

Pressure switch hex 27

Changeover switch with silver or gold contacts



Technical data

- **Easily adjustable switching point.**
- **Factory adjustable hysteresis (except type 0140/0141) ¹⁾.**
- **High overpressure safety and long life even under harsh operating conditions.**
- **Ready-wired versions with your desired connectors (see p. 38).**
- **Deliverable with socket device or protective cap according to IP65.**

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 ⁶ cycles (life expectancy of diaphragm pressure switches only for pressures up to max. 50 bar)	
Pressure rise rate:	≤ 1 bar / ms	
Hysteresis (Only preset at factory):	adjustable average value 10-30% depending on type Type 0140/0141 not adjustable	
Vibration resistance:	10 g / 5 – 200 Hz sine-wave	
Shock resistance:	294 m / s ² ; 14 ms half-sine-wave	
Degree of protection:	IP65 with suitable connector installed terminals IP00	
Weight in grams:	0140 / 0141 0170 / 0171, 0180 / 0181, 0183, 0186, 0187, 0190 / 0191, 0196, 0197	approx. 100 g
	0184 / 0185, 0194 / 0195	approx. 130 g

¹⁾ Our pre-set switches are sealed with lacquer paint and the set pressure is embossed on the body.

Electrical values

Rated operating voltage U_e	Rated operational current I_e	Utilisation category ²
250 Volt AC 50 / 60 Hz	4 Ampere (2 Ampere) ¹	AC 12
250 Volt AC 50 / 60 Hz	1 Ampere	AC 14
24 Volt DC	4 / 2 Ampere (2 / 1 Ampere) ¹	DC 12 / DC 13
50 Volt DC	2 / 1 Ampere (1 / 0.5 Ampere) ¹	DC 12 / DC 13
75 Volt DC	1 / 0.5 Ampere (0.5 / 0.25 Ampere) ¹	DC 12 / DC 13
125 Volt DC	0.3 / 0.2 Ampere (0.2 / 0.1 Ampere) ¹	DC 12 / DC 13
250 Volt DC	0.25 / 0.2 Ampere (0.15 / 0.1 Ampere) ¹	DC 12 / DC 13
Rated insulation voltage U_i :	300 Volt	
Rated operating current I_{imp} :	2.5 kV (4 kV) ¹	
Rated thermal current I_{the} :	5 Ampere	
Switching overvoltage:	< 2.5 kV	
Rated frequency:	DC and 50 / 60 Hz	
Short circuit current rating of the device:	to 5 Ampere (to 3.5 Ampere) ¹	
Rated short-circuit current:	< 350 Ampere	
IP class of protection according to EN60529:1991+A1:1999:	IP65 with socket device	
Tightening torque of terminal screws:	< 0.35 Nm (concerns only type 0140 / 0141, 0184 / 0185, 0194 / 0195)	
Cable diameter:	0.5 – 1.5 mm ²	

¹⁾ Figures in brackets for series 0140 / 0141

²⁾ Explanations see page 9



CE marking

SUCO pressure switches rated with an operating limit of 250 V are covered by the Low Voltage Directive 73/23/EC.

An EC Declaration of Conformity has been issued for these pressure switches and is on file at our offices. The corresponding switches bear the CE mark in our catalogue.

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 for stainless steel enclosures) must not be exceeded.

Switching performance and materials overview

Type	0140	0141	0170	0171	0180	0181	0183	0184	0185	0186	0187	0190	0191	0194	0195	0196	0197
24 V												■	■	■	■	■	■
42 V			■	■													
250 V	■	■			■	■	■	■	■	■	■						
50 mA												■	■	■	■	■	■
2 A	■	■															
4 A			■	■	■	■	■	■	■	■	■						
Gold contacts												■	■	■	■	■	■
Silver contacts	■	■	■	■	■	■	■	■	■	■	■						
Adjustable hysteresis			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Zinc-plated steel (CrVI-free)	■	■	■	■	■	■	■	■	■			■	■	■	■		
Stainless steel 1.4305										■	■					■	■
DIN-socket device								■	■					■	■		



- Socket device IP65 or rubber capped IP54 for increased protection
- Easy installation with mountable socket device
- Thread adapters for special threads

hex 27 accessories



Rubber protective cap

with two
cable feeds
for 1.7 to 2.3 mm diameter
cable

**When rubber cap
attached
IP54**

Suitable for voltages
up to 42 V



Socket device

Threaded connection Pg9
(Tightening range 6 - 9 mm)

**When attached to
socket device
IP65**

Suitable for voltages
up to 250 V



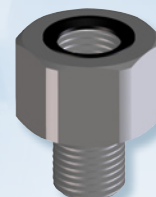
**Socket device
with indicator light**

According to DIN EN
175301- 803-A (DIN 43650)

Threaded connection Pg9
(Tightening range 6 - 9 mm)

**When attached to
socket device
IP65**

Suitable for
24 V or 250 V



**Thread adapter
for special threads**

from G1/4-DIN3852-E
to R1/4 acc. to DIN 2999

including FKM seals

0170 / 0171



0180 / 0181

(Up to max 42 V)

0183

(Up to max 42 V)

0184 / 0185

0190 / 0191

0194 / 0195

0186 / 0187

(Up to max 42 V)

0196 / 0197

Order number:

1-1-70-621-007

1-1-80-652-002

24 VDC: 1-1-84-652-011

1-1-00-420-009

250 VAC: 1-1-84-652-010

- Zinc-plated steel body (CrVI-free)
- With integrated changeover switch and silver contacts
- Overpressure safe up to 300 / 600 bar ¹⁾
- Incl. polyamide cap, degree of protection IP65



p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0140 Diaphragm pressure switch with screw terminals

300 ¹⁾	0.3 – 1.5	± 0.2	G 1/4	0140	457	03	X	003
			NPT 1/8	0140	457	04	X	300
			NPT 1/4	0140	457	09	X	305
			7/16-20 UNF	0140	457	20	X	310
			9/16-18 UNF	0140	457	21	X	315
	1 – 10	± 0.5	G 1/4	0140	458	03	X	006
			NPT 1/8	0140	458	04	X	301
			NPT 1/4	0140	458	09	X	306
			7/16-20 UNF	0140	458	20	X	311
			9/16-18 UNF	0140	458	21	X	316
	10 – 20	± 1.0	G 1/4	0140	459	03	X	009
			NPT 1/8	0140	459	04	X	302
			NPT 1/4	0140	459	09	X	307
			7/16-20 UNF	0140	459	20	X	312
			9/16-18 UNF	0140	459	21	X	317
	20 – 50	± 2.0	G 1/4	0140	461	03	X	012
			NPT 1/8	0140	461	04	X	303
			NPT 1/4	0140	461	09	X	308
			7/16-20 UNF	0140	461	20	X	313
			9/16-18 UNF	0140	461	21	X	318

0141 Piston pressure switch with screw terminals

600 ¹⁾	50 – 150	± 5.0	G 1/4	0141	460	03	X	003
			NPT 1/8	0141	460	04	X	304
			NPT 1/4	0141	460	09	X	309
			7/16-20 UNF	0141	460	20	X	314
			9/16-18 UNF	0141	460	21	X	319

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

Order number: 014X - XXX XX - X-XXX

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.
- Protection class 2, protective insulation
- Other diaphragm- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.

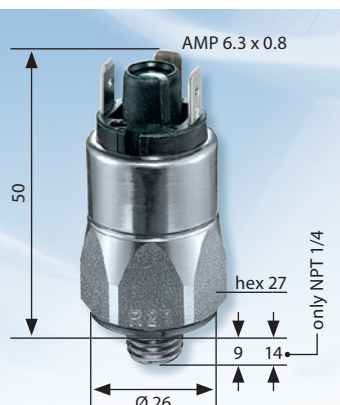


¹⁾ Static pressure, dynamic pressures should be 30 to 50% lower. These values refer to the hydraulic or pneumatic part of the pressure switch.

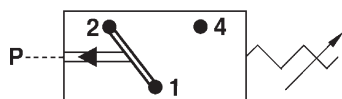


- Zinc-plated steel body (CrVI-free)
- With changeover switch and silver contacts
- Overpressure safe up to 100 / 300 / 600 bar ¹⁾
- Hysteresis adjustable at works

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- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



Accessories see page 28

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0170 Diaphragm pressure switch with spade terminals

100 ¹⁾	0.3 – 1.5	± 0.2	M 10x1 con.	0170	457	01	X	001
			M 12x1.5	0170	457	02	X	002
			G 1/4	0170	457	03	X	003
			NPT 1/8	0170	457	04	X	318
			NPT 1/4	0170	457	09	X	314
			7/16-20 UNF	0170	457	20	X	301
			9/16-18 UNF	0170	457	21	X	302
300 ¹⁾	1 – 10	± 0.5	M 10x1 con.	0170	458	01	X	040
			M 12x1.5	0170	458	02	X	041
			G 1/4	0170	458	03	X	042
			NPT 1/8	0170	458	04	X	343
			NPT 1/4	0170	458	09	X	340
			7/16-20 UNF	0170	458	20	X	341
			9/16-18 UNF	0170	458	21	X	342
	10 – 50	± 3.0	M 10x1 con.	0170	459	01	X	007
			M 12x1.5	0170	459	02	X	008
			G 1/4	0170	459	03	X	009
			NPT 1/8	0170	459	04	X	320
			NPT 1/4	0170	459	09	X	316
			7/16-20 UNF	0170	459	20	X	305
			9/16-18 UNF	0170	459	21	X	306
	10 – 100	± 3.0 – 5.0	M 10x1 con.	0170	461	01	X	010
			M 12x1.5	0170	461	02	X	011
			G 1/4	0170	461	03	X	012
			NPT 1/8	0170	461	04	X	321
			NPT 1/4	0170	461	09	X	317
			7/16-20 UNF	0170	461	20	X	307
			9/16-18 UNF	0170	461	21	X	308

0171 Piston pressure switch with spade terminals

600 ¹⁾	50 – 200	± 5.0	M 10x1 con.	0171	460	01	X	001
			M 12x1.5	0171	460	02	X	002
			G 1/4	0171	460	03	X	003
			NPT 1/8	0171	460	04	X	304
			NPT 1/4	0171	460	09	X	303
			7/16-20 UNF	0171	460	20	X	301
			9/16-18 UNF	0171	460	21	X	302

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

Order number:	017X - XXX XX - X-XXX
---------------	-----------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

¹⁾ 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 changeover switch and silver contacts
- Overpressure safe up to 100 / 300 / 600 bar ¹⁾
- Hysteresis adjustable at works



p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0180 Diaphragm pressure switch with spade terminals

100 ¹⁾	0.3 – 1.5	± 0.2	M 10x1 con.	0180	457	01	X	001
			M 12x1.5	0180	457	02	X	002
			G 1/4	0180	457	03	X	003
			NPT 1/8	0180	457	04	X	318
			NPT 1/4	0180	457	09	X	314
			7/16-20 UNF	0180	457	20	X	301
			9/16-18 UNF	0180	457	21	X	302

	1 – 10	± 0.5	M 10x1 con.	0180	458	01	X	040
			M 12x1.5	0180	458	02	X	041
			G 1/4	0180	458	03	X	042
			NPT 1/8	0180	458	04	X	343
			NPT 1/4	0180	458	09	X	340
			7/16-20 UNF	0180	458	20	X	341
			9/16-18 UNF	0180	458	21	X	342

300 ¹⁾	10 – 50	± 3.0	M 10x1 con.	0180	459	01	X	007
			M 12x1.5	0180	459	02	X	008
			G 1/4	0180	459	03	X	009
			NPT 1/8	0180	459	04	X	320
			NPT 1/4	0180	459	09	X	311
			7/16-20 UNF	0180	459	20	X	305
			9/16-18 UNF	0180	459	21	X	306

	10 – 100	± 3.0 – 5.0	M 10x1 con.	0180	461	01	X	010
			M 12x1.5	0180	461	02	X	011
			G 1/4	0180	461	03	X	012
			NPT 1/8	0180	461	04	X	321
			NPT 1/4	0180	461	09	X	312
			7/16-20 UNF	0180	461	20	X	307
			9/16-18 UNF	0180	461	21	X	308

0181 Piston pressure switch with spade terminals

600 ¹⁾	50 – 200	± 5.0	M 10x1 con.	0181	460	01	X	001
			M 12x1.5	0181	460	02	X	002
			G 1/4	0181	460	03	X	003
			NPT 1/8	0181	460	04	X	304
			NPT 1/4	0181	460	09	X	303
			7/16-20 UNF	0181	460	20	X	301
			9/16-18 UNF	0181	460	21	X	302

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

Order number:	018X - XXX XX - X-XXX
---------------	-----------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

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

With male thread



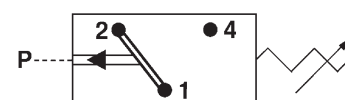
■ Our pressure switches are also available with factory pre-set switching points.

■ Ready-wired versions can be found starting on page 38 following.

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

■ Other diaphragm- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.

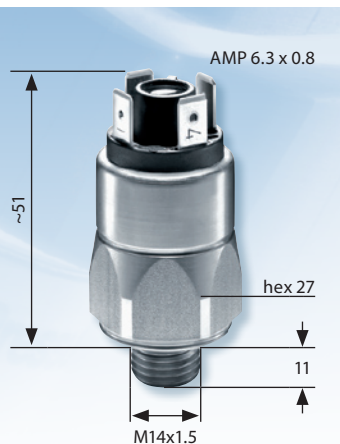
■ For further technical data see page 26/27.



Accessories see page 28



Thread similar ISO 6149-3
(Incl. O-ring for sealing)



- 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 seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



- Zinc-plated steel body (CrVI-free)
- With changeover switch and silver contacts
- Overpressure safe up to 600 bar¹⁾, hysteresis adjustable at works
- Adjustment range: 100 – 400 bar
- Installation height only 62 mm

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0183 Piston pressure switch with spade terminals

600 ¹⁾	100 – 300	± 10.0	M 14x1.5	0183	462	45	X	051
	200 – 400			0183	463	45	X	061

Seal material – areas of application

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

Temperature ranges of seal materials see page 26

Order number:	0183 - XXX 45 - X - XXX
---------------	-------------------------

Accessories

Adapter From M 14 x 1.5 to G 1/4 Order number: 1-1-83-420-006	Adapter From M 14 x 1.5 to M 12 x 1.5 Order number: 1-1-83-420-007	Adapter From M 14 x 1.5 to NPT 1/8 Order number: 1-1-83-420-008
---	--	---

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.



Accessories see page 28

¹⁾ 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 socket device similar to DIN EN 175301 (DIN 43650)
- With changeover switch and silver contacts
- Overpressure safe up to 100 / 300 / 600 bar¹⁾
- Hysteresis adjustable at works

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0184 Diaphragm pressure switch

100 ¹⁾	0.3 – 1.5	± 0.2	M 10x1 con.	0184	457	01	X	001
			M 12x1.5	0184	457	02	X	002
			G 1/4	0184	457	03	X	003
			NPT 1/8	0184	457	04	X	318
			NPT 1/4	0184	457	09	X	314
			7/16-20 UNF	0184	457	20	X	301
			9/16-18 UNF	0184	457	21	X	302

	1 – 10	± 0.5	M 10x1 con.	0184	458	01	X	040
			M 12x1.5	0184	458	02	X	041
			G 1/4	0184	458	03	X	042
			NPT 1/8	0184	458	04	X	343
			NPT 1/4	0184	458	09	X	340
			7/16-20 UNF	0184	458	20	X	341
			9/16-18 UNF	0184	458	21	X	342

300 ¹⁾	10 – 50	± 3.0	M 10x1 con.	0184	459	01	X	007
			M 12x1.5	0184	459	02	X	008
			G 1/4	0184	459	03	X	009
			NPT 1/8	0184	459	04	X	320
			NPT 1/4	0184	459	09	X	311
			7/16-20 UNF	0184	459	20	X	305
			9/16-18 UNF	0184	459	21	X	306

	10 – 100	± 3.0 – 5.0	M 10x1 con.	0184	461	01	X	010
			M 12x1.5	0184	461	02	X	011
			G 1/4	0184	461	03	X	012
			NPT 1/8	0184	461	04	X	321
			NPT 1/4	0184	461	09	X	312
			7/16-20 UNF	0184	461	20	X	307
			9/16-18 UNF	0184	461	21	X	308

0185 Piston pressure switch

600 ¹⁾	50 – 200	± 5.0	M 10x1 con.	0185	460	01	X	001
			M 12x1.5	0185	460	02	X	002
			G 1/4	0185	460	03	X	003
			NPT 1/8	0185	460	04	X	304
			NPT 1/4	0185	460	09	X	303
			7/16-20 UNF	0185	460	20	X	301
			9/16-18 UNF	0185	460	21	X	302

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

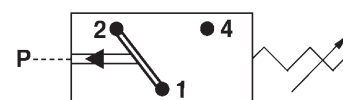
Order number:	018X – XXX XX – X – XXX
----------------------	--------------------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

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

**With male thread**

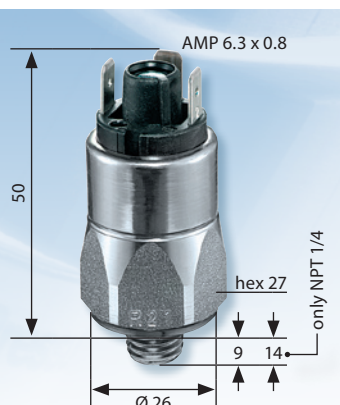
- Our pressure switches are also available with factory pre-set switching points.
- Ready-wired versions can be found starting on page 38 following.
- We offer other body materials and connecting threads upon request.
- Other diaphragm- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



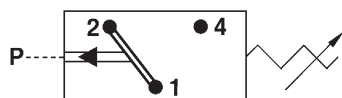
Accessories see page 28



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- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



Accessories see page 28

- Zinc-plated steel body (CrVI-free), with spade terminals
- With changeover switch
- Max. voltage 24 V
- Overpressure safe up to 100/300/600 bar¹⁾
- Hysteresis adjustable at works

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0190 Diaphragm pressure switch with spade terminals

100 ¹⁾	0.3 – 1.5	± 0.2	M 10x1 con.	0190	457	01	X	001
			M 12x1.5	0190	457	02	X	002
			G 1/4	0190	457	03	X	003
			NPT 1/8	0190	457	04	X	318
			NPT 1/4	0190	457	09	X	314
			7/16-20 UNF	0190	457	20	X	301
			9/16-18 UNF	0190	457	21	X	302
300 ¹⁾	1 – 10	± 0.5	M 10x1 con.	0190	458	01	X	040
			M 12x1.5	0190	458	02	X	041
			G 1/4	0190	458	03	X	042
			NPT 1/8	0190	458	04	X	343
			NPT 1/4	0190	458	09	X	340
			7/16-20 UNF	0190	458	20	X	341
			9/16-18 UNF	0190	458	21	X	342
	10 – 50	± 3.0	M 10x1 con.	0190	459	01	X	007
			M 12x1.5	0190	459	02	X	008
			G 1/4	0190	459	03	X	009
			NPT 1/8	0190	459	04	X	320
			NPT 1/4	0190	459	09	X	316
			7/16-20 UNF	0190	459	20	X	305
			9/16-18 UNF	0190	459	21	X	306
	10 – 100	± 3.0 – 5.0	M 10x1 con.	0190	461	01	X	010
			M 12x1.5	0190	461	02	X	011
			G 1/4	0190	461	03	X	012
			NPT 1/8	0190	461	04	X	321
			NPT 1/4	0190	461	09	X	317
			7/16-20 UNF	0190	461	20	X	307
			9/16-18 UNF	0190	461	21	X	308

0191 Piston pressure switch with spade terminals

600 ¹⁾	50 – 200	± 5.0	M 10x1 con.	0191	460	01	X	001
			M 12x1.5	0191	460	02	X	002
			G 1/4	0191	460	03	X	003
			NPT 1/8	0191	460	04	X	304
			NPT 1/4	0191	460	09	X	303
			7/16-20 UNF	0191	460	20	X	301
			9/16-18 UNF	0191	460	21	X	302

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

Order number:

019X - XXX XX - X-XXX

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

¹⁾ 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 socket device similar to DIN EN 175301 (DIN 43650)
- With changeover switch
- Overpressure safe up to 100/300/600 bar¹⁾
- Hysteresis adjustable at works

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0194 Diaphragm pressure switch

100 ¹⁾	0.3 – 1.5	± 0.2	M 10x1 con.	0194	457	01	X	001
			M 12x1.5	0194	457	02	X	002
			G 1/4	0194	457	03	X	003
			NPT 1/8	0194	457	04	X	318
			NPT 1/4	0194	457	09	X	314
			7/16-20 UNF	0194	457	20	X	301
			9/16-18 UNF	0194	457	21	X	302
300 ¹⁾	1 – 10	± 0.5	M 10x1 con.	0194	458	01	X	040
			M 12x1.5	0194	458	02	X	041
			G 1/4	0194	458	03	X	042
			NPT 1/8	0194	458	04	X	343
			NPT 1/4	0194	458	09	X	340
			7/16-20 UNF	0194	458	20	X	341
			9/16-18 UNF	0194	458	21	X	342
	10 – 50	± 3.0	M 10x1 con.	0194	459	01	X	007
			M 12x1.5	0194	459	02	X	008
			G 1/4	0194	459	03	X	009
			NPT 1/8	0194	459	04	X	320
			NPT 1/4	0194	459	09	X	311
			7/16-20 UNF	0194	459	20	X	305
			9/16-18 UNF	0194	459	21	X	306
	10 – 100	± 3.0 – 5.0	M 10x1 con.	0194	461	01	X	010
			M 12x1.5	0194	461	02	X	011
			G 1/4	0194	461	03	X	012
			NPT 1/8	0194	461	04	X	321
			NPT 1/4	0194	461	09	X	312
			7/16-20 UNF	0194	461	20	X	307
			9/16-18 UNF	0194	461	21	X	308

0195 Piston pressure switch

600 ¹⁾	50 – 200	± 5.0	M 10x1 con.	0195	460	01	X	001
			M 12x1.5	0195	460	02	X	002
			G 1/4	0195	460	03	X	003
			NPT 1/8	0195	460	04	X	304
			NPT 1/4	0195	460	09	X	303
			7/16-20 UNF	0195	460	20	X	301
			9/16-18 UNF	0195	460	21	X	302

Diaphragm / seal material – areas of application

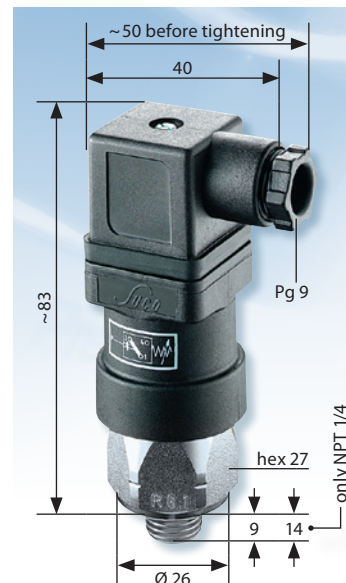
NBR	Hydraulic / machine oil, heating oil, air, nitrogen etc.	1
EPDM	Brake fluid, ozone, acetylene, hydrogen etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	3

Temperature ranges of diaphragm / seal materials see page 26

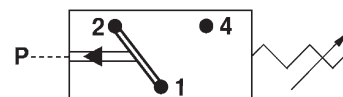
Order number:	019X – XXX XX – X – XXX
----------------------	--------------------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

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

**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- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



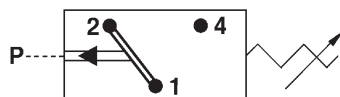
Accessories see page 28



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- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.
- For further technical data see page 26/27.



Accessories see page 28

- Stainless steel (1.4305 / AISI 303) body
- With changeover switch and silver contacts
- Max. voltage 250 V
- Overpressure safe up to 300/600 bar¹⁾
- Hysteresis adjustable at works

p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0186 Diaphragm pressure switch with spade terminals

300 ¹⁾	0.5 – 5	± 0.2	G 1/4	0186	457 03	X	003
	1 – 10	± 0.5		0186	458 03	X	006
	10 – 50	± 3.0		0186	459 03	X	009
	10 – 100	± 3.0 – 5.0		0186	461 03	X	012

0187 Piston pressure switch with spade terminals

600 ¹⁾	50 – 200	± 5.0	G 1/4	0187	460 03	X	003
-------------------	----------	-------	-------	------	--------	---	-----

Diaphragm / seal material – areas of application

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

Temperature ranges of diaphragm / seal materials see page 26

²⁾ Not recommended for piston pressure switches.

Order number:	018X - XXX 03 - X-XXX
---------------	-----------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

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

- Stainless steel (1.4305 / AISI 303) body
- With changeover switch and gold contacts
- Max. voltage 24 V
- Overpressure safe up to 300/600 bar¹⁾
- Hysteresis adjustable at works



p _{max.} in bar	Adjustment range in bar	Tolerance at room temperature	Thread	Order number:
-----------------------------	----------------------------	----------------------------------	--------	---------------

0196 Diaphragm pressure switch with spade terminals

300 ¹⁾	0.5 – 5	± 0.2	G 1/4	0196	457 03	X	003
	1 – 10	± 0.5		0196	458 03	X	006
	10 – 50	± 3.0		0196	459 03	X	009
	10 – 100	± 3.0 – 5.0		0196	461 03	X	012

0197 Piston pressure switch with spade terminals

600 ¹⁾	50 – 200	± 5.0	G 1/4	0197	460 03	X	003
-------------------	----------	-------	-------	------	--------	---	-----

Diaphragm / seal material – areas of application

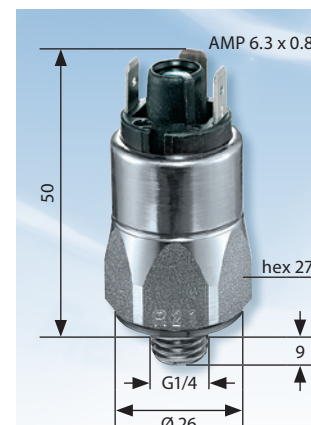
NBR	Hydraulic / machine oil, heating oil, air, nitrogen etc.	1
EPDM	Water ²⁾ , Brake fluid, ozone, acetylene, hydrogen etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	3

Temperature ranges of diaphragm / seal materials see page 26

²⁾ Not recommended for piston pressure switches.

Order number:	019X - XXX 03 - X-XXX
----------------------	------------------------------

Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

With male thread

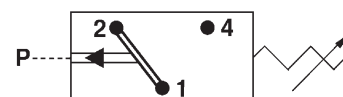
■ Our pressure switches are also available with factory pre-set switching points.

■ Ready-wired versions can be found starting on page 38 following.

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

■ Other diaphragm- / seal materials are available on request, e.g. HNBR or silicone for diaphragm pressure switches.

■ For further technical data see page 26/27.



Accessories see page 28

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