

# Pressure switches hex 24

Normally open or Normally closed, maximum voltage 42 V



■ **Low-cost solution for mechanical pressure monitoring.**

■ **Stable switching point even after long use and high load.**

■ **Switching point easily adjustable<sup>1</sup> – also during use.**

■ **High pressure resistance, compact, small switch available as normally closed (nc) or normally open (no).**

■ **Ready-wired versions with the plug that you require – see page 38 following.**

## Technical data

Voltage	max. 42 V	
Current rating (resistive):	max. 4 Ampere	
Contact rating:	100 VA	
Temperature stability for diaphragm / seal materials:	NBR	-40 °C – +100 °C
	EPDM	-30 °C – +120 °C
	FKM	-5 °C – +120 °C
	Silicone	-40 °C – +120 °C
	HNBR	-30 °C – +120 °C
Switching frequency:	200 / min.	
Mechanical life expectancy:	10 <sup>6</sup> cycles (life expectancy of diaphragm pressure switches only for pressures up to max. 50 bar)	
Pressure rise rate:	≤ 1 bar/ms	
Hysteresis:	average value 5 – 30 % depending on type, not adjustable	
Vibration resistance:	10 g / 5 – 200 Hz sine-wave	
Shock resistance:	294 m/s <sup>2</sup> ; 14 ms half-sine-wave	
Degree of protection:	IP65 Terminals IP00	
Weight in grams:	approx. 90 g	

<sup>1)</sup> The pressure switches can also be factory preset. Our preset switches are sealed with lacquer paint and have the set pressure embossed on their body.

# Pressure switches hex 24

With fitted rubber cap: Degree of protection IP54

## Technical data

Type:		0163	0164	0166	0167	0168	0169
Material:	Zinc-plated steel (Cr VI-free)	■		■		■	■
	Stainless steel		■				
	Brass				■		
Overpressure safe up to:	35 bar				■		
	300 bar			■		■	
	600 bar	■	■				■



## Accessories



### Rubber protective cap

with central cable feed for 1.5 - 5 mm diameter cable

#### With fitted cap IP54

Suitable for voltages up to 42 V

**Order number:**

**1-1-66-621-010**



### Rubber protective cap

with central cable feed for 1.5 - 5 mm diameter cable

#### With fitted cap IP54

Suitable for voltages up to 42 V

**Order number:**

**1-1-66-621-003**

### Degree of protection IPXX

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

### Oxygen warning!

When using oxygen, the relevant safety regulations must be observed. In addition, we recommend that a maximum operating pressure of 10 bar (50 bar series 0164) must not be exceeded.



- Zinc-plated steel body (CrVI-free)
- With M3 screw terminals
- Overpressure safe up to 600 bar<sup>1)</sup>

### With male thread



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → :
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### 0163 Diaphragm pressure switches with M3 screw terminals

0.1 – 1 (± 0.2)	M 10x1 con.	0163	401 01	X	001	0163	402 01	X	005
	M 12x1.5	0163	401 02	X	002	0163	402 02	X	006
	G 1/4	0163	401 03	X	003	0163	402 03	X	007
	NPT 1/8	0163	401 04	X	004	0163	402 04	X	008
	G 1/8	0163	401 28	X	601	0163	402 28	X	602
	M 10x1 cyl.	0163	401 13	X	001	0163	402 13	X	002

1 – 10 (± 0.5)	M 10x1 con.	0163	405 01	X	017	0163	406 01	X	021
	M 12x1.5	0163	405 02	X	018	0163	406 02	X	022
	G 1/4	0163	405 03	X	019	0163	406 03	X	023
	NPT 1/8	0163	405 04	X	020	0163	406 04	X	024
	G 1/8	0163	405 28	X	605	0163	406 28	X	606
	M 10x1 cyl.	0163	405 13	X	005	0163	406 13	X	006

10 – 20 (± 1.0)	M 10x1 con.	0163	409 01	X	033	0163	410 01	X	037
	M 12x1.5	0163	409 02	X	034	0163	410 02	X	038
	G 1/4	0163	409 03	X	035	0163	410 03	X	039
	NPT 1/8	0163	409 04	X	036	0163	410 04	X	040
	G 1/8	0163	409 28	X	609	0163	410 28	X	610
	M 10x1 cyl.	0163	409 13	X	009	0163	410 13	X	010

20 – 50 (± 2.0)	M 10x1 con.	0163	413 01	X	049	0163	414 01	X	053
	M 12x1.5	0163	413 02	X	050	0163	414 02	X	054
	G 1/4	0163	413 03	X	051	0163	414 03	X	055
	NPT 1/8	0163	413 04	X	052	0163	414 04	X	056
	G 1/8	0163	413 28	X	613	0163	414 28	X	614
	M 10x1 cyl.	0163	413 13	X	013	0163	414 13	X	014

■ Our pressure switches are also available with factory pre-set switching points.

■ We offer other body materials and connecting threads upon request.

■ Other diaphragm materials are available on request, e.g. HNBR or silicone.

### Diaphragm material – areas of application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0163 –XXX XX–X–XXX</b>
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Accessories see page 17

<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.

- Zinc-plated steel body (CrVI-free)
- With spade terminals
- Overpressure safe up to 600 bar<sup>1)</sup>



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → :
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### 0163 Diaphragm pressure switches with spade terminals

0.1 – 1 (± 0.2)	M 10x1 con.	0163	403 01	X	009	0163	404 01	X	013
	M 12x1.5	0163	403 02	X	010	0163	404 02	X	014
	G 1/4	0163	403 03	X	011	0163	404 03	X	015
	NPT 1/8	0163	403 04	X	012	0163	404 04	X	016
	G 1/8	0163	403 28	X	603	0163	404 28	X	604
	M 10x1 cyl.	0163	403 13	X	003	0163	404 13	X	004
1 – 10 (± 0.5)	M 10x1 con.	0163	407 01	X	025	0163	408 01	X	029
	M 12x1.5	0163	407 02	X	026	0163	408 02	X	030
	G 1/4	0163	407 03	X	027	0163	408 03	X	031
	NPT 1/8	0163	407 04	X	028	0163	408 04	X	032
	G 1/8	0163	407 28	X	607	0163	408 28	X	608
	M 10x1 cyl.	0163	407 13	X	007	0163	408 13	X	008
10 – 20 (± 1.0)	M 10x1 con.	0163	411 01	X	041	0163	412 01	X	045
	M 12x1.5	0163	411 02	X	042	0163	412 02	X	046
	G 1/4	0163	411 03	X	043	0163	412 03	X	047
	NPT 1/8	0163	411 04	X	044	0163	412 04	X	048
	G 1/8	0163	411 28	X	611	0163	412 28	X	612
	M 10x1 cyl.	0163	411 13	X	011	0163	412 13	X	012
20 – 50 (± 2.0)	M 10x1 con.	0163	415 01	X	057	0163	416 01	X	061
	M 12x1.5	0163	415 02	X	058	0163	416 02	X	062
	G 1/4	0163	415 03	X	059	0163	416 03	X	063
	NPT 1/8	0163	415 04	X	060	0163	416 04	X	064
	G 1/8	0163	415 28	X	615	0163	416 28	X	616
	M 10x1 cyl.	0163	415 13	X	015	0163	416 13	X	016

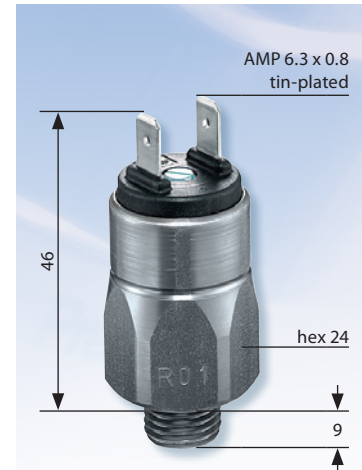
### Diaphragm material – areas of application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0163 -XXX XX-X-XXX</b>
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### With male thread



- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.



<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.



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

### With male thread



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → :
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### 0166 Diaphragm pressure switches with M3 screw terminals

0.1 – 1 (± 0.2)	M 10x1 con.	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 con.	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 con.	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 con.	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

■ Our pressure switches are also available with factory pre-set switching points.

■ We offer other body materials and connecting threads upon request.

■ Other diaphragm materials are available on request, e.g. HNBR or silicone.

### Diaphragm material – areas of application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

**Order number:** 0166 -XXX XX-X-XXX



Accessories see page 17

<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.

- Zinc-plated steel body (CrVI-free)
- With spade terminals
- Overpressure safe up to 300 bar<sup>1)</sup>



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) →  :
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**0166 Diaphragm pressure switches with spade terminals**

0.1 – 1 (± 0.2)	M 10x1 con.	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 con.	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 con.	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 con.	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

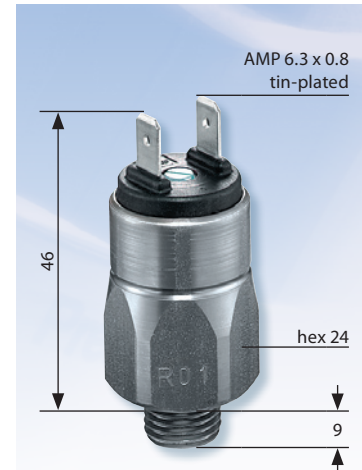
**Diaphragm material – areas of application**

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0166 –XXX XX –X –XXX</b>
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**With male thread**



- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.

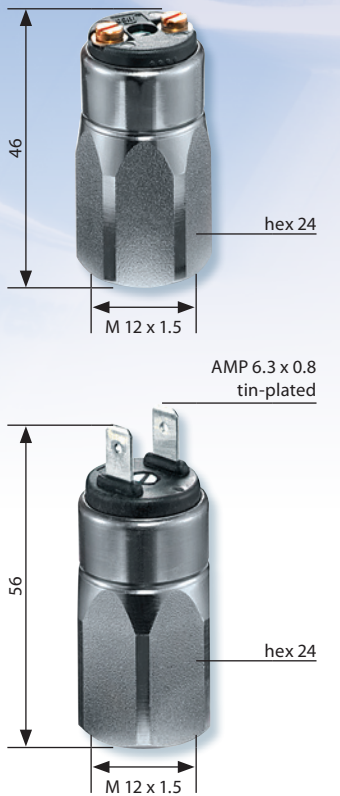


<sup>1)</sup> Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.



- Zinc-plated steel body (CrVI-free)
- With M3 screw terminals or spade terminals
- Overpressure safe up to 300 bar<sup>1)</sup>
- With female thread for compression fittings acc. to DIN 2353

### With female thread



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → :
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### 0168 Diaphragm pressure switches with M3 screw terminals

0.1 – 1 (± 0.2)	M 12x1.5 female	0168	401	16	X	001	0168	402	16	X	002
1 – 10 (± 0.5)		0168	405	16	X	005	0168	406	16	X	006
10 – 20 (± 1.0)		0168	409	16	X	009	0168	410	16	X	010
20 – 50 (± 2.0)		0168	413	16	X	013	0168	414	16	X	014

### 0168 Diaphragm pressure switches with spade terminals

0.1 – 1 (± 0.2)	M 12x1.5 female	0168	403	16	X	003	0168	404	16	X	004
1 – 10 (± 0.5)		0168	407	16	X	007	0168	408	16	X	008
10 – 20 (± 1.0)		0168	411	16	X	011	0168	412	16	X	012
20 – 50 (± 2.0)		0168	415	16	X	015	0168	416	16	X	016

### Diaphragm material – areas of application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Water, brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

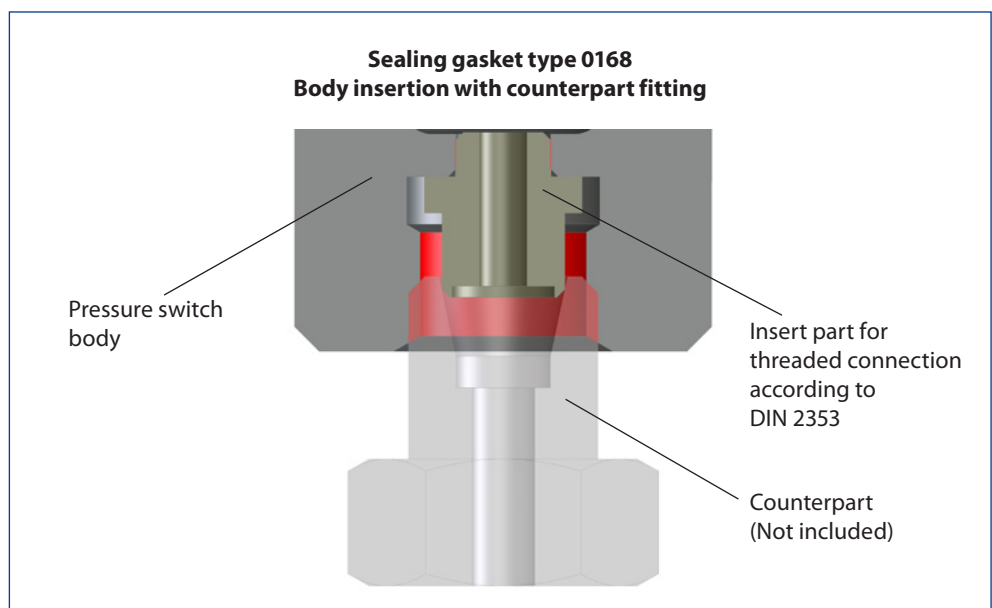
See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0168 – XXX 16 – X – XXX</b>
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- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.



Accessories see page 17



<sup>1)</sup> Static value. Dynamic value is 30-50% lower. The values refer to the hydraulic or pneumatic part of the pressure switch.

- Zinc-plated steel body (CrVI-free)
- With M3 screw terminals or spade terminals
- Overpressure safe up to 600 bar<sup>1)</sup>



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → :
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**0169 Piston pressure switches with M3 screw terminals**

50 – 150 (± 5.0)	M 10x1 con.	0169	417	01	X	001	0169	418	01	X	005
	M 12x1.5	0169	417	02	X	002	0169	418	02	X	006
	G 1/4	0169	417	03	X	003	0169	418	03	X	007
	NPT 1/8	0169	417	04	X	004	0169	418	04	X	008
	G 1/8	0169	417	28	X	601	0169	418	28	X	602
	M 10x1 cyl.	0169	417	13	X	001	0169	418	13	X	002

**0169 Piston pressure switches with spade terminals**

50 – 150 (± 5.0)	M 10x1 con.	0169	419	01	X	009	0169	420	01	X	013
	M 12x1.5	0169	419	02	X	010	0169	420	02	X	014
	G 1/4	0169	419	03	X	011	0169	420	03	X	015
	NPT 1/8	0169	419	04	X	012	0169	420	04	X	016
	G 1/8	0169	419	28	X	603	0169	420	28	X	604
	M 10x1 cyl.	0169	419	13	X	003	0169	420	13	X	004

**Seal material – areas of application**

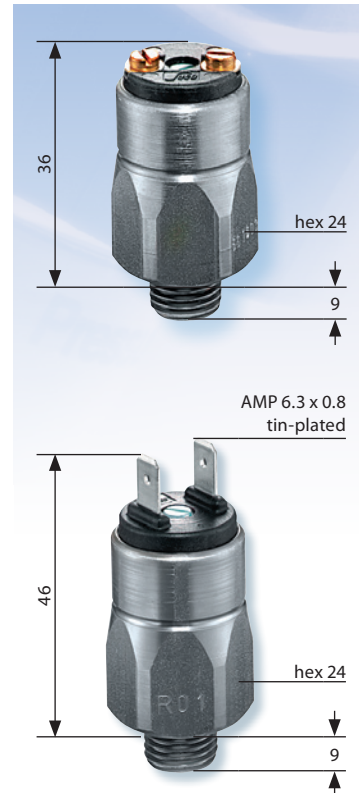
<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Brake fluid, ozone, acetylene etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0169 – XXX XX – X – XXX</b>
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Piston pressure switches are only to a limited extent suitable for use with gases. See explanation on page 9.

**With male thread**



- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.



Accessories see page 17

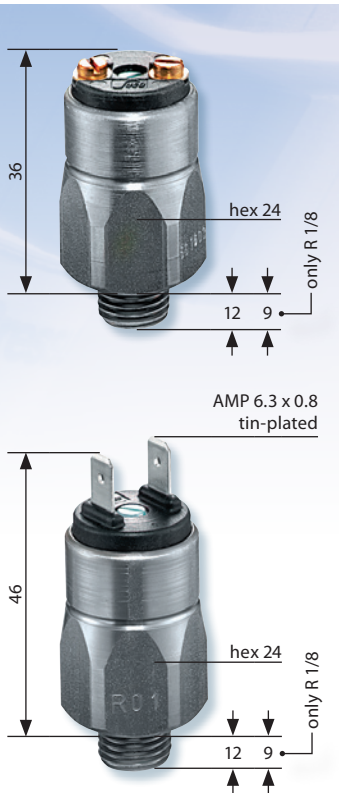
<sup>1)</sup> Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.





- Body made of stainless steel (1.4305 / AISI 303)
- With M3 screw or spade terminals
- Overpressure safe up to 600 bar<sup>1)</sup>

### With male thread



- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.



Accessories see page 17

Setting range in bar (tolerance in bar at room temperature)	Thread	Normally open (no) →  :	Normally closed (nc) → -:
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### 0164 Diaphragm pressure switches with screw terminals

Setting range in bar (tolerance in bar at room temperature)	Thread	Normally open (no) →  :					Normally closed (nc) → -:				
		0164	401	12	X	001	0164	402	12	X	002
0.1 – 1 (± 0.2)	R1/8	0164	401	12	X	001	0164	402	12	X	002
	G1/4-E	0164	401	41	X	001	0164	402	41	X	002
	R1/4	0164	401	46	X	001	0164	402	46	X	002
1 – 10 (± 0.5)	R1/8	0164	405	12	X	005	0164	406	12	X	006
	G1/4-E	0164	405	41	X	005	0164	406	41	X	006
	R1/4	0164	405	46	X	005	0164	406	46	X	006
10 – 20 (± 1.0)	R1/8	0164	409	12	X	009	0164	410	12	X	010
	G1/4-E	0164	409	41	X	009	0164	410	41	X	010
	R1/4	0164	409	46	X	009	0164	410	46	X	010
20 – 50 (± 2.0)	R1/8	0164	413	12	X	013	0164	414	12	X	014
	G1/4-E	0164	413	41	X	013	0164	414	41	X	014
	R1/4	0164	413	46	X	013	0164	414	46	X	014

### 0164 Diaphragm pressure switches with spade terminals

Setting range in bar (tolerance in bar at room temperature)	Thread	Normally open (no) →  :					Normally closed (nc) → -:				
		0164	403	12	X	003	0164	404	12	X	004
0.1 – 1 (± 0.2)	R1/8	0164	403	12	X	003	0164	404	12	X	004
	G1/4-E	0164	403	41	X	003	0164	404	41	X	004
	R1/4	0164	403	46	X	003	0164	404	46	X	004
1 – 10 (± 0.5)	R1/8	0164	407	12	X	007	0164	408	12	X	008
	G1/4-E	0164	407	41	X	007	0164	408	41	X	008
	R1/4	0164	407	46	X	007	0164	408	46	X	008
10 – 20 (± 1.0)	R1/8	0164	411	12	X	011	0164	412	12	X	012
	G1/4-E	0164	411	41	X	011	0164	412	41	X	012
	R1/4	0164	411	46	X	011	0164	412	46	X	012
20 – 50 (± 2.0)	R1/8	0164	415	12	X	015	0164	416	12	X	016
	G1/4-E	0164	415	41	X	015	0164	416	41	X	016
	R1/4	0164	415	46	X	015	0164	416	46	X	016

### Diaphragm material – areas of application

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Water, brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0164 -XXX XX -X -XXX</b>
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<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.

- Brass body
- With M3 screw terminals or spade terminals
- Overpressure safe up to 35 bar<sup>1)</sup>



Adjustment range in bar (tolerance at room temperature)	Thread	Normally open (no) → :	Normally closed (nc) → :
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**0167 Diaphragm pressure switches with M3 screw terminals**

0.1 – 1 (± 0.2)	M 10x1 con.	0167	401 01	X	001	0167	402 01	X	004
	R 1/8	0167	401 12	X	002	0167	402 12	X	005
	R 1/2	0167	401 07	X	003	0167	402 07	X	006
	G 1/4	0167	401 03	X	037	0167	402 03	X	038
	G 1/8	0167	401 28	X	001	0167	402 28	X	002
1 – 10 (± 0.5)	M 10x1 con.	0167	405 01	X	013	0167	406 01	X	016
	R 1/8	0167	405 12	X	014	0167	406 12	X	017
	R 1/2	0167	405 07	X	015	0167	406 07	X	018
	G 1/4	0167	405 03	X	041	0167	406 03	X	042
	G 1/8	0167	405 28	X	005	0167	406 28	X	006
10 – 20 (± 1.0)	M 10x1 con.	0167	409 01	X	025	0167	410 01	X	028
	R 1/8	0167	409 12	X	026	0167	410 12	X	029
	R 1/2	0167	409 07	X	027	0167	410 07	X	030
	G 1/4	0167	409 03	X	045	0167	410 03	X	046
	G 1/8	0167	409 28	X	009	0167	410 28	X	010

**0167 Diaphragm pressure switches with spade terminals**

0.1 – 1 (± 0.2)	M 10x1 con.	0167	403 01	X	007	0167	404 01	X	010
	R 1/8	0167	403 12	X	008	0167	404 12	X	011
	R 1/2	0167	403 07	X	009	0167	404 07	X	012
	G 1/4	0167	403 03	X	039	0167	404 03	X	040
	G 1/8	0167	403 28	X	003	0167	404 28	X	004
1 – 10 (± 0.5)	M 10x1 con.	0167	407 01	X	019	0167	408 01	X	022
	R 1/8	0167	407 12	X	020	0167	408 12	X	023
	R 1/2	0167	407 07	X	021	0167	408 07	X	024
	G 1/4	0167	407 03	X	043	0167	408 03	X	044
	G 1/8	0167	407 28	X	007	0167	408 28	X	008
10 – 20 (± 1.0)	M 10x1 con.	0167	411 01	X	031	0167	412 01	X	034
	R 1/8	0167	411 12	X	032	0167	412 12	X	035
	R 1/2	0167	411 07	X	033	0167	412 07	X	036
	G 1/4	0167	411 03	X	047	0167	412 03	X	048
	G 1/8	0167	411 28	X	011	0167	412 28	X	012

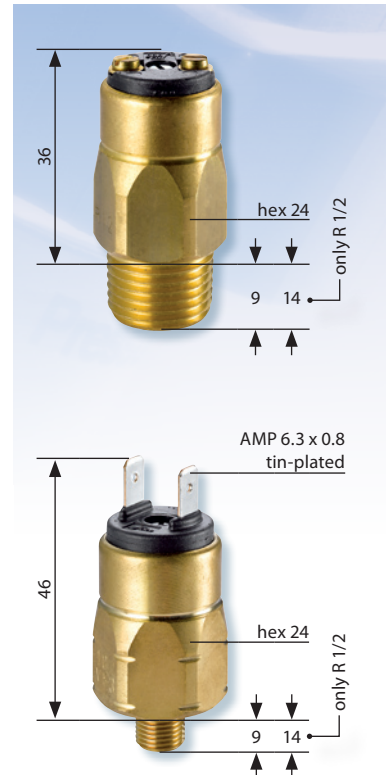
**Diaphragm material – areas of application**

<b>NBR</b>	Hydraulic / machine oil, heating oil, air, nitrogen etc.	<b>1</b>
<b>EPDM</b>	Water, brake fluid, ozone, acetylene, hydrogen etc.	<b>2</b>
<b>FKM</b>	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	<b>3</b>

See page 16 for temperature ranges of diaphragm / seal materials

<b>Order number:</b>	<b>0167 – XXX XX – X – XXX</b>
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**With male thread**



- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm materials are available on request, e.g. HNBR or silicone.



<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.