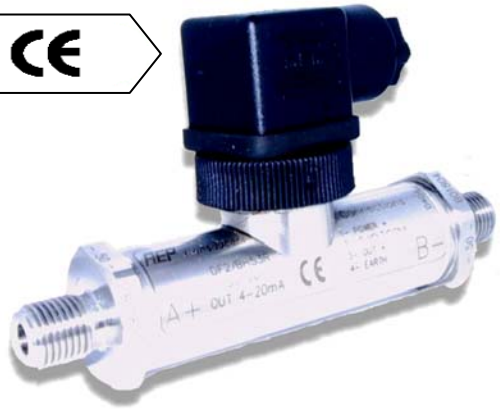
NORDIC TRANSDUCER

Data Sheet: DF2.422.R2-1104

DF2

DIFFERENTIAL Pressure transmitter



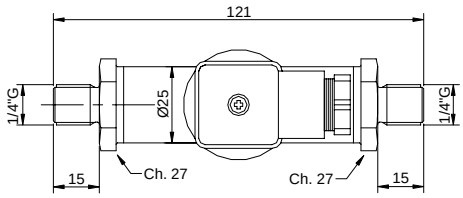
DIFFERENTIAL pressure transmitters of these series distinguish themselves for high reliability and long-term stability of mechanical and electrical features.
The sensitive part, in contact with pressure, is entirely made of 17-4 PH corrosion-proof stainless steel.
High vacuum thermal treatments which stainless steel is subjected to, ensure the correct functioning even when highly dynamic stresses are involved. Monolithic execution of measuring element, without any assembling via tight rings or gaskets, guarantees a high long-term stability, with negligible hysteresis and zero drift. Pressure is internally detected by two strain gauge full bridges, that guarantee the maintenance of performances even when dynamic stresses are involved.
Electronic section, realised via SMD technology, consists of a high precision instrumental amplifier and a stable supplier, protected against short circuits and polarity inversion.
Every pressure transmitter is entirely LASER welded and completely resin-encapsulated, to ensure insensitivity and a high degree of hermetic tight.
During production cycle, pressure transmitters are thermally compensated, tested and individually calibrated with the use of completely automated stations that analyse and record data.
These features make their use ideal in several industrial fields, as: pneumatic, hydraulic, food process control and, generally, whenever checking the difference between two exerted pressures is necessary.
They are installed on test benches, material testing machines, and used in research and development laboratories.

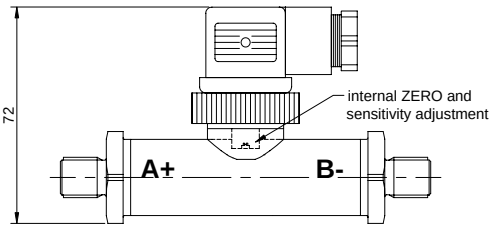
≤ ± 0.20% ***Linearity - Hysteresis***

For highly dynamic stresses.

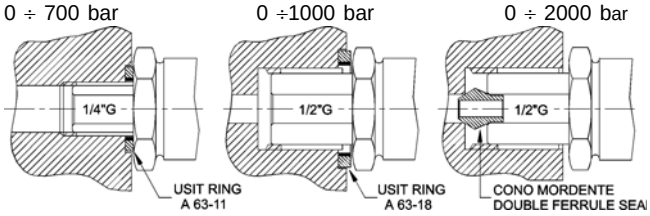
High resistance
High long term stability

Dimensions mm





Typical installation



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Technical Data

RELATIVE PRESSURE (R)	0.5 - 1 - 2.5 - 5 - 10 - 20 bar
ABSOLUTE PRESSURE (A)	50 - 100 - 250 - 350 - 500 - 700 bar *1000 - *1500 - *2000 bar
LINEARITY and HYSTERESIS	≤ ± 0.20 %
TEMPERATURE EFFECT (1°C) *a) on zero* *b) on sensitivity*	 ≤ ± 0.015% ≤ ± 0.015%
NOMINAL SENSITIVITY *CALIBRATION TOLERANCE*	4-20mA (*3 wires*) ± 5 V, ± 10 V ≤ ± 0.1%
NOMINAL POWER SUPPLY	4-20mA *and* ±5V ➡ 12-24Vdc ±10V ➡ 15-24Vdc
MAX. POWER SUPPLY *MAX. ABSORPTION* *a) 3 wires* *LOADING RESISTANCE:* *a) tension* *b) current* *INSULATION RESISTANCE* *ZERO BALANCE* *DIFFERENTIAL VARIABLE SENSITIVITY* *RESPONSE FREQUENCY*	28Vdc 30mA min. 3KΩ *from 0 to 470Ω* >2 GΩ ± 10% ADJ. ± 75% ADJ. *from 0.5 to 1 kHz*
LIMIT MECHANICAL VALUES REFERRED TO NOMINAL PRESSURE : *a) service pressure* *b) max. permissible pressure* *c) breaking pressure* *d) highly dynamic pressure*	 100% 150% >300% 75%
REFERENCE TEMPERATURE *WORKING TEMPERATURE RANGE* *STORAGE TEMPERATURE RANGE*	+23°C -10/+70°C -20/+80°C
PROCESS COUPLING *TIGHTENING WRENCH* *TIGHTENING TORQUE* *PROTECTION CLASS (EN 60529)* *SENSOR EXECUTION MATERIAL* *ELECTRICAL CONNECTION*	1/4"Gas (*1/2"Gas) *BSP Male* 27 mm 28 Nm IP65 INOX 17-4 PH *Connector DIN 43650 A/ISO 4400*

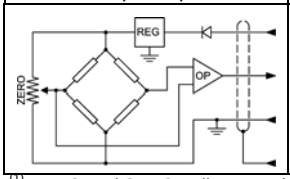
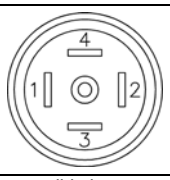
**In the version with mA output, when pressure increases in the port B-, the signal decreases down to 0.8mA then stops even if pressure continues to increase.*

Functioning example

		SIGNAL OUTPUT		
Port	**Pressure**	**4-20mA***	**±5V**	**± 10 V**
A + / B -	0 / 0	4 mA	0	0
A + / B -	FS / 0	20 mA	+ 5V	+ 10V
A + / B -	0 / FS	max 0.8 mA	- 5V	- 10V
A + / B -	FS / FS	4 mA	0	0

Electrical connections

3 wires SYSTEM

4-20mA, 0-5V, 0-10V	***OUTPUT DIN43650*** [1]
	

1 POWER+
2 0 Volt/SIG.-
3 OUT+
4 EARTH [2]

[1] *ZERO and SENS. adjustment is accessible by unscrewing the connector.*
[2] *Connected to body of the pressure transmitter.*

Dasa-Rägister
EN ISO 9001 (2000)
IQ-1100-01

Distributor:

NORDIC TRANSDUCER

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