

# Metal Diaphragm Pressure Switches

**D1S/D2S**

Mechanical single/dual pressure switch  
Repeatability  $\pm 1.0$  % at constant temperature

## Features

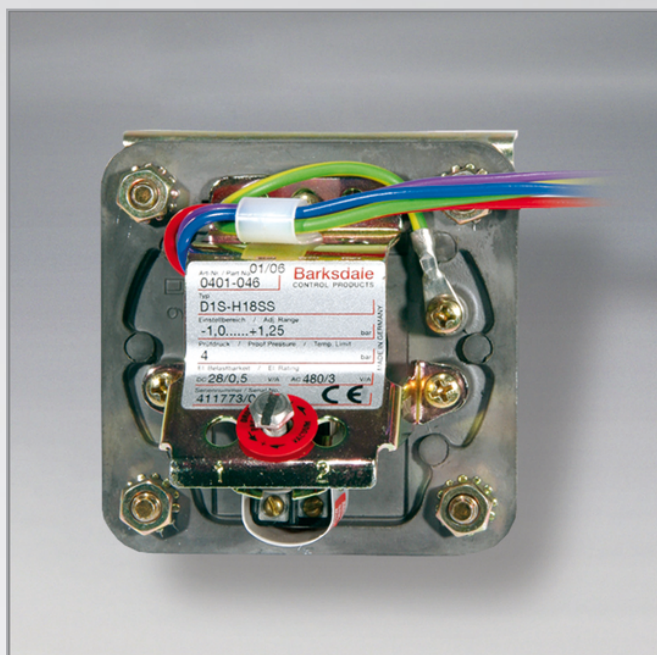
Metal diaphragm pressure switch  
Wetted parts welded.  
Direct action, no friction, high accuracy

## Adjustment ranges

0.005 ... 10.3 bar and  
-0.006 ... -1 bar (Vacuum)

## Applications

Machine and tool engineering,  
Autoclaves,  
Pump control,  
Refrigerant monitoring



## Technical Data

|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Wetted parts:       | Stainless steel 17 - 7PH/SS304                                  |
| Repeatability:      | $\pm 1$ % at constant temperature                               |
| Switching rate:     | max. 20/min                                                     |
| Temperature range:  | -40 °C... +75 °C                                                |
| Protection class:   | IP00                                                            |
| Housing:            | Without housing for installation in control panels              |
| Process connection: | 1/4" NPT female thread<br>Optional: 1/2" NPT female thread (P2) |

|                                    |                                                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Electrical connection:             | Lead wire PVC 1.5 mm <sup>2</sup> , length appr. 450 mm                                                     |
| Electrical ratings and hysteresis: | A large variety of micro switches offers different electrical ratings and hysteresis for many applications. |
| Weight:                            | D1S-...: approx. 0.6 kg<br>D2S-...: approx. 0.7 kg                                                          |
| Set point adjustment:              | Turn the adjustment screw clockwise to decrease the set point                                               |
| Approval:                          | ---                                                                                                         |

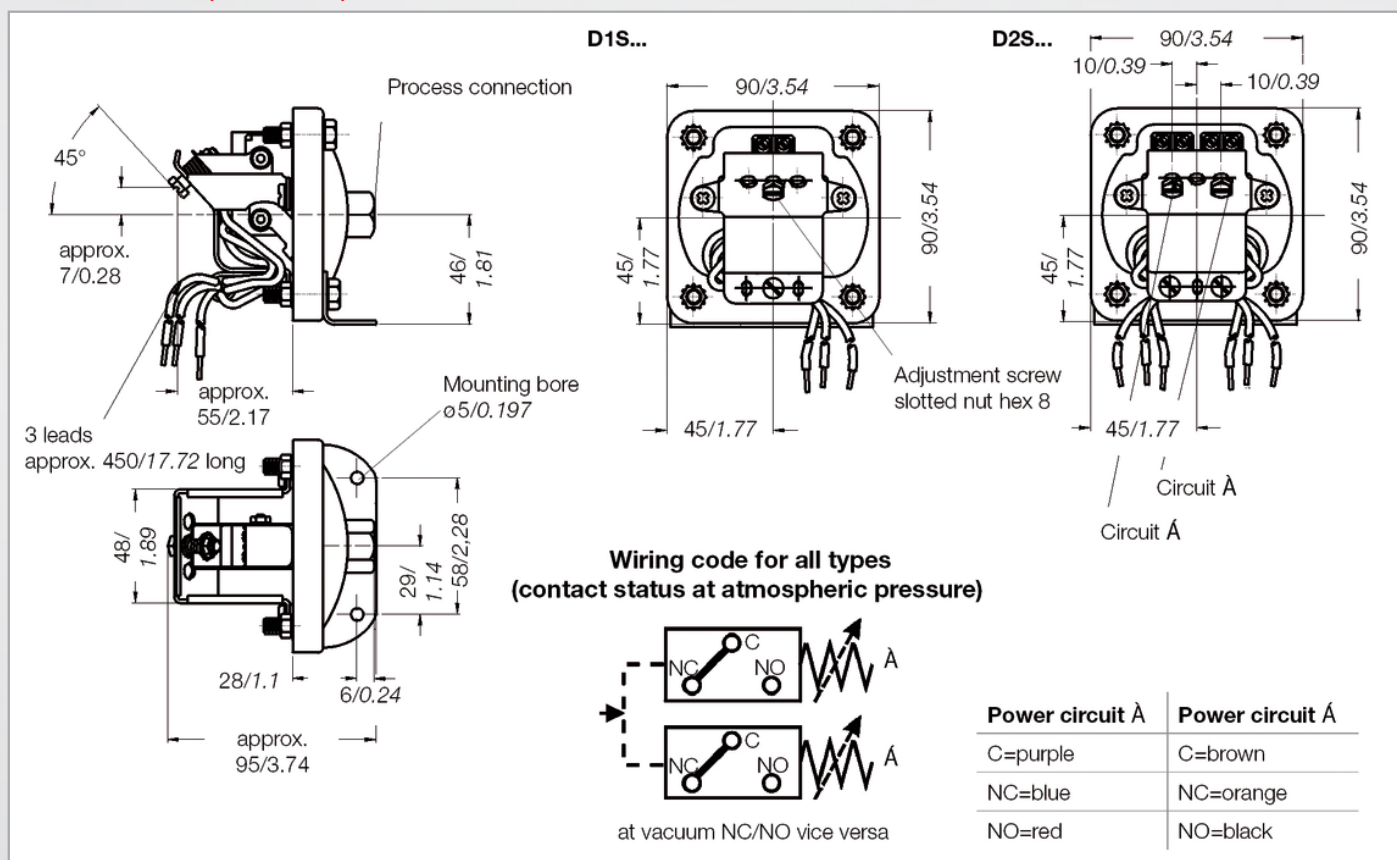
## Pressure Ranges

| Pressure range code | Adjustment range [bar] |                   | Max. operating pressure [bar] | Proof pressure [bar] | The resulting hysteresis is approx. ... bar at the end of range |             |
|---------------------|------------------------|-------------------|-------------------------------|----------------------|-----------------------------------------------------------------|-------------|
|                     | Increasing press.      | Decreasing press. |                               | (short term)         | H, GH [bar]                                                     | M, GM [bar] |
| Overpressure        |                        |                   |                               |                      |                                                                 |             |
| 2SS                 | 0.005 ... 0.11         | 0.001 ... 0.11    | 0.13                          | 0.2                  | 0.004                                                           | 0.006       |
| 3SS                 | 0.012 ... 0.20         | 0.002 ... 0.196   | 0.47                          | 0.7                  | 0.005                                                           | 0.010       |
| 18SS                | 0.050 ... 1.20         | 0.030 ... 1.20    | 2.7                           | 4.0                  | 0.018                                                           | 0.040       |
| 80SS                | 0.300 ... 5.50         | 0.030 ... 5.30    | 7.1                           | 10.7                 | 0.110                                                           | 0.240       |
| 150SS               | 0.500 ... 10.30        | 0.100 ... 9.90    | 13.3                          | 20.0                 | 0.190                                                           | 0.420       |
| Vacuum              |                        |                   |                               |                      |                                                                 |             |
| 3SS                 | -0.006 ... -0.20       | -0.002 ... -0.196 | 0.13                          | 0.2                  | 0.004                                                           | 0.009       |
| 18SS                | -0.040 ... -1.00       | -0.020 ... -0.970 | 0.67                          | 1.00                 | 0.030                                                           | 0.060       |

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## D1S/D2S

### Dimensions (mm / inch)



### Electrical Ratings

| Micro switch | Special features                                                | Volt AC<br>50/60 Hz | Ind. load<br>A | Res. load<br>A | Volt DC         | Ind. load<br>A       | Res. load<br>A     | Comments                                    |
|--------------|-----------------------------------------------------------------|---------------------|----------------|----------------|-----------------|----------------------|--------------------|---------------------------------------------|
| H            | Micro switch with silver contacts                               | 125<br>250<br>480*  | 10<br>10<br>3  | 10<br>10<br>3  | 6<br>to<br>24   | 0.50                 | 0.5                | Small hysteresis;<br>High AC-/low DC-load   |
| M            | Micro switch with silver contacts                               | 125<br>250<br>480*  | 10<br>10<br>3  | 10<br>10<br>3  | 12<br>24<br>250 | 5.00<br>1.00<br>0.25 | 15.0<br>2.0<br>0.4 | Medium hysteresis;<br>High AC- and DC-loads |
| GH           | Micro switch with gold contacts for low voltage and low current | 125                 | 1              | 1              | 24              | 1.00                 | 1.00               | Small hysteresis                            |
| GM           |                                                                 | 30                  | 0.1            | 0.1            | 30              | 0.10                 | 0.1                | Medium hysteresis                           |

### Options

P2 = 1/2" NPT F SS Process connection

### Order Code

Example for order number

| Type           | Micro switch | Pressure range code | Options |
|----------------|--------------|---------------------|---------|
| D1S or D2S - H |              | 3SS                 | P2      |

Your order number

| Type | Micro switch | Pressure range code | Options |
|------|--------------|---------------------|---------|
|      |              |                     |         |