

**differential pressure gauges PN 100
with single diaphragm
DS 6" (150mm)**



PED 2014/68/UE ATEX 2014/34/UE TP TC 012/2011

These instruments are designed for measuring differential pressures of gases and liquids which do not have high viscosity and do not crystallize.

2.13 - Standard Model

Accuracy class: 2,5 as per EN 837.

Scale amplitude: 180°.

Static Pressure: max 1500 psi (100 bar).

Ambient temperature:

-4...+149 °F (-20...+65 °C), IP55 housing (IEC 529);

-63...+149 °F (-53...+65 °C), vented IP65/67 housing (IEC 529);

-76...+149 °F (-60...+65 °C), silicon oil filled.

Process fluid temperature: +302°F (-40...+150 °C).

Thermal drift: ±0,8% applied to variations of ±10 °C

Protection degree: IP 55 as per EN 60529/IEC 529.

Socket material: AISI 316L st.st.

Elastic element: Duratherm diaphragm.

Gasket: VITON and PTFE.

Case: stainless steel

Ring: stainless steel, bayonet lock

Window: tempered glass.

Movement: stainless steel.

Dial: aluminium, white with black markings

Pointer: adjustable, aluminium, black.

Weight: 12.12 lbs (4,8 kg).

RANGE	mbar	mmH ₂ O	bar	kPa
0...0,4			◆	
0...0,6			◆	
0... 1			◆	
0...1,6			◆	
0...2,5			◆	
0...4			◆	
0...6			◆	
0...10			◆	
0...16			◆	
0...25			◆	
0...40				◆
0...60				◆
0...100				◆
0...160				◆
0...250				◆
0...400	◆			◆
0...600	◆			◆
0...1000	◆			◆
0...1600	◆			
0...2500	◆			
0...4000		◆		
0...6000		◆		
0...10000		◆		

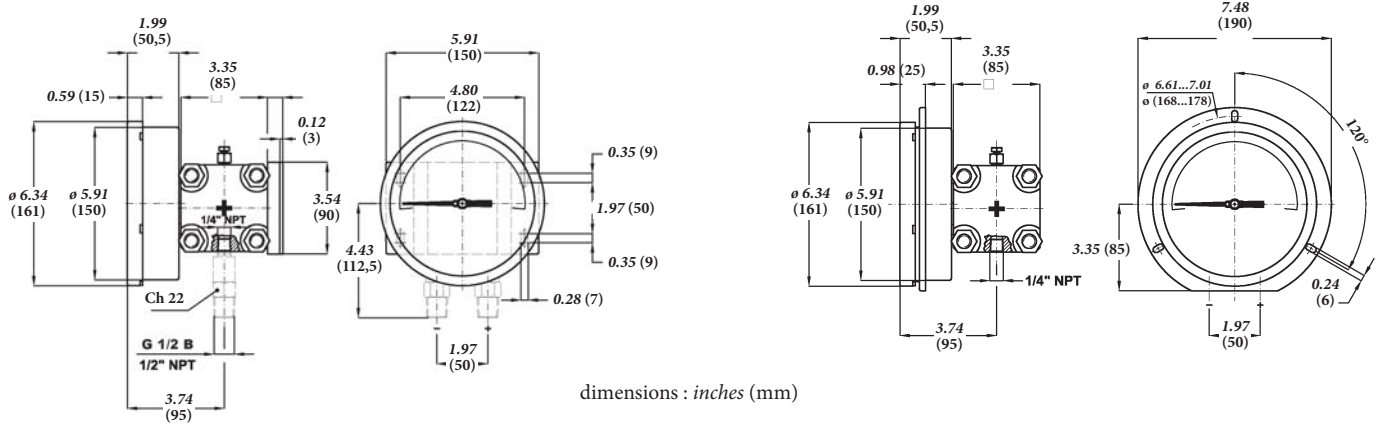


ISO 9001 : 2015
Cert. nr. 0433/7

**differential pressure gauges PN 100
with single diaphragm, DS 6" (150mm)**

**MD13
(MD15/13)**

RC6-0172



dimensions : inches (mm)

Lower (Mounting code **A**) , with back flange (Option code **C**)

Lower (Mounting code **A**) , with front flange (Option code **E**)

OPTIONS

C - Back flange	R10 - Case glycerine filling - IP 65/67 - T.a. 0...+65 °C
E - Front flange	R11 - Case filling with silicon oil - IP 65/67 - T.a. -20...+65 °C
C40 - Case and ring AISI 316L st.st.	S31 - 2" pipe mounting bracket
E67 - Protection degree IP65/67	T01 - Tropicalization
L22 - Maximum pointer IP65 on Plexiglas window	T32 - Safety glass window
2G2 - ATEX II 2G Ex h - T.a. -20...+60 °C (1)	ECV - Vented housing version - T.a. -53...+65 °C (6) (7)
2D2 - ATEX II 2G Ex h - T.a. -20...+60 °C (1, 2)	S60 - Silicone oil filling - IP 65/67 - T.a. -60...+65 °C
2D0 - ATEX II 2G Ex h - T.a. 0...+60 °C (1, 3)	
2D5 - ATEX II 2G Ex h - T.a. -53...+60 °C (1, 4)	
2D6 - ATEX II 2G Ex h - T.a. -60...+60 °C (1, 5)	

(1) For constructive details see ATEX execution catalogue sheet
(2) to be ordered with R11 option
(3) to be ordered with R10 option
(4) to be ordered with ECV + E67 option

(5) to be ordered with S60 option
(6) to be ordered with E67 option
(7) choose model with filled case if corrosive atmospheres are involved

“HOW TO ORDER” SEQUENCE

Section / Model / Case / Mounting / Diameter / Special version / Range / Process connection / Options
2 13 1 A G --- 41M - G 1/2 A M C, E
43M - 1/2" NPT M C40...S60
23F - 1/4" NPT F

differential pressure gauges PN 200 with double diaphragm DS 4", 6" (100-150mm)



PED 2014/68/UE ATEX 2014/34/UE TP TC 012/2011

These instruments are used to measure differential pressures of gaseous liquids which do not have high viscosity and do not crystallize. They can be combined with a diaphragm seal when high temperature liquids, highly viscous and corrosive process fluids or fluids that may crystallize are involved.

2.15.1 - Standard Model

Ranges: from 0...40 IN H₂O to 0...300 psi (from 0...0,1 bar to 0...25 bar, or other equivalent unit).

Accuracy class: 1,6 as per EN 837.

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

Static pressure: 300...3000 psi (25...200 bar), depending on the scale range.

Ambient temperature: +32...+149°F (0...+65 °C).

Process fluid temperature: +302°F (+150 °C).

Thermal drift: ±0,8% every ±50°F (±10 °C) of ambient temperature

Protection degree: IP 55 as per EN 60529/IEC 529.

Socket material: AISI 316L st.st.

Elastic element: AISI 316L st.st. double diaphragm for pressure ranges < 250 mbar; AISI 316L st.st./Duratherm double diaphragm for pressure ranges ≥ 250 mbar

Gasket: VITON and PTFE.

Case: stainless steel.

Ring: stainless steel, polished, bayonet lock.

Window: tempered glass.

Movement: stainless steel.

Dial: aluminium, white with black markings

Pointer: adjustable, aluminium, black

RANGE	Static pressure, one side : psi (bar)	Static pressure, both side : psi (bar)	Scale amplitude DS 4" (100mm)	Scale amplitude DS 6" (150mm)
(0...0,1 bar)	360 (25)	1500 (100)	180°	180°
(0...0,16 bar)	360 (25)	1500 (100)	180°	180°
0...4 psi (0...0,25 bar)	1500 (100)	3000 (200)	270°	180°
0...6 psi (0...0,4 bar)	1500 (100)	3000 (200)	270°	180°
0...10 psi (0...0,6 bar)	1500 (100)	3000 (200)	270°	270°
0...15 psi (0...1 bar)	1500 (100)	3000 (200)	270°	270°
(0...1,6 bar)	1500 (100)	3000 (200)	270°	270°
0...30 psi (0...2,5 bar)	1500 (100)	3000 (200)	270°	270°
0...60 psi (0...4 bar)	1500 (100)	3000 (200)	270°	270°
0...100 psi (0...6 bar)	1500 (100)	3000 (200)	270°	270°
0...160 psi (0...10 bar)	1500 (100)	3000 (200)	270°	270°
0...250 psi (0...16 bar)	1500 (100)	3000 (200)	270°	270°
0...300 psi (0...25 bar)	1500 (100)	3000 (200)	270°	270°



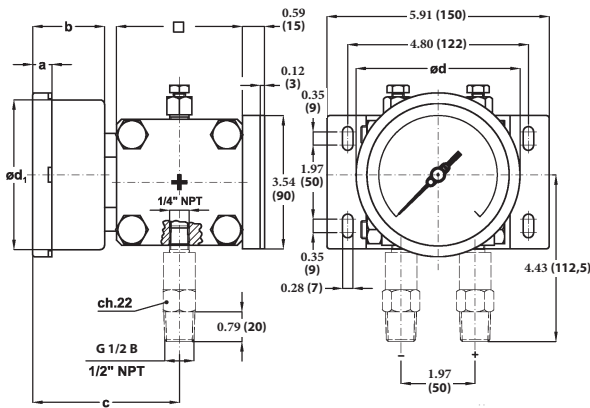
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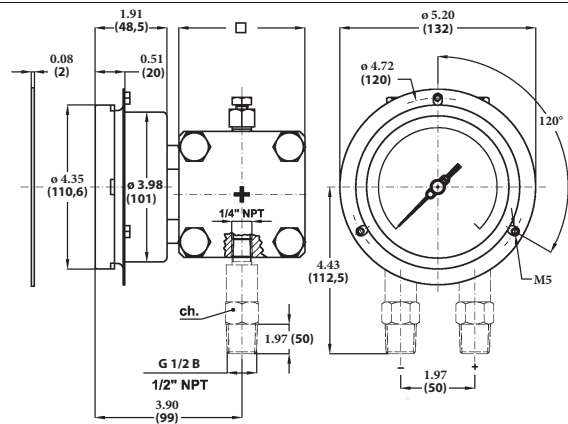
-1-

differential pressure gauges PN 200
with double diaphragm, DS 4", 6" (100-150mm)

MD15



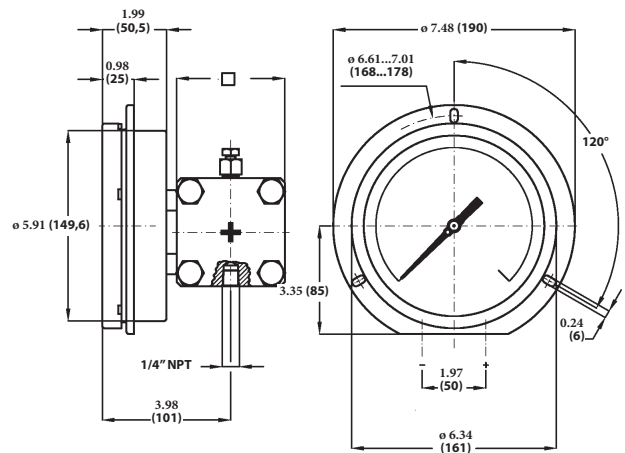
Lower (Mounting code **A**), with back flange
(Option code **C**): DS 4", 6" (100-150mm)



Lower (Mounting code **A**), with front flange (Option code **F**): DS 4" (100mm)

DS	a	b	d	d ₁	□		Weight : lbs (kg)
					≤ 0,16 bar	> 0,16 bar	
E 4" (100)	0.51" (13)	1.90" (48,5)	4.35" (110,5)	3.97" (101)	3.93" (100)	3.34" (85)	10.36" (4,7)
G 6" (150)	0.59" (15)	1.96" (50,5)	6.33" (161)	5.88" (149,5)	3.93" (100)	3.34" (85)	11.24" (5,1)

dimensions : inches (mm)



Lower (Mounting code **A**), with front flange (Option code **E**): DS 6" (150mm)

OPTIONS

C - Back flange for DN100-150 instruments	D10 - Elastic element and connection in MONEL 400 (2)
E - Front flange for DN150 instruments	M23 - Protection diaphragm in Monel 400 (2)
Electric contacts for DN 150 (amplitude 180°) (1)	T01 - Tropicalization
E30 - NACE version MR0103 - ISO17945 (3)	T32 - Safety glass window
R10 - Case filling using glycerine - IP 65/67 - T.a. 0...+65 °C (6)	C40 - Case and ring in AISI 316L st.st.
R11 - Case filling using silicon oil - IP 65/67 - T.a. 0...+65 °C (4, 6)	2G0 - ATEX Ex II 2G h - T.a. 0...+60 °C (5, 6)
S31 - 2" pipe mounting bracket	2D0 - ATEX Ex II 2GD h - T.a. 0...+60 °C (5, 6)
E67 - Protection degree IP 65/67	

- (1) For features and connections see catalogue sheet model MN14
(2) Accuracy 2,5 as per EN837, for ranges < 160 IN H₂O (400 mbar)
(3) To be ordered with Monel 400 or Hastelloy C diaphragms

- (4) Viton window gasket and blow out vent
(5) See ATEX execution catalogue sheet
(6) Electric contacts are not available

"HOW TO ORDER" SEQUENCE

Section / Model / Case / Mounting / Diameter / Special version / Range / Process connection / Options
2 15 1 A E --- 41M - G 1/2 A M C...E
G D10 43M - 1/2" NPT M E30...2D0
43F - G 1/2 F

**differential pressure gauges PN 100
with double diaphragm
DS 4", 6" (100-150mm)**



PED 2014/68/UE ATEX 2014/34/UE

These instruments are used to measure the differential pressure of gaseous and liquid fluids which are not highly viscous or do not crystallize. The double membrane measuring cell features a system composed of two blocking devices which, in case of unilateral overpressure, create a liquid layer which support the measuring element. The linear movement of the membrane is turned into a circular movement by a lever and transmitted to the pointer by an amplifying movement.

2.16.1 - Standard Model

Accuracy class: 2,5 as per EN 837.

Scale amplitude: 180°.

Static pressure: 1500 psi max (100 bar).

Ambient temperature: -40...+149°F (-40...+65 °C).

Process fluid temperature: +302°F (+150 °C).

Protection: IP 55 as per EN 60529/IEC 529.

Process connection: AISI 316L st.st.

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

Gasket: VITON and PTFE.

Case: stainless steel.

Ring: stainless steel polished, bayonet lock.

Window: glass.

Movement: stainless steel.

Dial: aluminium, white with black markings.

Pointer: aluminium, micrometric adjustable.

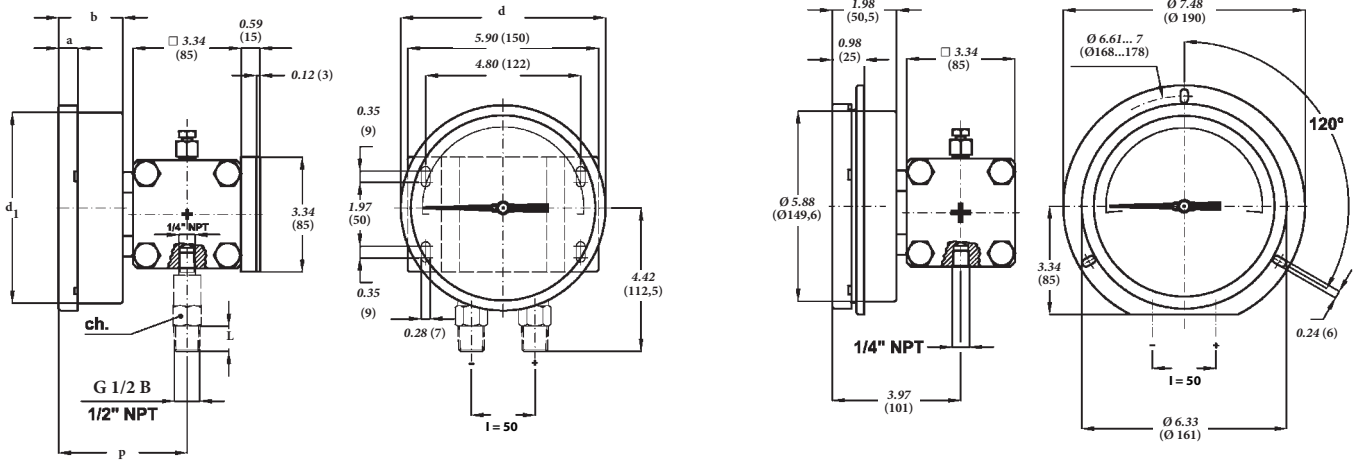
RANGES	mbar	mmH2O	bar	kPa	psi
0...0,4			♦		
0...0,6			♦		
0...1			♦		
0...1,6			♦		
0...2,5			♦		
0...4			♦		♦
0...6			♦		♦
0...10			♦		♦
0...15					♦
0...30					♦
0...40				♦	♦
0...60				♦	♦
0...100				♦	♦
0...160				♦	♦
0...200					♦
0...250				♦	♦
0...300					♦
0...400	♦			♦	
0...600	♦			♦	
0...1000	♦			♦	
0...1600	♦				
0...4000		♦			
0...6000		♦			
0...10000		♦			



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**differential pressure gauges PN 100 with double diaphragm,
DS 4", 6" (100-150mm)**

MD16



**Lower (Mounting code A) , with back flange
(Option code C): DS 4", 6" (100-150mm)**

**Lower (Mounting code A) , with front flange (Option code
F : DS 4" - 100mm; Option code E : DS 6" - 150mm)**

dimensions : inches (mm)

Mounting	DS	F	a	b	d	d ₁	p	L	ch	Weight lbs (kg)
Wall	E 4" (100mm)	41M G 1/2 A	0.51 (13)	1.91 (48,5)	4.35 (110,5)	3.98 (101)	3.88 (98,5)	0.79 (20)	0.87 (22)	10.71 (4,86)
Wall	G 6" (150mm)		0.59 (15)	1.99 (50,5)	6.34 (161)	5.89 (149,5)	3.97 (101)	0.79 (20)	0.87 (22)	11.79 (5,35)
Panel	G 6" (150mm)		43M 1/2-14 NPT	1 (25,5)	1.99 (50,5)	6.34 (161)	5.89 (149,5)	3.97 (101)	0.79 (20)	0.87 (22)

OPTIONS

C - Back flange	P02 - Oxygen service (5)
F - Front flange for DN100 instruments	R10 - Glycerine filled case. Ambient temp. +32...+149°F (0...+65 °C). (8)
E - Front flange for DN150 instruments	R11 - Silicon oil filled case. Ambient temp. -40...+149°F (-40...+65 °C). (6) (8)
C40 - AISI 316L st.st. case and ring	S31 - 2" pipe mounting bracket
E30 - NACE MR0175 version (ISO 15156) (2)	T01 - Tropicalization
E65 - Protection IP65 (3) (8)	T32 - Safety glass window (8)
L22 - Maximum pointer IP65 (4)	2G9 - ATEX versions : II 2G c (8) (9)
M23 - MONEL 400 diaphragms	2D9 - ATEX versions : II 2GD c (8) (9)
Mechanical electric contacts (1)	054 - Centre-to-centre distance "I" = 54 mm

(1) Codes, descriptions and wiring on data-sheet MN14

(2) Available for ranges ≥ 1 bar. To be ordered with Monel 400 diaphragm.

(3) To be ordered with Plexiglas window

(4) Available only for ranges ≥ 1 bar

(5) Filling of internal chamber with Fluorolube

(6) Window gasket and blow out vent: VITON

(8) Not available with electric contacts

(9) For constructive details see ATEX execution data-sheet

"HOW TO ORDER" SEQUENCE

Section / Model / Case / Mounting / Diameter / Special version / Range / Process connection / Options
2 16 1 A E --- 41M - G 1/2 A M C, E
G 43M - 1/2" NPT M C40...054
23F - 1/4" NPT F

**differential pressure gauges PN 400
with double diaphragm
DS 4", 6" (100-150mm)**



PED 2014/68/UE ATEX 2014/34/UE

These instruments are used to check filter obstructions, pressure drops, flow rate differences, level, measurements and generally the difference between two pressures of equal of 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 circuit pressure.

2.17.1 - Standard Model

Accuracy class: 1,6 as per EN 837.

Scale amplitude: 270°.

Static Pressure: 6000 *psi max* (400 bar).

Ambient temperature: -40...+149°F (-40...+65 °C).

Process fluid temperature: +302°F (+150 °C).

Thermal drift: ± 0,8 % every ±50°F (± 10° C) of ambient temperature

Protection degree: IP 55 as per EN 60529/IEC 529.

Socket material: AISI 316L st.st.

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

Gasket: VITON and PTFE.

Case: stainless steel.

Ring: stainless steel, bayonet lock.

Window: tempered glass.

Movement: stainless steel.

Dial: aluminium, white with black markings

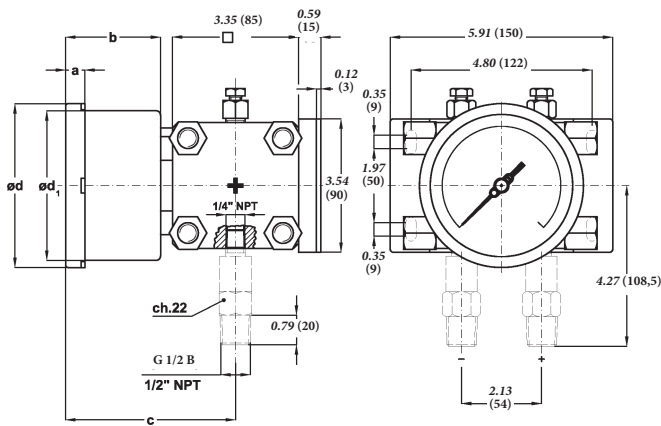
RANGE	Static pressure, one side : <i>psi (bar)</i>	Static pressure, both side : <i>psi (bar)</i>
(0...0,4 bar)	3500 (250)	6000 (400)
0...10 <i>psi</i> (0...0,6 bar)	3500 (250)	6000 (400)
0...15 <i>psi</i> (0...1 bar)	3500 (250)	6000 (400)
(0...1,6 bar)	3500 (250)	6000 (400)
0...30 <i>psi</i> (0...2,5 bar)	3500 (250)	6000 (400)
0...60 <i>psi</i> (0...4 bar)	3500 (250)	6000 (400)
0...100 <i>psi</i> (0...6 bar)	3500 (250)	6000 (400)
0...160 <i>psi</i> (0...10 bar)	3500 (250)	6000 (400)



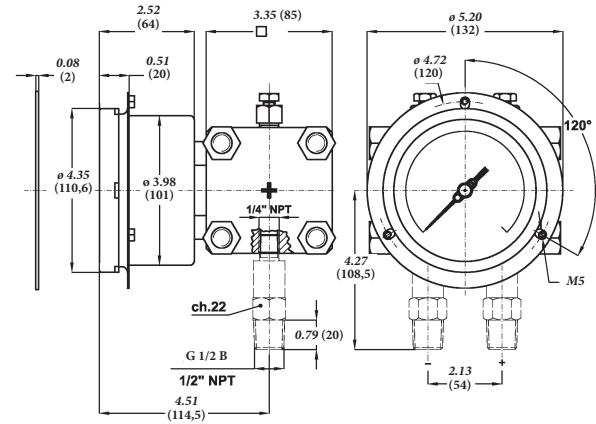
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differential pressure gauges PN 400
double diaphragm, DS 4", 6" (100-150mm)

MD17



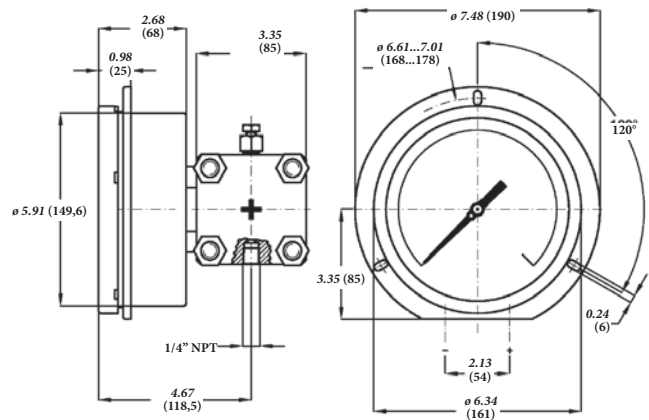
Lower (Mounting code A), with back flange
(Option code C): DS 4", 6" (100-150mm)



Lower (Mounting code A), with front flange (Option code F): DS 4" (100mm)

DS	a	b	c	d	d ₁	Weight : lbs (kg)
E 4" (100)	0.51" (13)	2.52" (64)	4.51" (114,5)	4.35" (110,6)	3.97" (101)	11.9" (5,4)
G 6" (150)	0.59" (15)	2.68" (68)	4.67" (118,5)	6.33" (161)	5.88" (149,6)	12.78" (5,8)

dimensions : inches (mm)



Lower (Mounting code A), with front flange (Option code E): DS 6" (150mm)

OPTIONS

C - Back flange for DN100-150 instruments	L22 - Maximum pointer IP 65 on plexiglas window (3) (6)
F - Front flange for DN100 instruments	M23 -Protection diaphragm MONEL 400 (4)
E - Front flange for DN150 instruments	R10 - Case glycerine filling. Ambient temp. +32...+149°F (0...+65 °C). (6)
Electric contacts (amplitude 180°) (1)	R11 - Case filling with silicon oil. Ambient temp. -40...+149°F (-40...+65 °C). (6)
C40 - Case and ring AISI 316L st.st.	S31 - 2" pipe mounting bracket
E30 - NACE version MR0103/MR0175 (ISO 15156) (2)	T32 - Safety glass window (6)
E65 - Protection degree IP 65 (6)	2D9 - Execution: ATEX : II 2GD c
2G9 - Execution: ATEX : II 2G c (5) (6)	

(1) Codes, descriptions and wiring on data-sheet MN14

(2) To be ordered with Monel 400 or Hastelloy C diaphragms

(3) To be ordered with plexiglas window

(4) Accuracy 2,5 secondo EN 837

(5) For constructive details see ATEX execution data-sheet

(6) Not available with electric contacts

"HOW TO ORDER" SEQUENCE

Section / Model / Case / Mounting / Diameter / Special version / Range / Process connection / Options
2 17 1 A E --- 41M - G 1/2 A M C...E
G 43M - 1/2" NPT M C40...2D9
43F - 1/2" NPT F