °C

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Approvals and approval marks

| | |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| ATEX Testing agency Certificates/certification numbers Inspection basis Valid for | Eurofins Electrosuisse Product Testing AG SEV 09 ATEX 0138 X EN 60079-0, EN 60079-11, EN 60079-26 Type 4043025/x-1-... |
| DNV GL Testing agency Certificates/certification numbers Inspection basis Valid for | DNV GL TA00001KB DNV GL CG-0339, November-2016 Type 403025/x-1-.../880 |
| EAC Testing agency Certificates/certification numbers Inspection basis Valid for | RU RU C-DE.ME92.B.00440 - Extra code 226 |
| SIL Testing agency Certificates/certification numbers Inspection basis Valid for | TÜV Nord No. SEBS-A. 140944/16 V1.0 DIN EN 61508/-1/-2 Basic type extension 2 |

NOTE!

The special conditions for use can be found in the [examination certificate](#).

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

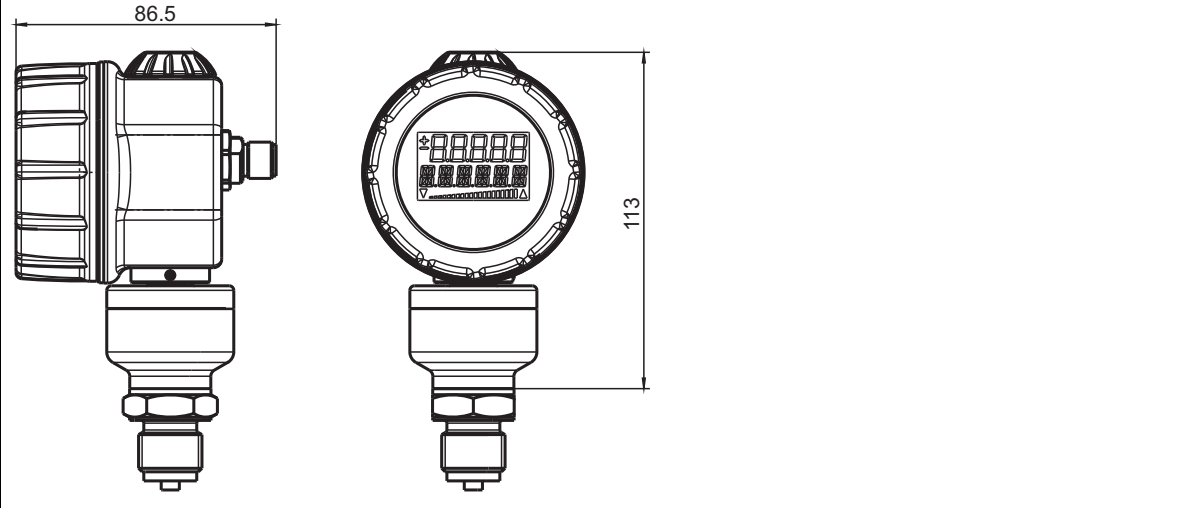
JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com

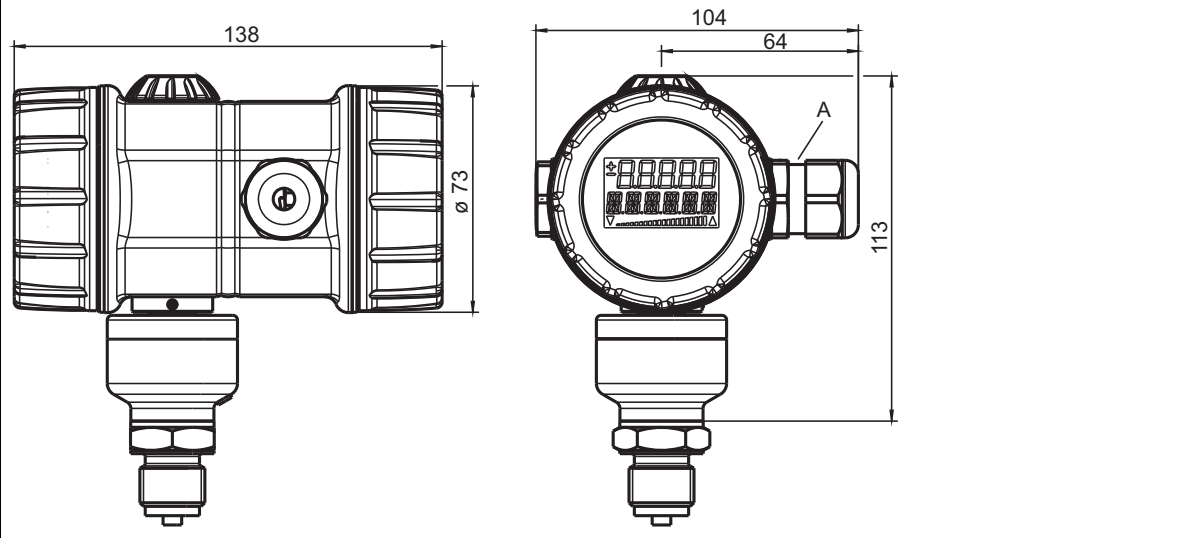


Dimensions

Type 403025/0-0-1 (short, stainless steel, with M12 connection)



Type 403025/0-0-2 (long, stainless steel, with cable fitting)



A M20 × 1.5 cable fitting

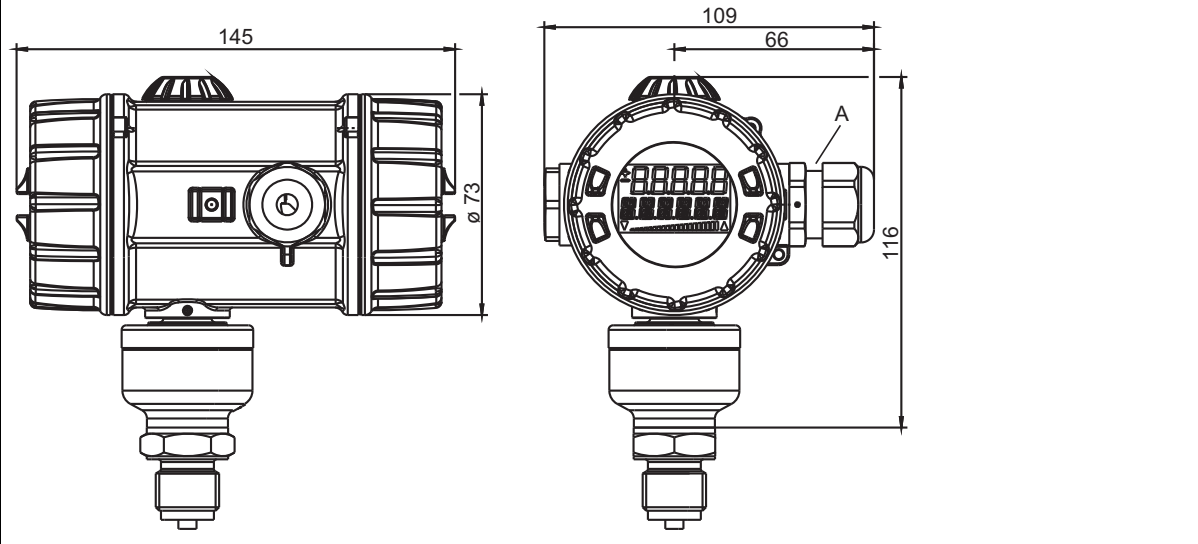
JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



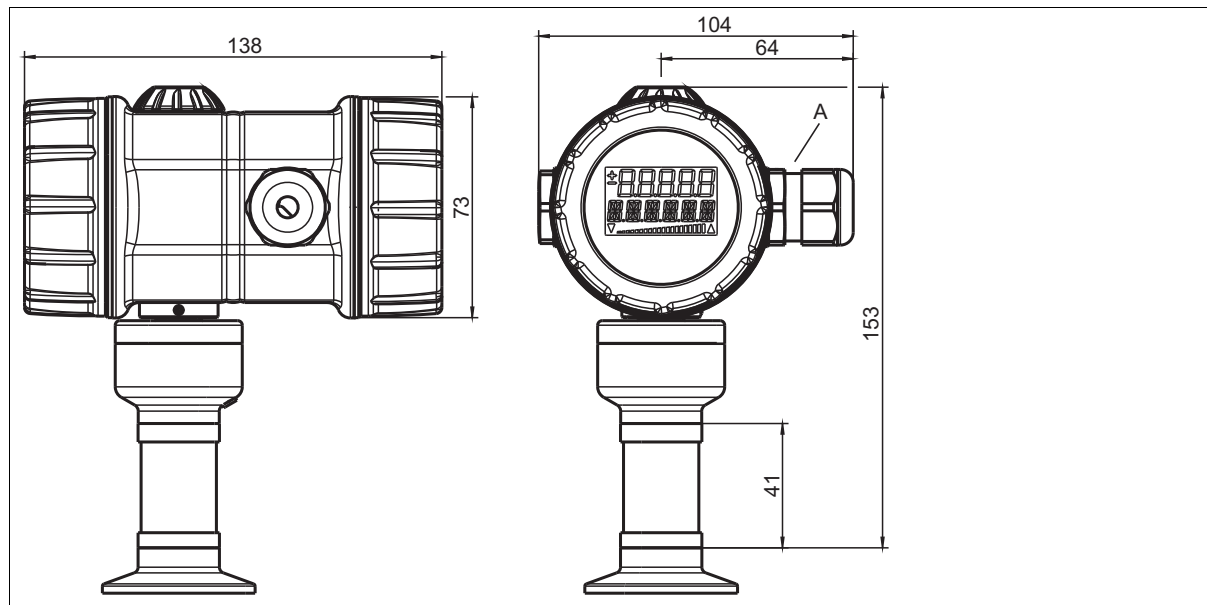
Type 403025/0-0-3 (precision casting, with cable fitting)



A M20 × 1.5 cable fitting

Dimensions at medium temperature 2 (high-temperature version)

Pressure transmitters that are suitable for medium temperatures up to 200 °C have an extended shaft through which the increased temperature is discharged. The total height of all pressure transmitters in this version increases by 41 mm as shown in the following figure.



A M20 × 1.5 cable fitting

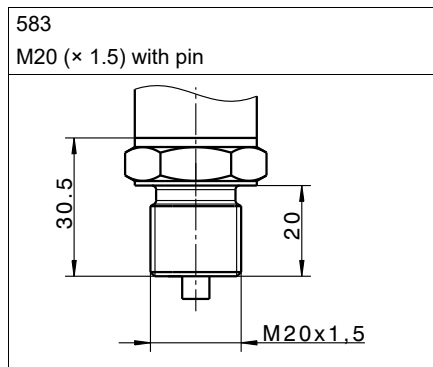
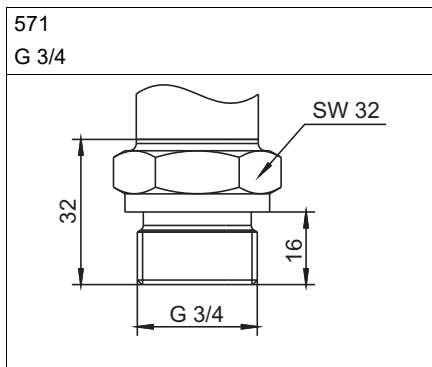
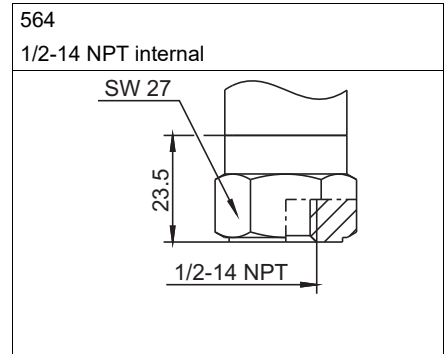
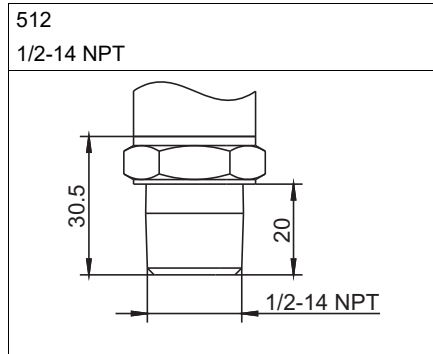
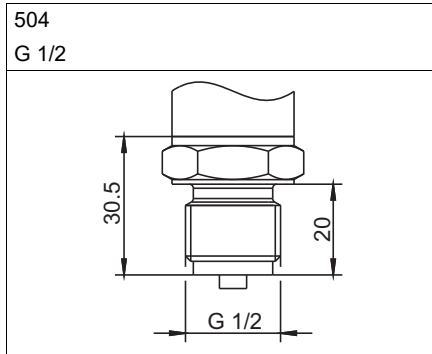
JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Process connections



JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

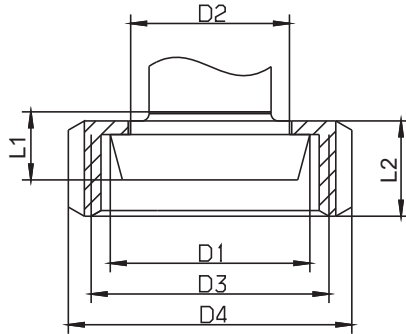
JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



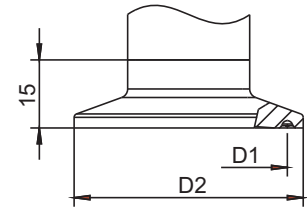
604 and 606

Taper socket with grooved union nut according to DIN 11851



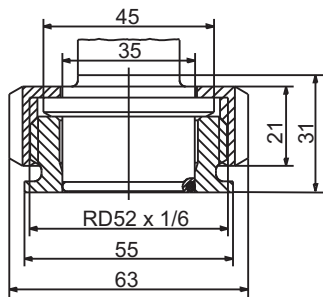
613 and 616

Clamp according to DIN 32676



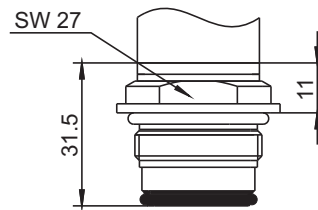
652

Tank connection with grooved union nut
 DN 25



997

JUMO PEKA



Dimensions of the process connections 604, 606, 613, and 616

| Connection | DN | D1 | D2 | D3 | D4 | L1 | L2 |
|------------|----|--------|--------|--------------|------|----|----|
| 604 | 25 | Ø 44 | Ø 35 | Rd 52 × 1/6" | Ø 63 | 15 | 21 |
| 606 | 40 | Ø 56 | Ø 48 | Rd 65 × 1/6" | Ø 78 | | |
| 613 | 25 | Ø 43,5 | Ø 50,5 | | | | |
| 616 | 50 | Ø 56,5 | Ø 64 | | | | |

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

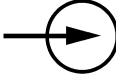


JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com

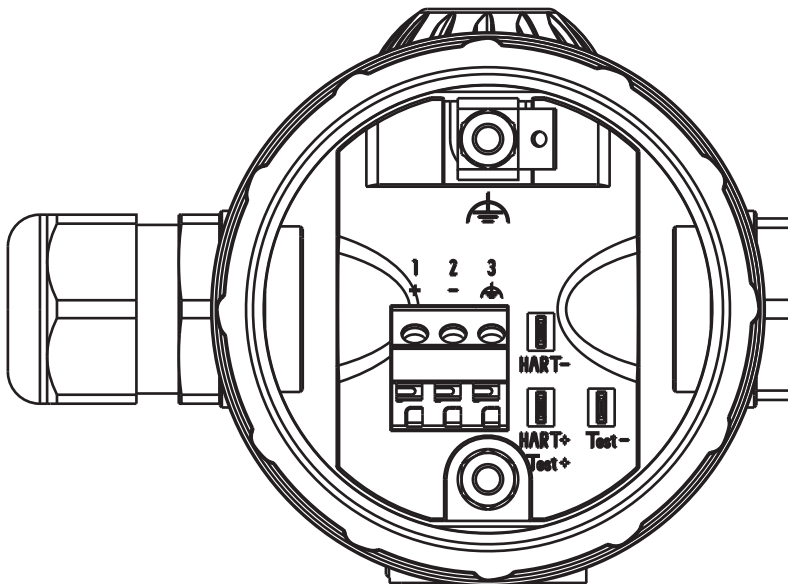


Connection diagram

The connection diagram in the data sheet provides preliminary information about the connection options. For the electrical connection, only use the installation instructions or the operating manual. The knowledge and the correct technical compliance with the safety information and warnings contained in these documents are mandatory for mounting, electrical connection, and startup as well as for safety during operation.

| Connection | Terminal assignment | |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------|
| | 82 (plastic), 93 (metal) Cable gland | 36 Round plug M12 × 1 |
| Voltage supply DC 12 to 36 V for none Ex version DC 12 to 28 V for Ex version |  | 1 L+ 2 L- |
| Output 4 to 20 mA, two-wire Impressed current 4 to 20 mA in voltage supply |  | 1 L+ 2 L- 3 L- |
| Current output test connection Inherent resistance of ammeter ≤ 10 Ω | | TEST + TEST - |
| HART® test connection Burden must be present! | | HART + HART - |
| Functional ground |  | 3 4 |

Cable fitting



Round plug M12 × 1



JUMO GmbH & Co. KG

Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.

JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



Order details

| | |
|--------|----------------------------------------------------------|
| | (1) Basic type |
| 403025 | JUMO dTRANS p20 - process pressure transmitter |
| | (2) Basic type extension |
| 0 | None |
| 2 | SIL ^a |
| 9 | Special version |
| | (3) Explosion protection |
| 0 | None |
| 1 | ATEX Ex ia ^b |
| | (4) Housing |
| 1 | Short, stainless steel, with M12 connection ^c |
| 2 | Long, stainless steel, with cable fitting |
| 3 | Precision casting, with cable fitting |
| | (5) Electrical connection |
| 36 | Round plug M12 × 1 |
| 82 | Plastic cable fitting |
| 93 | Metal cable fitting |
| | (6) Cover material |
| 20 | CrNi (stainless steel) |
| 85 | Plastic |
| | (7) Display |
| 0 | None |
| 1 | With display (LCD) |
| | (8) Operation |
| 0 | None |
| 1 | With control knob |
| | (9) Input – nominal measuring range |
| 450 | -600 to +600 mbar relative pressure |
| 473 | -1 to +2.5 bar relative pressure |
| 513 | -1 to +4 bar relative pressure |
| 472 | -1 to +10 bar relative pressure |
| 514 | -1 to +25 bar relative pressure |
| 515 | -1 to +100 bar relative pressure ^d |
| 508 | -1 to +250 bar relative pressure |
| 516 | -1 to +600 bar relative pressure ^e |
| 487 | 0 to 600 mbar absolute pressure |
| 490 | 0 to 2.5 bar absolute pressure |
| 491 | 0 to 4 bar absolute pressure |
| 493 | 0 to 10 bar absolute pressure |
| 495 | 0 to 25 bar absolute pressure |
| 507 | 0 to 100 bar absolute pressure ^d |
| | (10) Output |
| 405 | 4 to 20 mA, two-wire |
| 410 | 4 to 20 mA, two-wire with HART® protocol |

JUMO GmbH & Co. KG

Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.

JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



| (11) Process connection | |
|----------------------------------------------|-------------------------------------------------------------------------------|
| 504 | G 1/2 according to DIN EN 837 |
| 512 | 1/2-14 NPT according to DIN EN 837 |
| 559 | M20 × 1.5 according to DIN 3852-11 |
| 564 | 1/2-14 NPT internal |
| 571 | G 3/4 front-flush according to DIN EN ISO 228-1 |
| 583 | M20 × 1.5 with pin |
| 604 | Taper socket with union nut DN 25 according to DIN 11851 (dairy pipe fitting) |
| 606 | Taper socket with union nut DN 40 according to DIN 11851 (dairy pipe fitting) |
| 613 | Clamp connection (clamp) DN 25 according to DIN 32676 |
| 616 | Clamp connection (clamp) DN 50 according to DIN 32676 (2" ISO 2852) |
| 652 | Tank connection with grooved union nut DN 25 |
| 997 | JUMO PEKA – Hygienic process connection |
| 998 | Diaphragm seal version, screwed |
| (12) Medium temperature | |
| 1 | Up to 120 °C ^f |
| 2 | Up to 200 °C ^g |
| (13) Process connection material | |
| 20 | CrNi (stainless steel) |
| 82 | NiMo ^h |
| (14) Measuring system, filling medium | |
| 00 | None |
| 01 | Silicon oil |
| (15) Extra codes | |
| 100 | Customer-specific factory setting ⁱ |
| 226 | GOST/EAC approval ^j |
| 374 | Inspection certificate 3.1 DIN EN 10204 material |
| 452 | Electrolytically polished parts |
| 591 | Choke in the pressure channel |
| 624 | Oil and grease free |
| 630 | Enlarged pressure channel |
| 634 | TAG number |
| 635 | NACE manufacturer's declaration ^k |
| 681 | Expanded admissible ambient temperature |
| 691 | Improved moisture and vibration protection |
| 880 | DNV GL approval ^l |
| 932 | HART® version 5 |

^a SIL is only available with 4 to 20 mA, two-wire with HART® protocol, and HART® version 5.
SIL is not available for the measuring range -10 to +10 bar, -1 to +250 bar, -1 to +600 bar, 0 to 2.5 bar, 0 to 10 bar and not with extended permissible ambient temperature.
SIL devices are always delivered with display.

^b ATEX Ex ia does not apply in connection with a cable fitting made out of plastic, a plastic lid, and output 4 to 20 mA.

^c The short housing is only available with the electrical connection round plug M12 × 1.

^d Not available with taper socket with union nut DN 25 and DN 40, clamp connection DN 25 and DN 50.

^e Not available with G 3/4, taper socket with union nut DN 25 and DN 40, clamp connection DN 25/32/40 and DN 50 and also not with the hygienic process connection JUMO PEKA.

^f For ATEX Ex ia (explosion protection 1) a maximum temperature of 115 °C applies.

^g For ATEX Ex ia (explosion protection 1) a maximum temperature of 175 °C applies.

^h The process connection material NiMo is not available with the following measuring ranges: -600 to +600 mbar, -1 to +2.5 bar, -1 to +4 bar, -1 to +10 bar, 0 to 600 mbar, 0 to 2.5 bar, 0 to 4 bar, 0 to 10 bar.

ⁱ Please specify the setting you want in plain text. For default setting see "Accuracy" section in the data sheet.

^j Upon request

^k Only available with NiMo and 1/2-14 NPT or 1/2-14 NPT internal; not for measuring range 0 to 600 mbar absolute pressure and -600 to +600 mbar relative pressure.

^l Only available with ATEX Ex ia and not with -1 to +600 bar relative pressure.

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Order code (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15)
 [] / [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] - [] / []
 Order example 403025 / 0 - 0 - 2 - 82 - 85 - 1 - 1 - 514 - 405 - 504 - 1 - 20 - 1 / 000

Accessories

| Designation | Part no. |
|--------------------------------------------------------|----------|
| 4-pole cable box, straight, M12 × 1 with 2 m PVC cable | 00404585 |
| 4-pole cable box, angled, M12 × 1 with 2 m PVC cable | 00409334 |
| PC interface with USB/TTL converter ^a | 00456352 |
| HART® modem USB ^b | 00443447 |
| Ex-i repeater power supply/input isolating amplifier | 00577948 |
| Measuring device holder for wall and 2" pipe | 00597711 |

| Designation | Data sheet |
|-------------------------------------------------------------------------------------------|------------|
| Valve manifolds | 409706 |
| JUMO PEKA – Hygienic process connection | 409711 |
| Diaphragm seal with dairy pipe fitting DIN 11851 | 409772 |
| Diaphragm seal with clamp connection | 409774 |
| Diaphragm seal with DRD flange or VARIVENT® socket | 409776 |
| Diaphragm seal with ISS/SMS/RJT socket and (grooved) union nut | 409778 |
| Membrane diaphragm seal 4MDV-10 | 409780 |
| Diaphragm seal with screw-in thread DIN ISO 228/1 or ANSI B1.201 | 409782 |
| Diaphragm seal with flange connection DIN EN 1092-1 with sealing strip form B1 | 409784 |
| Diaphragm seal with flange connection according to ANSI B 16.5 with sealing strip form RF | 409786 |
| Ex-i repeater power supply/input isolating amplifier | 707530 |

^a The PC interface cable is the connection between the JUMO interface of the differential pressure transmitter and the USB interface of a PC.

^b The HART® modem is the connection between the HART® interface of the differential pressure transmitter and the USB interface of a PC.

Software

| Description | Part no. |
|--------------------------------------------|----------|
| JUMO setup dTRANS p20 series | 00537577 |
| Device Type Manager (DTM), JUMO dTRANS p20 | 00738288 |

Stock versions

| Order code | Input | Part no. |
|------------------------------------------------|-------------------------------------|----------|
| 403025/0-1-1-36-20-1-1-450-410-504-1-20-01/000 | -600 to +600 mbar relative pressure | 00563929 |
| 403025/0-1-1-36-20-1-1-513-410-504-1-20-01/000 | -1 to +4 bar relative pressure | 00557370 |
| 403025/0-1-1-36-20-1-1-514-410-504-1-20-01/000 | -1 to +25 bar relative pressure | 00572278 |
| 403025/0-1-1-36-20-1-1-491-410-504-1-20-01/000 | 0 to 4 bar absolute pressure | 00573299 |