ENERCORP instruments ltd

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Pressure transmitter dTRANS p30

Type 404366



General application

Pressure transmitter 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
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)
12 — 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
electrostatic discharge:
IEC 1000-4-2 / EN 61 000-4-2 / severity 4
(test voltage 15 kV)
electromagnetic fields:
IEC 1000-4-3 / EN 61 000-4-3 / severity 4
(test field strength 10 V/m)
transient disturbance (burst):
IEC 1000-4-4 / EN 61 000-4-4 / severity 4
(test voltage on I/O line 2 kV)
immunity to impulse voltage (surge):
IEC 1000-4-5 / EN 61 000-4-5 / severity 2
immunity to conductor-borne interference induced by high-frequency fields:
IEC 1000-4-6 / ENV 50 141
(U0=3 V)
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 with 11.5 — 30 V DC supply 0 — 10 V with 11.5 — 30 V DC supply 0.5 — 4.5 V with 5 V DC supply		2 - 3 +	grey yellow
Output 4 — 20 mA, 2-wire with 10 — 30 V DC supply		1 + 2 -	white grey
		proportional current 4 to 20 mA in supply	
Output 0(4) — 20 mA, 3-wire with 11.5 — 30 V DC supply		2 + 3 -	grey yellow
Protective ground			
Screen			black

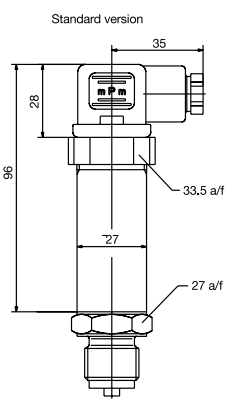


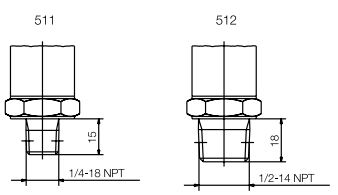
Caution
Ground instrument!
(pressure connection and / or ⏚ or screen

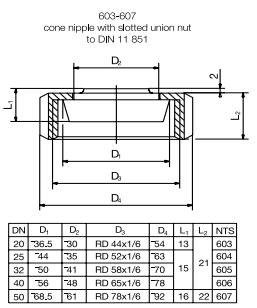
Dimensions

connections (not front-flush)

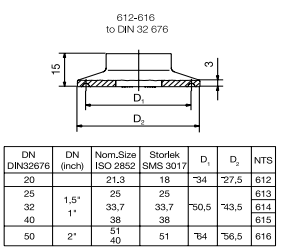
front-flush connections





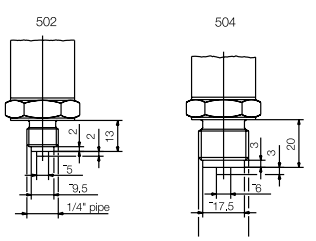


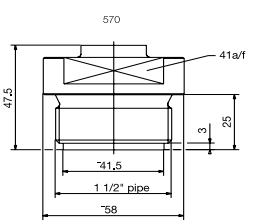
DN	D_1	D_2	D_3	D_4	L_1	L_2	NTS
20	36,5	30	RD 44x1/6	54	13	21	603
25	44	35	RD 52x1/6	63	15		604
32	50	41	RD 58x1/6	70			605
40	56	48	RD 65x1/6	78			606
50	68,5	61	RD 78x1/6	92	16	22	607

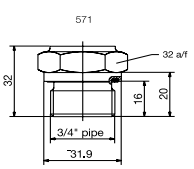


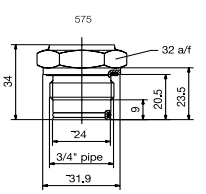
DN DIN32676	DN (inch)	Nom.Size ISO 2852	Storlek SMS 3017	D_1	D_2	NTS
20		21,3	18	34	27,5	612
25	1,5"	25	25	50,5	43,5	613
32	1"	33,7	33,7			614
40		38	38			615
50	2"	51 40	51	64	56,5	616

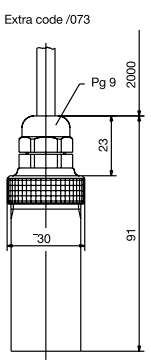
Standard connection

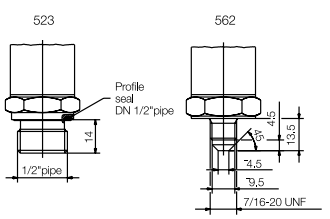


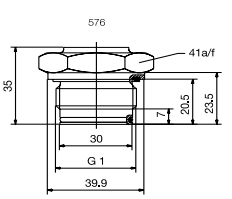


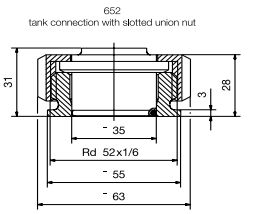












Order details

	Basic type				
404366	Pressure transmitter JUMO dTRANS p30				
	Basic type extensions				
	/000	none			
	/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		
		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		
		999	special range		
			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	
			415	0 to 10 V	
			418	1 to 5 V	
			420	1 to 6 V	
				Process connection (not front-flush)	
				502	pressure connection 1/4" pipe to EN 837
				504	pressure connection 1/2" pipe to EN 837 (standard connection)
				511	pressure connection 1/4"-18 NPT to DIN 837
				512	pressure connection 1/2"-14 NPT to DIN 837
				523	pressure connection1/2" pipe to DIN 3852 T11
				562	pressure connection 7/16"-20 UNF
				998	suitable for connecting to pressure separator
				Process connection (front-flush)	
				570	pressure connection 1 1/2" pipe
				571	pressure connection 3/4" pipe
				575	pressure connection 3/4" pipe with front seal
				576	pressure connection 1" pipe with front seal
				603	taper pressure connection with slotted nut to DIN11 851, DN20

I	I	I	I	604	taper pressure connection with slotted nut to DIN 11 851, DN25
I	I	I	I	605	taper pressure connection with slotted nut to DIN 11 851, DN32
I	I	I	I	606	taper pressure connection with slotted nut to DIN 11 851, DN40
I	I	I	I	607	taper pressure connection with slotted nut to DIN 11 851, DN50
I	I	I	I	612	clamp pressure connection to DIN 32 676, DN20
I	I	I	I	613	clamp pressure connection to DIN 32 676, DN25
I	I	I	I	614	clamp pressure connection to DIN 32 676, DN32
I	I	I	I	615	clamp pressure connection to DIN 32 676, DN40
I	I	I	I	616	clamp pressure connection to DIN 32 676, DN50
I	I	I	I	652	tank connection with slotted union nut
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**