autocontrol process instrumentation

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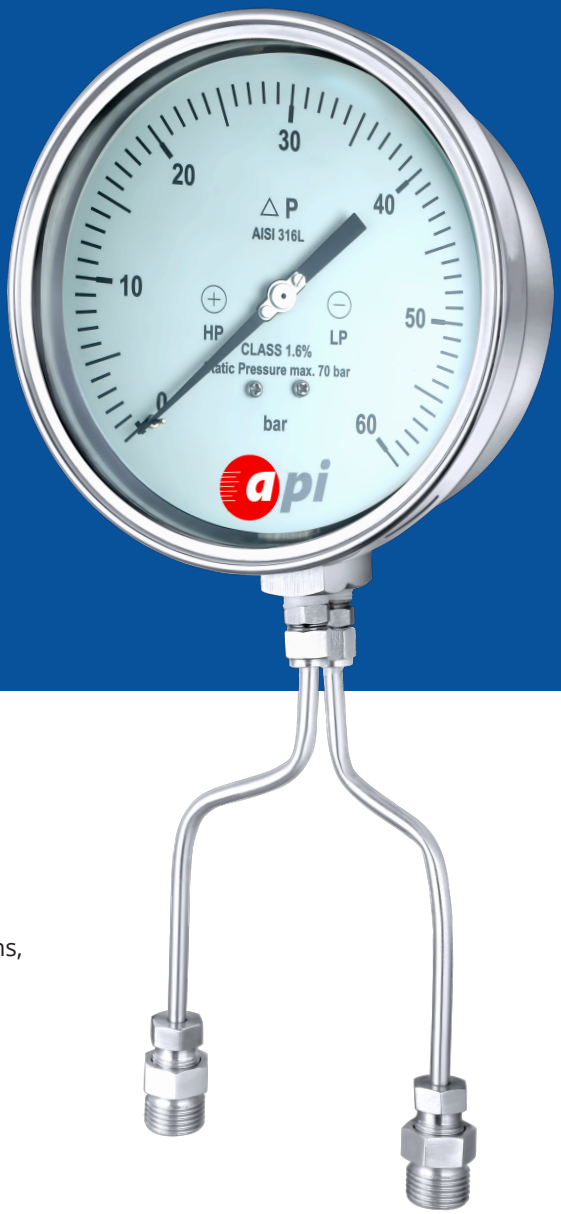
DOUBLE BOURDON DIFFERENTIAL PRESSURE GAUGE

MODEL M2.04



PRODUCT DESCRIPTION

Differential Pressure Gauge consists essentially of two opposing bourdon tubes, each having its own connection but operating a common pointer that shows the difference between the two pressures. These instruments are used to check filter Obstructions, pressure drops, flow rate differences, level, measurements. The modular design enables a multitude of combinations of case materials, process connections, nominal sizes and scale ranges.

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DOUBLE BOURDON DIFFERENTIAL PRESSURE GAUGE

MODEL M2.04

KEY FEATURES

- All SS measuring system
- Optional Electric contact version
- Dry & liquid filled
- ATEX approved II 2 GD Ex h T6
- Standard Followed EN 837-1
- Liquid-filled for applications with pulsations or vibrations

SPECIFICATIONS

Design Standard	:	According to EN 837-1
Sensing Element	:	Double Bourdon
Accuracy	:	± 1.6 % of Span (Standard)
Dial Size	:	150mm (6")
Pressure Range	:	0...1 bar up to 0...100 bar
Process Conn. Location	:	Direct ,bottom connection
Process Conn. Size & Type	:	¼" NPT (F) (Other sizes on request)
Mounting	:	Direct bottom Connection
Service Temperature	:	250 °C max.
Ingress Protection	:	IP68
Approvals	:	Atex

MATERIAL OF CONSTRUCTION

Case & Bezel Ring	:	SS 304 (Bayonet type)
Process Connection	:	SS 316L
Accuracy	:	± 1% of Span
Movement	:	SS 304
Bourdon tube & shanks	:	SS 316L
Pointer	:	Aluminum, Black colored Micrometer zero adjustable
Dial	:	Aluminum, Black graduation on white background
Window	:	Shatter proof safety Glass
Window gasket & Filling plug	:	Neoprene

APPLICATION

- Refinery
- Nuclear
- Aerospace
- Fertilizer
- Petrochemicals
- Pharmaceuticals
- Power
- Cement
- Chemical
- Sugar
- Food & Beverages
- Paper & Allied process industries

PRESSURE LIMITS

Steady Pressure	:	Up to FSD
Fluctuating Pressure	:	90% FSD
Over Range Pressure	:	130% FSD

TEMPERATURE LIMITS

Version	Ambient	Process
Dry	-40 to 65 °C	Max. 200 °C
Glycerin filled	Max. 65 °C	Max. 65 °C
Silicone filled	Max. 165 °C	Max. 165 °C

Note: The variation of indication caused by the effect of temperature shall not exceed: ± 0.4% / 10K FS

CASE FILLING (OPTIONAL)

The gauges can be filled with different kind of fill fluids. Available fill fluids are:

- Glycerin fluid (99.7%)
- Silicon fluid
- Other fill fluids can be offered on request

CERTIFICATION & APPROVALS

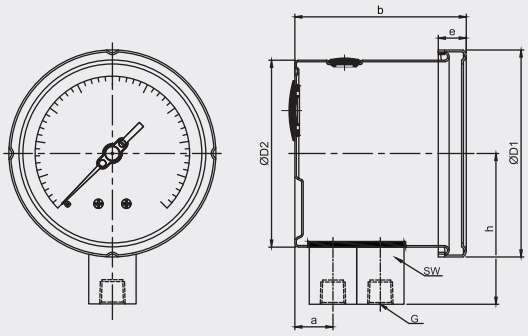
Calibration Certificate	:	Gauges are factory calibrated to full range by default 5-Point Calibration Cert.
Material Certification	:	Only For Wetted parts With Chemical Composition
NACE Compliance	:	Available as per MR 01 75/ MR 01 03 (ISO 15156) for wetted parts (Optional)
Approvals	:	ATEX: Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6 (Optional)

DOUBLE BOURDON DIFFERENTIAL PRESSURE GAUGE

MODEL M2.04

DIMENSIONAL DRAWINGS

Direct, Bottom Connection



NS	Dimensions in mm								Weight in gm	
	a	b	ØD1	ØD2	e	h±1	G	SW	Dry Version	Glycerin Version
150	16	96	161	148	17	102	1/4"	22	6835	6870

Important Notes: Above drawings are not to scale. All Dimension are in mm

TABLE-1 PRESSURE RANGE

bar		kg/cm2		kPa		MPa	
Code	Range	Code	Range	Code	Range	Code	Range
BR35	0…1	KG35	0…1	KP35	0…100	MP35	0…0.1
BR36	0…1.6	KG36	0…1.6	KP36	0…160	MP36	0…0.16
BR38	0…2.5	KG38	0…2	KP38	0…250	MP38	0…0.25
BR40	0…4	KG40	0…2.5	KP40	0…400	MP40	0…0.4
BR42	0…6	KG42	0…4	KP42	0…600	MP42	0…0.6
BR45	0…10	KG45	0…6	KP45	0…1000	MP45	0…1
BR50	0…16	KG50	0…10	KP47	0…1600	MP50	0…1,6
BR52	0…25	KG52	0…16	KP49	0…2500	MP50	0…2.5
BR55	0…40	KG55	0…16	KP51	0…4000	MP50	0…4
BR58	0…60	KG58	0…16	KP53	0…6000	MP50	0…6
BR60	0…70	KG60	0…16	KP55	0…7000	MP50	0…7
BR62	0…100	KG62	0…16	KP57	0…10000	MP50	0…10

DOUBLE BOURDON DIFFERENTIAL PRESSURE GAUGE

MODEL M2.04

MODEL CODING & ORDERING INFORMATION

Description	CODE	M2.04	6	1	B	14NF	XXX	X16
Model								
Double Bourdon Differential Pressure Gauge	M2.04	M2.04						
Dial Size								
100 mm (4")	4							
150 mm (6")	6		6					
Version								
Dry (but fillable)	1			1				
Glycerin filled	2							
Silicon Oil filled	3							
Type of Mounting/Connection Orientation								
Direct Bottom connection	B				B			
Process Connection (Size & Type)								
¼" BSP (F)	14BF							
¼"' NPT (F)	14NF					14NF		
(Note: For ½" connections possible in tubing only)								
Range								
To be selected from Table 1								
(Other custom ranges available on request)	XXX						XXX	
Other Options								
Back flange for bottom mounting (AISI 304)	XBF							
2" Pipe mounting bracket for bottom mounting (AISI 304)	XB4							
2" Pipe mounting bracket for bottom mounting (AISI 316)	XB6							
Bourdon & socket in Monel 400	XM4							
Window in Toughened glass	XWT							
Tag number marking on Dial	XTM							
ATEX Conformity acc. to RL 2014/34/EU II 2 GD Ex h T6	XAT							
Solid front version with Baffle Wall/Plate	XSF							
Movement in AISI 316	X04							
Calibration Certificate	X16							X16
Material test certificate	X17							
Wetted parts complied to NACE	X20							
Certificate for Oxygen Service	X21							
Custom Dial Design / Private labeling	X29							
Case & Bezel ring in AISI 316	X31							

SAMPLE ORDERING CODE:

M2.04-6.1.B.14NF.XXX.X16

Note: Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and material specified may be replaced by others without prior notice.