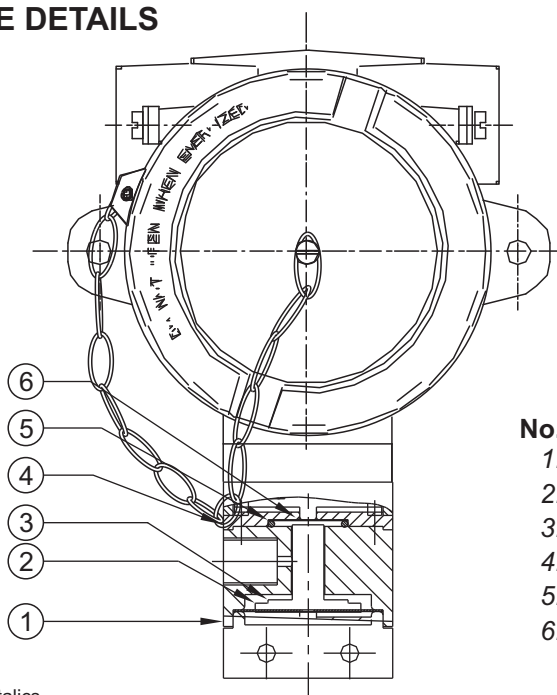




## FE



### PRESSURE CAPSULE DETAILS

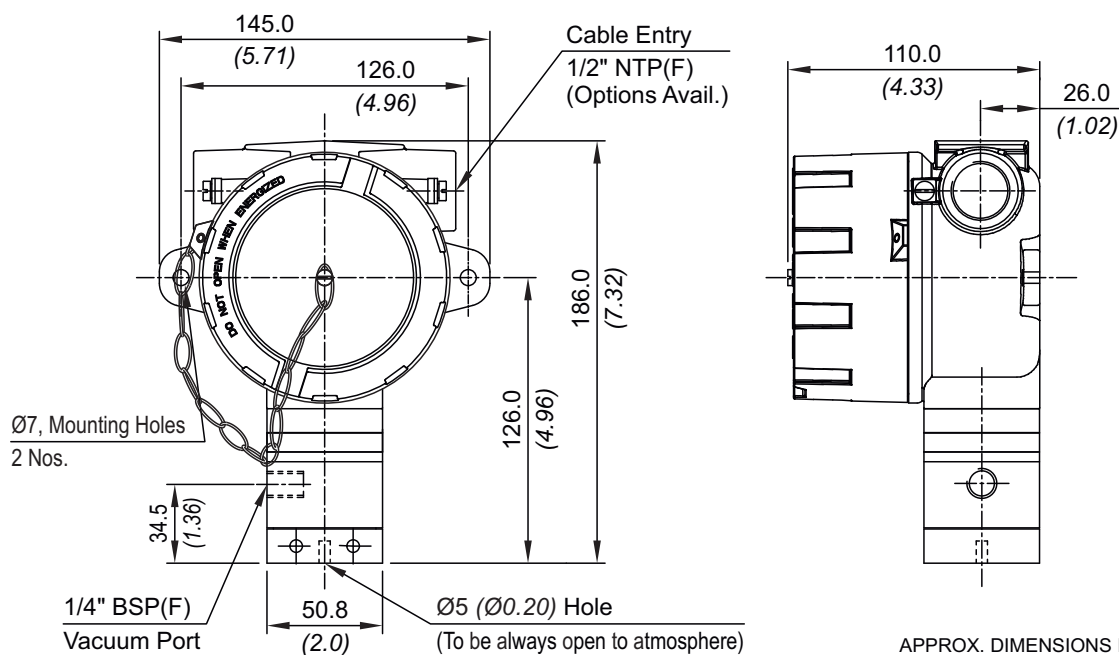


#### No. Description

1. Disc
2. Diaphragm
3. Plunger (SS316)
4. Junction Plate
5. Sealing O-Ring (PTFE)
6. Sealing diaphragms (PTFE)

Note : *wetted parts* are mentioned in italics.

### INSTALLATION DRAWING



# FC/FE VACUUM SWITCHES

## RANGE SELECTION TABLE

| Range Code | Range<br>mm Hg ("Hg)            | Differential* mm Hg ("Hg)                         | Maximum<br>Working Pressure<br>bar (psi) |
|------------|---------------------------------|---------------------------------------------------|------------------------------------------|
|            |                                 | Approximate<br>Maximum<br>for "A1"<br>microswitch |                                          |
| V00        | † 760 to 100<br>(29.92 to 3.94) | 20.0<br>(0.78)                                    | 12.0<br>(174.05)                         |

Note:

1. The minimum differential increases with the setpoint. The differential values mentioned in the above table are approximate maximum for FSR. The differential value will vary according to the pressure range selected and microswitch type. For actual values of differential please contact sales office.

2. When using 2SPDT switching arrangement, both microswitches may not actuate and/or deactuate at the same point. A small stage gap, normally upto +/- 5% FSR (depending on range code) may be observed. The On-Off differential (hysteresis) typically tends to be atleast double of those published for 1SPDT pressure switches.

If actuation and/or deactuation at same point is critical part of operation, then it can be achieved by using a separate DPDT relay. This relay will need a separate power supply for it's coil.

## HOW TO ORDER FLAMEPROOF VACUUM RANGE SWITCHES

| Group 1                                                                                                                                                                                                                                     | Group 2                                                                                                                                    | Group 3                                                                                                                                                                                                                                                                                                                                                                                                        | Group 4                                                                                                                                         | Group 5                     | Group 6                                                                                                                                                                                                                                                                                                                                           | Group 7                                                                                                                       | Group 8                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Non standard allocation                                                                                                                                                                                                                     | Model                                                                                                                                      | Cable Entry Size                                                                                                                                                                                                                                                                                                                                                                                               | Switch Type                                                                                                                                     | Range Code (values in mmHg) | Microswitch Type                                                                                                                                                                                                                                                                                                                                  | Pressure Port Material / Size                                                                                                 | Diaphragm                              |
| <input type="checkbox"/> A prefix "N" is used in the model code in case of any non standard options / accessories that are provided with the switches. Will be given by manufacturer, only after agreement of supply details with customer. | <b>FC</b> = IP66 Flameproof pressure switch, ATEX, IECEx & PESO approved<br><br><b>FE</b> = IP66 Flameproof pressure switch, PESO approved | <b>1</b> = Al. head<br>1/2" NPT threads<br><b>2</b> = Al. head<br>3/4" NPT threads<br><b>3</b> = Al. head<br>M20 x 1.5 threads<br><b>*4</b> = Grey Cl head<br>1/2" NPT threads<br><b>*5</b> = Grey Cl head<br>3/4" NPT threads<br><b>*6</b> = Grey Cl head<br>M20 x 1.5 threads<br><b>7</b> = SS head<br>1/2" NPT threads<br><b>8</b> = SS head<br>3/4" NPT threads<br><b>9</b> = SS head<br>M20 x 1.5 threads | <b>V1</b> = vacuum switch, fixed differential without scale                                                                                     | <b>V00</b> = († 760 - 100)  | <b>A1</b> = General purpose microswitch rated at 15 A; 250 VAC<br><br><b>*A6</b> = elements with adjustable deadband<br><br><b>*A7</b> = 2SPDT switching elements<br><br><b>A8</b> = General purpose microswitch rated at 5 A, 250 VAC; 5 A, 28 VDC<br><br><b>*B7</b> = 2SPDT Switching Elements<br><br><b>C6</b> = 1SPDT Adjustable Differential | <b>S1</b> = SS316 / 1/4" BSP(F)<br><b>S2</b> = SS316 / 1/4" NPT(F)<br><br>More options available, please contact sales office | <b>0</b> = Neoprene<br><b>1</b> = PTFE |
| The prefix is subject to change as per specific requirement.                                                                                                                                                                                |                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
| Approx. switch weight in Kgs                                                                                                                                                                                                                |                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
| Enclosure                                                                                                                                                                                                                                   | FC                                                                                                                                         | FE                                                                                                                                                                                                                                                                                                                                                                                                             | For adjustable differential please select microswitches A6 or C6 in group 6                                                                     |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
| Aluminium                                                                                                                                                                                                                                   | 2.030                                                                                                                                      | 1.530                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
| Grey Cl                                                                                                                                                                                                                                     | 4.430                                                                                                                                      | 3.950                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
| SS                                                                                                                                                                                                                                          | 4.560                                                                                                                                      | 4.050                                                                                                                                                                                                                                                                                                                                                                                                          | Please refer to page nos. 120 & 121 for options and specifications of microswitches<br>* Please contact sales office for additional information |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
|                                                                                                                                                                                                                                             |                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                 |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |
|                                                                                                                                                                                                                                             |                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                | For additional wetted parts please contact Sales Office                                                                                         |                             |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |                                        |

eg. A flameproof switch for gas group IIC, with 1/2" NPT cable entry in aluminium housing as 1SPDT vacuum switch, having 760 mm Hg to 100 mm Hg vacuum 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       | V1      | V00     | 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.

## VACUUM SWITCHES

## FC/FE