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

Nominal position
unrestricted

Weight
200 g

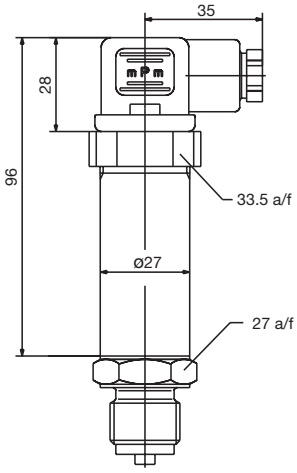
Electrical connection

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 -	white grey
		proportional current 4 to 20 mA in supply	
Output 0(4) — 20 mA, 3-wire		2 - 3 +	grey yellow
Protective earth			
Screen			black

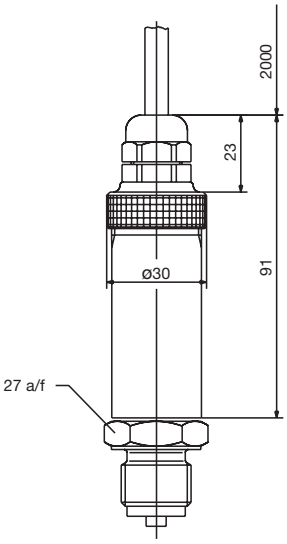
Caution
Earth instrument!
(pressure connection and / or ⏚ or screen

Dimensions

Electrical connection with terminal box (61)



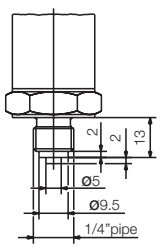
Electrical connection with attached cable (12)



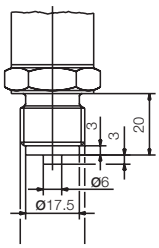
connections (not front-flush

Standard connection

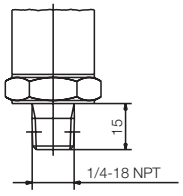
502



504



511



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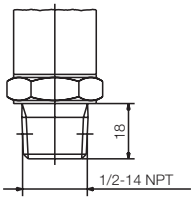

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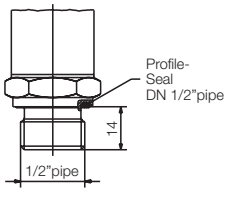

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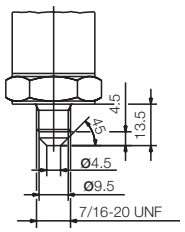
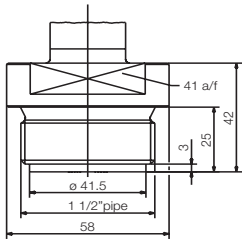
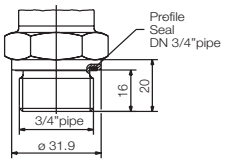


front-flush connections

570



571



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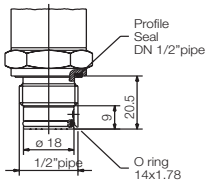

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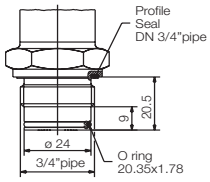

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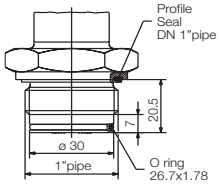
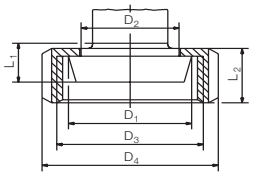


603-607

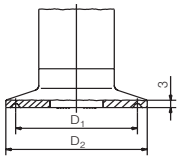
Cone nipple with slotted union nut to DIN 11 851



NTS	DN	øD1	øD2	øD3	øD4	L1	L2
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		
606	40	56	48	RD 65x1/6	78		
607	50	68.5	61	RD 78x1/6	92	16	22

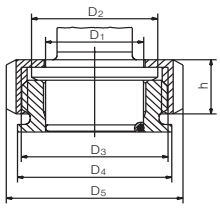
612-616

Clamp connection to DIN 32 676



NTS	DN DIN 32676	DN (Zoll)	Nominal Size ISO 2852	øD1	øD2
612	20 15		12 12.7 17.2 21.3	27.5	34
613	25 32 40	1" 1,5"	25 33.7 38	43.5	50.5
616	50	2"	40 51	56.5	64

652-654



NTS	DN	øD1	øD2	øD3	øD4	øD5	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
404366				Pressure transmitter JUMO dTRANS p30
I				**Basic type extensions**
I	/000			none
I	/023			reduced deviation from characteristic[1]
I	/000			reduced ambient temperature error[2]
I	/999			special version
I	I			**Input**
I	I	451		0 — 0.25 bar gauge pressure
I	I	452		0 — 0.4 bar gauge pressure
I	I	453		0 — 0.6 bar gauge pressure
I	I	454		0 — 1.0 bar gauge pressure
I	I	455		0 — 1.6 bar gauge pressure
I	I	456		0 — 2.5 bar gauge pressure
I	I	457		0 — 4 bar gauge pressure
I	I	458		0 — 6 bar gauge pressure
I	I	459		0 — 10 bar gauge pressure
I	I	460		0 — 16 bar gauge pressure
I	I	461		0 — 25 bar gauge pressure
I	I	462		0 — 40 bar gauge pressure
I	I	463		0 — 60 bar gauge pressure
I	I	464		0 — 100 bar gauge pressure
I	I	465		0 — 160 bar gauge pressure
I	I	466		0 — 250 bar gauge pressure
I	I	467		0 — 400 bar gauge pressure
I	I	468		0 — 600 bar gauge pressure
I	I	478		-1 — 0 bar gauge pressure
I	I	479		-1 — 0.6 bar gauge pressure
I	I	480		-1 — 1.6 bar gauge pressure
I	I	481		-1 — 3 bar gauge pressure
I	I	482		-1 — 5 bar gauge pressure
I	I	483		-1 — 9 bar gauge pressure
I	I	484		-1 — 15 bar gauge pressure
I	I	485		-1 — 24 bar gauge pressure
I	I	487		0 — 0.6 bar absolute pressure
I	I	488		0 — 1.0 bar absolute pressure
I	I	489		0 — 1.6 bar absolute pressure
I	I	490		0 — 2.5 bar absolute pressure
I	I	491		0 — 4 bar absolute pressure
I	I	492		0 — 6 bar absolute pressure
I	I	493		0 — 10 bar absolute pressure
I	I	494		0 — 16 bar absolute pressure
I	I	495		0 — 25 bar absolute pressure
I	I	998		special range absolute pressure
I	I	999		special range gage pressure
I	I	I		**Output**
I	I	I	402	0 to 20 mA 3-wire
I	I	I	405	4 to 20 mA 2-wire
I	I	I	406	4 to 20 mA 3-wire
I	I	I	412	0.5 to 4.5 V 3-wire
I	I	I	415	0 to 10 V 3-wire
I	I	I	418	1 to 5 V 3-wire

I	I	I	420		1 to 6 V 3-wire
I	I	I	I		**Process connection (not front-flush)**
I	I	I	I	502	1/4" pipe to EN 837
I	I	I	I	504	1/2" pipe to EN 837 (standard connection)
I	I	I	I	511	1/4"-18 NPT to DIN 837
I	I	I	I	512	1/2"-14 NPT to DIN 837
I	I	I	I	523	1/2" pipe to DIN 3852 T11
I	I	I	I	562	7/16"-20 UNF
I	I	I	I	998	suitable for connecting to pressure separator
I	I	I	I		**Process connection (front-flush)**
I	I	I	I	570	1 1/2" pipe[4]
I	I	I	I	571	3/4" pipe[4]
I	I	I	I	574	1/2" pipe with front seal[3]
I	I	I	I	575	3/4" pipe with front seal[4]
I	I	I	I	576	1" pipe with front seal[4]
I	I	I	I	603	taper pressure connection with slotted nut to DIN11 851, DN20[4]
I	I	I	I	604	taper pressure connection with slotted nut to DIN 11 851, DN25[4]
I	I	I	I	605	taper pressure connection with slotted nut to DIN 11 851, DN32[4]
I	I	I	I	606	taper pressure connection with slotted nut to DIN 11 851, DN40[4]
I	I	I	I	607	taper pressure connection with slotted nut to DIN 11 851, DN50[4]
I	I	I	I	612	clamp pressure connection to DIN 32 676, DN20[4]
I	I	I	I	613	clamp pressure connection to DIN 32 676, DN25[4], DN32[4] and DN40[4]
I	I	I	I	616	clamp pressure connection to DIN 32 676, DN50[4]
I	I	I	I	652	tank connection with slotted union nut[4]
I	I	I	I		**Material of process connection**
I	I	I	I	I 20	stainless steel
I	I	I	I	I I	**Electrical connection**
I	I	I	I	I I 12	with attached cable (cable length in plain text)
I	I	I	I	I I 61	with terminal box
I	I	I	I	I I I	

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

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[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 to10 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