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# Pressure Transmitter

## JUMO dTRANS p30

### Type 404366

#### General application

Pressure transmitters are used to measure the relative (gauge) and absolute pressures in liquids or gases. The measuring device for the transmitter is a piezo-resistive element or a thin-film strain gauge. The pressure is converted into an electrical signal.

#### Technical data

##### Reference conditions

as per DIN 16 086 and IEC 770/5.3

##### Ranges

see order details

##### Overload limit

ranges

0 – 25 bar 3 x full scale

ranges

0 – 40 to 0 – 250 bar 2 x full scale

ranges

0 – 400 to 0 – 600 bar 1.5 full scale

##### Bursting pressure

ranges

0 – 40 bar ≤ 4 x full scale

ranges

0 – 60 to 0 – 100 bar 8 x full scale

ranges

0 – 160 to 0 – 400 bar 5 x full scale

ranges

0 – 600 bar 3 x full scale

##### Parts in contact with medium

normally:

st. steel, Mat. Ref. 1.4571 / 1.4435

for range ≥ 60 bar:

Mat. Ref. 1.4571 / 1.4542

##### Output

0 – 20 mA

3-wire burden ≤ (U<sub>B</sub>-12 V) / 0.02A

4 – 20 mA

2-wire burden ≤ (U<sub>B</sub>-10 V) / 0.02A

4 – 20 mA

3-wire burden ≤ (U<sub>B</sub>-12 V) / 0.02A

0.5 – 4.5 V burden ≥ 50 kΩ

1 – 6 V burden ≥ 10 kΩ

0 – 10 V burden ≥ 10 kΩ

##### Burden error

0.5% max.

##### Zero offset

≤ 0.3% of full scale

##### Thermal hysteresis

± 0.5% max. of full scale

(within compensated temperature range)

± 1% max. for ranges 0 – 250 mbar

0 – 400 mbar

0 – 600 mbar

##### Ambient temperature error

within range 0 to +100°C

(compensated temperature range)

for ranges 250 and 400 mbar

zero: ≤ 0.03%/°C typical,

≤ 0.05%/°C max.

span: ≤ 0.02%/°C typical,

≤ 0.04%/°C max.

for ranges above 600 mbar

zero: ≤ 0.02%/°C typical,

≤ 0.04%/°C max.

span: ≤ 0.02%/°C typical,

≤ 0.04%/°C max.

with basic type extension 024:

zero: ≤ 0.01%/°C

##### Deviation from characteristic

≤ 0.5% of full scale

(limit point adjustment)

with basic type extension 023:

≤ 0.2% of full scale

(limit point setting)

##### Hysteresis

≤ 0.1% of full scale

##### Repeatability

≤ 0.05% of full scale

##### Response time

with current output (output 402, 405 or

406):

≤ 3 msec max.

with voltage output (output 412, 415, 418

or 420):

≤ 10 msec max.

##### Stability per year

≤ 0.5% of full scale



##### Supply

10 – 30 V DC (output 4 – 20 mA and

1 – 6 V)

5 V DC (output 0.5 – 4.5 V)

11.5 – 30 V DC (output 0 – 10 V)

11.5 – 30 V DC (output 0(4) – 20 mA)

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

≤ 0.02% per V

(nominal supply voltage 24 V DC)

in proportion for supply 5 V DC (±0.5 V)

##### Permissible ambient temperature

-20 to +100°C

##### Storage temperature

-40 to +125°C

##### Permissible temperature of medium

-30 to +120°C

##### Electromagnetic compatibility

EN 61 326

interference emission: Class B

noise immunity: industrial requirements

##### Mechanical shock

(to IEC 68-2-27)

100 g/1 msec

##### Mechanical vibration

(to IEC 68-2-6)

20 g max. at 15 – 2000 Hz

##### Protection

with terminal box

IP65 to EN 60 529

(connecting cable diameter

5 mm min., 7 mm max.)

with connecting cable

IP67 to EN 60 529

with circular connector M12 x 1

P67 to EN 60 529

**Housing**

stainless steel, Mat. Ref. 1.4301  
polycarbonate GF

**Pressure connection**

see order details;  
other connections on request

**Electrical connection**

see order details  
terminal box to DIN 43 650,  
Form 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

**Nominal position**

unrestricted

**Weight**

200 g

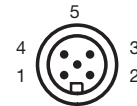
**Electrical connection**

Connection		Terminals		
		Plug	Cable	M12 x 1
Supply 10 – 30 V DC 11.5 – 30 V DC 5 V DC		1 L+ 2 L-	white grey	1+ 3-
Output 1 – 6 V 0 – 10 V 0.5 – 4.5 V		2 - 3 +	grey yellow	3- 4+
Output 4 – 20 mA, 2-wire		1 + 2 -	white grey proportional current 4 to 20 mA in supply	1+ 3-
Output 0(4) – 20 mA, 3-wire		2 - 3 +	grey yellow	3- 4+
Protective earth				
Screen			black	2

**Caution**

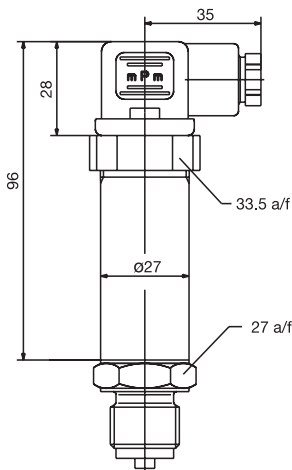
Earth instrument!  
(pressure connection and / or or screen)

**Pin assignment M12 x 1**

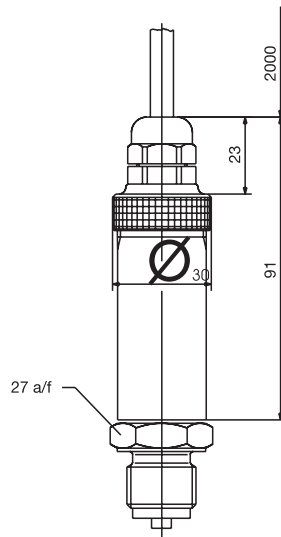


**Dimensions**

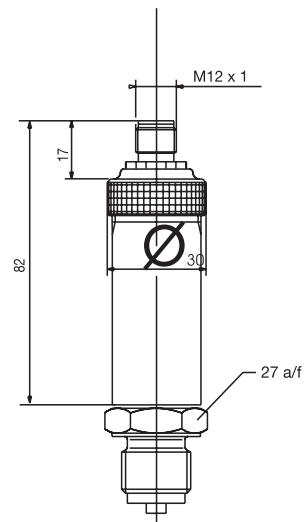
Electrical connection  
with terminal box  
(61)



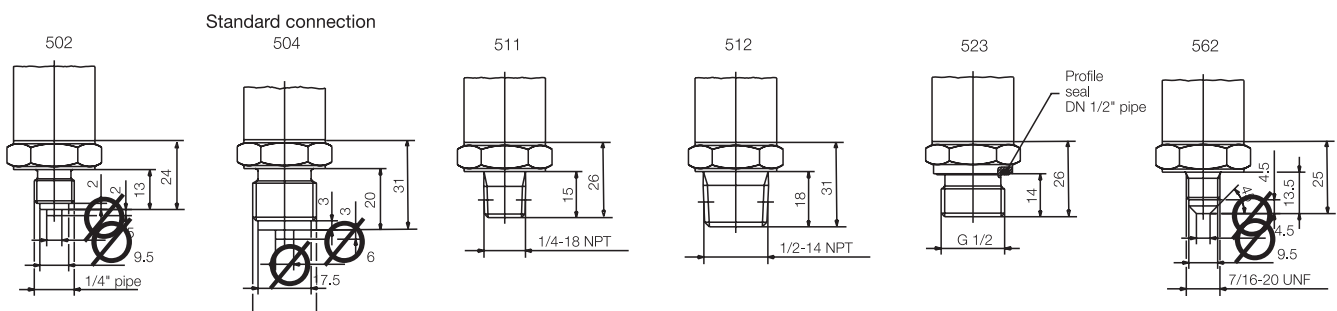
Electrical connection  
with attached cable  
(12)



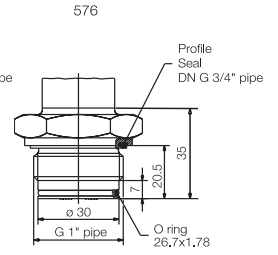
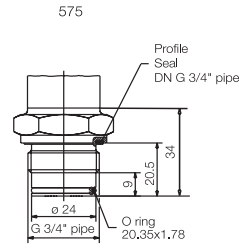
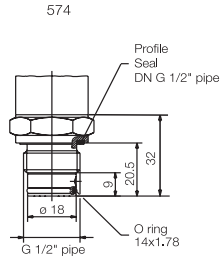
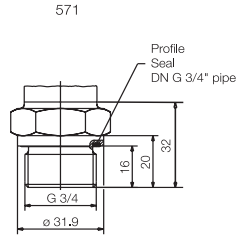
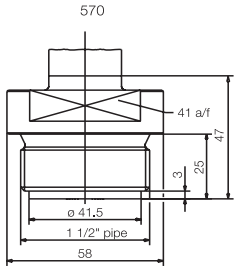
Electrical connection  
with circular connector M12 x 1  
(36)



**Connections (not front-flush)**

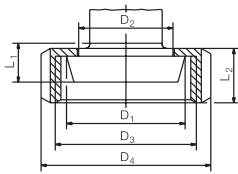


Front-flush connections



603-607

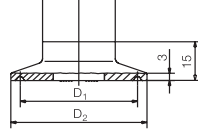
Cone nipple with slotted union nut to DIN 11 851



	DN	øD <sub>1</sub>	øD <sub>2</sub>	øD <sub>3</sub>	øD <sub>4</sub>	L <sub>1</sub>	L <sub>2</sub>
603	20	36,5	30	RD 44x1/6	54	13	21
604	25	44	35	RD 52x1/6	63		
605	32	50	41	RD 58x1/6	70	15	
606	40	56	48	RD 65x1/6	78		
607	50	68,5	61	RD 78x1/6	92	16	

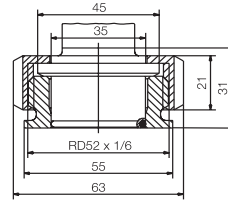
612-616

Clamp connection to DIN 32676

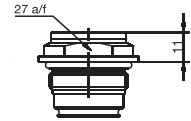


	DN DIN 32676	DN (Zoll)	Nominal Size ISO 2852	øD <sub>1</sub>	øD <sub>2</sub>
612	20 15		12	27,5	34
			12,7		
			17,2		
613	25 32 40	1" 1,5"	25	43,5	50,5
			33,7		
			38		
616	50	2"	40	56,5	64
			51		

652



997 Suitable for the JUMO PEKA adapter system, see data sheet 40.9711



## Order details

### Basic type

404366 Pressure transmitter JUMO dTRANS p30

		<b>Basic type extensions</b>
	/000	none
	/023	reduced deviation from characteristic <sup>1</sup>
	/024	reduced ambient temperature error <sup>2</sup>
	/999	special version
		<b>Input</b>
	451	0 – 0.25 bar gauge pressure
	452	0 – 0.4 bar gauge pressure
	453	0 – 0.6 bar gauge pressure
	454	0 – 1.0 bar gauge pressure
	455	0 – 1.6 bar gauge pressure
	456	0 – 2.5 bar gauge pressure
	457	0 – 4 bar gauge pressure
	458	0 – 6 bar gauge pressure
	459	0 – 10 bar gauge pressure
	460	0 – 16 bar gauge pressure
	461	0 – 25 bar gauge pressure
	462	0 – 40 bar gauge pressure
	463	0 – 60 bar gauge pressure
	464	0 – 100 bar gauge pressure
	465	0 – 160 bar gauge pressure
	466	0 – 250 bar gauge pressure
	467	0 – 400 bar gauge pressure
	468	0 – 600 bar gauge pressure
	478	-1 – 0 bar gauge pressure
	479	-1 – 0.6 bar gauge pressure
	480	-1 – 1.5 bar gauge pressure
	481	-1 – 3 bar gauge pressure
	482	-1 – 5 bar gauge pressure
	483	-1 – 9 bar gauge pressure
	484	-1 – 15 bar gauge pressure
	485	-1 – 24 bar gauge pressure
	487	0 – 0.6 bar absolute pressure
	488	0 – 1.0 bar absolute pressure
	489	0 – 1.6 bar absolute pressure
	490	0 – 2.5 bar absolute pressure
	491	0 – 4 bar absolute pressure
	492	0 – 6 bar absolute pressure
	493	0 – 10 bar absolute pressure
	494	0 – 16 bar absolute pressure
	495	0 – 25 bar absolute pressure
	998	special range absolute pressure
	999	special range gauge pressure
		<b>Output</b>
	402	0 to 20 mA 3-wire
	405	4 to 20 mA 2-wire
	406	4 to 20 mA 3-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

					<b>Process connection (not front-flush)</b>
				502	1/4" pipe to EN 837
				504	1/2" pipe to EN 837 (standard connection)
				511	1/4"-18 NPT to DIN 837
				512	1/2"-14 NPT to DIN 837
				523	1/2" pipe to DIN 3852 T11
				562	7/16"-20 UNF
				998	suitable for connecting to pressure separator
					<b>Process connection (front-flush)</b>
				570	1 1/2" pipe <sup>4</sup>
				571	3/4" pipe <sup>4</sup>
				574	1/2" pipe with front seal <sup>3</sup>
				575	3/4" pipe with front seal <sup>4</sup>
				576	1" pipe with front seal <sup>4</sup>
				603	taper pressure connection with slotted nut to DIN11 851, DN20 <sup>4</sup>
				604	taper pressure connection with slotted nut to DIN 11 851, DN25 <sup>4</sup>
				605	taper pressure connection with slotted nut to DIN 11 851, DN32 <sup>4</sup>
				606	taper pressure connection with slotted nut to DIN 11 851, DN40 <sup>4</sup>
				607	taper pressure connection with slotted nut to DIN 11 851, DN50 <sup>4</sup>
				612	clamp pressure connection to DIN 32 676, DN20 <sup>4</sup>
				613	clamp pressure connection to DIN 32 676, DN25 <sup>4</sup> , DN32 <sup>4</sup> and DN40 <sup>4</sup>
				616	clamp pressure connection to DIN 32 676, DN50 <sup>4</sup>
				652	tank connection with slotted union nut <sup>4</sup>
				997	JUMO PEKA <sup>6</sup>
					<b>Material of process connection</b>
				20	stainless steel
					<b>Electrical connection</b>
				12	with attached cable (cable length in plain text)
				36	with circular connector M12 x 1
				61	with terminal box
					<b>Extra code</b>
				000	none
				591	throttle in pressure duct <sup>5</sup>
				630	enlarged pressure duct <sup>5</sup>

404366 / [ ] - [ ] - [ ] - [ ] - 20 - [ ] / [ ] **Order code**

<sup>1</sup> only for 4 to 20 mA 2-wire output  
 only for ranges between 0.6 and 40 bar  
 not with process connection 574.  
<sup>2</sup> only for spans between 4 and 25 bar  
 only for output 0 to 10 V or 4 to 20 mA 2-wire or 0(4) to 20 mA 3-wire  
 not with process connection 574  
<sup>3</sup> only for ranges from 1 to 400 bar  
<sup>4</sup> only for ranges up to 25 bar  
<sup>5</sup> only with process connections that are not front-flush  
<sup>6</sup> suitable process connection adapter, see data sheet 40.9711