



Pressure Transmitter for use in hazardous areas JUMO dTRANS p33

Type 404753

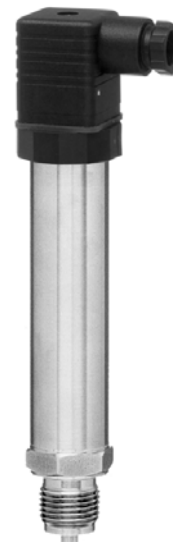
Ex II 1/2 GD EEx ia IIC T4 – T6

General application

The type 404753 pressure transmitter measures the pressure in both corrosive and non-corrosive gases, vapors, liquids and dusts. The transmitter operates on the piezoresistive measuring principle. The output signal is a DC current that is proportional to the input pressure.

The type 404753 pressure transmitter fulfills the requirements for equipment group II, category 1/2 GD, for application in areas (zone 1 and 2) with an explosion hazard caused by gas (Gas) as well as in areas (zone 20, 21 and 22) with an explosion hazard caused by dust (Dust). The pressure connection (process connection) may, however, also be mounted on to zone 0.

The EC type-examination certificate is designated:
SNCH 03 ATEX 3545.



Technical data

Explosion protection

Ex II 1/2 GD EEx ia IIC T4 – T6
T / Ta ≤ 95°C; ≤ 85°C; ≤ 70°C
IP65

as per

EN 1127-1,
EN 50 014
EN 50 020
EN 50 284
EN 50 281-1-1

Reference conditions

to DIN 16 086 and IEC 770/5.3

Measurement ranges

see Order details

Overload limit

for ranges < 100 bar:
4 x full scale
for ranges ≥ 100 bar:
2 x full scale

Bursting pressure

10 x full scale, 2000 bar max.

Parts in contact with medium

standard:
stainless steel, Mat. Ref. 1.4436, 1.4571
for range ≥ 60 bar:
stainless steel, Mat. Ref. 1.4571, 1.4542

Output

4 – 20 mA 2-wire

Zero offset

≤ 0.3% of full scale

Thermal hysteresis

for ranges ≤ 600 mbar:
≤ ± 1% of full scale

for ranges > 600 mbar:
≤ ± 0.5% of full scale

Ambient temperature error

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 setting)

Hysteresis

≤ 0.1% of full scale

Stability per year

≤ 0.5% of full scale

Supply

11 – 28 V DC
(from intrinsically safe circuit ¹)
U_{max} ≤ 28 V
I_{K max} ≤ 120 mA
Ripple:
The voltage spikes must not go above or below the limits specified for the supply.
max. current drawn ≤ 45 mA
(at 24 V DC)

¹ intrinsically safe circuit in conjunction with supply unit with isolating transformer, Type KFD2, Data Sheet 40.4756.

Supply voltage error

≤ 0.03% per V

Permissible ambient temperature

-40 to +85°C

Storage temperature

-40 to +85°C

Permissible temperature of medium

-40 to +85°C
(-40 to +200°C with basic type ext. 004)

Electromagnetic compatibility

EN 61 326
interference emission: Class B
interference immunity:
to industrial requirements

Electrical connection

recommended: screened 5-wire cable

Mechanical shock

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

Mechanical vibration

(to IEC 68-2-6)
max. 10 g at 15 – 2000 Hz

Enclosure protection

with connector screwed on
IP65 to EN 60 529

Housing

stainless steel, Mat. Ref. 1.4301

Pressure connection

see Order details;
other connections on request

Nominal position

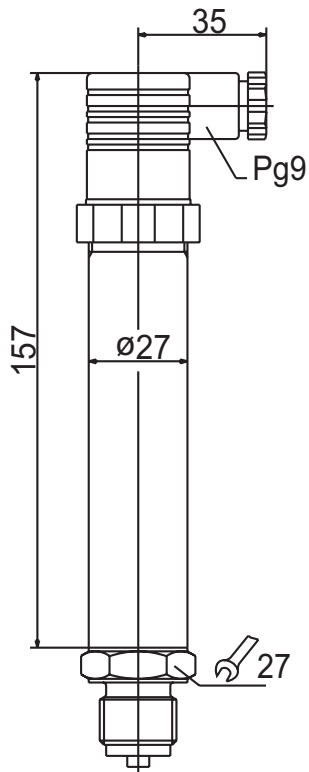
unrestricted

Weight

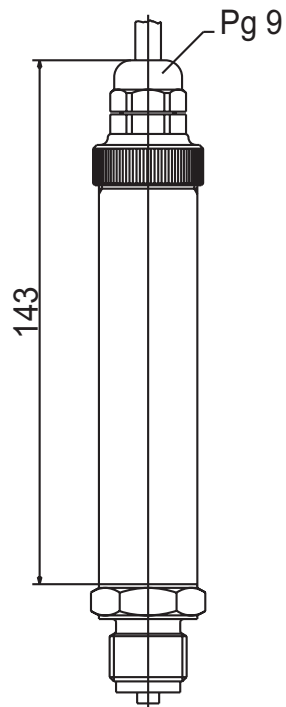
350 g (with pressure connection G 1/2)

Dimensions

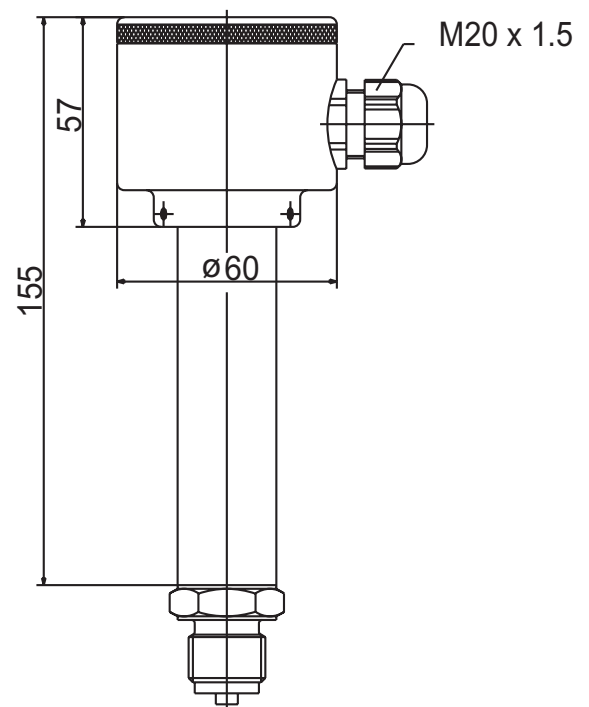
Electrical connection 61



Electrical connection 12

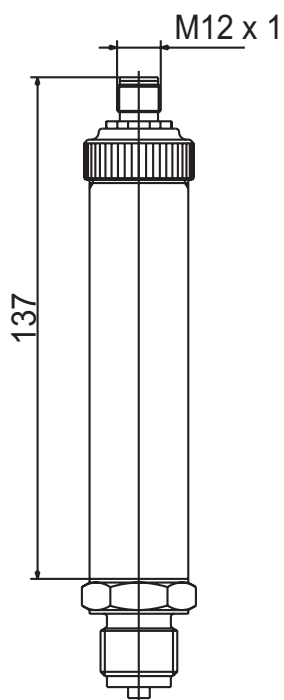


Electrical connection 75

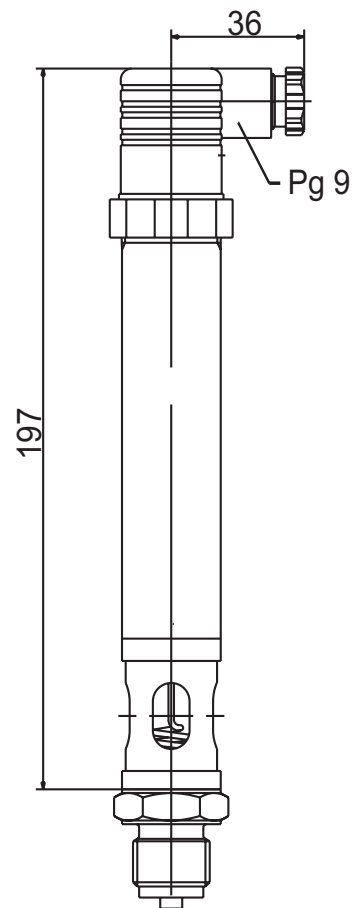
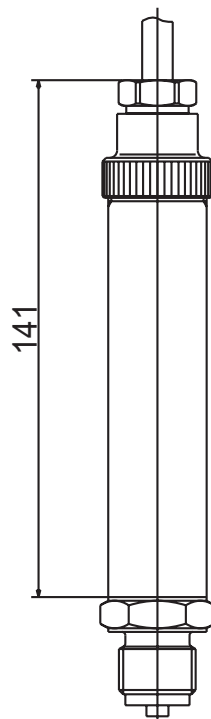


Basic type extension 004

Electrical connection 36

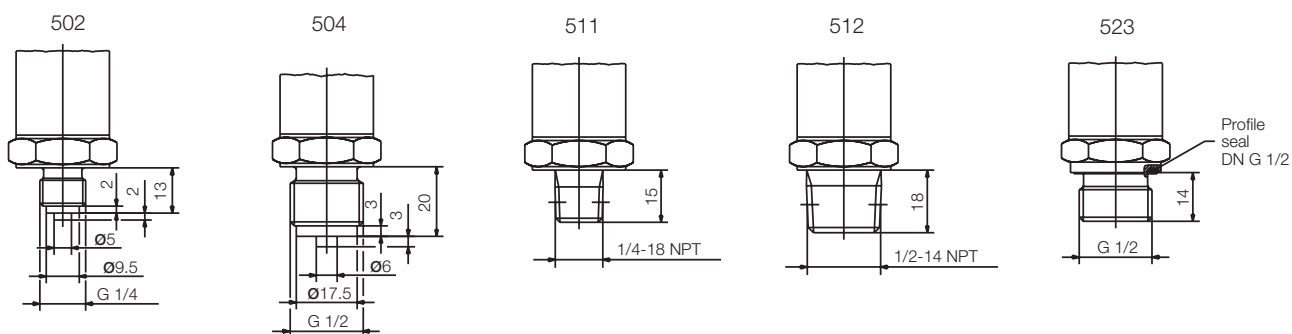
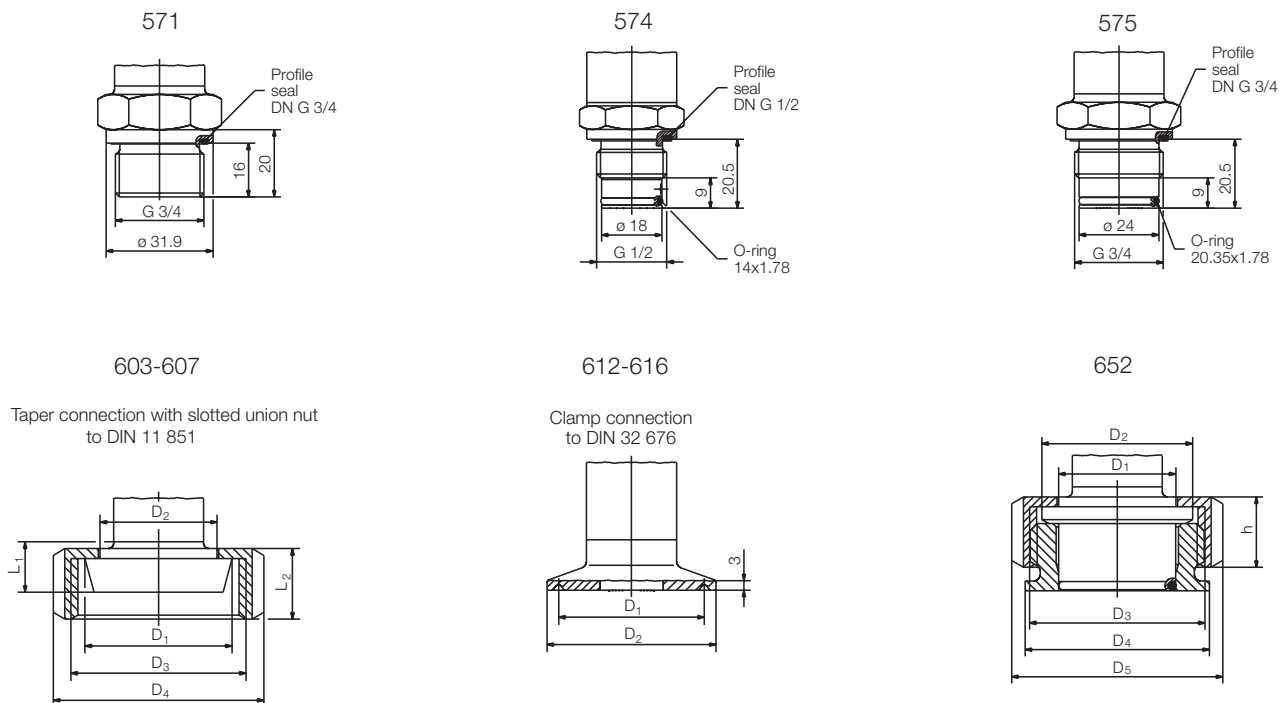


Extra code 406



Process connection (not front-flush)

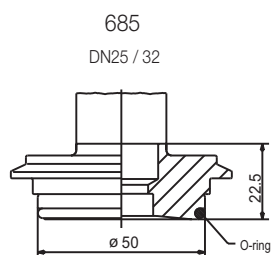
Standard connection

**Process connections (front-flush)**

Process conn.	DN	ϕD_1	ϕD_2	ϕD_3	ϕD_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		
606	40	56	48	RD 65x1/6	78		
607	50	68.5	61	RD 78x1/6	92	16	

Process conn.	DN DIN 32676	DN (inch)	Nominal Size ISO 2852	ϕD_1	ϕD_2
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

Process conn.	DN	ϕD_1	ϕD_2	ϕD_3	ϕD_4	ϕD_5	h
652	25	35	45	RD 52x1/6	55	63	21



Electrical connection

Connection		Terminals		
		Terminal box	Attached cable	Connector M12 x 1
Supply 11 — 28 V DC intrinsically safe		1 L+ 2 L-	white gray	1 L+ 3 L-
Output 4 — 20 mA 2-wire proportional current 4 to 20 mA in supply		1 + 2 -	white gray	1 + 3 -
Potential equilibration				2
Screen			black	

Pin assignment (M12 x 1)



Order details

(1) Basic type	
404753	Pressure transmitter JUMO dTRANS p33 for use in hazardous areas
(2) Basic type extension	
000	none
004	elevated temperature of medium ¹
(3) Nominal input range	
475	-0.25 0 bar gauge pressure
476	-0.4 0 bar gauge pressure
477	-0.6 0 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
451	0 0.25 bar gauge pressure
452	0 0.4 bar gauge pressure
453	0 0.6 bar gauge pressure
454	0 1 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

¹ only for spans between 1 bar and 60 bar

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 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

(4) Output

405	4 — 20 mA 2-wire
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(5) Process connection (not front-flush)

502	G ¹ / ₄ to EN 837
504	G 1/2 to EN 837 (standard connection)
511	1/4-18 NPT to DIN 837
512	1/2-14 NPT to DIN 837
523	G 1/2 to DIN 3852 T11

Process connection (front-flush)

571	G ³ / ₄ ⁵
574	G ¹ / ₂ front seal ⁴
575	G ³ / ₄ front seal ⁵
603	taper connection with slotted nut to DIN11851, DN20 ⁵
604	taper connection with slotted nut to DIN11851, DN25 ⁵
605	taper connection with slotted nut to DIN11851, DN32 ⁵
606	taper connection with slotted nut to DIN11851, DN40 ⁵
607	taper connection with slotted nut to DIN11851, DN50 ⁵
612	clamp connection to DIN 32676, DN20 ⁵
613	clamp connection to DIN 32676, DN25 ⁵ , DN32 ⁵ and DN40 ⁵
616	clamp connection to DIN 32676, DN50 ⁵
652	tank connection with slotted union nut ⁵
685	Varivent DN 32/25

Material of process connection

20	stainless steel
99	special material for process connection

(7) Electrical connection¹

12	attached screened cable (cable length in plain text)
36	circular connector M 12 x 1
61	terminal box
75	terminal head
99	special electrical connection

(8) Filling medium for measurement system

- 0 no filling medium
 1 silicone oil²
 9 special filling medium

(9) Extra codes (on request only)

- 406 IP68 protection to EN 60 529³

¹ see "Dimensions" for type of connection

² not for nominal ranges 0 — 100 bar to 0 — 600 bar gauge pressure

³ only in conjunction with electrical connection 12 "attached connecting cable..."

⁴ only for ranges from 60 to 400 bar.

⁵ only for ranges up to 25 bar.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Order code	404753	/	000	-		-	405	-	
							20	-	
								-	
								/	