

# 0166

## Diaphragm pressure switches 42 V

Zinc-plated steel body  
 With M3 screw terminals  
 Overpressure safe to 300 bar <sup>1)</sup>



With external thread



- Also available with switching point preset in our works.
- Other body materials and connection threads on request.
- Other diaphragm / seal materials on request, e.g. HNBR, silicone (last one for diaphragm type only).

• Accessories: see page 21



### 0166 Diaphragm pressure switches with screw terminals

| Adjustment range in bar (tolerance at room temperature) | Thread       | Normally open (no) → : | Normally closed (nc) →: |
|---|--------------|------------------------|-------------------------|
| 0.1–1 (± 0.2)   | M 10x1 taper | 0166 401 01 X 001      | 0166 402 01 X 005       |
|   | M 12x1.5     | 0166 401 02 X 002      | 0166 402 02 X 006       |
|   | G 1/4        | 0166 401 03 X 003      | 0166 402 03 X 007       |
|   | NPT 1/8      | 0166 401 04 X 004      | 0166 402 04 X 008       |
|   | G 1/8        | 0166 401 28 X 601      | 0166 402 28 X 602       |
|   | M 10x1 cyl.  | 0166 401 13 X 001      | 0166 402 13 X 002       |
| 1–10 (± 0.5)  | M 10x1 taper | 0166 405 01 X 017      | 0166 406 01 X 021       |
|   | M 12x1.5     | 0166 405 02 X 018      | 0166 406 02 X 022       |
|   | G 1/4        | 0166 405 03 X 019      | 0166 406 03 X 023       |
|   | NPT 1/8      | 0166 405 04 X 020      | 0166 406 04 X 024       |
|   | G 1/8        | 0166 405 28 X 605      | 0166 406 28 X 606       |
|   | M 10x1 cyl.  | 0166 405 13 X 005      | 0166 406 13 X 006       |
| 10–20 (± 1.0)   | M 10x1 taper | 0166 409 01 X 033      | 0166 410 01 X 037       |
|   | M 12x1.5     | 0166 409 02 X 034      | 0166 410 02 X 038       |
|   | G 1/4        | 0166 409 03 X 035      | 0166 410 03 X 039       |
|   | NPT 1/8      | 0166 409 04 X 036      | 0166 410 04 X 040       |
|   | G 1/8        | 0166 409 28 X 609      | 0166 410 28 X 610       |
|   | M 10x1 cyl.  | 0166 409 13 X 009      | 0166 410 13 X 010       |
| 20–50 (± 2.0)   | M 10x1 taper | 0166 413 01 X 049      | 0166 414 01 X 053       |
|   | M 12x1.5     | 0166 413 02 X 050      | 0166 414 02 X 054       |
|   | G 1/4        | 0166 413 03 X 051      | 0166 414 03 X 055       |
|   | NPT 1/8      | 0166 413 04 X 052      | 0166 414 04 X 056       |
|   | G 1/8        | 0166 413 28 X 613      | 0166 414 28 X 614       |
|   | M 10x1 cyl.  | 0166 413 13 X 013      | 0166 414 13 X 014       |

**Order number:**  
 Add figure for diaphragm/seal material

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|  |   |     |     |
|--|---|-----|-----|
| <b>NBR</b>   | Hydraulic / machine oil, turpentine, heating oil, air etc.  | = 1 | = 1 |
| <b>EPDM</b>  | Hydrogen, acetylene, ozone, brake fluid etc.                | = 2 | = 2 |
| <b>FKM</b>   | Hydraulic fluids (HFA, HFB, HFC, HFD), petrol/gasoline etc. | = 3 | = 3 |
| See page 10 for temperature ranges of diaphragm / seal materials |   |     |     |

#### Warning!

When using with oxygen, the relevant accident-prevention regulations must be observed. In addition, we recommend that a maximum operating pressure of 10 bar is not exceeded.

<sup>1)</sup> Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.

#### Degree of protection IP65

The type approval does not apply without restriction to all environmental conditions. It is the responsibility of the user to check whether the connection complies with regulations other than those stated, and whether it can be used for special applications which could not be foreseen by us in advance.

# 0166

## Diaphragm pressure switches 42 V

Zinc-plated steel body  
With push-on terminals  
Overpressure safe to 300 bar <sup>1)</sup>



### 0166 Diaphragm pressure switches with push-on terminals

| Adjustment range in bar<br>(tolerance at room temperature) | Thread       | Normally open (no) → : | Normally closed (nc) → |
|--|--------------|------------------------|------------------------|
| 0.1–1 (± 0.2)  | M 10x1 taper | 0166 403 01 X 009      | 0166 404 01 X 013      |
|  | M 12x1.5     | 0166 403 02 X 010      | 0166 404 02 X 014      |
|  | G 1/4        | 0166 403 03 X 011      | 0166 404 03 X 015      |
|  | NPT 1/8      | 0166 403 04 X 012      | 0166 404 04 X 016      |
|  | G 1/8        | 0166 403 28 X 603      | 0166 404 28 X 604      |
|  | M 10x1 cyl.  | 0166 403 13 X 003      | 0166 404 13 X 004      |
| 1–10 (± 0.5)   | M 10x1 taper | 0166 407 01 X 025      | 0166 408 01 X 029      |
|  | M 12x1.5     | 0166 407 02 X 026      | 0166 408 02 X 030      |
|  | G 1/4        | 0166 407 03 X 027      | 0166 408 03 X 031      |
|  | NPT 1/8      | 0166 407 04 X 028      | 0166 408 04 X 032      |
|  | G 1/8        | 0166 407 28 X 607      | 0166 408 28 X 608      |
|  | M 10x1 cyl.  | 0166 407 13 X 007      | 0166 408 13 X 008      |
| 10–20 (± 1.0)  | M 10x1 taper | 0166 411 01 X 041      | 0166 412 01 X 045      |
|  | M 12x1.5     | 0166 411 02 X 042      | 0166 412 02 X 046      |
|  | G 1/4        | 0166 411 03 X 043      | 0166 412 03 X 047      |
|  | NPT 1/8      | 0166 411 04 X 044      | 0166 412 04 X 048      |
|  | G 1/8        | 0166 411 28 X 611      | 0166 412 28 X 612      |
|  | M 10x1 cyl.  | 0166 411 13 X 011      | 0166 412 13 X 012      |
| 20–50 (± 2.0)  | M 10x1 taper | 0166 415 01 X 057      | 0166 416 01 X 061      |
|  | M 12x1.5     | 0166 415 02 X 058      | 0166 416 02 X 062      |
|  | G 1/4        | 0166 415 03 X 059      | 0166 416 03 X 063      |
|  | NPT 1/8      | 0166 415 04 X 060      | 0166 416 04 X 064      |
|  | G 1/8        | 0166 415 28 X 615      | 0166 416 28 X 616      |
|  | M 10x1 cyl.  | 0166 415 13 X 015      | 0166 416 13 X 016      |

**Order number:**  
Add figure for diaphragm/seal material

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|  |   |     |     |
|--|---|-----|-----|
| <b>NBR</b>   | Hydraulic / machine oil, turpentine, heating oil, air etc.  | = 1 | = 1 |
| <b>EPDM</b>  | Hydrogen, acetylene, ozone, brake fluid etc.                | = 2 | = 2 |
| <b>FKM</b>   | Hydraulic fluids (HFA, HFB, HFC, HFD), petrol/gasoline etc. | = 3 | = 3 |
| See page 10 for temperature ranges of diaphragm / seal materials |   |     |     |

#### Warning!

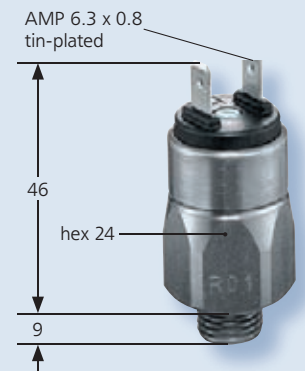
When using with oxygen, the relevant accident-prevention regulations must be observed. In addition, we recommend that a maximum operating pressure of 10 bar is not exceeded.

<sup>1)</sup> Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.

#### Degree of protection IP65

The type approval does not apply without restriction to all environmental conditions. It is the responsibility of the user to check whether the connection complies with regulations other than those stated, and whether it can be used for special applications which could not be foreseen by us in advance.

#### With external thread



- Also available with switching point preset in our works.
- For ready-wired variants, see page 34 onwards.
- Other body materials and connection threads on request.
- Other diaphragm / seal materials on request, e.g. HNBR, silicone (last one for diaphragm type only).

• Accessories: see page 21

