

## FC1151/3351 Pressure / Differential Pressure Transmitter

### Products summary

FC1151/3351 pressure / differential pressure transmitter is the self-develop multi-function transmitter that our company imports from foreign advanced technology. The key raw materials and components are imported, with advanced design principles, complete specifications, installation is simple, it is suitable for industrial measurement of all occasions and medium and is an ideal pressure measuring instrument for industrial automation area.

### Scope of application

FC1151/3351 pressure / differential pressure transmitter is suitable for accurate measurement of differential pressure to large differential pressure, low pressure to high pressure, level, vacuum and gravity; with throttling device can also measure the flow.



### Function characteristics

- high precision;
- good stability;
- Intelligent HART fieldbus protocol;
- Compact, light weight, firm vibration resistance;
- Measure range, zero external continuously adjustable;
- Damping adjustable;
- Field LCD display unit can be rotated to adjust; Good protection characteristics for
  - one-way overload;
- No mechanical detachable parts, less maintenance;
- Full series of unified structure, excellent interchangeability of parts;
- Explosion- proof structure, all-weather use;
- The diaphragm material of contiguous medium is optional; diaphragm could choose
  - 316L, TAN, HAS-C, MONEL and other corrosion-resistant materials;

### Technic Parameter

#### ※Technic index

- ◇ Use object: Liquid, gas, vapour

- ◇ Range of measurement
  - Gauge pressure: 0~0.13 kPa至0~41370 kPa
  - Pressure differential: 0~0.125 kPa to 0~6890 kPa
  - Absolute Pressure: 0~6.8 kPa to 0~6890 kPa
  - Negative pressure: -0.2~0 kPa to -100~41370 kPa
- ◇ Output: 4~20mADC, Intelligent HART fieldbus protocol signal output
- ◇ Power supply:
  - General type: 12~45VDC; Explosion-proof: 24VDC; Intrinsic safety: Power supply by safety barrier.
- ◇ Positive and negative migration: No matter how about the output, after negative migration, its range, the lower limit shall not exceed the range limit.
  - Maximum migration: 500% of the minimum adjustment range
  - Maximum negative migration: 600% of the minimum adjustment range
- ◇ Temperature range:
  - Conventional transmitters operating temperature -25 °C ~ +70 °C; With field instruction sheet -15 °C ~ +70 °C
  - Storage temperature: -40 °C ~ +100 °C
  - Amplifier operating temperature range): -29 °C ~ +93 °C (LT type is: -30 °C ~ +70 °C)
  - Operating temperature of silicone oil filling measurement device (LT type of medium temperature): -40 °C ~ +149 °C
  - When remote transmitter silicone oil filling temperature: -15 ~ +315 °C
  - Ordinary silicone: -40 ~ +149 °C
- ◇ Humidity Range: Relative humidity of 1 to 100%
- ◇ Sensor volume variation: Less than 0.16cm<sup>3</sup>
- ◇ Instruction meter: (site) Digital display
- ◇ Explosion-proof type: Flameproof Exd II CT6; Intrinsically Safe Exia II CT6
- ◇ Measurement range and zero point: external continuously adjustable
- ◇ Overpress limit:
  - Measurement range is under 6MPa: 0 (absolute pressure) ~ 14MNpa;
  - Measurement is 20MPa: 0 (absolute pressure) ~ 32MNpa;
  - Measurement is 42MPa: 0 (absolute pressure) ~ 52MNpa;

Transmitter is not damaged when flange is under 60PMa.

- ◇ Damping: Continuously adjustable between 0.2 to 16 seconds
- ◇ Start time: 2 seconds, without preheating
- ◇ Vibration influence: On any axis, frequency of 10Hz ~ 150Hz, the error caused will less than  $\pm 0.05\%$  of the maximum range , Range code (differential pressure) is  $\pm 0.25\%$
- ◇ Power influence: Less than 0.005% of output span / V
- ◇ Load influence: When the power supply is stable, no-load impact
- ◇ Mounting position effects:  
Maximum produce the zero error of 0.24kPa, but can be calibrated, no effect on the range

#### ※ Performance indicators

- ◇ Structural materials: Isolate Diaphragm: 316 stainless steel, Hastelloy C, Monel, Tantalum.

O-ring (Medium): Fluororubber

Flanges: 316 stainless steel.

Irrigation liquid: silicone oil or inert oil.

Electrical case: low polyurethane paint aluminum bronze.

- ◇ Pressure-bring adapting piece: The connection thread holes on the pressure chamber is 1/4NPT, the connection thread holes on the pressure-bring connection is 1/4NPT for 1/2NPT, The center distance follows various types of dimensions.

The connection thread holes of the signal connection cable is M20 × 1.5.

- ◇ Case Protection class: IP65
- ◇ Weight: 3.9kg (Not including the optional accessories, except the transmitter with flange).

## Mode selection diagram

## ※FC1151/3351GP Series pressure transmitter selection sheet

Code		Illustration			
FC1151/3351 GP		Pressure transmitter			
Measurement range	0 ~ 4 2	Write the numerical value directly (MPa)			
Signal output	E	4~20mADC			
	S	Intelligent type 4~20mADC two-wire system+fieldbus HART protocol			
Structure material		Flange joint	Exhausting/ Drain valve	Isolation diaphragm	Irrigation Liquid
	F22	316 Stainless steel	316 Stainless steel	316 Stainless Steel	Silicone oil
	F23	316 Stainless steel	316 Stainless steel	Hastelloy C	
	F24	316 Stainless steel	316 Stainless steel	Monel	
	F25	316 Stainless steel	316 Stainless steel	Tantalum	
	F33	Hastelloy C	Hastelloy C	Hastelloy C	
	F35	Hastelloy C	Hastelloy C	Tantalum	
	F44	Monel	Monel	Monel	
Optional	M3	LCD digital display meter			
	B1	Piping outfitting bend holder			
	B2	Flat outfitting bend holder			

	B3	Piping outfitting flat holder
	D0	Release valve is in the back of pressure chamber
	D1	Side release valve is on the top of pressure chamber
	D2	Side release valve is on the bottom of pressure chamber
	C0	Negative thread taper pipe joint 1/2 " NPT
	C1	The back part of pressure-bring joint 1/2 " NPT is welded $\phi 14$ pressure-bring tube
	C2	T-shaped thread joint M20×1.5
	d	Flame-proof type ExdIICT6
	i	Intrinsic safety type ExiaIICT6

※FC1151/3351AP Absolute Pressure transmitter

Code			Illustration			
FC1151/3351AP			Absolute pressure transmitter			
Measurement range	0 ~ 7		Write the numerical value directly (MPa)			
Output signal	E		4~20mADC			
	S		Intelligent type 4~20mADC two-wire system fieldbus HART protocol			
Structure material		Flange joint	Exhausting/draining valve	Isolation Diaphragm	Irrigation liquid	
	F22	316 Stainless Steel	316 Stainless Steel	316 Stainless steel	Silicone Oil	
	F23	316 Stainless Steel	316 Stainless Steel	Hastelloy C		
	F24	316 Stainless Steel	316 Stainless Steel	Monel		
	F25	316 Stainless Steel	316 Stainless Steel	Tantalum		

	F33	Hastelloy C	Hastelloy C	Hastelloy C	
	F35	Hastelloy C	Hastelloy C	Tantalum	
	F45	Monel	Monel	Monel	
Option	M3	LCD digital display meter			
	B1	Piping outfitting bend holder			
	B2	Flat outfitting bend holder			
	B3	Piping outfitting flat holder			
	D0	Release valve is in the back of pressure chamber			
	D1	Side release valve is on the top of pressure chamber			
	D2	Side release valve is on the bottom of pressure chamber			
	C0	Negative thread taper pipe joint 1/2 " NPT			
	C1	The back part of pressure-bring joint 1/2 " NPT is welded $\phi$ 14 pressure-bring tube			
	C2	M20 $\times$ 1.5 T-shaped thread joint			
	d	Flame-proof type ExdIICT6			
	i	Intrinsic safety type ExiaIICT6			

Attention: Please indicate the delivery measuring range,if there is no indication,we will follow the highest

delivery measuring range.

## ※FC1151/3351DP Type pressure differential transmitter selection diagram

Code		Illustration			
FC1151/3351DP		Pressure differential transmitter			
Measurement range	0~7	Write the numerical value directly (MPa)			
Output signal	E	4~20mADC			
	S	Intelligent type 4~20mADC two-wire system fieldbus HART protocol			
Structure material		Flange joint	Exhausting/ Draining valve	Isolation Diaphragm	Irrigation liquid
	F22	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	Silicone Oil
	F23	316 Stainless Steel	316 Stainless Steel	Hastelloy C	
	F24	316 Stainless Steel	316 Stainless Steel	Monel	
	F25	316 Stainless Steel	316 Stainless Steel	Tantalum	
	F33	Hastelloy C	Hastelloy C	Hastelloy C	
	F35	Hastelloy C	Hastelloy C	Tantalum	
	F45	Monel	Monel	Monel	
Maximum working pressure (MPa)	08		4		
	09		10		
	10		14		
Optional	M3	LCD digital display meter			
	B1	Piping outfitting bend holder			
	B2	Flat outfitting bend holder			
	B3	Piping outfitting flat holder			
	D0	Release valve is in the back of pressure chamber			
	D1	Side release valve is on the top of pressure chamber			
	D2	Side release valve is on the bottom of pressure chamber			
	C0	NPT negative thread taper pipe joint 1/2 "			

	C1	The back part of pressure-bring joint 1/2 " NPT is welded $\phi$ 14 pressure-bring tube
	C2	T-shaped thread joint M20×1.5
	d	Flame-proof type ExdIICT6

Attention:Please indicate the delivery measuring range,if there is no indication,we will follow the highest delivery measuring range.



## ※FC1151/3351DR Micro differential pressure transmitter selection diagram

Code			Illustration		
FC1151/3351DR			Micro differential pressure Transmitter		
Measurement range	0~1.5		Write the numerical value directly (KPa)		
Output signal	E		4~20mADC		
	S		Intelligent type 4~20mADC two-wire system Fieldbus HART protocol		
Structure material		Flange joint	Exhausting/ Draining valve	Isolation Diaphragm	Irrigation Liquid
	F22	316 Stainless steel	316 Stainless steel	316 Stainless Steel	Silicone oil
Maximum working pressure (MPa)	06		1		
	08		4		
option		M3	LCD digital display meter		
		B1	Piping outfitting bend holder		
		B2	Flat outfitting bend holder		
		B3	Piping outfitting flat holder		
		D0	Release valve is in the back of pressure chamber		
		D1	Side release valve is on the top of pressure chamber		
		D2	Side release valve is on the bottom of pressure chamber		
		C0	Negative thread taper pipe joint 1/2 " NPT		
		C1	The back part of pressure-bring joint 1/2 " NP is welded pressure-bring tube φ14		
		C2	T-shaped thread joint M20×1.5		
		d	Flame-proof type ExdIICT6		
	i	Flame-proof type ExiaIICT6			

## ※FC1151/3351HP High hydrostatic pressure transmitter selection diagram

Code			Illustration		
FC1151/3351HP			Hydrostatic pressure transmitter selection diagram		
Measurement range	0~2		Write the numerical value directly (MPa)		
Output signal	E		4~20mADC		
	S		Intelligent type 4~20mADC two-wire system Fieldbus HART protocol		
Structure material		Flange joint	Exhausting/ Draining valve	Isolation Diaphragm	Irrigation Liquid
	F22	316 Stainless steel	316 Stainless steel	316 Stainless Steel	Silicone Oil
Maximum working pressure (MPa)	09		25		
	10		32		
Option		M3	LCD digital display meter		
		B1	Piping outfitting bend holder		
		B2	Piping outfitting flat holder		
		B3	Piping outfitting flat holder		
		D0	Release valve is in the back of pressure chamber		
		D1	Side release valve is on the top of pressure chamber		
		D2	Side release valve is on the bottom of pressure chamber		
		C0	Negative thread taper pipe joint 1/2 " NPT		
		C1	The back part of pressure-bring joint 1/2 " NPT is welded φ14 pressure-bring tube		
		C2	T-shaped thread joint M20×1.5		
		d	Flame-proof type ExdIICT6		
	i	Flame-proof type ExiaIICT6			

Attention: Please indicate the delivery measuring range, if there is no indication, we will follow the highest delivery measuring range.