

Pressure Transmitter-GP/AP

Range

Type	Nominal range	Minimum range	Lower (LRL)	Upper (URL)	Overload
GP	40kPa	2kPa	-40kPa	40kPa	1MPa
	250kPa	12.5kPa	-100kPa	250kPa	4MPa
	1MPa	50kPa	-100kPa	1MPa	6MPa
	3MPa	150kPa	-0.1MPa	3MPa	15MPa
	10MPa	500kPa	-0.1MPa	10MPa	20MPa
	40MPa	5MPa	-0.1MPa	40MPa	80MPa
AP	10kPa	5kPa	0kPa	10kPa	600kPa
	20kPa	10kPa	0kPa	20kPa	1MPa
	40kPa	20kPa	0kPa	40kPa	1MPa
	250kPa	50kPa	0kPa	250kPa	4MPa
	1MPa	200kPa	0kPa	1MPa	6MPa
	3MPa	300kPa	0kPa	3MPa	15MPa
	10MPa	1MPa	0kPa	10MPa	20MPa

LRV/URV setting: the lower limit value(LRV) and upper limit value(URV) are achieved between the upper and lower limits. If $URV \geq LRV$, URV must be larger than the minimum pressure, if $URV \leq LRV$, LRV must be larger than the minimum pressure.

When the AP range is 0.1 bar or 0.2 bar, the measuring diaphragm is ceramic.

Accuracy

Linear output accuracy	GP	TD ≤ 5	±0.1%	40kPa
			±0.075%	250kPa, 1MPa, 3MPa, 10MPa, 40MPa
		TD > 5	± (0.025+0.015TD) %	40kPa
			± (0.0025+0.0145TD) %	250kPa, 1MPa, 3MPa, 10MPa, 40MPa
	AP	TD ≤ 5	±0.2%	10kPa, 20kPa, 40kPa
			±0.1%	250kPa, 1MPa, 3MPa, 10MPa
		TD > 5	± (0.025+0.035TD) %	10kPa, 20kPa, 40kPa
			± (0.025+0.015TD) 250%	250kPa, 1MPa, 3MPa, 10MPa

TD (Turn down) represents the range ratio, TD= Maximum range/current range.

Maximum range = URL (range starts with 0, same as factory-calibrated range); Current range=SPAN (equivalent to URL-LRV)

Maximum range = URL (range starts with 0, same as factory-calibrated range); Current range = Span (equivalent to URV-LRV).

Specifications

GP accuracy	±0.075%、±0.1%、±0.2% URL
AP accuracy	±0.1%、±0.2% URL
GP range	40kPa~40MPa
AP range	10kPa~10MPa
Turn down ratio	100:1
stability	±0.2%SPAN/10 years
Voltage effects	When the power supply voltage changes within 18.3V to 44VDC, its zero point and range change should not exceed ± 0.005% URL/V
Mounting position effects	Less than 4mbar at any position, which can be corrected by Primary Value = 0 reset
Vibration effects	< 0.1%SPAN as per GB/T18271.3/IEC61298-3
Output signal	4mA~20mA DC, HART
Protection class	IP67
Weight	About: 1.56kg

Ambient temperature effects

Type	Effect	Range
GP	$\pm (0.075+0.0375TD) \% 10^{\circ}\text{C}$ of SPAN	40kPa, 250kPa, 1MPa, 3MPa, 10MPa, 40MPa
AP	$\pm (0.125+0.075TD) \% 10^{\circ}\text{C}$ of SPAN	10kPa, 20kPa, 40kPa
	$\pm (0.115+0.065TD) \% 10^{\circ}\text{C}$ of SPAN	250kPa, 1 MPa, 3MPa, 10MPa

Environmental conditions

Items	Conditions	
Operating temperature	-50°C ~85°C, With LCD display: -40°C ~70°C	
Storage temperature	-50°C ~100°C, With LCD display: -40°C ~85°C	
Sensor operating temperature	-40°C ~105°C	
Medium temperature	Silicone oil filled: -40°C ~200°C	Fluorocarbon oil 1: -20°C ~110°C
	Low temperature silicone oil: -55°C ~200°C	Fluorocarbon oil 2: -55°C ~85°C
Operating humidity	5%RH~100%RH@40°C	

Power supply and load requirements

Items	Conditions	
Power supply voltage	HART communication protocol: 18.3V~44V DC	
	Intrinsically safe HART communication protocol: 18.3V~30V DC	
Load resistance	0Ω~1476Ω 250Ω~800Ω for HART communication	
Transmission distance	< 1000m	
Power consumption		
4mA~20mA	≤ 500mW@24V DC, 20.8mA	

EMC Effects

No.	Test items	Basic standards	Test conditions	Performance ability
1	Radiated interference (housing)	GB/T 9254.1/CISPR 32	30MHz~1000MHz	Qualified
2	Conducted interference (DC power port)	GB/T 9254.1/CISPR 32	0.15MHz~30MHz	Qualified
3	Electrostatic discharge immunity test	GB/T 17626.2/IEC61000-4-2	8kV(contact), 15kV(air)	B
4	Immunity to radio frequency EM-fields	GB/T 17626.3/IEC61000-4-3	10V/m (80MHz~1GHz)	A
5	Power frequency magnetic field immunity test	GB/T 17626.8/IEC61000-4-8	30A/m	B
6	Electrical fast transient/Burst Immunity test	GB/T 17626.4/IEC61000-4-4	4kV(5/50ns,100kHz)	B
7	Surge immunity requirements	GB/T 17626.5/IEC61000-4-5	2kV(line to line) 4kV(line to ground) (1.2/50μs)	B
8	Immunity to conducted disturbances induced by radio frequency fields	GB/T 17626.6/IEC61000-4-6	3V(150kHz~80MHz)	A

Time index

Damping time constant: equals to the combined time of electronic components and sensor module
Electronic components damping time: 0s to 100s configurable
Sensor module damping time: (sensor isolated diaphragm and filled silicone oil): $\leq 0.2s$
Turn-on time: $\leq 6s$
Factory reset time: $\leq 31s$
Response time: $\leq 100ms$