

## Electronic OEM pressure switch DS1N

### Criteria

- Electronic pressure switch with following features:
  - media compatibility, Helium tested (oil, brake-fluid, Diesel fuel, methane and other gases)
  - excellent stability and over pressure capability
  - various preset pressure ranges standard from 2 bar to 4000 bar

#### Technical data

- pressure ranges see below
- overload: 2 x pressure range
- burst pressure: 3 x pressure range
- weight: 100 g
- operating voltage: DC 12-27V  
reverse-connect-protected
- max. voltage surge: 35V at 25°C
- current consumption: 10mA at 12V
- switch output (switching against UB, pnp): max. 1A
- switch point
  - preset in factory
  - adjustable by customer with teach-in-adaptor or optional programmer unit
- following parameters are programmable: (programming to the customers request in factory, or with programmer unit, wich is available as accessories)
  - close or open
  - hysteresis in 0,5% FS - steps
  - switching delay 100ms ... 10s
  - switching resolution: 0,5 % FS
  - min. switching delay: typical 5ms
  - total error band <math>< \pm 1,5\% \text{ full scale}</math>

#### Accessories (optional)

- Teach-in-adaptor for setting the switching point in customer applications
- Programmer unit for programming above-mentioned parameters

#### Operating conditions

- storage temperature: -20 to +120°C
- operating temperature: -10 to +80°C
- shock proof: 300m/s<sup>2</sup>  
14 ms at RT
- Vibration stability: 10g / 20-1000 Hz
- EMV and ESD acc. to: EN 50082-1 and EN 50082-2

### DS1N - 100 bar



### Features

The stainless steel membrane is vacuum proof, extremely burst proof and can be used in all medias, as long as they are stainless steel compatible.

#### Applications

- Hydraulic
- Pneumatic
- Environmental technology
- Process control
- Semiconductor industry
- Automotiv
- Agricultural devices
- Heating systems
- Robot systems

1 Standard ranges in kPa (other ranges open request)

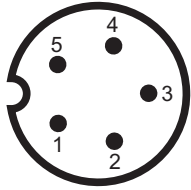
0 - 500	0 - 5.000	0 - 50.000
0 - 1.000	0 - 10.000	0 - 70.000
0 - 2.000	0 - 35.000	0 - 200.000

2 All parts that get in contact with the media are made of following materials  
to 500 bar X 5 CrNi1810 SUS 304 - 50 Mpa

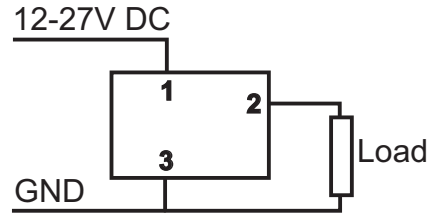
to 2000 bar X 5 CrNiCuNb 174 SUS 630 - 100 Mpa  
no O-rings and silicon oil pattern

# Technical Data

## terminal and wiring diagram



- 1 operating voltage (red)
- 2 switching output (green)
- 3 GND (blue)
- 4 SCL
- 5 SDA



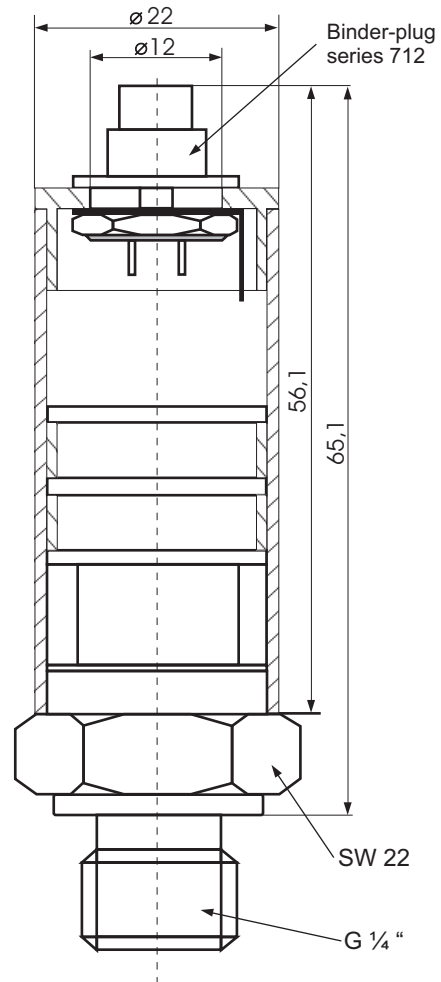
### Specification

The electronic pressure switches of the series DS1N contain only a few active components, a stainless steel membrane, the sensor element, a CMOS-ASIC for calibration and storing the calibration values, a micro controller and some standard components..

The switch setup electronically and setup point are stored digitally. This guarantees a good long-term stability and accuracy.

The equalize of switching-point, hysteresis, open/closed and switching delay, can follow in factory. Otherwise the customer can keep the Service or change himself the parameters with an optional programmer unit.

### Mechanics



### User tips

All in all the presented characteristics make the handling of this switch very simple.

The pneumatic or hydraulic sealing is done by a standard flatseal or O-ring.

The admissible torque during fastening is 25 Nm.

We reserve the right to make technical modifications

## DS1N-A1-G40-B100

### CONNECTION, code A

- 0 custom-built model
- 1 open collector highside

### PRESSURE RANGE, code B (bar) code P (PSI)

- 0 -1...0 bar
- 1 0,6 bar
- 2 <1,6 bar
- 3 2,5 bar
- 4 4 bar

further name:  
code-number=pressure end value (FS)

### THREAD, code G

- 0 custom-built model
- 8 M8
- 10 M10x1 (standard)
- 12 M12x1
- 14 M14x1,5
- 20 M20x1,5
- 30 7/16" - 20UNF
- 31 7/16" - 20UNF femal
- 40 G 1/4" E
- 41 G 1/4" A (standard)
- 50 3/8" - 24UNF
- 60 NPT 1/4"
- 61 NPT 1/8"
- 70 M18x1,5
- 71 G 1/4" A narrow hex

- DIN 13-1
- DIN 13-5
- DIN 13-5
- DIN 13-6
- DIN 13-6
- DIN 13-6
- US-norm
- DIN 228-1
- DIN 228-1
- US-norm
- US-norm
- US-norm
- DIN 13-6