

Differential Pressure Gauges with double diaphragm PN 200 bar

02.15 DS100-150



These instruments are used to check filter obstructions, pressure drops, flow rate differences, level, measurements and generally the difference between two pressures of equal or different circuits. The measuring element is formed by two diaphragms, acting on the same movement. In this way the pointer senses only the difference between the two pressures corresponding respectively to upstream and downstream pressure of the circuit.

Functional and constructive characteristics

Accuracy : 1,6 as per EN 837.

Scale amplitude: 180...270°, depending on the scale range.

Static pressure: 25...200 bar, depending on the scale range.

Ambient temperature : -25...+65 °C.

Process fluid temperature: max +150 °C.

Thermal drift: $\pm 0,8\%$ every ± 10 °C of ambient temperature.

Protection: IP55 as per IEC 529, UNI 8896.

Process connection: AISI 316L st.st.

Elastic element: AISI 316L st.st. double diaphragm.

Gasket: VITON and PTFE.

Case: AISI 304 st.st.

Ring: AISI 304 st. st. polished, bayonet lock.

Window: glass, 4 mm. thick.

Movement: stainless steel.

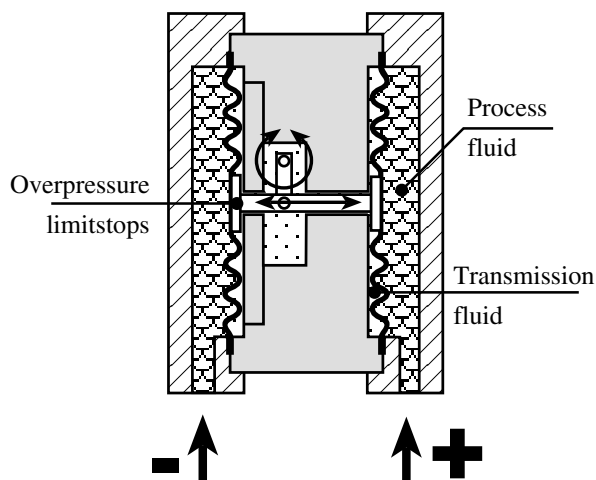
Dial: aluminium, white with black markings.

Pointer: aluminium, micrometric adjustable.

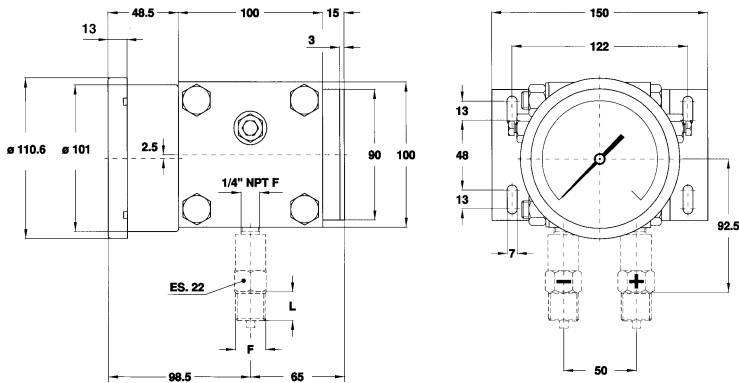
Window gasket and blow out vent: EPDM.

Operating principle

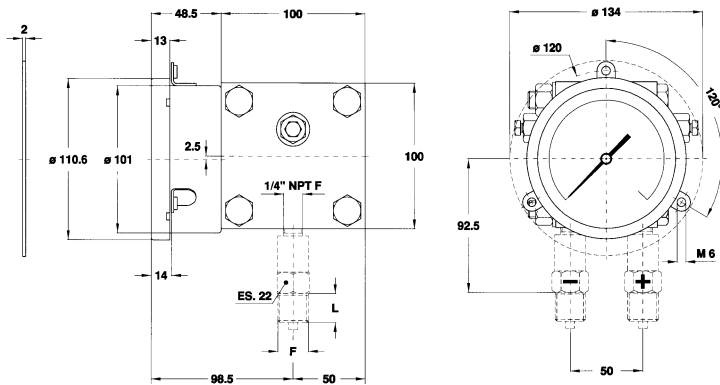
The double diaphragm measuring cell is characterized by a system of limitstops that closes and blocks the passage, obtaining in this way a liquid bed on which the measuring element stops. The linear shifting of the diaphragms is transformed, by leverages, in circular shifting and transmitted by the movement to the pointer.



TYPES, DIMENSIONS AND WEIGHTS



TYPE C
surface mounting, back flange;
lower connections.



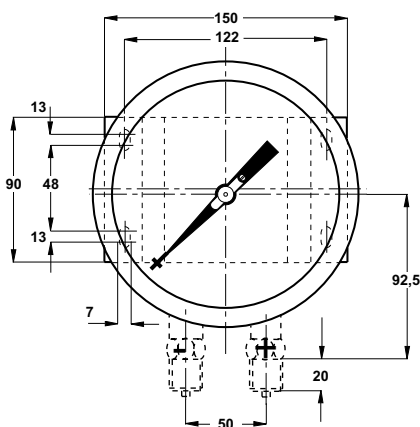
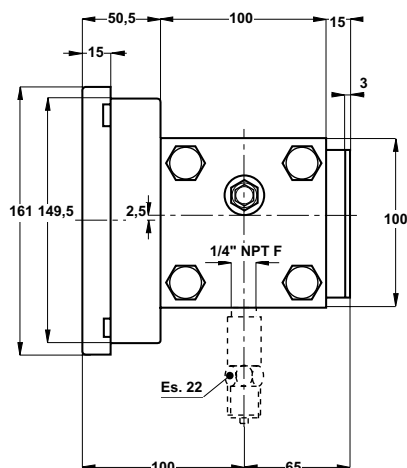
TYPE F
panel mounting, front flange;
lower connections.

02.15 DS100 : RANGES

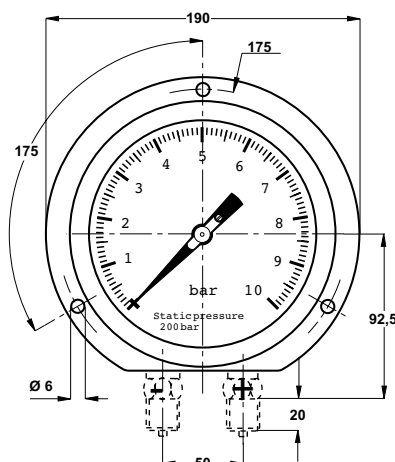
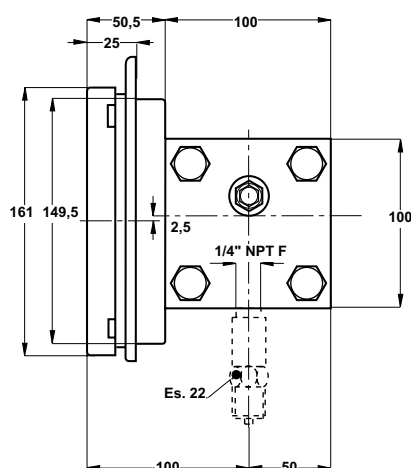
| mbar | mmH2O | bar (1) | kPa | MPa | Static pressure One side | Static pressure Both side | Scale amplitude |
|--------|---------|---------|--------|-------|-----------------------------|------------------------------|-----------------|
| 0/100 | 0/1000 | | 0/10 | | 25 bar | 100 bar | 180° |
| 0/160 | 0/1600 | | 0/16 | | 25 bar | 100 bar | 180° |
| 0/250 | 0/2500 | | 0/25 | | 100 bar | 200 bar | 270° |
| 0/400 | 0/4000 | | 0/40 | | 200 bar | 200 bar | 270° |
| 0/600 | 0/6000 | 0/0,6 | 0/60 | | 200 bar | 200 bar | 270° |
| 0/1000 | 0/10000 | 0/1 | 0/100 | | 200 bar | 200 bar | 270° |
| 0/1600 | | 0/1,6 | 0/160 | | 200 bar | 200 bar | 270° |
| | | 0/2,5 | 0/250 | | 200 bar | 200 bar | 270° |
| | | 0/4 | 0/400 | | 200 bar | 200 bar | 270° |
| | | 0/6 | 0/600 | | 200 bar | 200 bar | 270° |
| | | 0/10 | 0/1000 | 0/1 | 200 bar | 200 bar | 270° |
| | | 0/16 | 0/1600 | 0/1,6 | 200 bar | 200 bar | 270° |
| | | 0/25 | 0/2500 | 0/2,5 | 200 bar | 200 bar | 270° |

(1) Available also M.U.: kg/cmq; bar/psi; bar/kPa; bar/MPa.

TYPES, DIMENSIONS AND WEIGHTS



TYPE C
surface mounting, back flange;
lower connections.



TYPE E
panel mounting, front flange;
lower connections.

02.15 DS150 : RANGES

| mbar | mmH2O | bar (1) | kPa | MPa | Static pressure One side | Static pressure Both side | Scale amplitude |
|--------|---------|---------|--------|-------|-----------------------------|------------------------------|-----------------|
| 0/100 | 0/1000 | | 0/10 | | 25 bar | 100 bar | 180° |
| 0/160 | 0/1600 | | 0/16 | | 25 bar | 100 bar | 180° |
| 0/250 | 0/2500 | | 0/25 | | 100 bar | 200 bar | 180° |
| 0/400 | 0/4000 | | 0/40 | | 200 bar | 200 bar | 180° |
| 0/600 | 0/6000 | 0/0,6 | 0/60 | | 200 bar | 200 bar | 270° |
| 0/1000 | 0/10000 | 0/1 | 0/100 | | 200 bar | 200 bar | 270° |
| 0/1600 | | 0/1,6 | 0/160 | | 200 bar | 200 bar | 270° |
| | | 0/2,5 | 0/250 | | 200 bar | 200 bar | 270° |
| | | 0/4 | 0/400 | | 200 bar | 200 bar | 270° |
| | | 0/6 | 0/600 | | 200 bar | 200 bar | 270° |
| | | 0/10 | 0/1000 | 0/1 | 200 bar | 200 bar | 270° |
| | | 0/16 | 0/1600 | 0/1,6 | 200 bar | 200 bar | 270° |
| | | 0/25 | 0/2500 | 0/2,5 | 200 bar | 200 bar | 270° |

(1) Available also M.U.: kg/cmq; bar/psi; bar/kPa; bar/MPa.

OPTIONS - "E" = DS100; "G" = DS150.

| Description | Code | 02.15 | Notes |
|---|------|-------|---|
| Inductive and mechanical electric contacts (amplitude 180°) | --- | G | Codes, descriptions and wiring on data-sheet MN14 |
| AISI 316 st.st. case and ring | C40 | EG | |
| MONEL 400 diaphragm and process connections | D10 | EG | accuracy 2,5% F.S.V. for pressure ranges < 400 mbar |
| NACE MR01.75 version | E30 | EG | to be ordered with MONEL 400 diaphragm (code M23) |
| Protection IP65 | E65 | EG | |
| Maximum pointer IP65 | L22 | EG | to be ordered with Plexiglas window (code T31) |
| MONEL 400 diaphragms | M23 | EG | accuracy 2,5% F.S.V. for pressure ranges < 400 mbar |
| Oxygen service | P02 | EG | Filling of internal chamber with Fluorolube |
| Special dial | Q01 | EG | |
| Case glycerine filling (Ambient Temperature +15...+65). | R10 | EG | |
| Silicone glycerine filling (Ambient Temperature -40...65) | R11 | EG | window gasket and blow out vent: VITON |
| 2" pipe mounting bracket | S31 | EG | mounting type "C" only |
| Tropicalization | T01 | EG | |
| Stainless steel label | T25 | EG | |
| Plexiglas window | T31 | EG | |
| Safety glass window | T32 | EG | |

OPTIONS FOR REMOTE MOUNTING, WITH DIAPHRAGM SEAL - "E" = DS100; "G" = DS150.

| Description | Code | 02.15 | Notes |
|--|------|-------|--|
| n.2 diaphragm seals mounting (1) | M30 | EG | with diaphragms > Ø63 mm. only (models 04.1B0-3B0-600) |
| St.st. capillary, covered with st.st. armour, 1 mt | CP1 | EG | |
| St.st. capillary, covered with st.st. armour, 2 mt | CP2 | EG | |
| St.st. capillary, covered with st.st. armour, 3 mt | CP3 | EG | |
| St.st. capillary, covered with st.st. armour, 4 mt | CP4 | EG | for pressure ranges 0 / 250 mbar |
| St.st. capillary, covered with st.st. armour, 5 mt | CP5 | EG | for pressure ranges 0 / 250 mbar |
| St.st. capillary, covered with st.st. armour, 6 mt | CP6 | EG | for pressure ranges 0 / 400 mbar |

(1) for pressure ranges < 250 mbar call Technical Service.

HOW TO ORDER

| | |
|------------------|---|
| 02 | 02- differential and low pressure gauges |
| 15 | 15- differential pressure gauges, double diaphragm |
| 1 | standard case |
| C | C - lower connections - back flange E - lower connections - front flange (DS150 only) F - lower connections - front flange (DS100 only) |
| E | E - DS100 G - DS150 |
| 0 | ranges: from 100 mbar to 25 bar |
| 0...1 bar | see ranges table |
| 41M | 23M - 1/4" NPTF 41M - 1/2" BSPM 43M - 1/2" NPTM |
| C40 | see Options tables |



DRUCK & TEMPERATUR Leitenberger GmbH
Postfach 64 · D-72136 Kirchentellinsfurt · Germany
Tel.: 07121 - 90920 - 0 · Fax: 07121 - 90920 - 99
E-Mail: dt-info@leitenberger.de
INTERNET-Site: <http://www.leitenberger.de>