

Differential Pressure switch series D4 and D7

General purpose or Ex-proof according UL or ATEX

(Ex d or Ex ia)

Accuracy: ±1 %



Features

- Ambient temperature up to 60 °C for Ex applications
- Ex II 2 GD or Ex II 1 GD
- Class 1 Division 1 Gr. B, C and D according UL
- Protection IP54, IP66 or NEMA 4, 4X, 7, 9 and 13 (UL)
- Wetted parts available in several materials
- High static pressure up to 140 bar

Ranges

75 mbar diff. up to 42 bar diff.

30 in. H₂O up to 600 psid

Applications

Chemical and petrochemical industry

Machine and apparatus construction

Food and beverage industry

Pulp and paper industry



| Technical specification | D4 series | D7 series | |
|--|--|--|---|
| Construction | Weatherproof | Ex-proof according UL CSA on request | Flame proof according EN 60079-0, -1, -31 Intrinsically safe acc. IEC 60079-0 and EN 60079 -11, -26 |
| Switch functions | One setpoint, single pole double throw (SPDT) or 2 times SPDT (2SPDT) | | |
| Adjustable range | From 15 % to 100 % F.S., below 15 % consult factory | | |
| Deadband | From 0,5 % to 15 % F.S., depending on material, range and microswitch | | |
| Measuring principle | Diaphragm-piston-cylinder-system | | |
| Range [mbar] | 75 150 250 375 | 1 2 4 6 7 14 28 42 | |
| Limits (pressure ranges) | mbar | 1 to 6 bar | 7 to 14 bar 28 bar 42 bar |
| Max. static pressure [bar] | 0,37 | 35 | 69 69 138 |
| Proof pressure [bar] | 1,5 | 138 | 276 551 551 |
| Pressure type | Optional 100 bar static pressure for the ranges 1 bar and 2 bar (only diaphragm Buna N or Viton) Differential pressure | | |
| Process connection | ¼ NPT female (standard), ½ NPT male, ½ NPT female G ½ B male, M20x1,5 (metric connections with adapter), others on request | | |
| Connection location | For mbar ranges lower and side, for bar ranges at the side | | |
| Material | Standard Nickel plated brass, optional stainless steel 316 (1.4401) or Monel For mbar ranges steel epoxy coated standard, stainless steel on request | | |
| Diaphragm | Buna N, Viton (max. 42 bar), Teflon, stainless steel 316 (1.4401) (stainless steel only from 1 to 6 bar) | | |
| Housing | Aluminum, epoxy coated black | | |
| Accuracy | 1,0 % F.S. | | |
| Electrical specification | | | |
| Microswitch ratings | Up to max. 6 A 30 VDC respectively 22 A 250 VAC (see microswitch table) | | |
| Flameproof and dust ignition protection by enclosure | | Class 1 Div. 1 Gr. B, C and D Class 2 Div. 1 Gr. E, F and G | Ex II 2GD Ex d IIC T6 Gb Ex t IIIIC T85°C Db IP6X SIRA 02 ATEX 1391X |
| Intrinsically safe and dust ignition protection by enclosure | | | Ex II 1 GD Ex ia IIC T4 Ga Ex ia IIIIC T135°C Da SIRA 04 ATEX 2081 |
| Electrical connection | ¾ NPT female, optional cable glands, ½ NPT with reducer bushing, M20x1,5, others on request | | |
| General specification | | | |
| Permissible | | | |
| Ambient temperature | -25 ... 60 °C | -25 ... 65 °C | -20 ... 60 °C |
| Medium temperature | Buna N and Teflon -18 ... 65 °C, Viton -7 ... 150 °C, stainless steel -18 ... 150 °C (Medium temperature of ATEX approved switches is restricted due to temperature class.) | | |
| Storage temperature | -40 ... 60 °C | | |
| Effect | Max. 0,4 % / 10 K ref. 20 °C | | |
| Protection according UL | NEMA 4, 4X and 13 | NEMA 7 and 9 | |
| Protection according EN 60 529/IEC 529 | IP54, optional IP66 | IP66 | |
| CE-mark | Low voltage regulations: EN 61 010-1, EN 60 947-1 | | |
| Mounting | Standard stem, wall (BP) or 2" pipe mounting (TM) | | |
| Weight mbar/bar [kg] | 1,2/1,6 | 1,7/2,0 | |
| Accessories, options | Diaphragm seals, valves, adapters, NACE | | |

