

## JUMO MIDAS HP OEM-Pressure Transmitter - High pressure

### Brief description

This pressure transmitter is used for measuring the relative (gauge) pressure in liquids and gases. The pressure transmitter incorporates the thin-film strain gauge measurement principle. The pressure is converted into an electrical signal.

### Technical data

#### Reference conditions

to DIN 16 086 and IEC 770/5.3

#### Measurement ranges

see Order details

#### Overload limit

ranges

0 to 100 bar to 0 to 250 2 x full scale  
ranges

0 to 400 to 0 to 600 bar 1.5 x full scale

#### Bursting pressure

ranges up to 160 to 250 bar 5 x full scale  
range

0 to 600 bar 3 x full scale

#### Parts in contact with medium

standard: stainless steel Mat. Ref. 1.4571  
and 1.4542

#### Output

4 to 20 mA

2-wire burden  $\leq (U_B \text{ to } 10 \text{ V}) /$   
0.02A

0.5 to 4.5 V burden  $\geq 20 \text{ k}\Omega$

1 to (5)6 V burden  $\geq 10 \text{ k}\Omega$

0 to 10 V burden  $\geq 10 \text{ k}\Omega$

#### Burden error

< 0.5% max.

#### Zero offset

$\leq 0.3\%$  of full scale

#### Thermal hysteresis

$\leq \pm 0.8\%$  of full scale

#### Ambient temperature error

within range -20 to +85°C  
(compensated temperature range)

zero:  $\leq 0.02\%/^{\circ}\text{C}$  typical,  
 $\leq 0.04\%/^{\circ}\text{C}$  max.

span:  $\leq 0.02\%/^{\circ}\text{C}$  typical,  
 $\leq 0.04\%/^{\circ}\text{C}$  max.

#### Deviation from characteristic

$\leq 0.5\%$  of full scale  
(limit setting)

#### Hysteresis

$\leq 0.2\%$  of full scale

#### Repeatability

$\leq 0.1\%$  of full scale

#### Settling time

$\leq 3 \text{ msec}$  max.

#### Stability per year

$\leq 1\%$  of full scale

#### Supply

10 to 30 V DC (output 4 to 20 mA and  
1 to (5)6 V)

5 V DC (output 0.5 to 4.5 V)

11.5 to 30 V DC (output 0 to 10 V)

Ripple: the voltage spikes must not go  
above or below the values specified for  
the supply

max. current drawn: approx. 25 mA

#### Supply voltage error

$\leq 0.02\%$  per V  
(nominal supply voltage 24 V DC)  
ratiometric with supply voltage  
5 V DC ( $\pm 0.5 \text{ V}$ )

#### Permissible ambient temperature

for version with plug:  
-20 to +125°C  
for version with attached cable:  
-20 to +100°C

#### Storage temperature

-40 to +125°C  
for version with attached cable  
-20 to +100°C

#### Permissible temperature of medium

-30 to +125°C

#### Electromagnetic compatibility (EMC)

to EN 61 326

#### Mechanical shock

(as per IEC 68-2-27)  
100 g/1 msec

#### Mechanical vibration

(to IEC 68-2-6)  
20 g max. at 15 to 2000 Hz



Type 401005/000-xxx-xxx-xxx-xx-61/000



Type 401005/000-xxx-xxx-xxx-xx-36/000

### Enclosure protection

with terminal box  
IP65 to EN 60 529  
(diameter of connecting cable  
5 mm min., 7 mm max.)  
with connecting cable or  
circular connector M12 x 1  
IP67 to EN 60 529

### Housing

stainless steel, Mat. Ref. 1.4571  
PBT

### Pressure connection

see Order details;  
other connections on request

### Electrical connection

see Order details  
terminal box to DIN 43 650,  
style A,  
conductor cross-section up to 1.5 mm<sup>2</sup>;  
or  
attached 4-core PVC cable, length 2 m  
other lengths on request  
or 4-pole circular connector M12 x 1






### Nominal position

unrestricted

### Weight

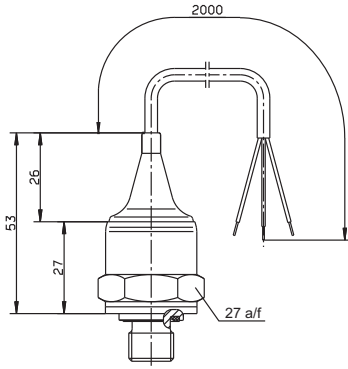
100 g

## Electrical connection

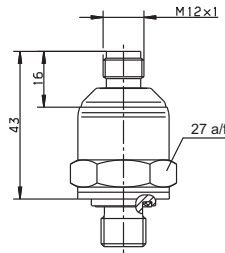
| Connection   |  | Terminals   |  |                               |  |
|--|--|---|--|-------------------------------|--|
|  |  | Terminal box  | Cable  | M12x1                         |  |
| Supply<br>10 to 30 V DC<br>11.5 to 30 V DC<br>5 V DC | (for output)<br>(1 to (5)6 V)<br>(0 to 10 V)<br>(0.5 to 4.5 V) |  | 1 L+<br>2 L-   | white+<br>brown-<br>1+<br>2-  |  |
| Output<br>1 to (5)6 V<br>0 to 10 V<br>0.5 to 4.5 V   |  |  | 2 -<br>3 +   | brown-<br>yellow+<br>2-<br>3+ |  |
| Supply<br>10 to 30 V DC                              | (for output)<br>(4 to 20 mA,<br>2-wire)                        |  | 1 L+<br>2 L-   | white+<br>brown-<br>1+<br>3-  |  |
| Output 4 to 20 mA, 2-wire                            |  |  | 1 +<br>2 -<br>proportional current 4 to 20 mA<br>in supply | white+<br>brown-<br>1+<br>3-  |  |

## Dimensions

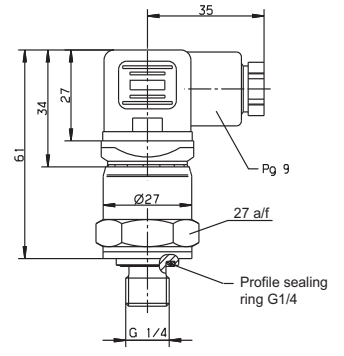
### Electrical connection



11



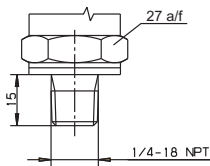
36



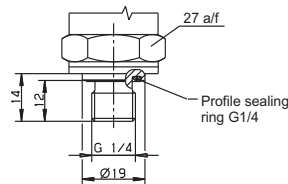
61

### Process connection

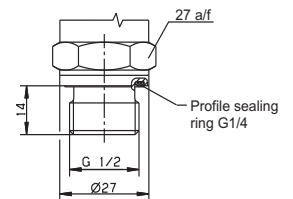
511



521



523





## Order details

- (1) **Basic type**  
401005 Pressure transmitter JUMO MIDAS HP
- (2) **Basic type extension**  
000 none  
999 special version
- (3) **Input**  
464 0 to 100 bar gauge pressure  
465 0 to 160 bar gauge pressure  
466 0 to 250 bar gauge pressure  
467 0 to 400 bar gauge pressure  
468 0 to 600 bar gauge pressure  
999 special range
- (4) **Output**  
405 4 to 20 mA 2-wire  
412 0.5 to 4.5 V 3-wire  
415 0 to 10 V 3-wire  
418 1 to 5 V 3-wire  
420 1 to 6 V 3-wire
- (5) **Process connection (not front-flush)**  
511 1/4-18 NPT to EN 837  
521 G 1/4 to DIN 3852 T11  
523 G 1/2 to DIN 3852 T11
- (6) **Material of process connection**  
20 stainless steel
- (7) **Electrical connection**  
11 attached cable 2 m  
36 circular connector M12 x 1  
61 terminal box
- (8) **Extra Code**  
000 none  
591 throttle in pressure duct

Order code                    (1)                    (2)                    (3)                    (4)                    (5)                    (6)                    (7)                    (8)  
                                   401005 / 000 - 466 - 405 - 523 - 20 - 11 / 000

## Accessories

### Designation

4-pole straight socket M12x1 with 2m PVC cable  
4-pole angled socket M12x1 with 2 m PVC cable

### Part No.

00404585  
00409334