

HPE81 Digital Pressure Gauge



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Overview

HPE81 electronic digital pressure gauge utilizes a high-precision, highly stable pressure sensor core as its sensing element and is manufactured through a rigorous assembly process. Powered by batteries, the unit provides accurate, real-time pressure readings and is characterized by high precision and excellent long-term stability. It features a large 5-digit LCD screen and offers functions such as unit switching, one-touch zeroing, peak/valley value recording, backlight control, and power on/off.

This digital pressure gauge is widely used in industries such as hydropower, municipal water supply, petroleum, chemicals, machinery, and hydraulics for the on-site measurement and display of pressure in media—such as gas, water, and oil—that are non-corrosive to stainless steel.

Features

- ◆ 5-digit large LCD display
- ◆ Comprehensive functions and user-friendly operation
- ◆ 0.25% accuracy class
- ◆ Wide measurement range; supports gauge, absolute, and sealed gauge pressure
- ◆ Compatible with oil, water, and gas
- ◆ Multiple pressure connection options available
- ◆ Wide-range temperature compensation with low thermal drift
- ◆ Excellent long-term stability

Technical Parameters

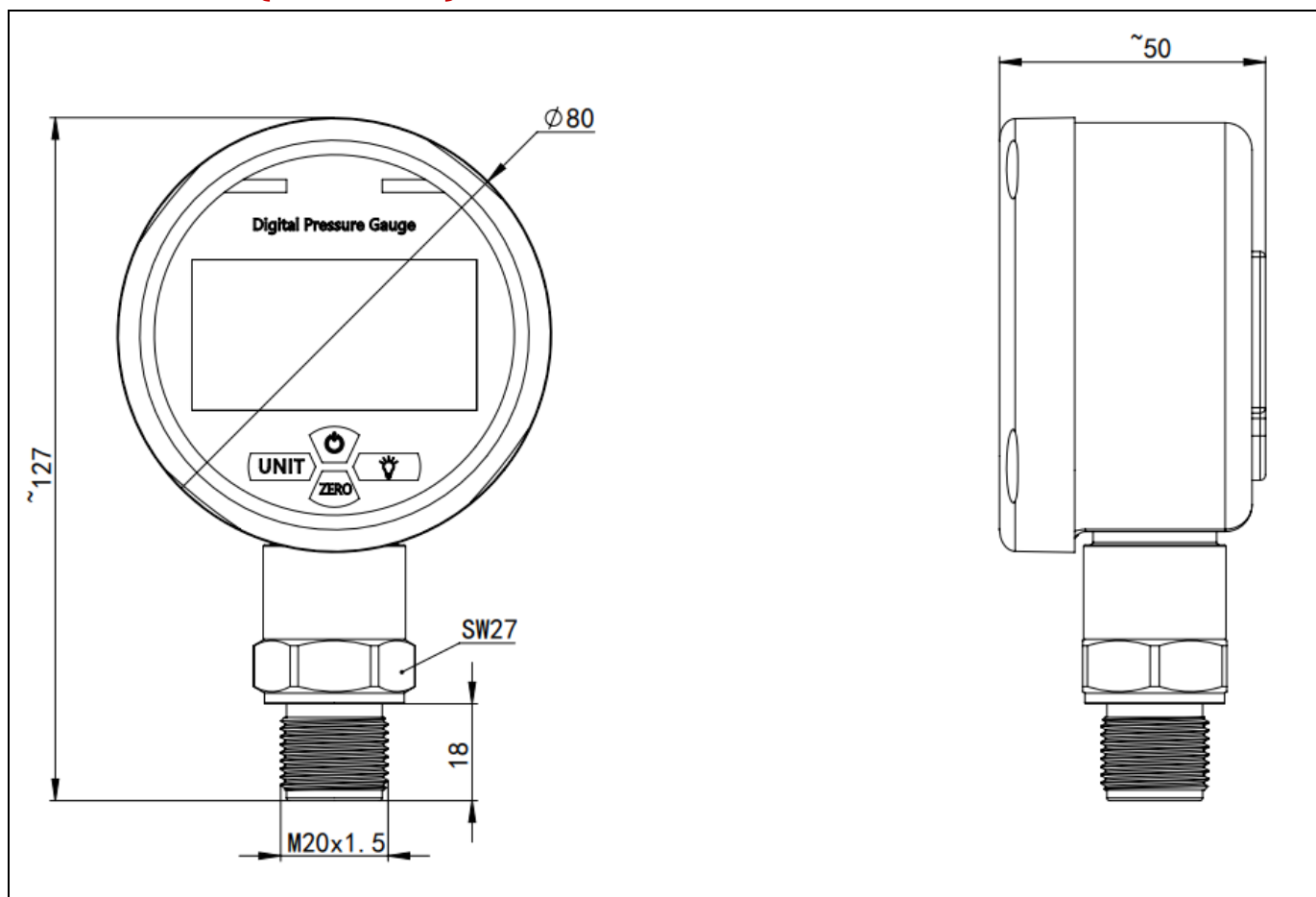
Pressure Range (Gauge)	-100kPa...0~20kPa...40MPa
Pressure Range (Absolute)	0~50kPa...4MPa
Overload	1.5x of full scale
Measuring Medium	various liquid, gas compatible with 304 or 316L stainless steel
LCD Display Digits	5-bits
LCD Display Range	-19999~99999
LCD Display Content	Simulation progress bar display, pressure unit display, remaining power display, peak and low value record display
Power Supply	3V (2*AAA battery)
Battery Life	≥6 months (depending on the specific working conditions)
Accuracy	±0.25%FS, @25°C
Long-term Stability	±0.3%FS/year
Compensate temperature range	0~60°C (Range ≤ 100kPa) -10~70°C (Range > 100kPa)

Temperature Coefficient of Zero	$\leq \pm 0.75\%FS$, Reference 25°C, Within temperature compensation range
Temperature Coefficient of Full Scale	$\leq \pm 0.75\%FS$, Reference 25°C, Within temperature compensation range
Backlight Time	0, 15, 30, 60: 0 means always on; other values represent the corresponding number of seconds.
Auto power off time	0~60 minutes: A value of 0 means the device does not shut down; values from 1 to 60 correspond to the shutdown time.
Sampling rate	0.2 s/cycle, 0.5 s/cycle, 1.0 s/cycle, 2.0 s/cycle, 3.0 s/cycle, 4.0 s/cycle, 5.0 s/cycle Note: The higher the setting value, the lower the power consumption and the longer the battery life.
Ambient Temperature	-20~50°C
Medium Temperature	-30~80°C -40~140°C (with 5 pcs cooling fins) -40~200°C (with 10 pcs cooling fins)
Storage Temperature	-20~50°C
Protection Grade	IP54

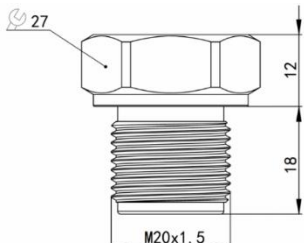
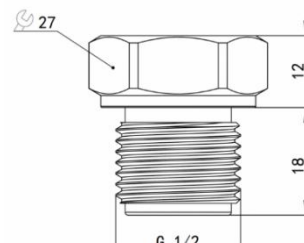
Structural Materials

Ordering Code	Part	Note
S4	Housing	Stainless steel 304 (By default)
S4	Process Connection	Stainless steel 304 (By default)
S6		Stainless steel 316L
X		Customized
M1	Sensor Diaphragm	Stainless steel 316L (By default)
X		Customized
FK	Sealing O-ring	FKM fluor rubber sealing ring (Applicable temperature range -20~200°C) (by default)
X		Custom Sealing Rings

Dimensions (Unit: mm)



Process connection (Unit: mm)

M20*1.5(Ordering code: P1)	G1/2(Ordering code: G12)
	

Functional Instructions



Key Operation

Key	Note	
	Power Button	When powered off, briefly press the "Power Button" to turn the device on. When in measurement mode, press and hold the "Power Button" for 3 seconds to turn the device off.

	Unit Button	1. Unit Switching Briefly press the "UNIT" button to cycle through the available units (MPa, kPa, bar, psi, kgf/cm²). 2. Peak/Valley Value Recording Press and hold the "UNIT" button for 3 seconds to display the maximum value (MAX); briefly press the "UNIT" button to switch to the minimum value (MIN); briefly press the "UNIT" button again to return to the real-time value display.
	Zero Button	1. One-Touch Zeroing At zero pressure, press and hold the "ZERO" button for 3 seconds; "CLEAr" appears on the display, indicating the zeroing process is complete. 2. Cancel Zeroing If the device has been zeroed, press and hold the "ZERO" button for 3 seconds; "rEst" appears on the display, indicating the zeroing has been cancelled. 3. Clear Peak/Valley Records While viewing the peak/valley records, press and hold the "ZERO" button for 3 seconds to clear the records and restart peak/valley data logging.
	Backlight Button	In measurement mode, briefly press the "Backlight Button" to turn the backlight on or off.

Parameter Settings

Operating Instructions		Press and hold the "Backlight" key until "LoCK" appears on the display, then press the "Power" or "ZERO" key to enter password input mode. Use the "ZERO" key to move the cursor and the "Power" key to change the value at the cursor position; enter the password "00016" and press the "UNIT" key to confirm and enter the menu settings mode. Parameter settings involve two modes: View Mode and Edit Mode. In View Mode, press the "Power" or "ZERO" key to navigate the menu, and press the "UNIT" key to enter Edit Mode. In Edit Mode, press the "Power" key to modify the parameter value and the "UNIT" key to save the parameter. After configuration is complete, on the "-End" screen, press the "UNIT" key to save all parameters and exit the settings menu.
oFFt		Auto-off time; can be set from 0 to 60 minutes. A value of 0 disables auto-off; values of 1–60 correspond to the shutdown time in minutes.
bCLt		Backlight duration; can be set to 0, 15, 30, or 60 seconds. A setting of 0 keeps the backlight permanently on.
IntE		Sampling interval; can be set to 0.2, 0.5, 1.0, 2.0, 3.0, 4.0, or 5.0. Higher values result in longer sampling intervals.
ZEro		Small signal cutoff; can be set from 0.00 to 1.00. For example, if set to 0.05, the zero-point cutoff is 0.05% of the full scale.

Ordering Guide

Code	Type				
HPE81	Digital pressure gauge				
eg:HPE81	(X ₁ ~ X ₂)kPa	Pressure Range	Measuring Range		
			X1 is the lower limit of the range X2 is the upper limit of the range		
			Code	Thread Spec	
			P1	M20×1.5 male	
			G12	G1/2 male	
			G14	G1/4 male	
			Code	Sensor Diaphragm	
			M1	316L	
			X	Customized	
			Code	Process Connection Material	
			S4	304	
			S6	316L	
			X	Customized	
			Code	Others	
			G	Gauge Pressure	
			S	Sealed Gauge Pressure	
			A	Absolute Pressure	
			FK	FKM sealing ring (by default)	
			X	Custom Sealing Rings	
			QF	Factory report	
				Others requests	
eg:HPE81	(0 ~ 600)kPa	P1	M1	S4	G FK