Pressure switches hex 27 with integrated connector

Changeover switch with silver or gold contacts



- Large selection of electrical plug-in types for quick attachment and reliable connection
- Hysteresis adjustable at factory
- High protection class (to IP67 or IP6K9K)
- Compact and rugged design in industrial environments like construction and agricultural machinery or commercial vehicles
- Switching point can be set on site with adjusting screw[1)]
- Very high overpressure safety
- Corresponding mating plugs are available as accessories (please refer to page 34)

[1)] Pressure switches can also be supplied preset at factory.
The switching point is embossed onto pressure switches preset at factory.

Pressure switches hex 27 with integrated connector

Technical details

Types:	0132-0137	0184 / 0185	0194 / 0195
Rated working voltage:	10 … 48 VAC/DC	10 … 250 VAC/DC	5 … 24 VDC
Rated current: (resistive load, DC12 / AC12)	10 mA … 4 A	10 mA … 4 A	3 … 50 mA
Temperature resistance of sealing materials:	NBR (diaphragm pressure switch, p_{max} = 400 bar)		-40 °C … +100 °C
	NBR (diaphragm pressure switch, p_{max} = 100 bar) (piston pressure switch)		-30 °C … +100 °C
	EPDM		-30 °C … +120 °C
	FKM (diaphragm pressure switch)		-5 °C … +120 °C
	FKM (piston pressure switch)		-15 °C … +120 °C
	FFKM		-20 °C … +120 °C
	Silicone		-40 °C … +120 °C
	HNBR		-30 °C … +120 °C
Burst pressure (diaphragm pressure switch, overpressure resistance 100 bar)	200 bar		
Burst Pressure (diaphragm pressure switch, overpressure resistance 400 bar)	700 bar (for threads M10, G 1/8, R 1/8 and NPT 1/8 up to max. 600 bar)		
Burst pressure (Piston pressure switch)	1,000 bar (for threads M10, G 1/8, R 1/8 and NPT 1/8 up to max. 600 bar)		
Switching frequency:	200 / min		
Mechanical life expectancy:	1,000,000 cycles (for diaphragm pressure switches, life expectancy value only applies for switching pressures to max. 50 bar)		
Pressure rise rate:	≤ 1,000 bar/s		
Hysteresis: (can only be set at factory) [1]:	Adjustable average value 10 … 30 % depending on type		
Vibration resistance:	10 g; 5 … 200 Hz sine wave; DIN EN 60068-2-6		
Shock resistance:	294 m/s²; 14 ms half sine wave; DIN EN 60068-2-27		
Weight:	approx. 100 g	approx. 130 g	approx. 130 g

Overview of maximum working voltage and current and contact materials

Type:	0132	0133	0134	0135	0136	0137	0184	0185	0194	0195
5 … 24 VDC									●	●
10 … 48 VAC/DC	●	●	●	●	●	●				
10 … 250 VAC/DC							●	●		
3 … 50 mA									●	●
10 mA … 4 A	●	●	●	●	●	●	●	●		
Gold contacts	○	○	○	○	○	○			●	●
Silver contacts	●	●	●	●	●	●	●	●		
Adjustable hysteresis (can only be set at factory)	●	●	●	●	●	●	●	●	●	●
Connector type	AMP Superseal 1.5®		M12x1 DIN EN 61076-2-101-A		Deutsch DT04-3P		DIN EN 175301			
Protection class	IP67		IP67		IP67, IP6K9K		IP65			

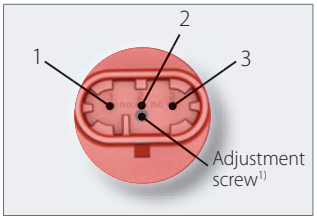
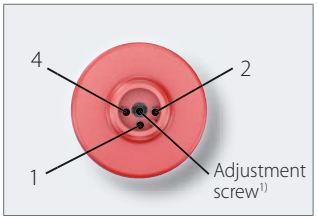
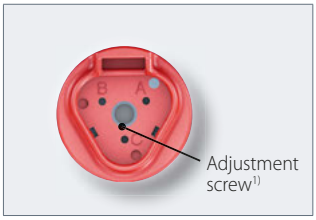
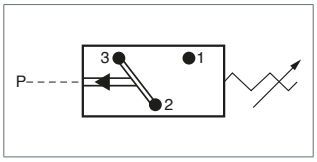
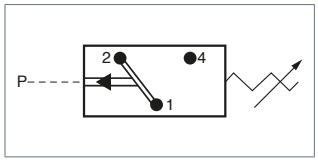
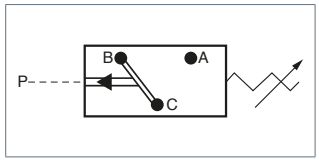
[1] see notes on hysteresis in the technical explanations (page 15-16)

○ Available as an option

0132 / 0133 / 0134 / 0135 / 0136 / 0137

Diaphragm/piston pressure switches with integrated connector, maximum operating voltage up to 48 V

- Simple, quick and reliable electrical connection with easy-to-fit connectors
- Quick fitting with socket wrench (spanner)
- Changeover with silver contacts (gold contacts available as option)
- Hysteresis adjustable at factory
- Made of zinc-plated steel (CrVI-free, other housing materials available as option)

Model / type	0132 / 0133	0134 / 0135	0136 / 0137
			
	TE AMP Superseal 1.5® IP67	**M12x1 EN 61076-2-101-A** Contact assignment DIN 60947-5-2 IP67	**Deutsch DT04-3P®** IP67, IP6K9K
Height without thread	H ≈ 73 mm	H ≈ 65 mm	H ≈ 71 mm
Contact assignments			
Circuit diagrams			

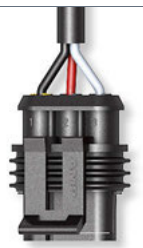
[1)] Blade of screwdriver max. 2 mm

Accessory

Not included in the delivery.

Please order separately.

Mating plug with 2 m cable [2)]

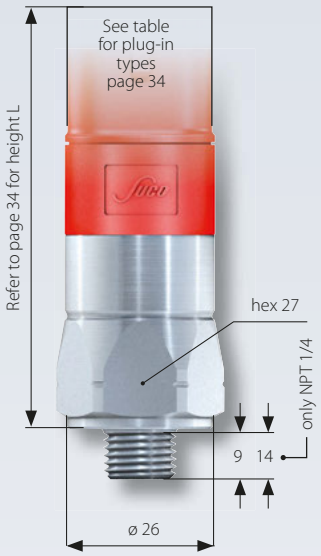
	TE AMP Superseal 1.5®	M 12x1 EN 61076-2-101-LF	Deutsch DT06-3S®
			
Cable cross-section / IP protection	3 x 0,5 mm² Radox cable / IP65	4 x 0,34 mm² PUR cable / IP67	3 x 0,5 mm² PUR cable / IP67
Article number	**1-1-32-653-158**	**1-1-00-653-162**	**1-1-36-653-160**

[2)] For the pin assignment of the wires please refer to chapter M.10 Accessories (page 91)

0132 / 0133 / 0134 / 0135 / 0136 / 0137

Diaphragm/piston pressure switches with integrated connector, maximum operating voltage up to 48 V

p_{max} in bar	Adjustment range in bar	Tolerance at room temperature in bar	Thread	Article number
0132 / 0134 / 0136 Diaphragm pressure switches				
100[1]	0.3 - 1.5	± 0.2	G 1/4	013X - 457 03 - X - 003
			M 10x1 con.	013X - 457 01 - X - 001
			M 12x1.5 cyl.	013X - 457 02 - X - 002
			NPT 1/8	013X - 457 04 - X - 318
			NPT 1/4	013X - 457 09 - X - 314
			7/16-20 UNF	013X - 457 20 - X - 301
			9/16-18 UNF	013X - 457 21 - X - 302
400[1]	1 - 10	± 0.5	G 1/4	013X - 458 03 - X - 042
			M 10x1 con.	013X - 458 01 - X - 040
			M 12x1.5 cyl.	013X - 458 02 - X - 041
			NPT 1/8	013X - 458 04 - X - 343
			NPT 1/4	013X - 458 09 - X - 340
			7/16-20 UNF	013X - 458 20 - X - 341
			9/16-18 UNF	013X - 458 21 - X - 342
	10 - 50	± 3.0	G 1/4	013X - 459 03 - X - 009
			M 10x1 con.	013X - 459 01 - X - 007
			M 12x1.5 cyl.	013X - 459 02 - X - 008
			NPT 1/8	013X - 459 04 - X - 320
			NPT 1/4	013X - 459 09 - X - 316
			7/16-20 UNF	013X - 459 20 - X - 305
			9/16-18 UNF	013X - 459 21 - X - 306
	10 - 100	± 3.0 - 5.0	G 1/4	013X - 461 03 - X - 012
			M 10x1 con.	013X - 461 01 - X - 010
			M 12x1.5 cyl.	013X - 461 02 - X - 011
			NPT 1/8	013X - 461 04 - X - 321
			NPT 1/4	013X - 461 09 - X - 317
			7/16-20 UNF	013X - 461 20 - X - 307
			9/16-18 UNF	013X - 461 21 - X - 308
0133 / 0135 / 0137 Piston pressure switches				
700[1] [2]	50 - 200	5.0	G 1/4	013X - 460 03 - X - 003
			M 10x1 con.	013X - 460 01 - X - 001
			M 12x1.5 cyl.	013X - 460 02 - X - 002
			NPT 1/4	013X - 460 09 - X - 303
			7/16-20 UNF	013X - 460 20 - X - 301
			9/16-18 UNF	013X - 460 21 - X - 302



Seal material – Application areas

NBR	Hydraulic/machine oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
FFKM	Hot water, chemical acids, diluted alkalis, ketones, esters, alcohols	6
HNBR[3]	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 33 for the temperature range and application thresholds of sealing materials.

Article number:	013 X – XXX XX – X – XXX

[1] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.
[2] Excluding the thread sizes G 1/8, R 1/8, NPT 1/8 and M 10x1 cylindrical/conical.
[3] HNBR diaphragm not available for pressure ranges 0.3 - 1.5 bar.

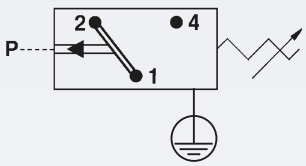
0184

Diaphragm pressure switches up to 250 V

- Made of zinc-plated steel (CrVI-free, other housing materials available as option)
- Socket device similar to DIN EN 175301 (DIN 43650)
- Changeover with silver contacts
- Overpressure safety up to 100 / 400 bar[1)]
- Hysteresis adjustable at factory



Socket device
included in the delivery



p_{max} in bar	Adjustment range in bar	Tolerance at room temperature in bar	Male thread	Article number
0184 Diaphragm pressure switches				
100[1)]	0.3 - 1.5	± 0.2	G 1/4	0184 - 457 03 - X - 003
			M 10x1 con.	0184 - 457 01 - X - 001
			M 12x1.5 cyl.	0184 - 457 02 - X - 002
			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
400[1)]	1 - 10	± 0.5	G 1/4	0184 - 458 03 - X - 042
			M 10x1 con.	0184 - 458 01 - X - 040
			M 12x1.5 cyl.	0184 - 458 02 - X - 041
			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	G 1/4	0184 - 459 03 - X - 009
			M 10x1 con.	0184 - 459 01 - X - 007
			M 12x1.5 cyl.	0184 - 459 02 - X - 008
			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	G 1/4	0184 - 461 03 - X - 012
			M 10x1 con.	0184 - 461 01 - X - 010
			M 12x1.5 cyl.	0184 - 461 02 - X - 011
			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

Seal material – Application areas

NBR	Hydraulic/machine oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
FFKM	Hot water, chemical acids, diluted alkalis, ketones, esters, alcohols	6
HNBR[2)]	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 33 for the temperature range and application thresholds of sealing materials.

Article number:	0184 – XXX XX – X – XXX

[1)] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.
[2)] HNBR diaphragm not available for pressure ranges 0.3 - 1.5 bar.

0185

Piston pressure switches up to 250 V

- Made of zinc-plated steel (CrVI-free, other housing materials available as option)
- Socket device similar to DIN EN 175301 (DIN 43650)
- Changeover with silver contacts
- Overpressure safety up to 700 bar [1)]
- Hysteresis adjustable at factory

p_{max} in bar	Adjustment range in bar	Tolerance at room temperature in bar	Male thread	Article number
0185 Piston pressure switches				
700[1) 2)]	50 - 200	± 5.0	G 1/4	0185 - 460 03 - X - 003
			M 10x1 con.	0185 - 460 01 - X - 001
			M 12x1.5 cyl.	0185 - 460 02 - X - 002
			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

Seal material – Application areas

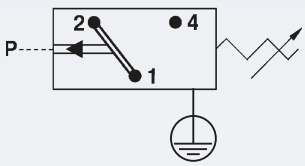
NBR	Hydraulic/machine oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 33 for the temperature range and application thresholds of sealing materials.

Article number:	0185 – 460 XX – X – XXX



Socket device
included in the delivery



[1)] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.
[2)] Excluding the thread sizes G 1/8, R 1/8, NPT 1/8 and M 10x1 cylindrical/conical.

0194

Diaphragm pressure switches up to 24 V with gold contacts

- Made of zinc-plated steel (CrVI-free)
- Socket device similar to DIN EN 175301 (DIN 43650)
- Changeover with gold contacts
- Overpressure safety up to 100 / 400 bar[1)]
- Hysteresis adjustable at factory



Socket device
included in the delivery



p_{max} in bar	Adjustment range in bar	Tolerance at room temperature in bar	Male thread	Article number

0194 Diaphragm pressure switches

100[1)]	0.3 - 1.5	± 0.2	G 1/4	0194 - 457 03 - X - 003
			M 10x1 con.	0194 - 457 01 - X - 001
			M 12x1.5 cyl.	0194 - 457 02 - X - 002
			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
400[1)]	1 - 10	± 0.5	G 1/4	0194 - 458 03 - X - 042
			M 10x1 con.	0194 - 458 01 - X - 040
			M 12x1.5 cyl.	0194 - 458 02 - X - 041
			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	G 1/4	0194 - 459 03 - X - 009
			M 10x1 con.	0194 - 459 01 - X - 007
			M 12x1.5 cyl.	0194 - 459 02 - X - 008
			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	G 1/4	0194 - 461 03 - X - 012
			M 10x1 con.	0194 - 461 01 - X - 010
			M 12x1.5 cyl.	0194 - 461 02 - X - 011
			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

Seal material – Application areas

NBR	Hydraulic/machine oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
FFKM	Hot water, chemical acids, diluted alkalis, ketones, esters, alcohols	6
HNBR[2)]	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 33 for the temperature range and application thresholds of sealing materials.

Article number:	0194 – XXX XX – X – XXX

[1)] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.
[2)] HNBR diaphragm not available for pressure ranges 0.3 - 1.5 bar.

0195

Piston pressure switches up to 24 V with gold contacts

- Made of zinc-plated steel (CrVI-free)
- Socket device similar to DIN EN 175301 (DIN 43650)
- Changeover with gold contacts
- Overpressure safety up to 700 bar [1)]
- Hysteresis adjustable at factory

p_{max} in bar	Adjustment range in bar	Tolerance at room temperature in bar	Male thread	Article number
0195 Piston pressure switches				
700[1) 2)]	50 - 200	± 5.0	G 1/4	0195 - 460 03 - X - 003
			M 10x1 con.	0195 - 460 01 - X - 001
			M 12x1.5 cyl.	0195 - 460 02 - X - 002
			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

Seal material – Application areas

NBR	Hydraulic/machine oil, air, nitrogen, etc.	1
EPDM	Brake fluid, hydrogen, oxygen, acetylene, etc.	2
FKM	Hydraulic fluids (HFA, HFB, HFD), petrol/gasoline, etc.	3
HNBR	Hydraulic/machine oil, ester-based bio-oils	9

Refer to page 33 for the temperature range and application thresholds of sealing materials.

Article number:	0195 – 460 XX – X – XXX



Socket device
included in the delivery



[1)] Static value. Dynamic value is 30-50 % lower. Values pertain to the hydraulic/pneumatic part of the pressure switch.
[2)] Excluding the thread sizes G 1/8, R 1/8, NPT 1/8 and M 10x1 cylindrical/conical.