

F5509, F6509 Differential Pressure Gauge

Features

- 316L Stainless steel case and wetted parts
- Static pressure 232 psi or 580 psi
- Ingress protection IP66/NEMA 4X
- Compliant to DIN 16003
- Dry or liquid filled
- Solid front case (F6509 only)

Typical Uses

- Chemical and petrochemical plants
- Marine and offshore technology
- Power plants

Specifications

Accuracy:	Class 1.6 with $\pm 1.6\%$ of span Class 1 with $\pm 1\%$ of span (OPT.)
Dial Sizes:	100 mm (4"), 160 mm (6")
Static Pressure:	1-4 psi max static 232 psi (16 bar) 6-362 psi max static 580 psi (40 bar)
Process Connection Size:	¼ NPT, ½ NPT, G ¼ B, G ½ B
Process Connection Location:	Lower
Case Style:	316L Stainless steel open front case (F5509) 316L Stainless steel solid front case (F6509)
Pointer:	Black, aluminum Red set hand (OPT.), maximum pointer (OPT.)
Weather Protection:	EN 60529/IEC 529 IP65 for instruments with integrated contacts IP66/NEMA 4X
Mounting:	Direct (STD.), Wall (OPT.), 2" pipe mounting (OPT.)
Dial:	Black figures on white background (secondary scale is inner scale for dual scale dials), aluminum. Meets DIN 16003
Electric Contacts:	Consult Inside Sales



F5509
100 mm (4"),
160 mm (6") dial sizes



Key Benefits

- Perfect solution for challenging application and installation requirements
- Designed for harsh services
- High reliability and safety

Wetted Components

Pressure Chamber	Diaphragm	Process Connection Materials
316L Stainless steel	316Ti 316L Stainless steel ≤ 6 psi Duratherm® 2.4781 (NiCrCo alloy) ≥ 8 psi	316L Stainless steel

Non-Wetted Components

Case	Window	Bayonet Ring
316L Stainless steel	Laminated safety glass	316L Stainless steel

Min/Max Temperature Limits

Version	Ambient	Process	Storage
Dry	-4 °F to 176 °F (-20 °C to 80 °C)	-40 °F to 212 °F (-40 °C to 100 °C)	-4 °F to 176 °F (-20 °C to 80 °C)
Glycerin Fill	16 °F to 176 °F (-9 °C to 80 °C)	-20 °F to 212 °F (-7 °C to 100 °C)	16 °F to 176 °F (-9 °C to 80 °C)
Silicone Fill	-4 °F to 176 °F (-20 °C to 80 °C)	-40 °F to 212 °F (-40 °C to 100 °C)	-4 °F to 176 °F (-20 °C to 80 °C)
Temperature Effects:	Max. 0.8% of span per 10 K change with reference temperature of 68 °F (20 °C)		

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F5509, F6509 Differential Pressure Gauge

Ordering Code	Example:	10	F5509	S	D	27	L	10IW	-XC4
Dial Size									
10 - 100 mm (4")		10							
16 - 160 mm (6")									
Model									
F5509 - 316L Stainless steel open front case			F5509						
F6509 - 316L Stainless steel solid front case									
Housing Material									
S - 316L Stainless steel				S					
Case Fill									
D - Dry					D				
L - Glycerin fill									
Process Connection Size									
02 - ¼ NPT Male									
04 - ½ NPT Male									
13 - G ¼ B Male									
15 - G ½ B Male									
16 - M20X1.5 Male									
25 - ¼ NPT Female									
27 - G ¼ B Female						27			
50 - ½ NPT Female									
51 - G ½ B Female									
Process Connection Location									
L - Lower							L		
Range (coding examples only, see range tables on page 3 for all standard ranges)									
10IW - 10 in. H ₂ O								10IW	
Options (If choosing an option(s) must include an "-X")									
Dampening									
GT - NAPVIS Fill (for use with magnetic electrical contacts only)									-X _ _
GV - Silicone Fill									
Accuracy									
AN - 1% of span (N/A with electrical contacts or ranges below 40 mbar)									
Window & Case									
EP - Maximum pointer and polycarbonate window									
EQ - Minimum pointer and polycarbonate window									
LJ - Field fillable case (dry gauge only)									
PD - Acrylic window									
Mounting									
FW - Wall mounting bracket									
TM - 2" Pipe mounting bracket									
Marking/Tagging									
CS - Dual scale									
DA - Dial marking - text marking on dial									
MN - Stainless steel tag bonded to case									
NH - Stainless steel tag wired to case									
SS - Special scale flow dial									

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Ordering Code	Example:	10	F5509	S	D	27	L	10IW	-XC4
Magnetic Electrical Contacts (Only admissible with ranges ≥ 100 mBar)									
M1000 - Single setpoint - contact closes									
M2000 - Single setpoint - contact opens									
M1100 - Dual setpoint - both contacts close									
M2200 - Dual setpoint - both contacts open									
M1200 - Dual setpoint - contact 1 closes, contact 2 opens									
Special Cleaning									
6B - Cleaned for oxygen service (dry gauge only)									
6W - Cleaned for oxidizing processes other than oxygen									
Testing/Certification									
HY - Hydrostatic testing									
ML - Mass spectrometer leak test									
MQ - Positive Material Identification									
C3 - Material certificate per EN 10204 3.1									
C4 - Traceable calibration certificate									
Certification (miscellaneous charges not included within model code)									
CD-1 - Certificate of Conformance to Specifications and/or Drawings (Standard)									
CD-1A - Certificate of Conformance to Specifications and/or Drawings (Non-Standard)									
CD-2 - Certificate per EN 10204 2.2									
CD-43 - Calibration Certificate per EN10204 3.1									
CD-94 - GOST-R Certification									

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Standard Ranges

Single Scale			
psid	mbar	bar	IWD
1#	40MB	0.6BR	10IW
5#	60MB	1BR	15IW
10#	100MB	1.6BR	30IW
15#	160MB	2.5BR	60IW
30#	250MB	4BR	100IW
60#	400MB	6BR	160IW
100#	-	10BR	200IW
160#	-	16BR	-
200#	-	25BR	-
300#	-	-	-
400#	-	-	-

Dual Scale (primary scale on outer, secondary on inner)

mbar	psi	bar	psi	kPa	psi	MPa	psi
25MB	0.36#	0.6BR	8.7#	2.5KP	0.36#	0.6MP	87#
40MB	0.58#	1BR	14.5#	4KP	0.58#	1MP	145#
60MB	0.87#	1.6BR	23#	6KP	0.87#	1.6MP	232#
100MB	1.45#	2.5BR	36#	10KP	1.45#	2.5MP	362#
160MB	2.3#	4BR	58#	16KP	2.3#		
250MB	3.6#	6BR	87#	25KP	3.6#		
400MB	5.8#	10BR	145#	40KP	5.8#		
		16BR	232	60KP	8.7#		
		25BR	362#	100KP	14.5#		
		kg/cm ²	psi	160KP	23#		
		0.6KG	8.53#	250KP	36#		
		1KG	14.22#	400KP	58#		
		1.6KG	22.76#				
		2.5KG	35.56#				
		4KG	56.89#				
		6KG	85.34#				
		10KG	142.2#				
		16KG	277.6#				
		25KG	355.6#				

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DIMENSIONS in [] are inches

For reference only, consult Ashcroft for specific dimensional drawings

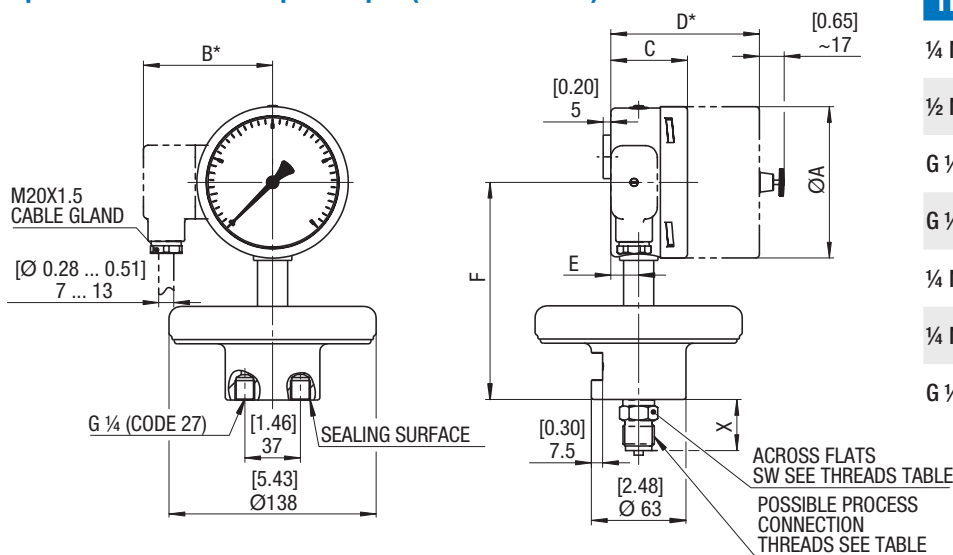
Dial Size Millimeters	ØA	B*	C	D	E	F	F1
100	101 [3.98]	86 [3.39]	51 [2.01]	99 [3.90]	18.5 [0.73]	145 [5.71]	144 [5.67]
160	161 [6.34]	120 [4.72]	50 [1.96]	100 [3.94]	17 [0.67]	175 [6.89]	174 [6.85]

*With optional integrated contacts. Consult Inside Sales.

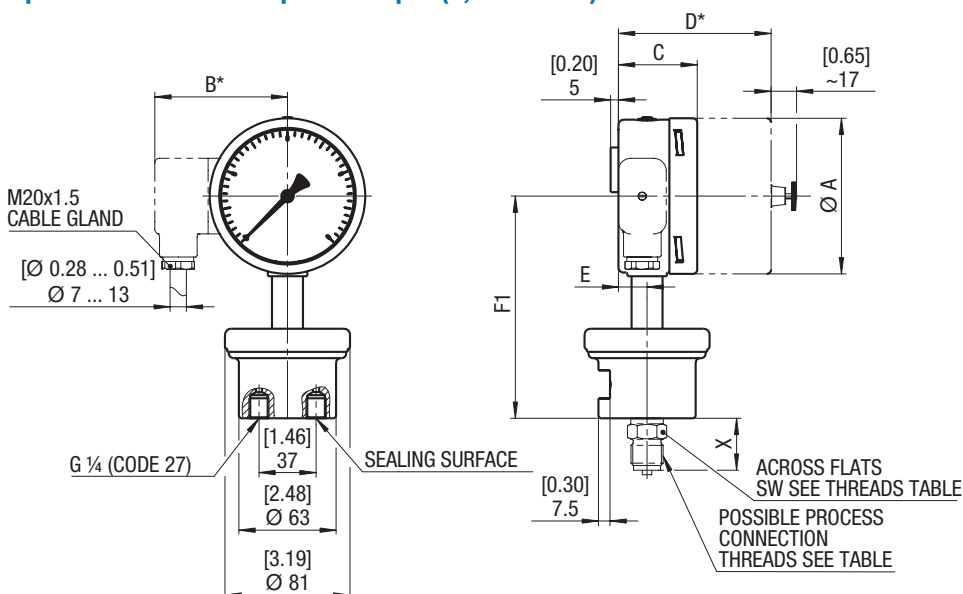
Weight		
Dial Size Millimeters	Dry lbs	Liquid Filled lbs
100	≤4 psi:	20
	≥6 psi:	9
160	≤4 psi:	21
	≥6 psi:	9

THREADS	CODE	X	SW
¼ NPT Male	02	30 [1.18]	19 [0.75]
½ NPT Male	04	37 [1.46]	22 [0.87]
G ¼ B Male; DIN EN 837	13	25 [0.98]	19 [0.75]
G ½ B Male; DIN EN 837	15	37 [1.46]	22 [0.87]
¼ NPT Female	25	20 [0.79]	19 [0.75]
½ NPT Female	50	26 [1.02]	27 [1.06]
G ½ B Female; DIN EN 837	51	26 [1.02]	27 [1.06]

Open front case for 1 psi - 4 psi (25 - 250 mbar)



Open front case for 6 psi - 362 psi (0,4 - 25 bar)



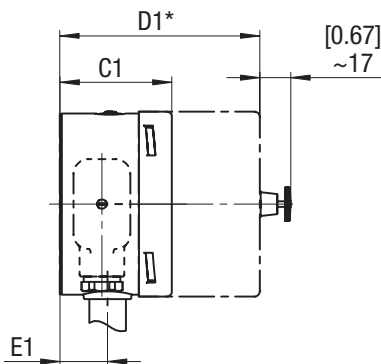
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Solid front case

Dial Size Millimeters	C1	D1*	E1
100	61 [2.38]	109 [4.29]	26 [1.02]
160	64 [2.52]	115 [4.53]	28 [1.11]

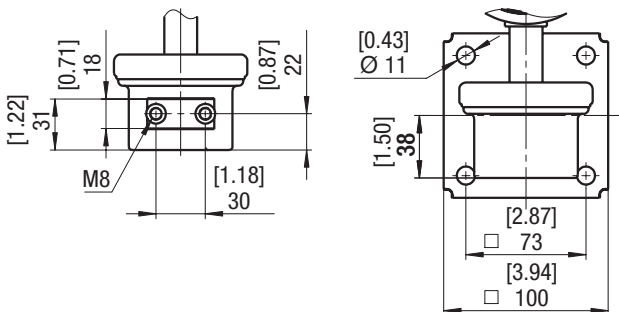


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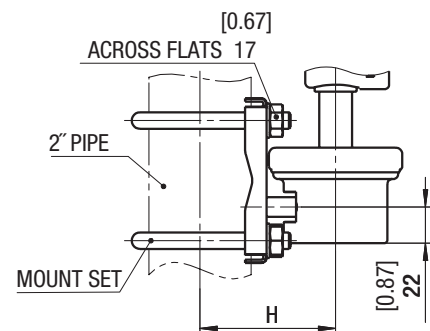
Mounting options

Range	G	H
1 psi - 4 psi (25 - 250 mbar)	83 [3.27]	111 [4.35]
6 psi - 362 psi (0,4 - 25 bar)	82 [3.22]	55 [2.15]

Wall mounting bracket option FW



2" Pipe mounting bracket option TM



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