



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 _B -12 V) / 0.02A
4 – 20 mA	
2-wire	burden ≤ (U _B -10 V) / 0.02A
4 – 20 mA	
3-wire	burden ≤ (U _B -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.

Deviation from characteristic

≤ 0.5% of full scale
(limit point adjustment)

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
The pressure transmitter thus fulfils all requirements of EN 50 082-2 (CE mark) for use in industrial areas.

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

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 mm²;
or
attached 4-core PVC cable, length 2 m
other lengths on request

Nominal position

unrestricted

Weight

200 g

Electrical connection

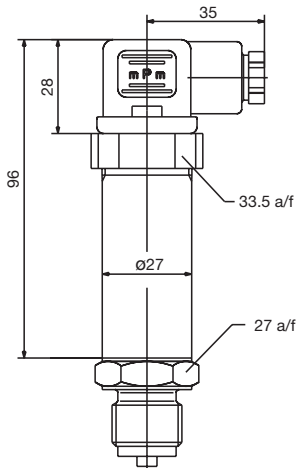
Connection		Terminals	
		Plug	Cable
Supply 10 – 30 V DC 11.5 – 30 V DC 5 V DC		1 L+ 2 L-	white grey
Output 1 – 6 V 0 – 10 V 0.5 – 4.5 V		2 - 3 +	grey yellow
Output 4 – 20 mA, 2-wire		1 + 2 - proportional current 4 to 20 mA in supply	white grey
Output 0(4) – 20 mA, 3-wire		2 - 3 +	grey yellow
Protective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

Caution

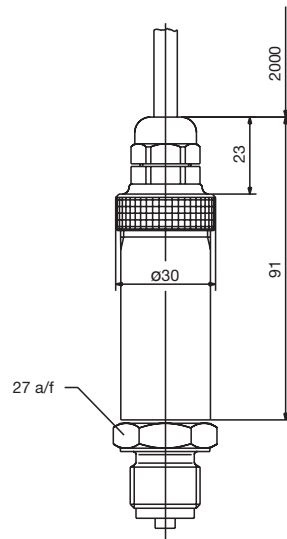
Earth instrument!
(pressure connection and / or or screen)

Dimensions

Electrical connection
with terminal box
(61)

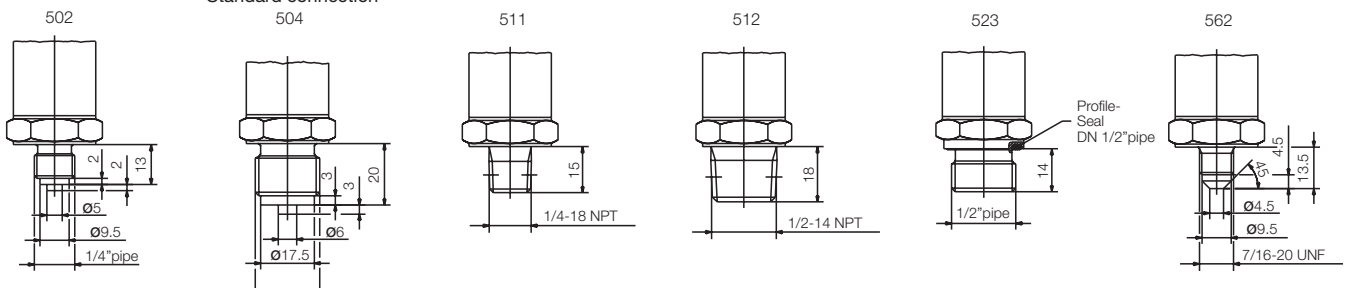


Electrical connection
with attached cable
(12)

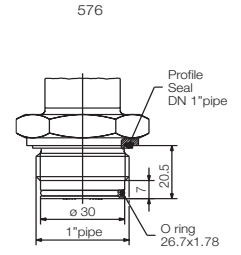
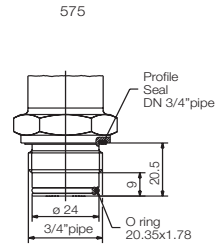
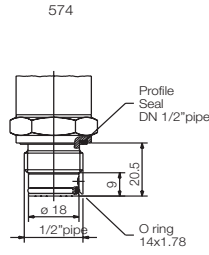
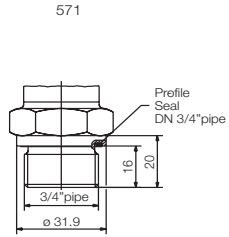
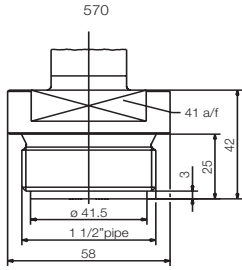


connections (not front-flush)

Standard connection

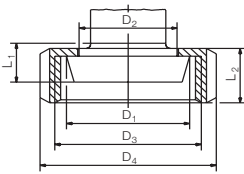


front-flush connections



603-607

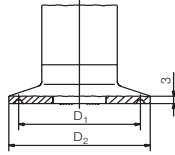
Cone nipple with slotted union nut to DIN 11 851



NTS	DN	eD ₁	eD ₂	eD ₃	eD ₄	L ₁	L ₂		
603	20	36.5	30	RD 44x1/6	54	13	21		
604	25	44	35	RD 52x1/6	63	15			
605	32	50	41	RD 58x1/6	70			15	
606	40	56	48	RD 65x1/6	78				16
607	50	68.5	61	RD 78x1/6	92				

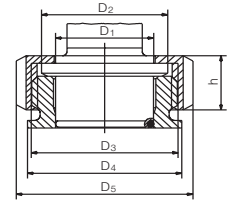
612-616

Clamp connection to DIN 32 676



NTS	DN DIN 32676	DN (Zoll)	Nominal Size ISO 2852	eD ₁	eD ₂
612	20 15		12	27.5	34
			12.7		
			17.2 21.3		
613	25 32 40	1" 1.5"	25	43.5	50.5
			33.7		
			38		
616	50	2"	40	56.5	64
			51		

652-654



NTS	DN	eD ₁	eD ₂	eD ₃	eD ₄	eD ₅	h
652	25	35	45	RD 52x1/6	55	63	21
653	40	48	56	RD 65x1/6	70	78	21
654	50	61	68.5	RD 78x1/6	84	92	22

Order details

Basic type

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		Basic type extensions
	/000	none
	/023	reduced deviation from characteristic ¹
	/000	reduced ambient temperature error ²
	/999	special version
		Input
		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 – 1.6 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 gage pressure
		Output
		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
				Process connection (not front-flush)
			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
				Process connection (front-flush)
			570	1 1/2" pipe ⁴
			571	3/4" pipe ⁴
			574	1/2" pipe with front seal ³
			575	3/4" pipe with front seal ⁴
			576	1" pipe with front seal ⁴
			603	taper pressure connection with slotted nut to DIN11 851, DN20 ⁴
			604	taper pressure connection with slotted nut to DIN 11 851, DN25 ⁴
			605	taper pressure connection with slotted nut to DIN 11 851, DN32 ⁴
			606	taper pressure connection with slotted nut to DIN 11 851, DN40 ⁴
			607	taper pressure connection with slotted nut to DIN 11 851, DN50 ⁴
			612	clamp pressure connection to DIN 32 676, DN20 ⁴
			613	clamp pressure connection to DIN 32 676, DN25 ⁴ , DN32 ⁴ and DN40 ⁴
			616	clamp pressure connection to DIN 32 676, DN50 ⁴
			652	tank connection with slotted union nut ⁴
				Material of process connection
			20	stainless steel
				Electrical connection
			12	with attached cable (cable length in plain text)
			61	with terminal box

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

¹ only for 4 to 20 mA 2-wire output
 not for ranges between 0.25 and 0.4 bar
 not with +/- ranges
 not with process connection 574.

² 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

³ only for ranges from 1 to 400 bar

⁴ only for ranges up to 25 bar