

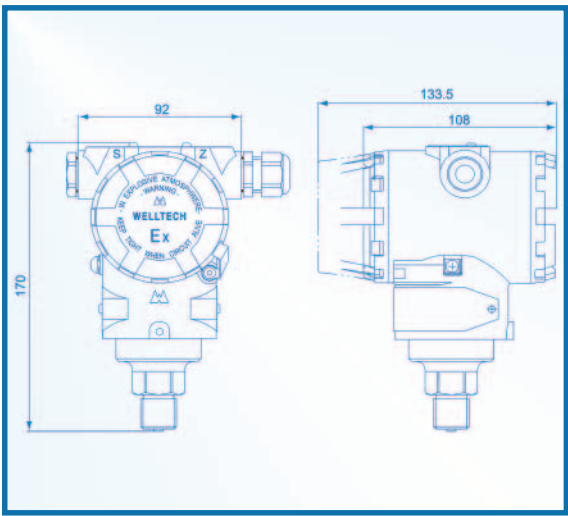
WT2000TG

Smart Pressure Transmitter

865B045D

Features

- Transmitter of:
 - Gauge pressure (WT2000TG)
- Accuracy: $\pm 0.1\%$
- Conformable with HART protocol
- Local span and zero adjustment
- EEPROM memory
- Digital led indicator
- IP66 mechanical protection
- Certification:
 - Explosion Proof Exd II CT4
 - Intrinsic Safety Exi II CT6



- Compact digital system, power supply 12÷45Vdc, suitable for liquid, gas and vapour applications.
- Ranges from 0÷0.005bar (0÷0,5KPa) to 0÷350 bar (0÷35000KPa)
- Accuracy: $\pm 0.1\%$
- BEEL202 FSK technology

General

Transmitters (WT2000TG Transmitter for short) are more stable in performance with the automatic temperature compensation function. Compact construction, small and light, conformable with HART protocol, the WT2000TG transmitter are widely used in petrochemical, iron and steel, power plant, chemical, light industry and other industries

Operation principle

Process pressure is transmitted through an isolation diaphragm. The reference pressure is transmitted similarly to the other side of the sensing diaphragm. The sensing diaphragm moves to a position which is proportional to the difference in pressure. The position of the sensing diaphragm is detected by the electronic unit system.



applied solution for the application

1. Functional Specifications

1.1 - Service

Liquid, gas, and vapour applications.

1.2 - Ranges

For the range and the range code see tab.1-1.

Codice Range	Ranges (URL) bar	WT2000TG	Codice Range	Ranges (URL) bar	WT2000TG
04	0÷0,935...37,4kPa; 0÷0,00935...0,374bar	O	08	0÷172,25...6890kPa; 0÷1,7225...68,9bar	O
05	0÷4,67...186,8kPa; 0÷0,0467...1,868bar	O	09	0÷517...20680kPa; 0÷5,17...206,8bar	O
06	0÷17,24...690kPa; 0÷0,1724...6,9bar	O	10	0÷1034,2...35000kPa; 0÷10,342...350bar	O
07	0÷51,7...2068kPa; 0÷0,517...20,68bar	O			

Tab.1-1

Note: O, is available; N, is not available.

1.3 - Output signal

2-wire 4÷20mA dc overlapped with HART digital signal, linear or square-root selectable

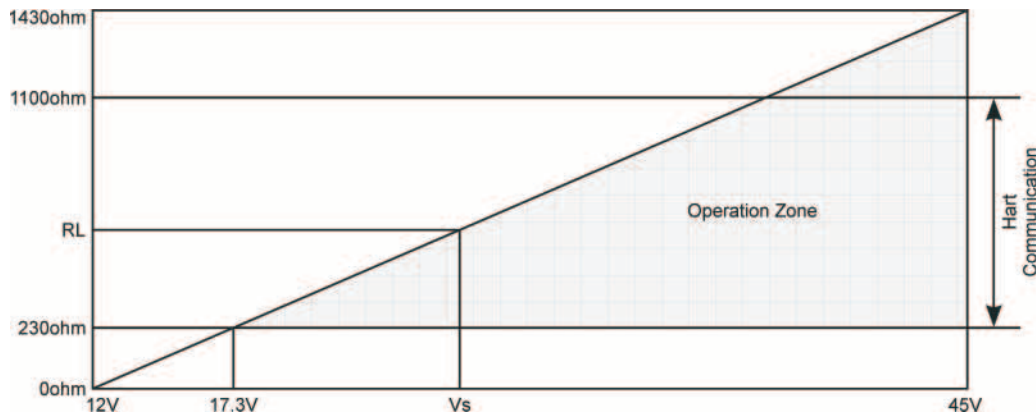
1.4 - Power supply

Standard 24 VDC, 12÷45Vdc with the load resistance in the area shown in fig.1.5.

1.5 - Load character

$RL = (Vs - 12V) / 23mA$. Where RL is the maximum load, Vs is the voltage of the power supply.

Fig.1.5



1.6 - Indication

M03 - 1/2 linear lcd meter, 0÷100%, 13mm high letters

Mxx - xxxxxxxxxxxxxxxxxxxxxxxxxxxx

1.7 - Span and zero

Local adjustment with the keys on the housing or with HART communicator.

1.8 - Zero elevation and suppression

TG - The maximum zero suppression is the difference between URL and span.

The maximum zero elevation is less than atmosphere.

1.9 - Alarm

The diagnostic program detects the malfunction and output 22mA for high or 3.8mA for low alarming signal. The alarming, high or low, is selectable by placing the jump on the circuit board.

1.10 - Write-Protect of the transmitter's status

Adjust the jump in case of changing the configuration

1.11 - Temperature limits

Diffused silicon sensor: -40°C ÷ +70°C

Ceramic capacitance sensor: -40°C ÷ +85°C

Complete product: -10°C ÷ +50°C

1.12 - Storage temperature

-10°C ÷ +50°C

1.13 - Turn-on time

2s maximum.

1.14 - Damping

0÷16s electronic damping, adjustable by 0.1s interval. Time constant is 0.2s. 0.4s for range code 09.

1.15 - Volumetric displacement

<0.16cm³ with minimum damping.

1.16 - Performance specification

(No zero elevation and suppression, reference operation conditions, silicon fill, and 316L stainless steel isolation diaphragm.)

1.16.1 - Accuracy

0,1%; non-linearity: ≤ ±0,1% FS for range ratio <10:1

0,2%; non-linearity: ≤ ±0,2% FS

1.16.2 - Insensitive zone

None

1.16.3 - Stability

Not greater than the accuracy of the transmitter for 24 month

1.16.4 - Temperature effect

± 0,1%/10°C



1.16.5 - Vibration effect

0.1% of URL, 10÷60Hz, S=0.07 in any direction.

1.16.6 - Power supply effect

Less than 0.005% of output span/V.

1.16.7 - EMI / RFI effect

0.1% of URL, tested from from 27 to 500MHz, field strength up to 30V/m.

1.16.8 - Mounting position effect

Zero shift of up to 0.0024bar if the sensing diaphragm is not vertical mounted, which can be calibrated out. No span effect.

1.16.9 - Construction materials

- **Electronic Housing** Low-copper aluminum.
- **Paint** Epoxy-polyester

1.16.10 - Process connections

M20 x 1,5, NPT 1/2" and G 1/2", external thread external thread; NPT 1/2" and NPT 1/4" internal thread

1.16.11 - Electrical connections

Two M20×1.5 on the housing for connecting the conduit. Screw terminals and a plat for test to connect the communicator.

1.16.12 - Weight

1Kg excluding accessories.

1.16.13 - Sensor maximum overpressure

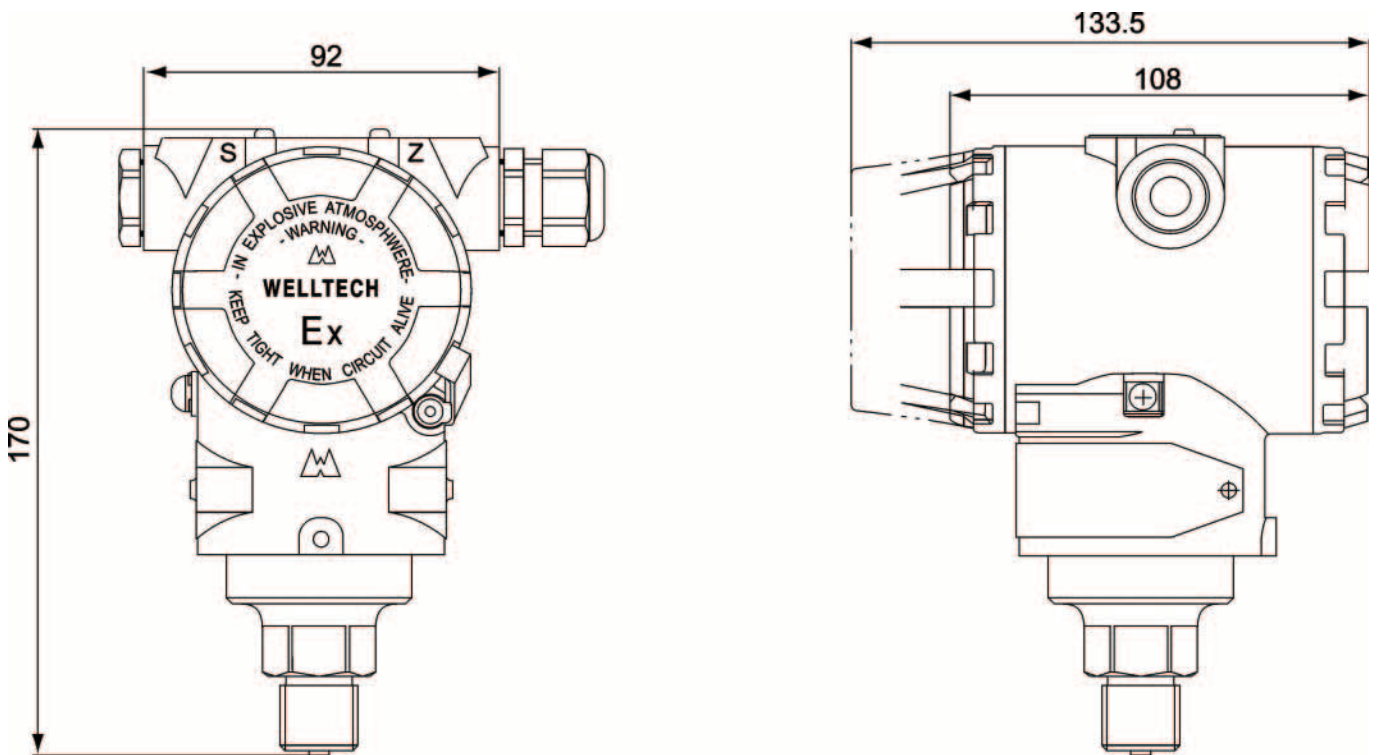
Maximum overpressure tolerable is:

-) 50 Bar (5MPa) for instruments with range \leq 20 Bar (2MPa);
-) Twice the range value for the others.



2. WT2000TG

Differential pressure transmitter
HART Communication
Best accuracy: $\pm 0,1\%$
Ranges from $0+0,00935$ to 350bar ($0+0,935$ to 35000kPa)
IP66 mechanical protection
Certifications: Explosion-Proof; Intrinsic Safety
Overall dimension: see fig.2.a



4. OPTIONAL

4.1 Brackets

4.1.1 2" pipe mount bracket

B15 optional selection code, see fig.4.1.1

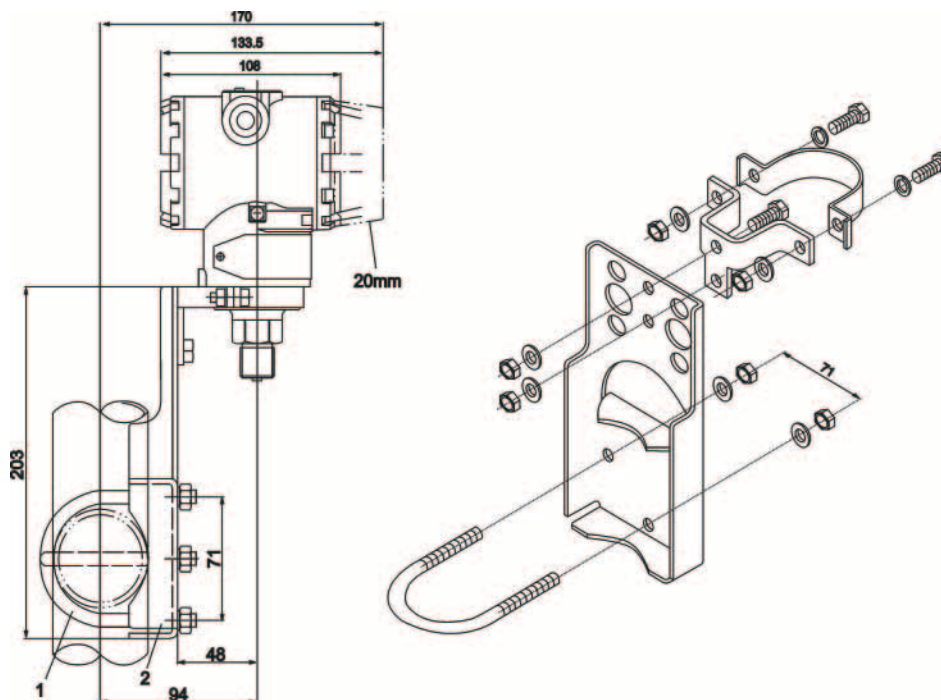


Fig.4.1.1

4.1.2 Panel mount bracket

B15 optional selection code, see fig.4.1.2

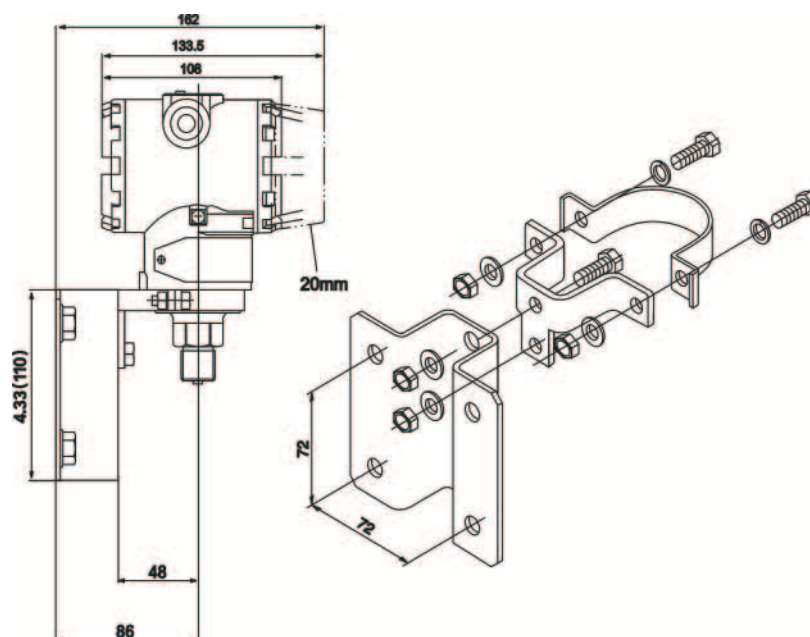


Fig.4.1.2



CERT. N. 2032308

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