

**Main specifications**      **Other Specifications**

▼ **Pressure connection**  
Please refer to pressure connection selection instruction

▼ **Electrical connection**  
Aviation plug - M12\*1 (4-pin)  
Vertical / Horizontal mounting

▼ **Pressure range**  
Min.: 10kPa  
Max.: 3MPa  
Please refer to pressure range selection instruction

▼ **Applicable media**  
Viscous. Paste-like, adhesive, crystallizing, particulate containing and contaminated media

▼ **Oil filling**  
Silicone oil / Sanitary fluid

▼ **Operating temperature**  
-40 to 85°C  
-20 to 70°C (with LCD display)

▼ **Storage temperature**  
-40 to 110°C,  
-40 to 85°C (with LCD display)

▼ **Fluid temperature**  
Sanitary fluid filling:  
-10 to 180°C  
-10 to 250°C(with heat exchanger)  
Silicone oil filling:  
-45 to 205°C  
-40 to 300°C(with heat exchanger)

▼ **Humidity**  
0-95%

▼ **Protection level**  
IP67

▼ **Explosion-proof class**  
Exia II CT4 (GB13, 1139X)

▼ **Approval**  
3A, CE certificate

▼ **Housing**  
Stainless steel  
Waterproof design

▼ **Output Signal**  
4~20mA (2-wire linearity)  
4~20mA+HART

▼ **Power supply**  
Standard: 10.5-55VDC  
With HART: 16.5-55VDC

▼ **Load resistance**  
0-2119Ω  
250-600Ω (HART)

▼ **Transmission distance**  
< 1000 meters

▼ **Power consumption**  
≤500mW@24VDC, 20.8mA

▼ **Insulation resistance**  
> 20MΩ@100VDC

▼ **Damping time**  
Amplifier: 0~100S (adjustable)  
Startup after power off: ≤6S  
Normal services after data recovery: ≤31S

▼ **Accuracy**  
±0.2% / ±0.5%F.S. (@20±5°C)  
(Including linearity, hysteresis and repeatability)

▼ **Stability**  
±0.2% F.S./year

▼ **Temperature drift**  
±0.2% F.S./10K (@-20 to 80°C)

▼ **Vibration effect**  
Vibration resistance:  
10g (25-2000Hz)  
Shock resistance: 500g/1ms

▼ **Operating pressure**  
Max overpressure 15MPa

▼ **Weight**  
About 0.6kg

# Flush Diaphragm Sanitary Pressure Transmitter

## Model: FDPT-858

### Introduction

FDPT858 sanitary pressure transmitter is designed for food and pharmaceutical industry, which is suitable for pressure and level measurement or CIP/SIP cleaning and sterilization.

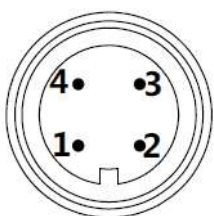


Due to the variety of customization, the picture is only for reference, please confirm the actual item with our sales. (If there is any change on specification, please take the latest version as standard.)

### Features

- OEM service
- Compact design
- High quality SS316L welded process diaphragm
- Filling fluid comply with hygiene standard
- A variety of international standard process connections are available
- Double diaphragm overload protection structure can easily cope with high overload test
- Isolated air cavity design to prevent condensation and pollution
- Friendly button parameters operation function with high display speed.
- 160 pressure calibration points to assure high measuring precision.
- Roughness of stainless steel surface Ra≤0.4 μm, conform to international sterile standard.
- 3A, explosion-proof, CE certificate

### Aviation plug M12\*1



No.	2-wire
1	Power supply+
2	x
3	Key-z
4	Power supply-

## Pressure range select instruction

Code	Nominal value	Smallest calibration span	Lower range limit	Upper range limit	Overpressure limit*
S403G	40kPa	10kPa	-40kPa	40kPa	1Mpa
S254G	250kPa	25kPa	-100kPa	250kPa	4MPa
S105G	1MPa	100kPa	-100kPa	1MPa	6MPa
S305G	3MPa	300kPa	-100kPa	3MPa	15MPa

The above pressure unit can be converted into kg/cm<sup>2</sup>, MPa, or kPa.

Adjust requirements: lower range value (LRV) and upper range value (URV) can be adjusted within the scope of the upper and lower range limit, minimum measuring range  $\leq |URV-LRV| \leq$  maximum measuring range

\* Limit value of overpressure: depends on the pressure value of the parts with lowest pressure capacity

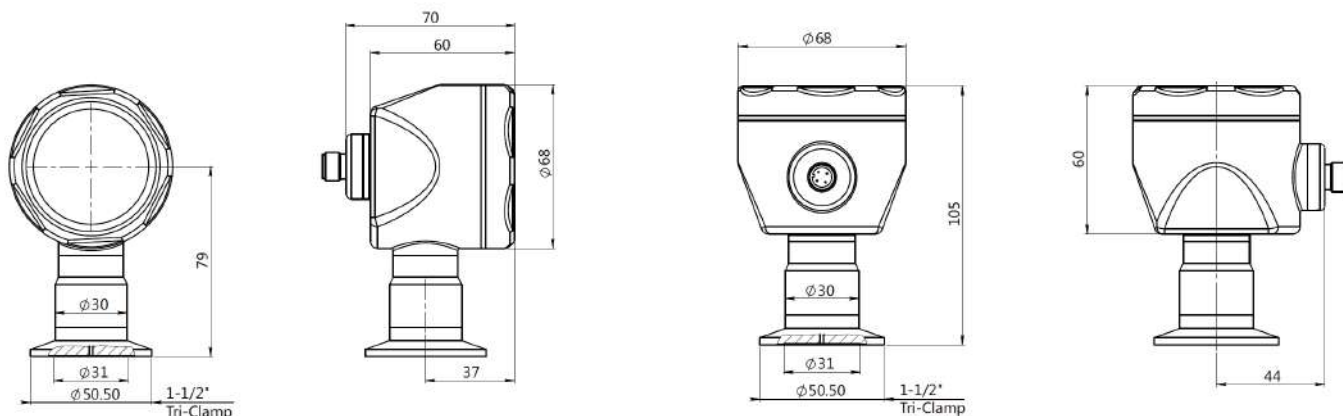
## Pressure connection select instruction

Item	Code	Description
Connection material	4	SS304
	6	SS316
Connection type	NT	Standard connection, medium temperature: -25 to 85°C
	NH	Cooling element connection, medium temperature: -40 to 150°C
Fluid filling	F	Sanitary fluid filling: -10 to 180°C
	S	Silicone oil filling: -45 to 250°C
Diaphragm material	S	SS316L
	H	Hastelloy C
Pressure connection specifications	K01	Tri-Clamp 1-1/2" (max. measuring range: 2MPa)
	K02	Tri-Clamp 2" (max. measuring range: 2MPa)
	K03	DIN32676 DN32 (max. measuring range: 1.6MPa)
	K04	DIN32676 DN40 (max. measuring range: 1.6MPa)
	K05	DIN32676 DN50 (max. measuring range: 1.6MPa)
	K06	ISO2852 DN38 (max. measuring range: 4MPa)
	K07	ISO2852 DN40 (max. measuring range: 4MPa)
	K08	ISO2852 DN51 (max. measuring range: 2.5MPa)
	K09	DIN11851 DN25 (max. measuring range: 2.5MPa)
	K10	DIN11851 DN40 (max. measuring range: 2.5MPa)
	K11	DIN11851 DN50 (max. measuring range: 2.5MPa)
	K12	SMS DN 1/1/2" (max. measuring range: 2.5MPa)
	K13	SMS DN2" (max. measuring range: 2.5MPa)
	K14	IDF DN 1-1/2" (max. measuring range: 2MPa)
	K15	IDF DN2" (max. measuring range: 2MPa)
K18	DRD(max. measuring range: 2.5MPa)	
K20	Plug in flush sanitary-clamp (max. measuring range: 2MPa)	

## Menu function

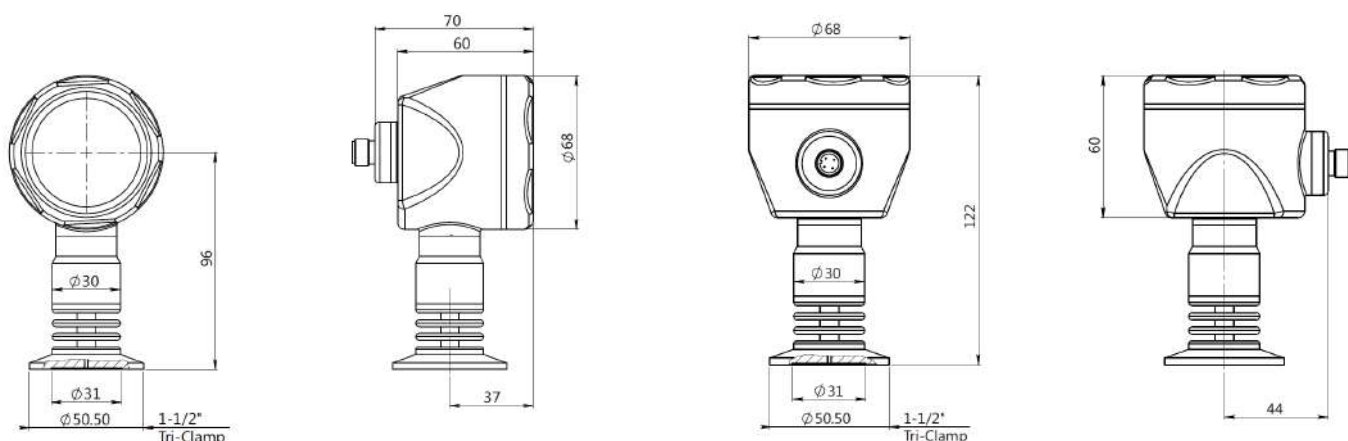
Transmission module type	4-20mA+HART: LCD/3 buttons on body, remote control HART 4-20mA: LCD/3 buttons on body		
LCD display unit	PV: Process variable shows on main screen, percentage and progress bar shows on secondary screen mA: Current shows on main screen, percentage and progress bar shows on secondary screen %: Percentage shows on main screen, percentage and progress bar shows on secondary screen		
Pressure unit	KPa: Kilopascal	MPa: Mega pascals	bar: Bar
	psi: Pounds per square inch	mmHg: Millimeter (s) of mercury@0 °C	mmH2O: Millimeter of water@4°C
	mH2O: Meter of water@4°C	inH2O: Inches of water@4°C	ftH2O: Feet of water@4°C
	TORR: Torr	mHg: Meter mercury column@0°C	inHg: Inches of mercury@0°C
	mbar: Millibar	g/cm2: Gram per square centimeter	kg/cm2: kg per square centimeter
	Pa: PA	ATM: Standard atmospheric pressure	Mm: Millimeter(Note1)
	m: Meter(Note1)	Note1: length unit need mark medium density	
Measuring menu set	URV: Upper range value LRV: Lower range value		
Damping time	Units S – setting range: 0-100		
Analog output type	mA LINER: Linearity mA √: Square root		
Alarm signal	ALARM NO: None / ALARM H: 20.8mA / ALARM L: 3.8mA		
Fix output	3.8000mA / 4.0000mA / 8.0000mA / 12.000mA / 16.000mA / 20.000mA / 20.800mA		
Quick menu	PV=0: Set current output to zero value, used to correct the error caused by static pressure and installation. Zero adjustment: 4mA re-range with pressure Span adjustment: 20mA re-range with pressure Restore factory setting: Restore backup data when error		

## Dimension



Vertical installation (standard type)

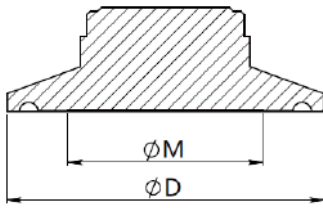
Horizontal installation (standard type)



Vertical installation (for high temperature type)

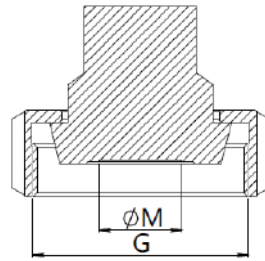
Horizontal installation (for high temperature type)

## Process Connection Dimension



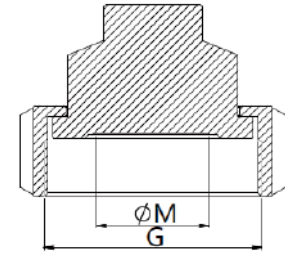
**K01-K08**

Standard	Spec.	$\phi D$	$\phi M$
Tri-Clamp	1-1/2"	50.5	31
Tri-Clamp	2"	64	42
DIN32676	DN32	50.5	31
DIN32676	DN40	50.5	31
DIN32676	DN50	64	42
ISO2852	DN38	50.5	31
ISO2852	DN40	64	42
ISO2852	DN51	64	42



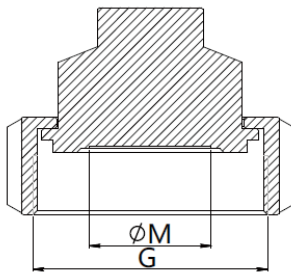
**K09-K11**

Standard	Spec.	G	$\phi M$
DIN11851	DN25	Rd 52*1/6	20
DIN11851	DN40	Rd 65*1/6	31
DIN11851	DN50	Rd 78*1/6	42



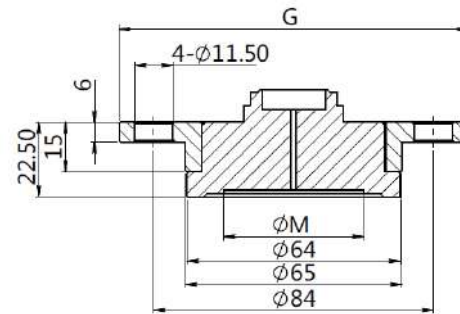
**K12-K13**

Standard	Spec.	G	$\phi M$
SMS	1-1/2"	Rd 60*1/6	31
SMS	2"	Rd 70*1/6	42



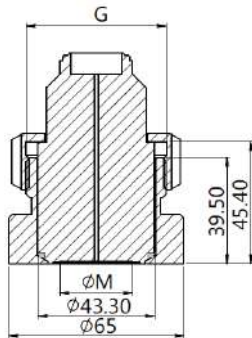
**K14-K15**

Standard	Spec.	G	$\phi M$
IDF	1-1/2"	IDF 1-1/2"	31
IDF	2"	IDF 2"	42



**K18**

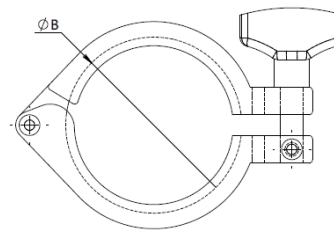
Standard	Spec.	G	$\phi M$
DRD	DN50	105	42



**K20**

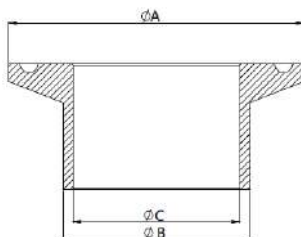
Standard	Spec.	G	$\phi M$
Normal	Standard	Rd 52*1/6	27

## Clamp Dimension



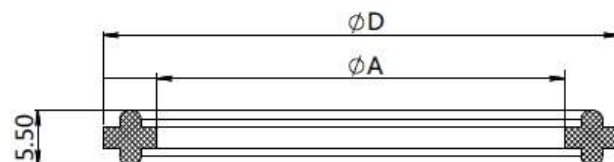
Standard	Spec.	$\phi B$
Tri-Clamp	1-1/2"	53.9
Tri-Clamp	2"	67.4

## Welding adaptor



Standard	Spec.	$\phi A$	$\phi B$	$\phi C$
Tri-Clamp	1-1/2"	50.5	38	35.6
Tri-Clamp	2"	64	51	48.6

## O-ring



Standard	Spec.	$\phi D$	$\phi A$
Tri-Clamp	1-1/2"	50.5	35
Tri-Clamp	2"	64	47.8

## How to Order

Item	Parameters	Code	
	Model	FDPT-858	Waterproof pressure transmitter
Sensor	Separator	Code	Detailed specifications as following
	Pressure range code	S403G	Nominal value: 40kpa
		S254G	Nominal value: 250kpa
		S105G	1MPa
		S305G	3MPa
Electrical connection	Separator	Code	Detailed specifications as following
	Cable length	F1	Stainless steel terminal, aviation plug M12*1 (4-pin) (H2), IP67, vertical mounting
		F2	Stainless steel terminal, aviation plug M12*1 (4-pin) (H2), IP67, horizontal mounting
Output	Separator	Code	Detailed specifications as following
	Output signal	H	4-20mA+HART (2-wire), power supply: 16.5-55VDC
		F	4~20mA two wire, power supply: 10.5-55VDC
	Display	C	LCD display
		A	Without LCD display
Process connection	Separator	Code	Detailed specifications as following
	Material	4	SS 304
		6	SS 316
	Connection type	NT	Standard connection ,suitable for media temperature: -25 to 85°C
		HT	With cooling elements, suitable for media temperature: -40 to 150°C
	Isolation fluid filling	F	Sanitary filling fluid, Neobee M-20, process temperature:-10 to 180°C
		S	Silicone oil, process temperature: -45 to 205°C
	Isolation diaphragm material	S	SS316L
		H	Hastelloy C
	Process connection specification	K01	Tri-Clamp 1-1/2" , max. measuring range: 2MPa
		K02	Tri-Clamp 2" , max. measuring range: 2MPa
		K03	DIN32676, DN32, max. measuring range: 1.6MPa
		K04	DIN32676, DN40, max. measuring range: 1.6MPa
		K05	DIN32676, DN50, max. measuring range: 1.6MPa
		K06	ISO2852, DN38, max. measuring range: 4MPa
		K07	ISO2852, DN40, max. measuring range: 4MPa
		K08	ISO2852, DN51, max. measuring range: 2.5MPa
		K09	DIN11851, DN25, max. measuring range: 2.5MPa
		K10	DIN11851, DN40, max. measuring range: 2.5MPa
		K11	DIN11851, DN50, max. measuring range: 2.5MPa
		K12	SMS DN1-1/2" , max. measuring range: 2.5MPa
K13		SMS DN2" , max. measuring range: 2.5MPa	
K14		IDF DN1-1/2" , max. measuring range: 2MPa	
K15		IDF DN2" , max. measuring range: 2MPa	
K18		DRD, max. measuring range: 2.5MPa	
K20		Plug in tube flush sanitary-clamp, max. measuring range: 2MPa	

Additional option	Separator	Code	Detailed specifications as following
	Accessory	J1	Aviation plug (straighter) with 2m cable, 4-pin, M12*1, IP67
		J2	Aviation plug (elbow) with 2m cable, 4-pin, M12*1, IP67
		G1	1.5" Clamp
		G2	2" Clamp
		M1	1.5" O-ring
		M2	2" O-ring
		Z1	Welding adaptor, Tri-Clamp 1-1/2"
		Z2	Welding adaptor, Tri-Clamp 2"
	Calibration report	Q1	Calibration report provided by our company
	Approvals	I1	Intrinsic safety certificate, Exia II CT4, NEPSI
		F3	CE certificate

Ordering Example: FDPT-858-S105G-F1-F-A-4-NT-F-S-K01+/M1