

# FD – Flame Proof Differential Pressure Switch

FD Series Flame Proof Differential Pressure Switches have been essentially designed to control the differential pressure drop in explosive and hazardous applications. The compact design helps in easy commissioning and installation. The specially designed aluminum die cast enclosure is IP66 approved. It is designed to sustain mechanical vibration and shocks. These can be used across filters, compressor lines etc.



## Features

- Compact type
- Easy installation
- Fixed / adjustable differential
- Adjustable set point
- Aluminum die-cast
- Flame proof to Ex.d IIC, Gb, IP66
- Internal locking
- Scale provided

## Applications

- Oil and Gas, Refineries
- Power plants
- Steel plants
- Furnace applications
- Petro-chemicals
- Fertilizers
- Cement industry
- Glass industry

## Standard Specifications

Repeatability	: ± 0.5 % F.S
Scale accuracy	: ± 1% F.S
Measurement unit	: bar, kg/cm <sup>2</sup> , psi, mbar and mmWC
Range	: Refer "range table"
Range adjustment	: External and internal locking
Differential	: Fixed and adjustable (optional)
Mounting	: Bottom / panel
Enclosure material	: Aluminum pressure die cast IIC, IP66
Sensing elements	: SS 316 diaphragm
Switch	: 1 SPDT snap action micro switch
Switch rating	: 15A, 250 VAC / 0.2A, 24 VDC
Process connection	: ¼" NPT (F)
Maximum process temperature	: 130 °C
Ambient temperature	: -10...60 °C
Cable entry	: Double compression cable gland
Set point	: Between 15 to 85 % F.S for better performance
High voltage strength	: 0.6 KV between open contacts and 2 KV between contact and body

## Range Table

Code	Range mmWC
1	30 + 200
2	50 + 600
3	100 + 1000
4	250 + 2000
5	500 + 6000

Code	Range kg/cm <sup>2</sup> and Bar
G	0.2 + 2
I	0.4 + 4
K	0.6 + 6
M	1 + 10
N	1.6 + 16
O	2.5 + 25

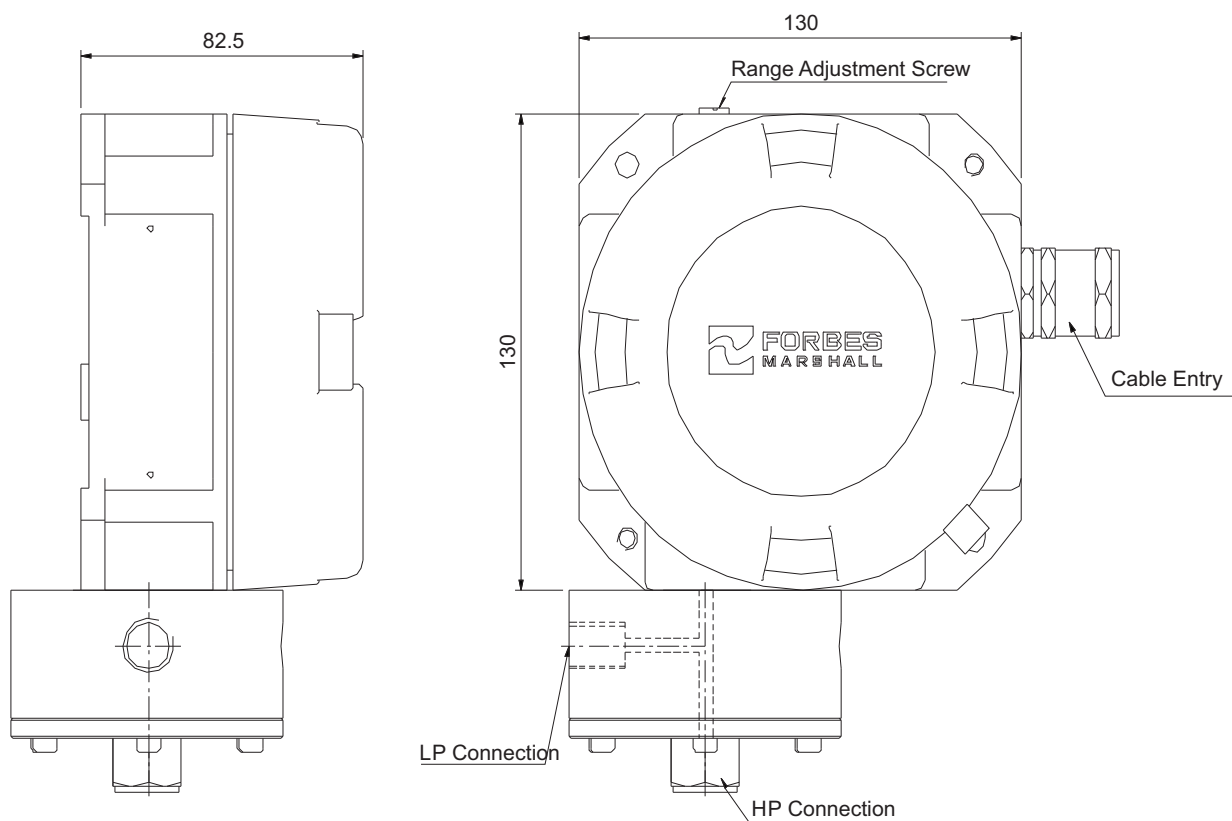
## Compatible Accessories

Chemical seal  
Syphon

Gauge saver  
Snubber

All type of manifolds

## Dimensional Drawing



## Microswitch Specifications

Description	Rating	Code 1SPDT	Code 2SPDT
General purpose	5-15A, 250 VAC	A	B
Gold contact	1A, 250 VAC	C	D
Environmentally sealed silver contact	5-15A, 250 VAC	E	F
Environmentally sealed gold contact	1 A, 250 VAC	G	H
Hermetically sealed silver contact	5-15A, 250 VAC	I	J
Hermetically sealed gold contact	1 A, 250 VAC	K	L

For any other requirement please contact Forbes Marshall. Other ranges can also be provided on request.

### Ordering Codes

<b>1. Model</b> FD Flame Proof Differential Pressure Switch	<b>FD</b>	<b>9. Sensor moc</b> 1 SS 316 2 Monel 3 Hastelloy C 4 Teflon backup	<b>1</b>
<b>2. Mounting</b> 1 Direct bottom 2 Surface bottom	<b>1</b>	<b>10. Wetted parts moc</b> 1 SS 316 2 Monel 3 Hastelloy C	<b>1</b>
<b>3. Process connection size</b> A 1/4" B 3/8" C 1/2"	<b>A</b>	<b>11. Optionals features</b> Calibration test certificate Material test certificate Enclosure protection to GR. IIA, IIB Enclosure protection to GR.IIC SS304 tag plate Wall mounting plate Pipe mounting with 2" pipe U-clamp	<b>XXXX</b>
<b>4. Process connection type</b> A NPT(M) D NPT(F) B BSP(M) E BSP(F) C BSPT(M) F BSPT(F)	<b>A</b>		
<b>5. Range</b> Please refer standard ranges table	<b>G</b>		
<b>6. Units</b> 1 Kg/sq.cm dual scale with bar 2 m Bar dual scale with mm WC	<b>1</b>		
<b>7. Microswitch</b> Refer table "Micro switch Specification"	<b>A</b>		
<b>8. Cable entry</b> B 3/4 ET double comp. gland D 1/2" NPT double comp. gland G M20 X 1.5P double comp. gland	<b>B</b>		

### Ordering Code

CODE for below for Flameproof Differential Pressure Switch will be **FD1AAG1AA11-0000**

Flame proof differential pressure switch, Direct bottom, 1/4"NPT(M), 0.2 + 2, Kg/sq.cm dual scale with Bar, 1 SPDT general purpose, 5-15A, 250VAC, 3/4"ET double compression gland, SS316 sensor, SS316 wetted parts, Optional features

### Notes

For any special requirements, please contact factory.

For special material such as Monel and Hastelloy C, the use of Diaphragm Seal Pressure Switch is recommended.



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