Pressure switch hex 27

Changeover switch with silver or gold contacts

- *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.*

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

Technical data

Temperature stability for diaphragm / seal materials:	NBR EPDM FKM Silicone HNBR	-40°C – +100°C -30°C – +120°C -5°C – +120°C -40°C – +120°C -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

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 U_{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 mm²		

[1] Figures in brackets for series 0140 / 0141
[2] Explanations see page 9

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								■	■					■	■		

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 to be exceeded.

Pressure switch hex 27

Accessories and applications

- 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			■ 24 V or 250 V (upon request) see also page 33	■
0190 / 0191	■	■		■
0194 / 0195			■ (24 V on request) also see page 35	■
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** **250 VAC: 1-1-84-652-010**	**1-1-00-420-009**

- 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

With male thread

$p_{max.}$ 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

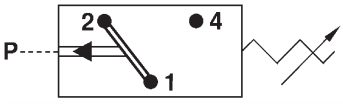
NBR	Hydraulic / machine oil, heating oil, air, nitrogen etc.	1
EPDM	Brake fluid, ozone, acetylene, hydrogen etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	3

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.

- *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.

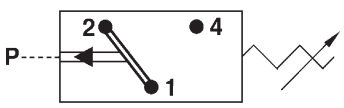
0170/0171

Diaphragm / piston pressure switches 42 V

- 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
300[1)]	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
	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

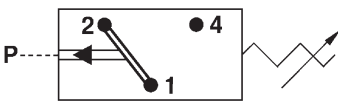
Order number:	018X – XXX XX – X – XXX

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.*



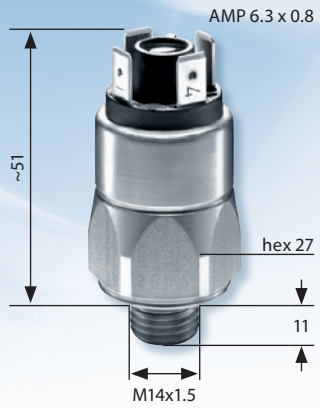
Accessories see page 28

0183

Piston pressure switches 250 V

- Zinc-plated steel body (CrVI-free)
- With changeover switch and silver contacts
- Overpressure safe up to 600 bar[1)], hysteresis adjustable at works
- Adjustment range: 100 – 400 bar
- Installation height only 62 mm

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



$p_{max.}$ 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

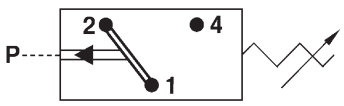
Seal material – areas of application

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

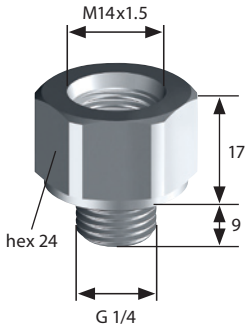
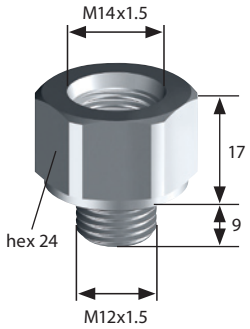
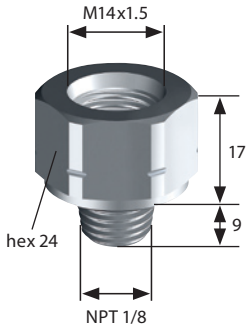
Temperature ranges of seal materials see page 26

Order number:	**0183 – XXX 45 – X – XXX**

- *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.*



Accessories

Adapter From M 14 x 1.5 to G 1/4	**Adapter** From M 14 x 1.5 to M 12 x 1.5	**Adapter** From M 14 x 1.5 to NPT 1/8
		
Order number: 1-1-83-420-006	**Order number: 1-1-83-420-007**	**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 bar[1)]
- 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
300[1)]	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
	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

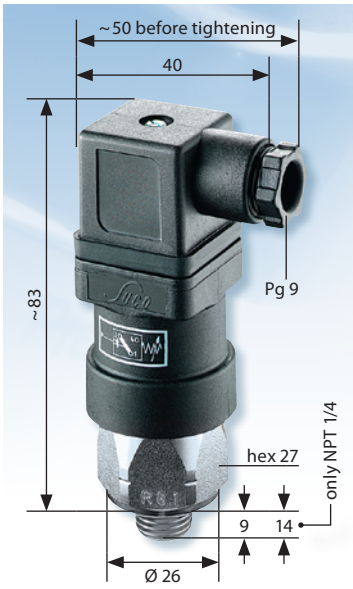
Temperature ranges of diaphragm / seal materials see page 26

Order number:	018X – XXX XX – X – XXX

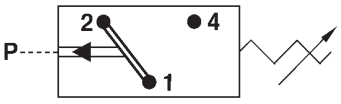
Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

[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

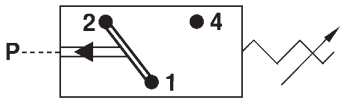
0190/0191

Diaphragm / piston pressure switches 24 V with gold contacts

- Zinc-plated steel body (CrVI-free), with spade terminals
- With changeover switch
- Max. voltage 24 V
- 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:			
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 bar[1)]
- 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

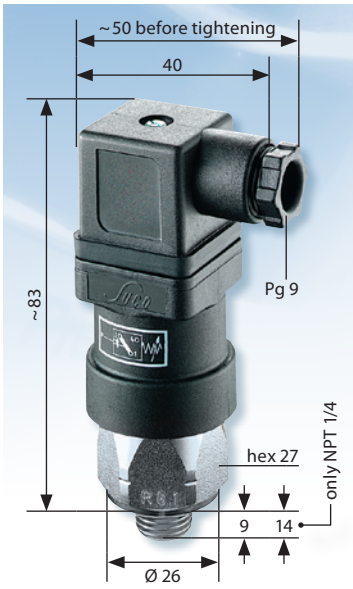
Temperature ranges of diaphragm / seal materials see page 26

Order number:	019X – XXX XX – X – XXX

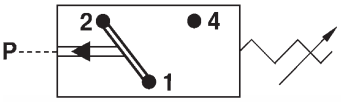
Piston pressure switches are only to a limited extent suitable for use with gases.
See explanation on page 9.

[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

0186/0187

Diaphragm / piston pressure switches 250 V with stainless steel body

- Stainless steel (1.4305 / AISI 303) body
- With changeover switch and silver contacts
- Max. voltage 250 V
- Overpressure safe up to 300/600 bar[1)]
- Hysteresis adjustable at works

With male thread

$p_{max.}$ 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

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.

Diaphragm / seal material – areas of application

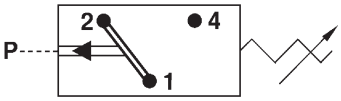
NBR	Hydraulic / machine oil, heating oil, air, nitrogen etc.	1
EPDM	Water[2)], Brake fluid, ozone, acetylene, hydrogen etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline etc.	3

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.



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.

- Stainless steel (1.4305 / AISI 303) body
- With changeover switch and gold contacts
- Max. voltage 24 V
- Overpressure safe up to 300/600 bar[1)]
- 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

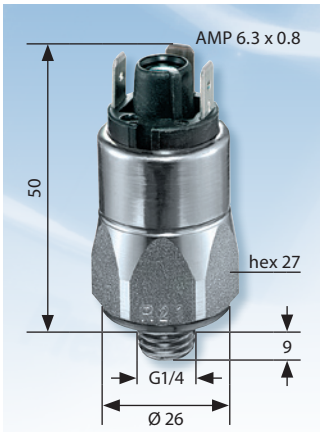
[2)] Not recommended for piston pressure switches.

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.

[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



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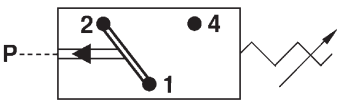

Accessories see page 28