The selection is detailed on page 8

PG27

Precision Pressure Gauge

Working principle

Sampling frequency
Users can customize the measurement frequency according to specific application requirements. The measurement frequency of standard applications is usually 3 times/second, up to 50 times/second, and the user can set it according to different measurement requirements.

Energy conservation
The gauge also has an energy saving feature that automatically switches to "sleep" mode. In this mode, battery life can be extended to 2,500 hours.

Product characteristics
With a new menu navigation, the pressure gauge is very simple to operate. The clear display, built-in bar chart display interface, and large text display area allow customers to effectively analyze multiple measurement points.

Certified accuracy
In addition, it has MIN/MAX (minimum/maximum) function, which not only allows the customer to immediately read the maximum and minimum pressures, but also automatically stores the maximum and minimum pressure values.
The accuracy of each digital pressure gauge is certified at the factory and accompanied by a factory calibration certificate, which can perfectly match the corresponding instrument. We can also provide DKD/DAkkS calibration certificates for instruments upon request.

Product description

Intro
The PG27 precision digital pressure gauge uses the design concept of analog pressure gauges, but its accuracy is no less than that of digital calibrators. The PG27 precision digital pressure gauge combines the high accuracy of digital measurement technology with the simplicity of analog instruments for performance, ease of use and meter features that are far superior to competitors in the supermarket market.

Accuracy
The PG27 digital pressure gauge has an accuracy of 0.1%FS (optional accuracy of 0.5%FS or 0.25%FS) and a temperature compensation range of -10... +50 °C (14... 122 °F). Readings can be displayed in 26 pressure and 5 level units, as well as in one of the customer-specific units, thus avoiding complex conversions.

Software
The PG27 can be equipped with LUDWIG AL calibration software. LUDWIG AL software can also be installed on computers for calibration applications and for managing calibration and instrumentation data in SQL databases. Additionally, users have the option to transmit data through LUDWIGA ireless.

Product application

- Oil and gas industry
- Maintenance and service facilities
- Calibration service companies and service industries
- Simple field calibration
- Pressure test

Functional characteristics

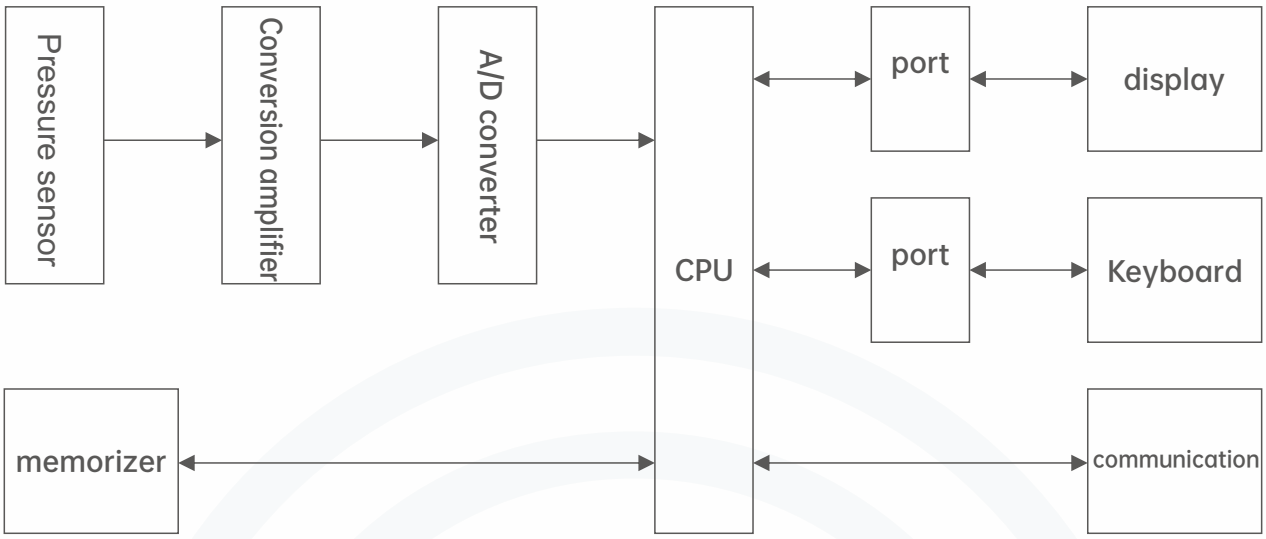
- Highly corrosive and the surrounding environment is also highly corrosive
- Designed according to EN 837-1
- Strong resistance to load change and shock resistance
- Integral stainless steel
- Range: up to 0... 60 MPa

✆ 400-860-9760

For more product information, please visit www.ludwig-schneider.com.cn

LUDWIG
INSTRUMENT

Working principle diagram



Specification parameter

Sensor technology							
Range							
Manometer pressure	MPa	0...0.01[1]	0...0.025[2]	0...0.04[2]	0...0.06[2]	0...0.1	0...0.16
		0...0.25	0...0.4	0...0.6	0...1	0...1.6	0...2.5
		0...4	0...6	0...10	0...16	0...20	0...25
		0...40	0...60	0...70[3]	0...100[3]	0...160[4]	0...250[4]
		0...400[5]	0...600[5]	0...700[5]	0...800[5]	0...1,000[5]	-
	psi	0...1.5[1]	0...5	0...10[2]	0...15	0...20	0...30
		0...50	0...60	0...100	0...150	0...160	0...200
		0...300	0...500	0...700	0...1,000	0...1,500	0...2,000
		0...3000	0...5000	0...6000	0...8,000	0...10,000[3]	0...15,000[3]
		0...20,000[4]	0...30,000[4]	0...50,000[5]	0...100,000[5]	0...150,000[5]	-
Absolute pressure	MPa abs.	0...0.025[2]	0...0.04[2]	0...0.06[2]	0...0.1	0...0.16	0...0.25
		0...0.4	0...0.6	0...0.7	0...1	0...1.6	0...2
		0...2.5	0...4	-	-	-	-
	psi abs.	0...3.5[2]	0...5[2]	0...10[2]	0...15	0...20	0...30
		0...50	0...60	0...100	0...150	0...200	0...300
		0...500	-	-	-	-	-
Vacuum and +/- range	MPa	-0.025...+0.025[2]	-0.04...+0.4[2]	-0.06...+0.06	-0.1...0	-0.1...+0.06	-0.1...0.15
		-0.1...0.25	-0.1...0.3	-0.1...0.5	-0.1...0.7	-0.1...0.9	-0.1...1
		-0.1...1.5	-0.1...2.4	-0.1...2.5	-0.1...3.9	-0.1...4	-
	psi	-14.5...0	-14.5...40	-14.5...40	-14.5...70	-14.5...100	-14.5...130
		-14.5...300	-3... +3[2]	-5...+5[2]	-8...+8	-3...0[2]	-5...0[2]
		-8...0[2]	-	-	-	-	-

Specification parameter

Overvoltage limit		
Sensor	< 2.5 MPa; 3 times	< 360 psi; 3 times
	> 2.5 MPa...≤60 MPa; 2 times	> 360 psi ... ≤870 psi; 2 times
	> 60 MPa...≤160 MPa; 1.5 times	> 360 psi ... ≤2,500 psi; 1.5 times
	> 160 MPa; 1.3 times	> 2,500 psi; 1.3 times
	> 600 MPa; 1.1 times	> 8,500 psi; 1.1 times
Reveal	> 110%FS Or -10%FS	
Accuracy[6)7)]	Standard: 0.1%FS selectable: 0.5%FS[8)] 0.25%FS[8)9)]	

Sensor technology	
Compensation temperature range	-10 ... +50°C (14 ... 122°F)
Pressure type	Gauge pressure, absolute pressure, (up to 2MPa absolute pressure) and vacuum measurement range
Process connection	
▪ Standard ≤100MPa (≤15,000 psi)	G ½ B、G ¼ B、½ NPT、¼ NPT、G 1 B (Flush pointing) and，G ½ B (Flush pointing)
▪ High pressure type > 100MPa (> 15,000 psi)	▪ M16 x 1.5 female thread with seal ring ▪ M20 x 1.5 female thread with seal ring ▪ 9/16-18 UNF Female thread F 250-C
Pressure medium	All compatible with 316 stainless steel for liquids and gases
Adjustable	Cheap and range factor adjustable

1Extended accuracy: 0.2%FS
2) Expansion accuracy: 0.15% FS
3) Not applicable to the rinsed version
4) The expansion accuracy was 0.1%FS at 23°C±3°C
5) Under the reference condition of 23°C±3°C, the expansion accuracy is 0.25%FS
6) The parameter is defined by the total measurement uncertainty, expressed as an inclusion factor (k=2) and incorporates the following factors: the inherent performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, the effect of environmental conditions, and the periodic zero adjustment periodThe range compensates for drift and temperature effects.
7) FS= full scale = End of range Start of range
8) Measurement frequency ≤3 times/second
9) Under the reference condition of 23 ° C ±3 ° C, only applicable to ≥0... 0.1MPa (≥0... 15 psi to ≤0... 14,500psi).

Display	
▪ Display	5 ½ bit 7-segment display with large matrix area for secondary information
	Bar chart: 0... 100%
	Adjustable backlight
▪ Rotatable housing	The case can be rotated 330°
▪ Resolution	4... 5 ½ bit, adjustable; Depends on the selected pressure element
▪ Pressure unit	Standard configuration: psi and MPa assorting: mbar、kg/cm²、Pa、hPa、KPa、bar、mmH2O、mH2O、inH2O、inH2O (4°C)、inH2O (20°C)、inH2O (60°F)、ftH2O、mmHg、cmHg、inHg、inHg (0°C)、inHg (60°F)、kp/cm²、lbf/ft²、kN/m²、atm、Torr、Microns and user-defined units[10)]
Feature	
▪ Frequency measurement	Max. 50/3

Specification parameter

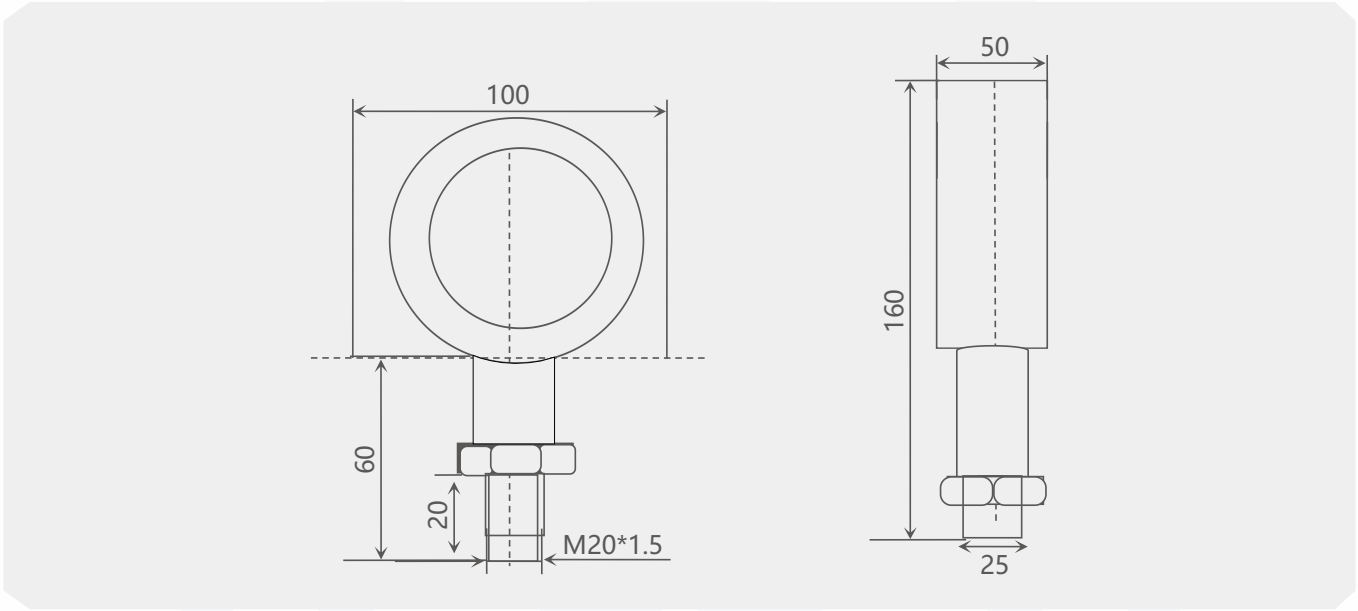
Feature	
▪ Menu language	Standard: English Available in: German, Italian, French, Spanish, Russian and Polish
▪ Storage	Standard configuration: MIN/MAX Optional: Integrated data logger
▪ Menu function	Min/Max (Max Min) alarm (visual), power off function, measurement frequency, mean filter, pressure change rate, mean (by adjusting interval),Level indicator, offset removal and damping display
▪ Mean interval	1... 300 seconds, adjustable
▪ Data recorder[11]	Loop recorder: automatically records up to 1,000,000 values; Cycle time: 1... Within the range of 3,600s, the step is 1s. The measurement frequency adjustment step can be: 1 time /s, 3 times /s, 10 times /s, and 50 times /s
Materials	
▪ Liquid connection unit	≤100MPa: Stainless steel 316 > 100MPa: Stainless steel 1.4534 -0.1 ... < 4MPa: Stainless steel 316 > 4 ... 100MPa: Stainless steel 316+Elgiloy cells 2.4711
▪ Watch case	Die cast aluminum, nickel plated
Supply voltage	
▪ Power source	3×1.5V, No. ⁵ Alkaline Battery ‹AA›[12]
▪ Maximum voltage	DC 4.95V (Spark ignition)
▪ Battery life	典The type value is 2,000... 2,500 h (no backlight and LUDWIG-Wireless inactive)
▪ Battery status indication	Four cell ICONS (25% each) indicate battery level
Allowable environmental condition	
▪ Operating temperature	-10 ... +50°C (14 ... 122°F)
▪ Medium temperature	-10 ... +50°C (14 ... 122°F) (The lower temperature limit is above the freezing point of the medium)
▪ Storage temperature	-20 ... +70°C (-4 ... +158°F)
▪ Relative humidity	< 95% r.H. (noncondensing)
Communication (optional)	
▪ Port	LUDWIG-Wireless[13]
Watch case	
▪ Size	About 100×150×59mm (3.9×5.9×2.3 in)
▪ Class of protection	IP65
▪ Weight	Battery included approx. 680g (1.5 lb) Approx. 820g (1.81 lb) with protective rubber cap
LUDWIG-Wireless[13]	
Frequency range	2,400 ... 2,500 MHz
HF output power	Max 2dBm (+2 dBi)
Number of channels	
▪ Standard	79
▪ underpower	40
Channel spacing	
▪ Standard	1 MHz
▪ underpower	2 MHz

Specification parameter

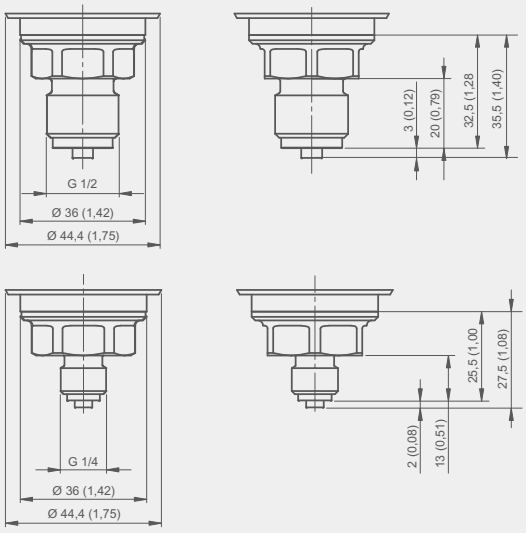
bandwidth	1 or 2 MHz
Output power	4 dBm / 10 mW
	Ex ia Maximum output power under explosion-proof fault conditions: 490mW

10) User-defined units can only be set using the CAL software.
11) In order to make full use of the functions of the recorder, CAL software must be equipped.
Logger data can be downloaded as a CSV file through CAL Trial. Use the logger template CAL for real-time recording, accurate data analysis or direct certificate creation.
12) For hazardous areas, only the following battery models are available:
Duracell, only Duracell MN1500
Duracell, Duralock Plus Power MN1500
Varta, RAYOVAC Maximum Plus 4006
13) A computer with Bluetooth® 2.1 interface is required
LUDWIG-Wireless Low Energy (=LE) needs to communicate with ios enabled phones via the myLUDWIG Device smartphone app.

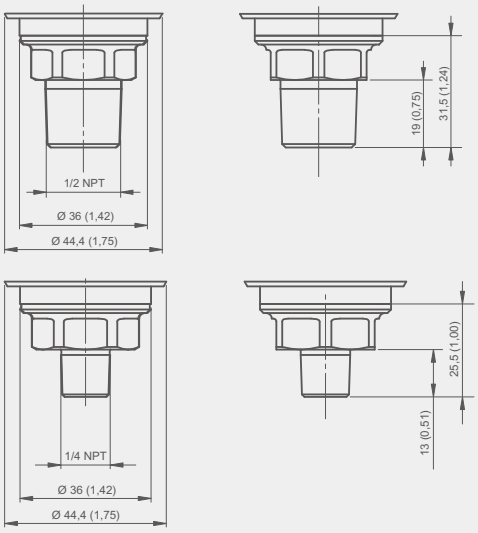
Size mm



G½ and G¼ threaded connections



½NPT and ¼NPT threaded connection



Attachments

Functional characteristics	
	**Alkaline battery** 3×1.5V AA
	**Protective rubber cap** For shell
	**Seal sleeve** Contains 4×G ½ USIT sealed, 2×G ¼ USIT sealed box plastic box
	**Surface shock washer 90°**
	**Plastic case** 1× digital pressure gauge, 1× hand-held hydraulic pressure test pump PG27-A Plastic enclosures are not allowed in dangerous areas! 1 x digital pressure gauge, 1 x hand-held pneumatic pressure test pump PG27-H or PG27 Plastic enclosures are not allowed in dangerous areas!
	For storage and transportation of 1×CPG1500 Plastic enclosures are not allowed in dangerous areas!
	For storage and transportation of 3×CPG1500 Plastic enclosures are not allowed in dangerous areas!
	**LUDWIG-Wireless USB controller**
	**Service package** pneumatic
	Hydraulic pressure

Range table

Negative pressure	code	MPa	code	Bar	code	kPa	code	kg/cm²	code	Psi/-inHg
	MV001	-0.1/0	BV001	-1/0	KV001	-100/0	GV001	-1/0	RV030	-30"/0 Hg
Positive and negative pressure	code	MPa	code	Bar	code	kPa	code	kg/cm²	code	Psi/-inHg
	MC006	-0.1/0.06	BC006	-1/0.6	KC006	-100/60	GC006	-1/0.6	PC015	-30"/0/15
	MC015	-0.1/0.15	BC015	-1/1.5	KC015	-100/150	GC015	-1/1.5	PC030	-30"/0/30
	MC030	-0.1/0.3	BC030	-1/3	KC030	-100/300	GC030	-1/3	PC060	-30"/0/60
	MC050	-0.1/0.5	BC050	-1/5	KC050	-100/500	GC050	-1/5	PC100	-30"/0/100
	MC090	-0.1/0.9	BC090	-1/9	KC090	-100/900	GC090	-1/9	PC160	-30"/0/160
	MC150	-0.1/1.5	BC150	-1/15	KC150	-100/1500	GC150	-1/15	PC200	-30"/0/200
	MC240	-0.1/2.4	BC240	-1/24	KC240	-100/2400	GC240	-1/24	PC300	-30"/0/300
Positive pressure	code	MPa	code	Bar	code	kPa	code	kg/cm²	code	Psi
	MP001	0/0.1	BP001	0/1	KP001	0/100	GP001	0/1	PP1E5	0/15
	MP1E6	0/0.16	BP1E6	0/1.6	KP1E6	0/160	GP1E6	0/1.6	PP003	0/30
	MP2E5	0/0.25	BP2E5	0/2.5	KP2E5	0/250	GP2E5	0/2.5	PP006	0/60
	MP004	0/0.4	BP004	0/4	KP004	0/400	GP004	0/4	PP010	0/100
	MP006	0/0.6	BP006	0/6	KP006	0/600	GP006	0/6	PP016	0/160
	MP010	0/1	BP010	0/10	KP010	0/1000	GP010	0/10	PP020	0/200
	MP016	0/1.6	BP016	0/16	KP016	0/1600	GP016	0/16	PP030	0/300
	MP025	0/2.5	BP025	0/25	KP025	0/2500	GP025	0/25	PP040	0/400
	MP040	0/4	BP040	0/40	KP040	0/4000	GP040	0/40	PP060	0/600
	MP060	0/6	BP060	0/60	KP060	0/6000	GP060	0/60	PP100	0/1000
	MP100	0/10	BP100	0/100	KP100	0/10000	GP100	0/100	PP150	0/1500
	MP160	0/16	BP160	0/160	KP160	0/16000	GP160	0/160	PP200	0/2000
	MP250	0/25	BP250	0/250	KP250	0/25000	GP250	0/250	PP300	0/3000
	MP400	0/40	BP400	0/400	KP400	0/40000	GP400	0/400	PP400	0/4000
	MP600	0/60	BP600	0/600	KP600	0/60000	GP600	0/600	PP600	0/6000
	MP1000	0/100	BP1000	0/1000	KP1000	0/100000	GP1000	0/1000	PP1000	0/10000

PG27-Selection composition

Selection example PG27 A / I / MP001 / N / J / S / V

1.Dial diameter	A	100	
2.Precision class	G	0.25%	
	H	0.5%	
	I	0.1%	
3.Range range	R( )	See range table (page 7)	
4.Scale unit	N	MPa	
	O	Bar	
	P	KPa	
	Q	Kg/cm²	
	R	Psi	
5.Process connection	I	1/2NPT	
	J	M20*1.5	
	K	G1/2B	
	T( )	Other process connection	
6.Liquid material	S	304SS	
	L	316L	
7.Explosion-proof requirement	U	Intrinsically safe explosion protection	
	V	not have	
8.communication	X	Wireless	
9.certificate	Y	EN10204	
	Z	not have	
10.Additional description	A	Yes (remarks)	
	B	not have	

Instructions:

Indicates that the dial diameter of PG27 precision digital display pressure gauge is 100mm, the accuracy level is 0.1%, the measuring range is 0~0.1MPa, the scale unit is MPa, the process connection is M20*1.5, the liquid material is 304 stainless steel, no explosion-proof, item 8/9/10 in the above table is optional.

Product Certification

Compliance and approval; Rodeweig pressure gauges meet key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;