

# Industrial Low Pressure Gauges (411P Series)

## Applications

- Low pressure measuring
- Chemical & petrochemical
- Power generation
- Furnace or air and gas pressure in tank

## Pressure Limitation

- Steady : 3/4 of full scale value  
(recommendation : 25% to 75% of full scale)
- Fluctuating : 2/3 of full scale value  
(recommendation : lower 50% of full scale)
- Short Time : 130% of full scale value (over range protection)

## Operating Temperature

- Ambient : -20~65°C
- Media (Fluid) : Max. 100°C



## Special Notes

1. This series has been approved by KS B 5305 (Korean Standard).

## Standard Specification Overview

### Dial Size

- 75mm (3"), 100mm (4"), 150mm (6")

### Reference Accuracy

- $\pm 1.5\%$  of Full Scale

### Scale Ranges

- See the ordering information table.

### Process Connection

- 75mm, 100mm : PT (1"R" in ISO) 3/8"
- 150mm : PT (1"R" in ISO) 1/2"

### Material

- Case : 304 SS
- Ring (Cover) : 304 SS
- Window : Safety Glass
- Pointer : Aluminum Alloy, Black Painted
- Connection : 316 SS
- Element : 316 SS
- Movement : Brass
- Chamber : 316L SS
- Dial Plate : White Aluminum with Black Graduations

### Optional Extra

- Test Report by Manufacturer
- Test Report by KOLAS (ILAC-MRA)
- Laminated Safety Glass
- 316 SS Case & Cover (Ring)
- 316L SS Connection Part
- Cleaning Service (USE NO OIL)
- Supersonic Cleansing Service
- Liquid Filled (Glycerine)
- Liquid Filled (Silicone)
- High Accuracy ( $\pm 1.0\%$  of F.S.) Calibration
- Throttling Screw (Restriction Orifice)
- Protection Cover (Polycarbonate)

## Ordering Information for 411P Series

● = Standard Products    ▲ = Available    NA = Not Available

Model	Description	Case & Ring	Wetted Parts		
411P	Industrial Low Pressure Gauges	304 SS	316 SS		
<b>Code</b>	<b>Dial Size</b>	<b>Accuracy</b>	<b>411P</b>		
30	75mm (3")	± 1.5% of F.S.	●		
40	100mm (4")	± 1.5% of F.S.	●		
60	150mm (6") [Not available zero adjustable]	± 1.5% of F.S.	●		
<b>Code</b>	<b>Mounting Type</b>		<b>30</b>	<b>40</b>	<b>60</b>
A	Bottom Connection without Mounting Flange		●	●	●
B	Bottom Connection with Back Mounting Flange		●	●	●
D	Center Back Connection without Mounting Flange		●	NA	NA
L	Lower Back Connection without Mounting Flange		●	●	●
F	Center Back Connection with 3-hole Front Mounting Flange		●	NA	NA
J	Lower Back Connection with 3-hole Front Mounting Flange		●	●	●
U	Lower Back Connection with "U" Clamp Mounting Bracket		●	●	●
<b>Code</b>	<b>Process Connection Style</b>		<b>30</b>	<b>40</b>	<b>60</b>
2	PT ("R" in ISO Standard)		●	●	●
3	PF ("G" in ISO Standard)		▲	▲	▲
4	NPT		▲	▲	▲
X	Others		☞	☞	☞
<b>Code</b>	<b>Process Connection Size</b>		<b>30</b>	<b>40</b>	<b>60</b>
C	1/4"		▲	▲	▲
D	3/8"		●	●	▲
F	1/2"		NA	▲	●
<b>Code</b>	<b>Pressure Range</b>		<b>30</b>	<b>40</b>	<b>60</b>
035	-30 kPa ~ 0		●	●	●
037	-20 kPa ~ 0		●	●	●
038	-15 kPa ~ 0		●	●	●
039	-10 kPa ~ 0		●	●	●
041	-5 kPa ~ 0		●	●	●
042	-4 kPa ~ 0		NA	●	●
043	-3 kPa ~ 0		NA	●	●
045	-2 kPa ~ 0		NA	●	●
047	-1 kPa ~ 0		NA	●	●
051	-25 ~ 25 kPa		NA	●	●
052	-20 ~ 20 kPa		NA	●	●
053	-15 ~ 15 kPa		●	●	●
054	-10 ~ 10 kPa		●	●	●
056	-5 ~ 5 kPa		●	●	●
057	-4 ~ 4 kPa		●	●	●
058	-3 ~ 3 kPa		●	●	●
059	-2.5 ~ 2.5 kPa		●	●	●

060	-2 ~ 2 kPa	●	●	●
062	-1~ 1 kPa	NA	●	●
063	-0.5~ 0.5 kPa	NA	●	●
084	0 ~ 1 kPa	NA	●	●
086	0 ~ 2 kPa	NA	●	●
088	0 ~ 3 kPa	NA	●	●
089	0 ~ 4 kPa	NA	●	●
090	0 ~ 5 kPa	●	●	●
092	0 ~ 10 kPa	●	●	●
093	0 ~ 15 kPa	●	●	●
094	0 ~ 20 kPa	●	●	●
095	0 ~ 25 kPa	●	●	●
096	0 ~ 30 kPa	●	●	●
097	0 ~ 35 kPa	●	●	●
098	0 ~ 40 kPa	●	●	●
099	0 ~ 50 kPa	●	●	●

\* kPa (SI Unit) is the standard dial scale but others are available upon request.

Code	Applicable Accessory Options
J0	Not Apply
J1	Adapter
J2	Gauge Unions
J3	Syphon Tubes
J4	Pulsation Dampeners
J5	Pressure Snubber
J7	Gauge Savers (Gauge Protectors)
J9	Manifold Valves

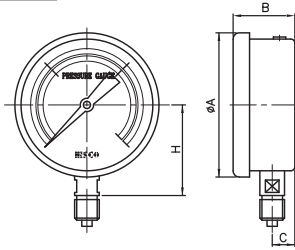
Code	Options	30	40	60
Test Reports				
T1	Test Report by Manufacturer	▲	▲	▲
T2	Test Report by KOLAS (ILAC-MRA)	▲	▲	▲
Material Option				
W1	Laminated Safety Glass	NA	▲	▲
S6	316 SS Case & Cover (Ring)	NA	▲	▲
S7	316L SS Connection Part	NA	▲	▲
Other Option				
C1	Cleaning Service (USE NO OIL)	▲	▲	▲
C2	Supersonic Cleansing Service	▲	▲	▲
F2	Liquid Filled (Glycerine) * Available upper than 10kPa	▲	▲	▲
F4	Liquid Filled (Silicone) * Available upper than 10kPa	▲	▲	▲
AC	High Accuracy (± 1.0% of F.S.) Calibration	NA	▲	▲
R1	Throttling Screw (Restriction Orifice)	▲	▲	▲
P2	Protection Cover (Polycarbonate)	NA	▲	NA

Sample Model Selection : 411P30A2D096J0

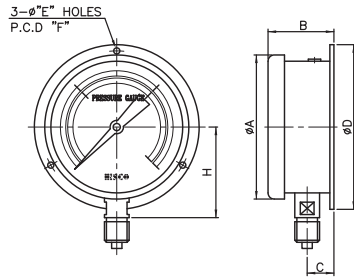
\* The standard specification and price are subject to change without prior notice.

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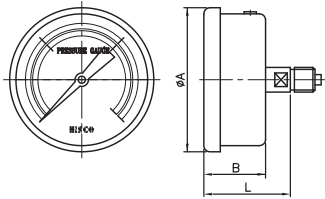
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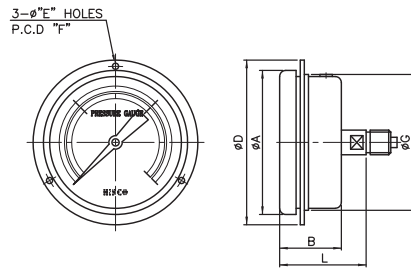
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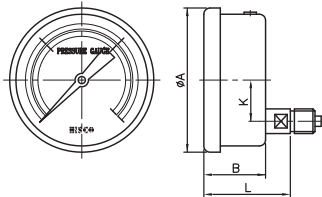
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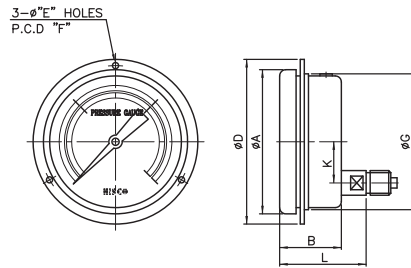
TYPE-F



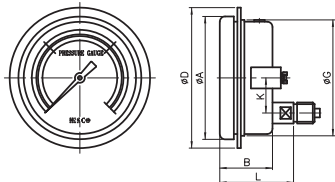
TYPE-L



TYPE-J



TYPE-U



(UNIT : mm)

Code	Dial Size	(Available Type)	A	B	C	D	E	F	G	H	L	K
30	ø75	A,[B],D,F,L,[J],U	86.5	46[48]	13	105	5.5	91.5	79	60	71.5	26.5
40	ø100	A,[B],L,[J],U	114	51[52]	17	127.5[136]	5.5	114 [124]	103	79	81	35.5
60	ø150	A,[B],L,[J],U	168	57.5[58]	21.5	185.5	5.5	173	156	104	86.5	50

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