

Electr. Dual Pressure Switch

Type UDS7

Electronic pressure switch for pressure control with internal or flush stainless steel diaphragm, digital display, 2 solid state contacts or solid state plus 1 analog output, linearity error 0.5 % f. s.

Features

Alphanumeric 4-digit dot-matrix display, microprocessor controlled, self monitoring with error display, scalable analog output. All parameters are configured by keypad, adjustable keypad lock, various access levels, rugged stainless steel construction, optional: rotatable display

Measuring ranges

0...1 bar 0...10 bar, absolute pressure

-1... 0 bar; 0...0.2 bar to 0... 600 bar; relative pressure

Applications

Hydraulic and pneumatic systems, process / chemical technology, test bed and apparatus construction, automation



Technical Data

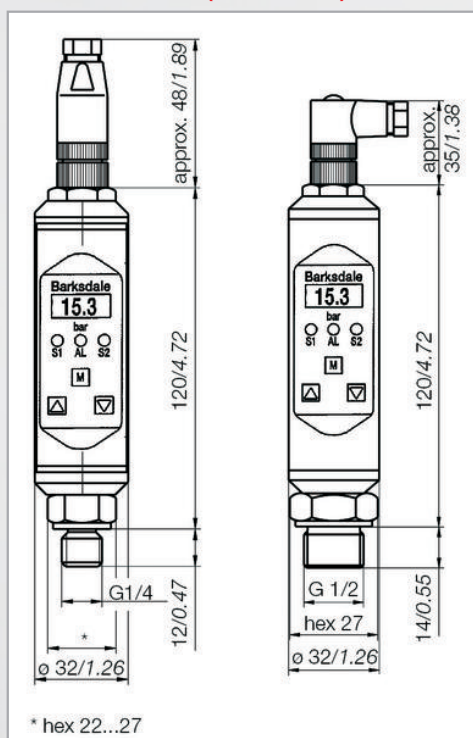
Sensor element:	Piezoresistive silicon measuring cell							
Materials:								
Wetted parts:	Stainless steel, material no. 1.4301							
Electronics hous.:	Stainless steel, material no. 1.4571							
Seals:	FKM							
Operating elements:	3 easy-response pushbuttons							
System of protection:	IP67 with PG / IP65 with plug							
Protection class:	III							
Process connection:	G 1/4 M; G 1/2, flush diaphragm for viscous media							
Dimensions:	32 mm x 120 mm (without plug connector)							
Weight:	approx. 350 g							
Measuring ranges [bar]:	0.2	0.4	0.6	1	2	5	10	50
Proof pressure [bar]:	2.5	2.5	2.5	3	4	7	15	75
Measuring ranges [bar]:	100	200	400	600	-1			
Proof pressure [bar]:	150	300	600	800	2.5			
Linearity error:	±0.5 % f. s. at 25 °C special calibration Option: ±0.25 % v. f. s.							
A/D converter:								
Resolution:	12 bit (4096 steps per measuring span)							
Scanning rate:	100 / s							
Electrical connection:	Plug M12 x 1, 5-pin							
Temperature influence:	±0.2 % f. s. / 10K							
Compensation range:	-10 °C... +70 °C							
Repeatability:	±0.1 % f. s.							

Temperature range:	
Medium:	-25 °C... +100 °C
Electronics:	-10 °C... +70 °C
Storage:	-30 °C... +80 °C
Power supply:	18... 32 V DC, reversed polarity protected (SELV, PELV)
Digital display:	4-digit dot-matrix display, digit height 5 mm, green
Display range:	-999... +999
Display rate:	5 / s
Delay:	0.0 s ... 9.9 s adjustable
Brightness:	20... 100 % adjustable
Error display:	LED red and alphanumeric display
Power consumption:	approx. 40 mA at Ub = 24 V DC (without load)
Analog output:	
Current output:	4...20 mA
Load:	max. RI = (Ub-12 V) / 20 mA RI = 600 Ohm at Ub = 24 V DC
Load influence:	0.3 % / 100 Ohm
Voltage output:	0...10 V DC
Rating:	max. 10 mA, short-circuit proof
Adjustment range:	25 %... 100 % f. s.
Transistor switching outputs PNP:	
Switching function:	Normally open / normally closed, standard / window mode and diagnosis function adjustable
Adjustment range:	0 %... 125 % f. s.
Switching frequ.:	max. 100 Hz
Current rating:	max. 500 mA, short-circuit proof
Delay:	0.0 s ... 9.9 s adjustable
Display:	LED green
Accessories:	Damping screw, plug connector
Approval:	GL, cULus: file no. E42816

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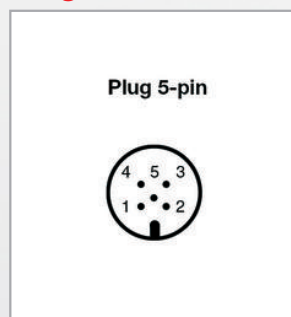
Dimensions (mm / inch)



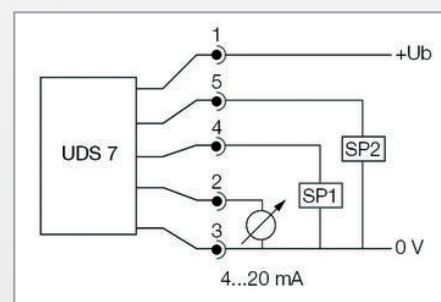
Connection chart Plug 1 (standard)

Plug M 12 x 1, 5-pin	Model with 2 switching outputs	Model with 2 switching outputs and 1 analog output
Pin 1	+Ub 18... 32 V DC	+Ub 18... 32 V DC
Pin 2	SP2 0.5 A max.	analog 4... 20 mA / 0...10 V DC
Pin 3	0 V	0 V
Pin 4	SP1 0.5 A max.	SP1 0.5 A max.
Pin 5	---	SP2 0.5 A max.

Plug



Electronic connections



Order Numbers

Pressure ranges	Process connection: G1/4 M		Process connection: G1/2, M, quasi flush	
	4...20 mA	0...10 V DC	4...20 mA	0...10 V DC
0... 1 bar abs.	0427-488	0427-729	---	---
0... 5 bar abs.	0427-489	0427-730	---	---
0... 10 bar abs.	0427-490	0427-731	---	---
0... 10 bar relative	0427-491	0427-735	0427-509	0427-736
0... 50 bar relative	0427-492	0427-737	0427-510	0427-738
0... 100 bar relative	0427-493	0427-739	0427-511	0427-740
0... 200 bar relative	0427-494	0427-741	0427-512	0427-742
0... 400 bar relative	0427-495	0427-743	0427-513	0427-744
0... 600 bar relative	0427-496	0427-745	0427-514	0427-746

Accessories

Order Number	Description
0499-016	Adapter G1/4 IG - G1/4 male thread for optimum alignment of pressure switch
906-0052	Adapter G1/4 IG - G1/2 male thread manometer connection
0499-002	Wall mounting brackets, stainless steel
901-0677	Damping screw with 0.2 mm restriction against quick pressure changes and high pulsation rate