

# FLAMEPROOF SWITCHES

## SPECIFIER'S GUIDE FOR

PRESSURE SWITCHES

PRESSURE DIFFERENCE SWITCHES

VACUUM SWITCHES

TEMPERATURE SWITCHES



**FC**



APPROVED



with  
**IECEX**  
CoC

PESO  
approved

KLPL  
approved

**FE**



PESO  
approved

KLPL  
approved

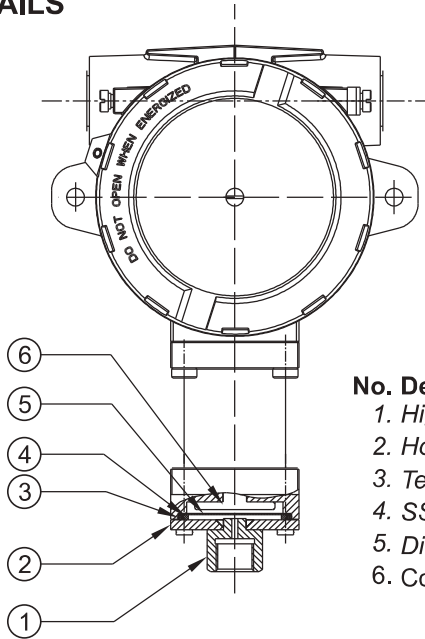
# FC/FE HIGH PRESSURE RANGES



## FC



### PRESSURE CAPSULE DETAILS

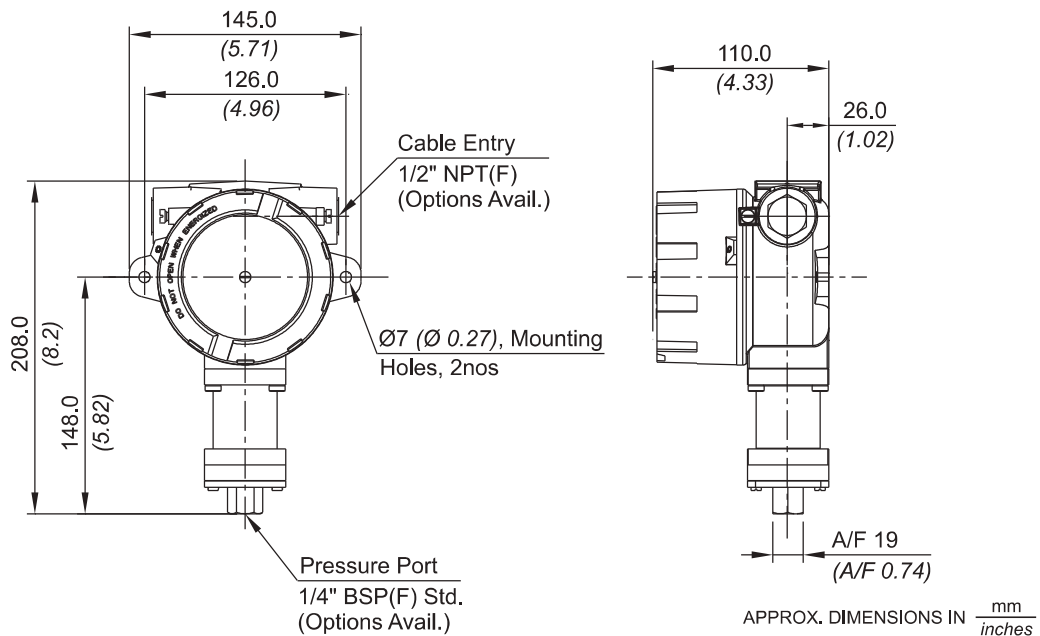


#### No. Description

1. High Pressure Port (SS316)
2. Housing Plate (SS316)
3. Teflon® O-Ring
4. SS 316 Ring
5. Diaphragm (Teflon®)
6. Conical Plunger

Note : *wetted parts* are mentioned in italics.

### INSTALLATION DRAWING



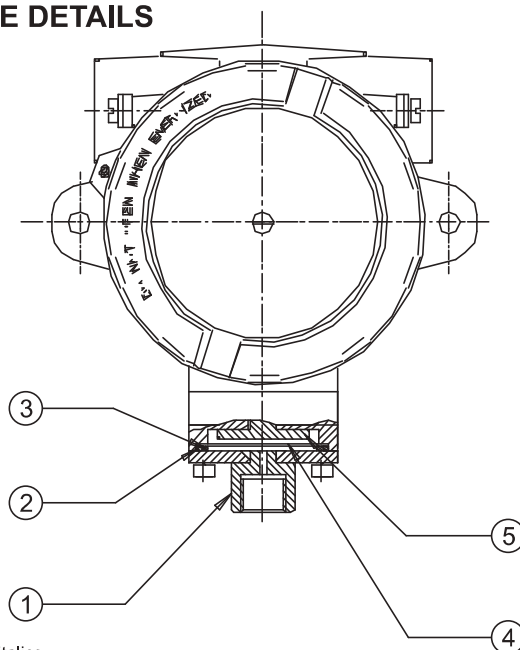
# HIGH PRESSURE RANGES FC/FE



FE



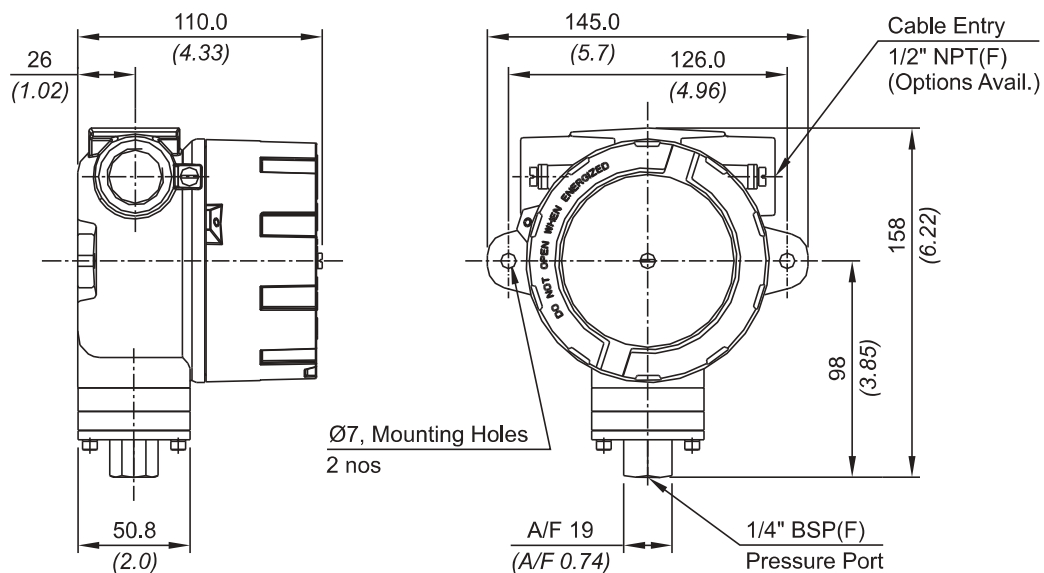
## PRESSURE CAPSULE DETAILS



- No. Description**
1. High Pressure Port
  2. Teflon® O-Ring
  3. SS 316 Ring
  4. Diaphragm
  5. Conical Plunger

Note : *wetted parts* are mentioned in italics.

## INSTALLATION DRAWING



APPROX. DIMENSIONS IN  $\frac{\text{mm}}{\text{inches}}$

# FC/FE HIGH PRESSURE RANGES

## RANGE SELECTION TABLE

Range Code	Range bar (psi)	Differential* bar (psi)	Maximum Working Pressure bar (psi)
		Approximate Maximum for "A1" microswitch	
LP	0.067 - 0.213 (0.97 - 3.09)	0.02 (0.29)	5 (72.52)
LP5	0.1 - 0.5 (1.45 - 7.25)	0.08 (1.16)	5 (72.52)
H01	0.1 - 1.0 (1.45 - 14.50)	0.10 (1.45)	12 (174.05)
H02	0.1 - 1.5 (1.45 - 21.76)	0.12 (1.74)	12 (174.05)
H03	0.2 - 2.6 (2.90 - 37.71)	0.15 (2.17)	12 (174.05)
H04	0.2 - 3.6 (2.90 - 52.21)	0.20 (2.90)	12 (174.05)
H07	0.5 - 7.0 (7.25 - 101.50)	0.20 (2.90)	12 (174.05)
H10	0.5 - 10.0 (7.25 - 145.037)	0.40 (5.80)	25 (362.6)
H15	1.0 - 15.0 (14.5 - 217.56)	0.50 (7.25)	25 (362.6)
H30	5.0 - 25.0 (72.52 - 362.6)	1.0 (14.5)	35 (507.63)

\*Minimum differential increases with setpoint, values with neoprene diaphragm (Graphs available on request)

\* Differentials of microswitches A2 through A9 will vary. Differentials for A7 are typically twice that for A1 microswitch. Please indicate specifically the differential value in enquiry/order, when it is critical in your application.



Note: Welded diaphragm also available as shown

## HOW TO ORDER FLAMEPROOF HIGH RANGE PRESSURE SWITCHES

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
Non standard allocation	Gas Group Classification	Cable Entry Size	Switch Type	Range Code (values in bar)	Microswitch Type	Pressure Port Material / Size	Diaphragm
<input type="checkbox"/> Reserved for non-standard options not covered in catalogue. Will be given by manufacturer, only after agreement of supply details with customer.	<b>FC</b> = Flameproof pressure switch, ATEX & IECEx approved, with Aluminium head as per IS/IEC 60079-1 for Gas Gr. IIC <b>FE</b> = IP66 Flameproof pressure switch, KLPL approved	<b>1</b> = Al. head 1/2" NPT threads <b>2</b> = Al. head 3/4" NPT threads <b>3</b> = Al. head M20 x 1.5 threads <b>4</b> = Grey CI head 1/2" NPT threads <b>5</b> = Grey CI head 3/4" NPT threads <b>6</b> = Grey CI head M20 x 1.5 threads <b>7</b> = SS head 1/2" NPT threads <b>8</b> = SS head 3/4" NPT threads <b>9</b> = SS head M20 x 1.5 threads	<b>P 1</b> = pressure switch, fixed differential without scale * <b>P2</b> = pressure switch, fixed differential with scale in bar * <b>P3</b> = pressure switch, fixed differential with scale in psi	<b>LP</b> = (0.067 - 0.213) <b>LP5</b> = (0.1 - 0.5) <b>H01</b> = (0.1 - 1.0) <b>H02</b> = (0.1 - 1.5) <b>H03</b> = (0.2 - 2.6) <b>H04</b> = (0.2 - 3.6) <b>H07</b> = (0.5 - 7.0) <b>H10</b> = (0.5 - 10.0) <b>H15</b> = (1.0 - 15.0) <b>H30</b> = (5.0 - 25.0)	<b>A1</b> = General purpose microswitch rated at 15 A; 250 VAC * <b>A2</b> = Hermetically sealed for corrosive environments * <b>A3</b> = gold plated contacts for low voltage applications * <b>A4</b> = DPDT configuration * <b>A5</b> = for high DC ratings * <b>A6</b> = elements with adjustable deadband * <b>A7</b> = 2SPDT switching elements * <b>A9</b> = General purpose microswitch rated at 5 A; 250 VAC  Please refer Page No. 69 for Microswitch options * Please refer note under Range Selection Table	<b>S1</b> = SS316 / 1/4" BSP(F) <b>S2</b> = SS316 / 1/4" NPT(F) <b>S3</b> = SS316 / 1" BSP(M) <b>H1</b> = Hastelloy C / 1/4" BSP(F) <b>H2</b> = Hastelloy C / 1/4" NPT(F) <b>N1</b> = Monel / 1/4" BSP(F) <b>N2</b> = Monel / 1/4" NPT(F)	<b>0</b> = Neoprene <b>1</b> = Teflon <b>2</b> = SS 316L <b>3</b> = Hastelloy C <b>4</b> = Monel <b>5</b> = Titanium <b>6</b> = Tantalum <b>7</b> = Inconel

eg. A flameproof switch for gas group IIC, with 1/2" NPT cable entry in aluminium housing as 1SPDT pressure switch, having 0.1 bar to 1 bar pressure range, with 15 Amp. microswitch, SS316 pressure housing with 1/4" BSP port size & neoprene diaphragm shall be specified by

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
<input type="checkbox"/>	FC	1	P1	H01	A1	S1	0

Please specify full model number to avoid ambiguity. If only the first two groups are specified while ordering, uncalibrated switches with standard wetted parts and enclosures will be supplied.