Series 20 D

Pressure switch for pneumatic and allfluid technology
Standard Program
-1 to 100 bar

- **Microswitch with gold-plated contacts (silver plated for field mounting)**
- **Electrical connection: Connector acc. to DIN 43650 or terminal in combination with cable gland acc. to DIN 46320 or NPT thread**



Ordering information
please see page 2

Technical Data

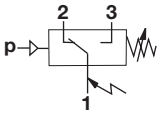
Fluid:
Neutral and aggressive gases and liquids
Mounting:
Optional
Port Sizes:
G 1/4 female, G 1/2 male, 1/4 NPT female, 1/2 NPT male
Operating pressure:
-1 to 100 bar
Ambient temperature:
-25 °C to +80 °C
-40 °C to +80 °C (field)
Operating viscosity:
Max. 1000 mm^2/s
Fluid temperature:
-10 °C to +100 °C
Maximum temperature at switching element:
+80 °C
Sealing:
> 10^{-7} mbar · l · s^{-1}
Repeatability:
±1% of final value (referred to pressure control)
Pulsations:
Not permitted
Vibrations / Shocks to be avoided:
4 g max. (sinusoidal) / max. 5 Hertz
Switching cycles:
max. 20/minute
Degree of protection:
IP65
Materials:

Housing:	aluminium die cast	(standard)
	aluminium die cast, tin plated	(field)
Sensor:	Brass 1.4404	
	St. st. 1.4305 / 1.4404	
	St. st. 1. 4571	

Sealing:
Stainless steel bellow
El.-connection/Sensor combinations:
See table overleaf

Switching function:

Microswitch SPDT
Terminals 1-3:
Contacts close on rising pressure
Terminals 1-2:
Contacts open on rising pressure



General Information / Selection criteria

The complete catalog number consists of 7 digits:

18 H XX YY

- 18 = Identification of 20 D
- H = 1 = fixed switching difference; 0 = adjustable switching difference
- XX = Pressure range and related switching differences
- YY = Sensor variation with related/available electrical and fluid connections

Order example:
for a pressure switch with a set point of 4 bar, fixed switching difference, G 1/2 male fluid connection suitable for water, outdoor location,
order part number 1811511.

Pressure range codes (XX) for 181 models (fixed switching difference)

XX Code	Pressure range	Over pressure	Switching differences for sensor options codes 00, 10 + 20		Switching differences for sensor options codes 11, 14, 21 + 24		Switching differences for sensor opt. codes 03, 05, 06, 13, 15, 16, 23 + 25	
			Lower range (bar)	Upper range (bar)	Lower range (bar)	Upper range (bar)	Lower range (bar)	Upper range (bar)
01	-1 – 0	10	0,06	0,07	0,07	0,08	0,06	0,07
02	-1 – 1	10	0,06	0,08	0,07	0,10	0,07	0,08
04	-1 – 2,5	10	0,08	0,12	0,09	0,12	0,09	0,12
11	0,05 – 1	10	0,06	0,08	0,07	0,08	0,07	0,08
13	0,1 – 2,5	10	0,07	0,09	0,09	0,10	0,11	0,15
14	0,5 – 4	20	0,20	0,25	0,30	0,33	0,30	0,33
15	0,5 – 6	20	0,20	0,30	0,30	0,35	0,30	0,35
16	0,5 – 10	20	0,30	0,40	0,30	0,40	0,30	0,40
17	1 – 16	50	0,60	0,80	0,70	0,80	0,70	0,80
18	1 – 25	50	0,70	0,90	0,70	0,90	0,70	0,90
19*	5 – 63	85	0,90	1,50	1,00	2,00	1,00	2,00
10***	5 – 100	150	2,50	5,00	3,00	7,00	3,00	7,00

Pressure range codes (XX) for 180 models (adjustable switching difference)

XX Code	Pressure range	Over pressure	Switching differences for sensor options codes 00, 10 + 20 (bar)			Switching differences for sensor options codes 03, 05, 06, 10, 11, 13, 14, 15, 16, 21, 23, 24, 25 (bar)		
			Lower range	Upper range Minimum	Upper range Maximum	Lower range	Upper range Minimum	Upper range Maximum
01	-1 – 0	10	0,12	0,13	0,70	0,12	0,13	0,70
02	-1 – 1	10	0,13	0,14	1,00	0,19	0,21	1,00
04	-1 – 2,5	10	0,17	0,20	2,50	0,22	0,24	2,50
11	0,05 – 1	10	0,08	0,11	0,70	0,15	0,16	0,70
13	0,1 – 2,5	10	0,11	0,15	2,00	0,20	0,25	2,00
14	0,5 – 4	20	0,30	0,40	2,50	0.80	0,80	2,50
15	0,5 – 6	20	0,35	0,50	5,00	0,80	0,90	5,00
16	0,5 – 10	20	0,40	0,80	8,00	0,90	1,90	8,00
17	1 – 16	50	0,80	1,10	12,00	1,70	2,00	12,00
18	1 – 25	50	1,00	1,50	20,00	1,80	2,80	20,00
19*	5 – 63	85	2,00	3,00	20,00	2,30	3,50	20,00
10***	5 – 100	150	3,50	7,00	55,00	4,00	9,00	55,00

Sensor variation codes (YY)

YY Code	Materials	El. connection	Fluid connection	Design
00	Brass/1.4404	DIN 43650**	G1/4 female	-
03	Brass/1.4404	1/2 NPT	1/4 NPT female	-
05	Brass/1.4404	Pg 13,5	G1/4 female	-
06	Brass/1.4404	Pg 16	G1/4 female	-
10	1.4305/1.4404	DIN 43650**	G1/2 male	-
11	1.4305/1.4404	Pg 16	G1/2 male	Field
13	1.4305/1.4404	1/2 NPT	1/2 NPT male	-
14	1.4305/1.4404	1/2 NPT	1/2 NPT male	Field
15	1.4305/1.4404	Pg 13,5	G1/2 male	-
16	1.4305/1.4404	Pg 16	G1/2 male	-
20	1.4571	DIN 43650**	G1/2 male	-
21	1.4571	Pg 16	G1/2 male	Field
23	1.4571	1/2 NPT	1/2 NPT male	-
24	1.4571	1/2 NPT	1/2 NPT male	Field
25	1.4571	Pg 13,5	G1/2 male	-

* Not available with sensor options 00, 03, 05, and 06.
** Connector not within scope of supply. If required pls. order separately 0570110
*** Only for sensor options 10, 11, 13, 14, 15, 16