



For neutral and aggressive gaseous and liquid fluids
Switching pressure ranges from -1 – 160 bar

- High accuracy
- Designs for special applications available on request
- Microswitches, encapsulated, protection class EEx D II CT 6, silverspring



Technical data

Fluids:

Pressure switch for air, gas, water, hydraulic oil, lubricating oil, light fuel oil

Repeatability:

± 2%

Working viscosity:

Up to 1000 mm²/s

Switching element:

Microswitch

Degree of protection:

IP 54

Ambient temperature:

-10 – +80 °C

Fluid temperature:

0 – +80 °C

Temperature at switching element:

Max. +80 °C

Mounting position:

Optional

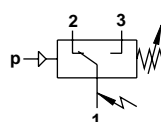
Vibrations (to be avoided):

Max. 4 g (sinusoidal) / 5 Hz

Ordering example

Pressure switch, ex-proof, adjustable switching difference, setpoint at 6 bar rising, process connection G 1/2, water

Type: **0841681**



Switching function:
Microswitch SPDT

Terminals 1 – 3: Contacts close on rising pressure,
Terminals 1 – 2: Contacts open on rising pressure.

Description

The following parts of these pressure- and temperature switches are protected against explosion (to VDE 0171):

Switching element, protection class EEx D II CT 6 (flame-proof housing);

Terminal block, protection class EExe I/II (for increased safety);

Registered with the Federal Physical-Technical Institute under PTB-Nr. III B/E-29811 in protection class (Ex)d 3n G5;

When mounting, observe VDE specification 0165 and data contained in PTB test certificate, respectively other local regulations;

Switching pressure difference optionally adjustable or fixed.

Degree of protection to DIN 40050: IP 54.



Pressure switches for neutral fluids -1 – 25 bar

Type	Adjustable pressure range p _{vu} min ... p _{vo} max (VDI 3283) (bar)	Switching pressure difference (bar)		Max. allowable pressure ¹⁾ (bar)	Number of switching cycles	Pressure sensor materials		Connection (Internal thread)	Total weight (kg)	Dimensional drawing No.
		Lower range	Upper range			Housing	Bellows			
Switching pressure difference fixed										
0850180	-1 ... 0	0.2	0.23	10	max. 20 (no sudden pressure changes)	Brass 2.0401	St. st. soldered 1.4404,	G 1/4	1.0	01
0850280	-1 ... 1	0.2	0.25	10				G 1/4	1.0	01
0850380	-1 ... 1.6	0.2	0.26	10				G 1/4	1.0	01
0850480	-1 ... 2.5	0.2	0.26	10				G 1/4	1.0	01
0851180	0 ... 1	0.16	0.18	10				G 1/4	1.0	01
0851280	0 ... 1.6	0.16	0.2	10				G 1/4	1.0	01
0851480	0.2 ... 4	0.5	0.55	20				G 1/4	1.0	01
0851580	0.3 ... 6	0.6	0.7	20				G 1/4	1.0	01
0851680	0.3 ... 10	0.7	0.9	20				G 1/4	1.0	01
0851780	0.5 ... 16	1.1	1.4	50				G 1/4	1.0	01
0851880	0.5 ... 25	1.3	1.8	50					1.0	01
Switching pressure difference adjustable										
0840180	-1 ... 0	kleinste 0.20 ... 0.25	größte 0.8	10	max. 20 (no sudden pressure changes)	Brass 2.0401	St. st. soldered 1.4404,	G 1/4	1.0	01
0840280	-1 ... 1	0.20 ... 0.30	1.0	10				G 1/4	1.0	01
0840380	-1 ... 1.6	0.20 ... 0.26	2.0	10				G 1/4	1.0	01
0840480	-1 ... 2.5	0.20 ... 0.28	2.5	10				G 1/4	1.0	01
0841180	0 ... 1	0.16 ... 0.18	0.8	10				G 1/4	1.0	01
0841380	0.1 ... 2.5	0.18 ... 0.22	2.0	10				G 1/4	1.0	01
0841480	0.2 ... 4	0.50 ... 0.60	2.5	20				G 1/4	1.0	01
0841580	0.3 ... 6	0.60 ... 0.70	5.0	20				G 1/4	1.0	01
0841680	0.3 ... 10	0.70 ... 0.90	8.0	20				G 1/4	1.0	01
0841780	0.5 ... 16	1.60 ... 1.90	12.0	50				G 1/4	1.0	01
0841880	0.5 ... 25	1.60 ... 2.20	20.0	50				G 1/4	1.0	01

Pressure switches for hydraulic oil and other neutral self-lubricating fluids 3 – 160 bar

Type	Adjustable-range p _{vu} min ... p _{vo} max (VDI 3283) (bar)	Switching pressure difference (bar)		Max. allowable pressure ¹⁾ (bar)	Number of switching cycles	Pressure sensor materials		Connection (Internal thread)	Total weight (kg)	Dimensional drawing No.
		Lower range	Upper range			Housing	Bellows			
Switching pressure difference fixed										
0856580	3 ... 40	6	13	300	max. 20 (no sudden pressure changes)	Brass 2.0401	St. st. 1.2210, grooved ring NBR (Perbunan)	G 1/4	1.0	05
0856680	5 ... 63	7	15	300				G 1/4	1.0	05
0856780	5 ... 100	7	18	300				G 1/4	1.0	05
0856880	5 ... 160	8	22	300				G 1/4	1.0	05
Switching pressure difference adjustable										
0846880	5 ... 160	min. 8 ... 22	max. 120	300	max. 20 (no sudden pressure changes)	Brass 2.0401	St. st. 1.2210, grooved ring NBR (Perbunan)	G 1/4	1.0	01

¹⁾ Operative use of this limiting value is not permissible. Even temporary pressure peaks during operation must not exceed this value. The limiting value corresponds to the maximum test pressure. (Valid also for tables on page 3).



Pressure switches for aggressive fluids -1 – 63 bar

Type	Adjustable pressure range p _{vu} min ... p _{vo} max (VDI 3283) (bar)	Switching pressure difference (bar)		Max. allowable pressure ¹⁾ (bar)	Number of switching cycles	Pressure sensor materials		Connection (internal thread)	Total weight (kg)	Dimensional drawing No.
		Lower-range	Upper range			Housing	Bellows			
Switching pressure difference fixed										
0850181	-1 ... 0	0.22	0.25	10	max. 20 (no sudden pressure changes)	All parts in contact with the pressure fluid made of stainless steel 1.4305		G 1/2	1.0	04
0850481	-1 ... 2.5	0.25	0.30	10						
0851281	0 ... 1.6	0.18	0.22	10						
0851381	0.1 ... 2.5	0.18	0.22	10						
0851481	0.2 ... 4	0.5	0.55	20						
0851581	0.3 ... 6	0.6	0.7	20						
0851681	0.3 ... 10	0.7	0.9	20						
0851781	0.5 ... 16	1.1	1.4	50						
0851881	0.5 ... 25	1.4	1.8	50						
0851981	3.0 ... 63	2.0	5.0	85						
Switching pressure difference adjustable										
		min.	max.		max. 20 (no sudden pressure changes)	All parts in contact with the pressure fluid made of stainless steel 1.4305		G 1/2	1.0	04
0840181	-1 ... 0	0.2 ... 0.25	0.8	10						
0840381	-1 ... 1.6	0.2 ... 0.26	2.0	10						
0841181	0 ... 1	0.16... 0.18	0.8	10						
0841281	0 ... 1.6	0.16... 0.2	1.0	10						
0841581	0.3 ... 6	0.6 ... 0.7	5.0	20						
0841681	0.3 ... 10	0.7 ... 0.9	8.0	20						
0841881	0.5 ... 25	1.3 ... 1.8	20.0	50						
0841981	3.0 ... 63	2.0 ... 5	20.0	85						

Differential pressure switches for neutral fluids

Type	Differential pressure range p _{vu} min ... p _{vo} max (VDI 3283) (bar)	Switching pressure difference (bar)		Working pressure range (bar)	Max. allowable pressure ¹⁾ (bar)	Number of switching cycles	Pressure sensor materials		Connection (internal thread)	Total weight (kg)	Dimensional drawing No.
		Lower range	Upper range				Housing	Bellows			
Switching pressure difference fixed											
0859280	0.2 ... 1.6	0.4	0.45		20	10	Brass 2.0401	St. st. soldered 1.4404	G 1/4	1.2	03
0859380	0.25 ... 2.5	0.4	0.45		20						
0859580	0.5 ... 6	1.6	1.8	-1 ... 25	30						
Switching pressure difference adjustable											
		min.	max.			10	Brass 2.0401	St. st. soldered 1.4404	G 1/4	1.2	03
0849480	0.3 ... 4	0.4...0.45	4	-1 ... 16	20						
0849680	0.5 ... 10	1.7...1.9	8		30						

1) Operative use of this limiting value is not permissible. Even temporary pressure peaks during operation must not exceed this value. The limiting value corresponds to the maximum test pressure. (Valid also for tables on page 3).

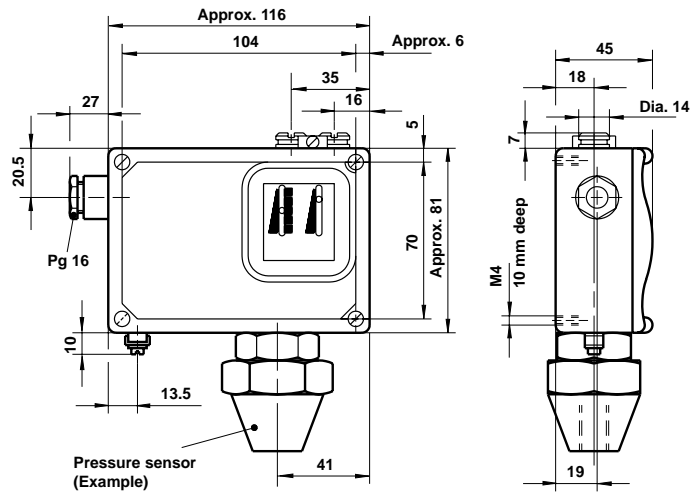


Differential pressure switches for aggressive fluids

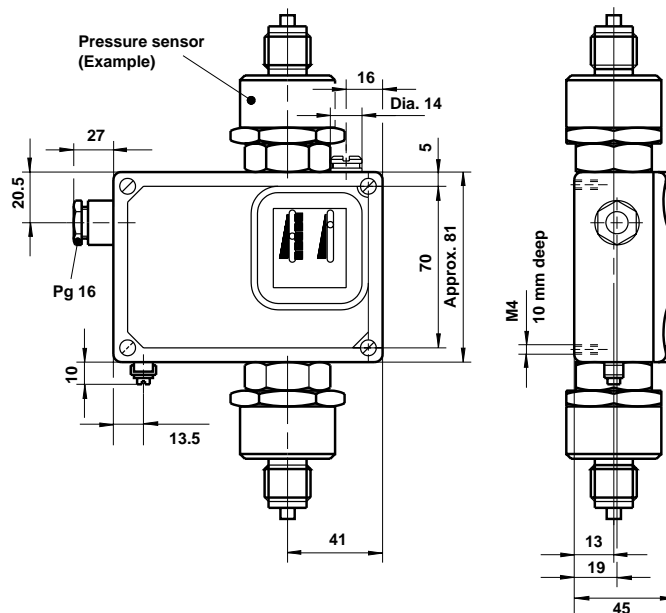
Type	Differential pressure range p _{vu} min ... p _{vo} max (VDI 3283) (bar)	Switching pressure difference (bar)		Working pressure range (bar)	Max. allowable pressure (bar)	Number of switching cycles	Pressure sensor materials			Connection (external thread)	Total weight (kg)	Dimensional drawing No.
		Lower range	Upper range				Housing	Bellows	Other parts			
Switching pressure difference not adjustable												
0859281	0.2 ... 1.6	0.7	0.8	0.5 ... 16	20	10	St. st.	St. st.	St. st.	G 1/2	1.2	02
0859381	0.25 ... 2.5	0.8	0.9		20	10	1.4305	1.4401	1.4304	G 1/2	1.2	02
0859481	0.3 ... 4	0.8	1		20	10				G 1/2	1.2	02
0859681	0.5 ... 10	1.6	2.2	1 ... 25	30	10				G 1/2	1.2	02

1) Operative use of this limiting value is not permissible. Even temporary pressure peaks during operation must not exceed this value. The limiting value corresponds to the maximum test pressure. (Valid also for tables on page 3).

Dimensional drawing 01

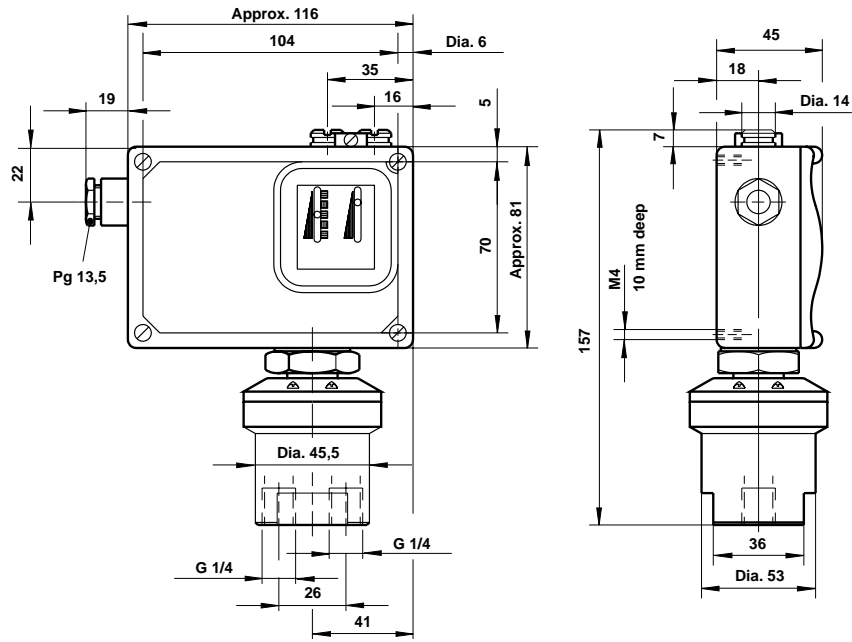


Dimensional drawing 02

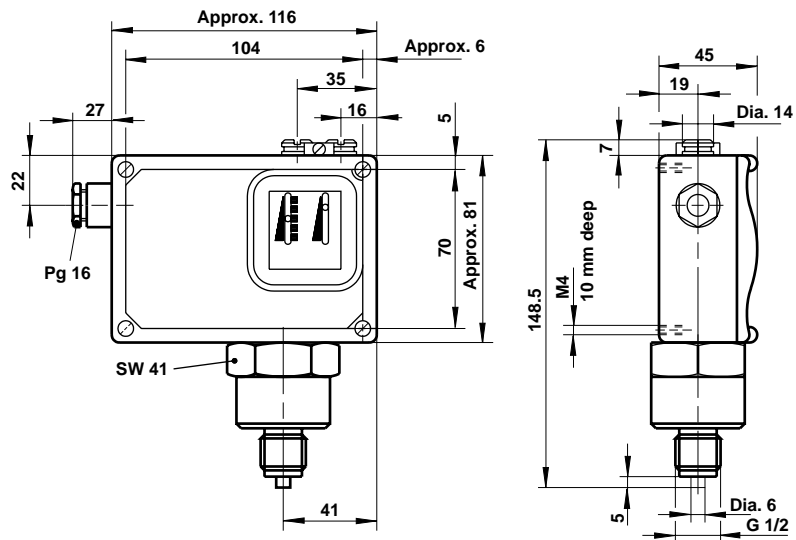




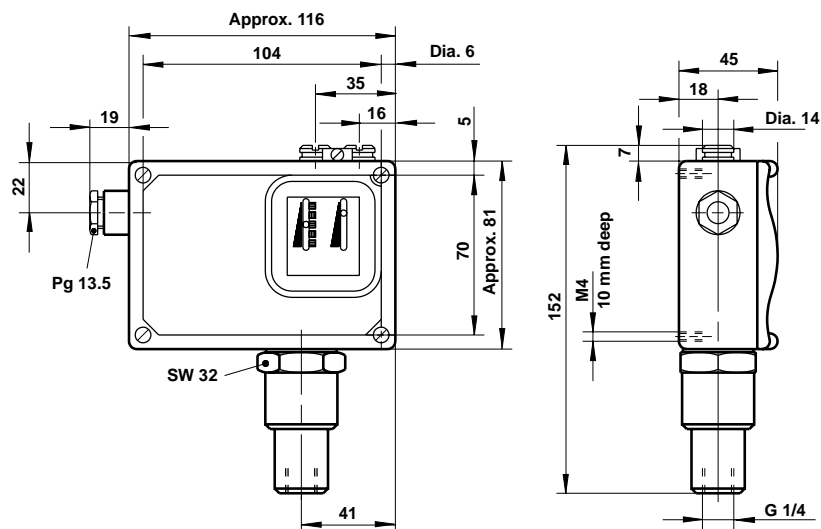
Dimensional drawing 03



Dimensional drawing 04



Dimensional drawing 05





Making and/or breaking capacity – Change-over with silver spring contacts

Type of current	Voltage U_s (V)				Contact rating
	30	60	125	250	
	Make and break current (A)				
AC	6	6	6	5	1250 VA
DC	2	1	0.4	0.25	60 W



