

LPD

All SS Pressure Gauge
Low Pressure Diaphragm Type



CE

Special Features

- Stainless steel case & measuring system
- Selectable ranges from
From 0 to 250 mmwc to Max. 6000 mmWC Pressure and Vacuum
- Flanged or screwed connection
- Standard followed in general EN 837 - 3
- C E approved electrical contacts

Application

- Suitable for clean air
- Corrosive environments & Gaseous or non crystallized liquid media that will not obstruct the pressure system.

Specifications

Standard Version : 100 mm & 150 mm

| | | |
|--------------------------|---|---|
| Diaphragm Type | : | 0 to 250 mmWC to Max. 6000 mmWC Pressure and Vacuum |
| Accuracy | : | ±1.6% of F. S. |
| Ambient temperature | : | -25°C to +65°C |
| Process temperature | : | Max 100°C |
| Operating pressure range | : | 75% of Scale Value |
| Over pressure limit | : | 125% of Scale Value |

| | | |
|------------------|---|----------------------------|
| Case & bezel | : | AISI 304 SS (Bayonet Type) |
| Top chamber | : | MS Powder Coated |
| Bottom chamber | : | AISI 316 SS |
| Movement | : | AISI 304 SS |
| Diaphragm | : | AISI 316L SS |
| Gauge connection | : | ½" BSP (M) |

| | | |
|---------------|---|--|
| Protection | : | IP 68 |
| Dial | : | Aluminum, black graduation on white background |
| Pointer | : | Aluminum, black coloured, micrometer zero adjustable |
| Window | : | Toughened Glass |
| Blow off Disc | : | Neoprene |
| Gasket | : | Neoprene |

Electrical contact - dry version

| | | |
|----------------------|---|---|
| Accuracy | : | ±2.5% of F.S. |
| Ambient Temperature | : | Maximum 65°C |
| Process Temperature | : | Maximum 65°C |
| Window | : | Polycarbonate Dome |
| Electrical Contacts* | : | Refer how to order |
| Other Features | : | Refer specification of standard version |

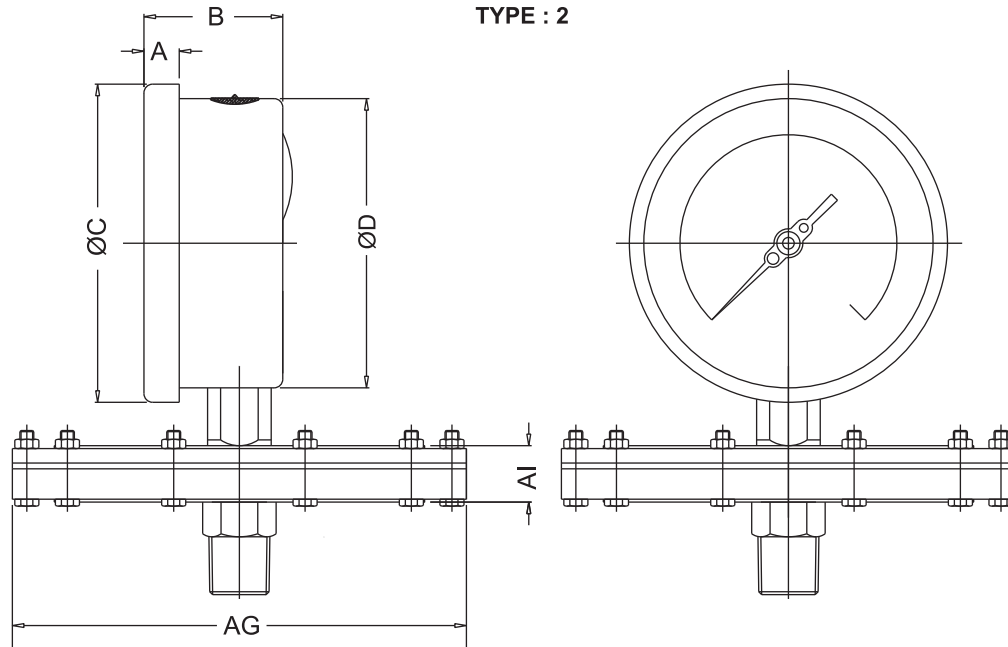
* Please specify contact set points while ordering.

Temperature effect :

The variation of indication caused by effects of temperature is to be calculated by below formula; which is to be added in the specified accuracy while measurement :- Formula : $\pm 0.08 \times (t_2 - t_1) \%$ of F. S. where t_1 = reference temperature (+20°C) and t_2 = ambient temperature in °C.

Note : The addition of mechanical electric contacts affects the accuracy of instruments such that 1% becomes 1.5%, 1.6% becomes 2.4% etc. (Add the 50% of accuracy; If the contact is of the magnetically assisted type, this value can't be added within the ±5% of setting point.)

Dimensions - standard version



| NS | A | B | ØC | ØD | AG* | AI | Weight in gram (With Box) |
|-----|------|----|-----|-----|-----|----|------------------------------|
| 100 | 12.5 | 48 | 111 | 100 | 155 | 16 | 2600 |
| 150 | 15.5 | 48 | 161 | 149 | 155 | 16 | 3080 |

Notes : • Drawings are not to scale.
• All Dimensions are in mm.
• NS = Nominal Size.

Range Table

Note : We offer National / International Scales like kPa, MPa, bar, psi, kg/cm² & Dual Scale like kPa with psi, kPa with bar, bar with psi or Equivalent scales as per the requirement can be provided on request. Following are the example tables for kg/cm² & psi scales

Pressure, Vacuum & Compound Ranges (LP)

| Pressure range | | | Vacuum & Compound Range | | |
|--------------------------|--------|--------|------------------------------|----------|----------|
| Single scale - mmWC (LP) | | | Single scale - mmWC (Vacuum) | | |
| 0/250 | 0/1000 | 0/2500 | - 250/0 | - 1000/0 | - 2500/0 |
| 0/400 | 0/1600 | 0/4000 | - 400/0 | - 1600/0 | - 4000/0 |
| 0/600 | 0/2000 | 0/6000 | - 600/0 | - 2000/0 | - 6000/0 |

Vacuum & Compound Range

| Single scale - mmWC (Compound) | | |
|--------------------------------|------------|-------------|
| - 100/150 | - 400/600 | - 1000/1500 |
| - 150/250 | - 600/1000 | - 1500/2500 |
| - 200/400 | - 800/1200 | - 2000/4000 |

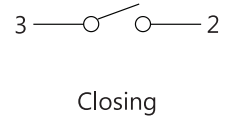
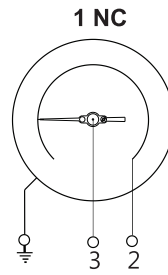
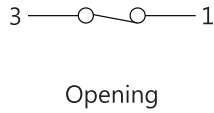
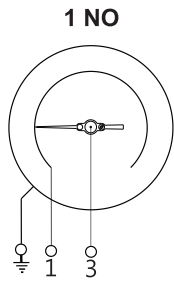
Accessories (refer datasheet for complete specifications)

| | |
|--|-------------------------|
| GC Gauge cock | SI Siphon |
| * Needle valve | CT Cooling tower |
| SN Snubber | |
| * Refer catalogue for valves and manifolds | |

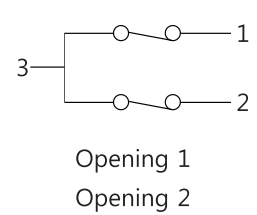
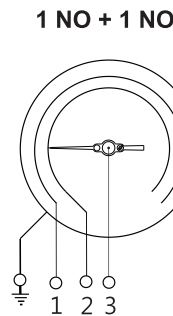
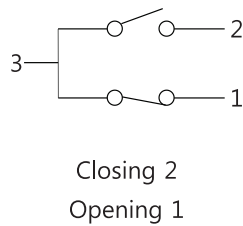
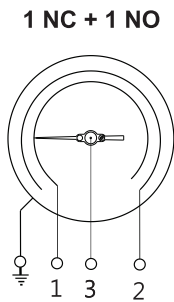
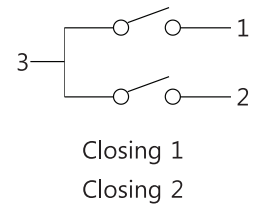
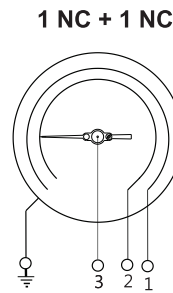
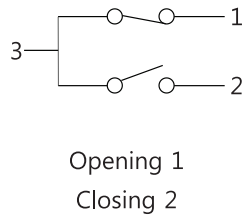
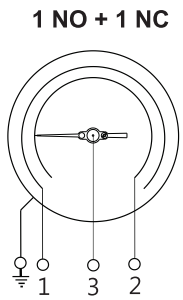
Range Table

Wiring diagrams for electric contacts

Single Contact



Double contact



Flange Table

Flange table with ordering codes,

E.g. For flange size of 1" as per BS-10 table E with raised face : B97 - A2 (A2 Raised face A3 Flat face)

As per DIN 2527

| DN | PN | CODE | |
|-----|-----|------|-----|
| 10 | 6 | A01 | |
| | 10 | A02 | |
| | 16 | A03 | |
| | 25 | A04 | |
| | 40 | A05 | |
| | 64 | A06 | |
| | 100 | A07 | |
| | 160 | A08 | |
| | 250 | A09 | |
| | 400 | A10 | |
| 15 | 6 | A11 | |
| | 10 | A12 | |
| | 16 | A13 | |
| | 25 | A14 | |
| | 40 | A15 | |
| | 64 | A16 | |
| | 100 | A17 | |
| | 160 | A18 | |
| | 250 | A19 | |
| | 400 | A20 | |
| 20 | 6 | A21 | |
| | 10 | A22 | |
| | 16 | A23 | |
| | 25 | A24 | |
| | 40 | A25 | |
| | 64 | A26 | |
| 25 | 10 | A27 | |
| | 16 | A28 | |
| | 25 | A29 | |
| | 40 | A30 | |
| | 64 | A31 | |
| | 100 | A32 | |
| 32 | 160 | A33 | |
| | 250 | A34 | |
| | 400 | A35 | |
| | 40 | 6 | A36 |
| | | 10 | A37 |
| | | 16 | A38 |
| 25 | | A39 | |
| 40 | | A40 | |
| 64 | | A41 | |
| 50 | 10 | A42 | |
| | 16 | A43 | |
| | 25 | A44 | |
| | 40 | A45 | |
| | 64 | A46 | |
| | 100 | A47 | |
| 60 | 160 | A48 | |
| | 250 | A49 | |
| | 400 | A50 | |
| | 6 | A51 | |
| | 10 | A52 | |
| | 16 | A53 | |
| 75 | 25 | A54 | |
| | 40 | A55 | |
| | 64 | A56 | |
| | 100 | A57 | |
| | 160 | A58 | |
| | 250 | A59 | |
| 400 | A60 | | |

| DN | PN | CODE |
|----|-----|------|
| 65 | 6 | A61 |
| | 10 | A62 |
| | 16 | A63 |
| | 25 | A64 |
| | 40 | A65 |
| | 64 | A66 |
| | 100 | A67 |
| | 160 | A68 |
| | 250 | A69 |
| | 400 | A70 |
| 80 | 6 | A71 |
| | 10 | A72 |
| | 16 | A73 |
| | 25 | A74 |
| | 40 | A75 |
| | 64 | A76 |
| | 100 | A77 |
| | 160 | A78 |
| | 250 | A79 |
| | 400 | A80 |

As per JIS - B 2210

| NOMINAL SIZE | RATING /CLASS | CODE |
|--------------|---------------|------|
| 10A | 5K | B57 |
| | 10K | B58 |
| | 40K | B59 |
| 15A | 5K | B60 |
| | 10K | B61 |
| | 40K | B62 |
| 20A | 5K | B63 |
| | 10K | B64 |
| | 40K | B65 |
| 25A | 5K | B66 |
| | 10K | B67 |
| | 40K | B68 |
| 32A | 5K | B69 |
| | 10K | B70 |
| | 40K | B71 |
| 40A | 5K | B72 |
| | 10K | B73 |
| | 40K | B74 |

As per DIN 2642

| DN | PN | CODE |
|----|----|------|
| 10 | 10 | A90 |
| 15 | | A91 |
| 20 | | A92 |
| 25 | | A93 |
| 32 | | A94 |
| 40 | | A95 |
| 50 | | A96 |
| 65 | | A97 |
| 80 | | A98 |

As per DIN 2633

| DN | PN | CODE |
|----|----|------|
| 10 | 16 | A81 |
| 15 | | A82 |
| 20 | | A83 |
| 25 | | A84 |
| 32 | | A85 |
| 40 | | A86 |
| 50 | | A87 |
| 65 | | A88 |
| 80 | | A89 |

As per DIN 2635

| DN | PN | CODE |
|----|----|------|
| 10 | 40 | A99 |
| 15 | | B01 |
| 20 | | B02 |
| 25 | | B03 |
| 32 | | B04 |
| 40 | | B05 |
| 50 | | B06 |
| 65 | | B07 |
| 80 | | B08 |

| NOMINAL SIZE | RATING /CLASS | CODE |
|--------------|---------------|------|
| 50A | 5K | B75 |
| | 10K | B76 |
| | 40K | B77 |
| 65A | 5K | B78 |
| | 10K | B79 |
| | 40K | B80 |
| 80A | 5K | B81 |
| | 10K | B82 |
| | 40K | B83 |

- Note : 1 Flanged Connections as per BS / ANSI / DIN etc standards with or without Teflon protection can be provided on request.
2 Flange Finish shall be 125 - 250 AARH as a standard. For other finish, please consult factory.

As per ANSI B 16.5

| NOMINAL SIZE | RATING /CLASS | CODE |
|--------------|---------------|------|
| 1/2" | 150 | B09 |
| | 300 | B10 |
| | 600 | B11 |
| | 900 | B12 |
| | 1500 | B13 |
| | 2500 | B14 |
| 3/4" | 150 | B15 |
| | 300 | B16 |
| | 600 | B17 |
| | 900 | B18 |
| | 1500 | B19 |
| 2500 | B20 | |
| 1" | 150 | B21 |
| | 300 | B22 |
| | 600 | B23 |
| | 900 | B24 |
| | 1500 | B25 |
| | 2500 | B26 |
| 1 1/4" | 150 | B27 |
| | 300 | B28 |
| | 600 | B29 |
| | 900 | B30 |
| | 1500 | B31 |
| | 2500 | B32 |
| 1 1/2" | 150 | B33 |
| | 300 | B34 |
| | 600 | B35 |
| | 900 | B36 |
| | 1500 | B37 |
| | 2500 | B38 |
| 2" | 150 | B39 |
| | 300 | B40 |
| | 600 | B41 |
| | 900 | B42 |
| | 1500 | B43 |
| | 2500 | B44 |
| 2 1/2" | 150 | B45 |
| | 300 | B46 |
| | 600 | B47 |
| | 900 | B48 |
| | 1500 | B49 |
| | 2500 | B50 |
| 3" | 150 | B51 |
| | 300 | B52 |
| | 600 | B53 |
| | 900 | B54 |
| | 1500 | B55 |
| | 2500 | B56 |

As per BS - 10

| NOMINAL SIZE | TABLE | CODE |
|--------------|-------|------|
| 1/2" | D | B84 |
| | E | B85 |
| | F | B86 |
| | H | B87 |
| | J | B88 |
| | K | B89 |
| 3/4" | D | B90 |
| | E | B91 |
| | F | B92 |
| | H | B93 |
| | J | B94 |
| K | B95 | |
| 1" | D | B96 |
| | E | B97 |
| | F | B98 |
| | H | B99 |
| | J | C01 |
| | K | C02 |
| 1 1/4" | D | C03 |
| | E | C04 |
| | F | C05 |
| | H | C06 |
| | J | C07 |
| | K | C08 |
| 1 1/2" | D | C09 |
| | E | C10 |
| | F | C11 |
| | H | C12 |
| | J | C13 |
| | K | C14 |
| 2" | D | C15 |
| | E | C16 |
| | F | C17 |
| | H | C18 |
| | J | C19 |
| | K | C20 |
| 2 1/2" | D | C21 |
| | E | C22 |
| | F | C23 |
| | H | C24 |
| | J | C25 |
| | K | C26 |
| 3" | D | C27 |
| | E | C28 |
| | F | C29 |
| | H | C30 |
| | J | C31 |
| | K | C32 |

| How To Order | | | | | | Example | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-----------------------|--|---|--|-----------------------|--------------------------|--|--|--|--|--|-------|-------|-------|-------|--------|--------|------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|----|-----------------------|-----------------------|----------------------|----------------------|----------------------|----|-----|-----------------------|-----------------------|----------------------|----------------------|----|----|--|
| Basic Model | | | | | | LPD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 40 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 100 mm | 150 mm | | XX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of Mounting | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Direct bottom entry | | 6 | 2" pipe / yoke mounting with bottom entry* | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * MOC of bracket and 'U' clamp will be steel. Ask factory for drawings, if required. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Top Chamber | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS | MS Powder Coated (Standard) | | S6 | AISI 316 SS | | XX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diaphragm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S6 | AISI 316L SS (Standard) | | | | | XX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bottom Chamber (* Refer Pressure v/s Temperature table below.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S4 | AISI 304 SS | | | | | XX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SL | AISI 316L SS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S6 | AISI 316 SS (Standard) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PC | PVC* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PZ | PVDF* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP | Polypropelene* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">MOC of Bottom Chamber</th> <th colspan="6">Pressure V/S Temperature</th> </tr> <tr> <th>20 °C</th> <th>40 °C</th> <th>60 °C</th> <th>80 °C</th> <th>100 °C</th> <th>120 °C</th> </tr> </thead> <tbody> <tr> <td>PVDF</td> <td>10 kg/cm²</td> <td>10 kg/cm²</td> <td>10 kg/cm²</td> <td>7 kg/cm²</td> <td>4 kg/cm²</td> <td>2 kg/cm²</td> </tr> <tr> <td>PP</td> <td>10 kg/cm²</td> <td>10 kg/cm²</td> <td>6 kg/cm²</td> <td>4 kg/cm²</td> <td>1 kg/cm²</td> <td>NA</td> </tr> <tr> <td>PVC</td> <td>10 kg/cm²</td> <td>10 kg/cm²</td> <td>4 kg/cm²</td> <td>1 kg/cm²</td> <td>NA</td> <td>NA</td> </tr> </tbody> </table> | | | | | | MOC of Bottom Chamber | Pressure V/S Temperature | | | | | | 20 °C | 40 °C | 60 °C | 80 °C | 100 °C | 120 °C | PVDF | 10 kg/cm ² | 10 kg/cm ² | 10 kg/cm ² | 7 kg/cm ² | 4 kg/cm ² | 2 kg/cm ² | PP | 10 kg/cm ² | 10 kg/cm ² | 6 kg/cm ² | 4 kg/cm ² | 1 kg/cm ² | NA | PVC | 10 kg/cm ² | 10 kg/cm ² | 4 kg/cm ² | 1 kg/cm ² | NA | NA | |
| MOC of Bottom Chamber | Pressure V/S Temperature | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20 °C | 40 °C | 60 °C | 80 °C | 100 °C | 120 °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PVDF | 10 kg/cm ² | 10 kg/cm ² | 10 kg/cm ² | 7 kg/cm ² | 4 kg/cm ² | 2 kg/cm ² | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PP | 10 kg/cm ² | 10 kg/cm ² | 6 kg/cm ² | 4 kg/cm ² | 1 kg/cm ² | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PVC | 10 kg/cm ² | 10 kg/cm ² | 4 kg/cm ² | 1 kg/cm ² | NA | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Process Connection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4NM | ½" NPT (M) (Standard) | 4TM | ½" BSPT (M) | 3BM | 3/8" BSP (M) (Except Option PLF) | XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4BM | ½" BSP (M) (Standard) | 4MM | M20 x 1.5 (M) | Flanged* | Refer Flange Table with ordering code on previous page | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note : Connections like Metric/ PT/ PF/ Flaired/ UNF/ G/ R etc. can be provided on request. * ask factory for drawings, if required. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Range | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refer range table | | | | | | 0/250 mmWC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Optional extras | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CDD | Custom designed dial | | | PLF | PTFE lining on flange or screwed connection* | XXX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STG | Shatterproof / safety glass | | | SPD | Silver protection on diaphragm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TND | Tag No Marking on Dial | | | PPD | PTFE protection on diaphragm** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STP | SS tag plate | | | PCD | PTFE coating on diaphragm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TCS | Top chamber in AISI 316 SS | | | PTG | PTFE gasket upto 200°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OXS | Oxygen service | | | MOS | AISI 316 SS movement | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PY4 | 2" pipe/yoke mounting bracket & 'U' clamp (AISI 304 SS) | | | CBS | AISI 316 SS case & bezel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PYS | 2" pipe/yoke mounting bracket & 'U' clamp (AISI 316 SS) | | | MTC | Material test certificates# | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| * For screwed connection, bore diameter will be minimum 10 mm. ** Suitable for Pressure Ranges only. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please consult factory. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric Contacts (CE Approved) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (For dry version, with ingress protection up to IP 55 & poly carbonate dome as a window) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A) Single insulated magnetic snap action type (230 V AC, 1 Amp.)(48 V DC, 0.5 Amp.) (Available for 1000 mmwc & above) | | | B) Inductive type (220 V AC, 0.4 Amp.) (Available for 1000 mm WC & above) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M1 | Single; normally closed (1 NC) | | D1 | Single; normally open (1 NO) | | XX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M2 | Double; normally closed + normally open (1 NC + 1 NO) | | D2 | Single; normally closed (1 NC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M3 | Single; normally open (1 NO) | | D3 | Double; normally closed + normally open (1 NC + 1 NO) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | Double; normally open + normally closed (1 NO + 1 NC) | | D4 | Double; normally open (both NO) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | Double; normally closed (both NC) | | D5 | Double; normally closed (both NC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M6 | Double; normally open (both NO) | | D6 | Double; normally open + normally closed (1 NO + 1 NC) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Note: the scale amplitude will be in between 180° to 270° & window shall be polycarbonate dome.

Ordering Example: LPD - XX - X - XX - XX - XX - XXX . 0/250 mmWC - XX - XXX - XX

For non standard products/optional items, please contact factory for delivery and minimum quantity of order.

Refer Datasheet **FR** for selection of Flushing Rings.

Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing.

Modifications may take place and materials specified may be replaced by others without prior notice.