

DS 230

Electronic OEM Pressure Switch

Applications:

- ▶ pneumatics
- ▶ pumps and hydraulic machines

Characteristics:

- ▶ nominal pressure ranges from 0 ... 2 bar up to 0 ... 400 bar
- ▶ display and housing rotatable
- ▶ up to 2 contacts
- ▶ configurable via display
- ▶ analogue output



Technical Data

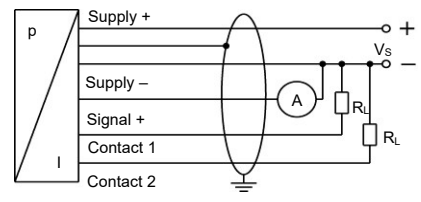


| Input pressure range | | | | | | | | | |
|--|-------|--|----|--|----|------------------------|-----|-----|-----|
| Nominal pressure gauge | [bar] | 2 | 5 | 10 | 20 | 50 | 100 | 250 | 400 |
| Overpressure | [bar] | 4 | 10 | 20 | 40 | 100 | 200 | 400 | 600 |
| Burst pressure | [bar] | 7 | 15 | 35 | 70 | 150 | 250 | 450 | 650 |
| Supply | | | | | | | | | |
| Supply voltage V_S | | 24 V _{DC} ± 10 % | | | | | | | |
| Current consumption | | < 40 mA (without analogue output and without contacts) | | | | | | | |
| Output signal | | | | | | | | | |
| Number, type | | standard: 1 PNP contact, 1 analogue output optional: max. 2 independent PNP contacts; 1 analogue output | | | | | | | |
| Contact (Standard) | | | | | | | | | |
| Switching current | | standard: contact rating max. 125 mA, short-circuit resistant | | | | | | | |
| Accuracy of contacts ¹ | | ≤ ± 1.5 % span BFSL | | | | | | | |
| Repeatability ¹ | | ≤ ± 0.5 % span BFSL | | | | | | | |
| Switching frequency | | max. 100 Hz | | | | | | | |
| Switching cycles | | > 100 x 10 ⁶ | | | | | | | |
| Functions | | Hysteresis- / Compare mode n/o / n/c | | | | | | | |
| Delay time | | 0 ... 99.99 sec | | | | | | | |
| Analogue output (optionally) | | | | | | | | | |
| Signal output | | 4 ... 20 mA (3-wire) | | | | | | | |
| Linearity, hysteresis, repeatability | | ≤ ± 0.5 % span BFSL | | | | | | | |
| Calibration accuracy | | ≤ ± 1 % span BFSL | | | | | | | |
| Permissible load | | R _{max} = 500 Ω | | | | | | | |
| Response time | | < 10 msec | | | | | | | |
| ¹ depending on nominal pressure range | | | | | | | | | |
| Thermal effects (Offset and Span) / Permissible temperatures | | | | | | | | | |
| Thermal error for offset | | ≤ ± 0.5 % span / 10 K | | in compensated range | | -25 ... 85 °C | | | |
| Permissible temperatures | | medium: -25 ... 125 °C | | electronics / environment: -25 ... 85 °C | | storage: -40 ... 85 °C | | | |

| | |
|-------------------------------|---|
| Electrical protection | |
| Short-circuit protection | permanent |
| Reverse polarity protection | no damage, but also no function |
| Electromagnetic compatibility | emission and immunity according to EN 61326 |
| Mechanical stability | |
| Vibration | 10 g RMS (25 ... 2000 Hz) according to DIN EN 60068-2-6 |
| Shock | 500 g / 1 msec according to DIN EN 60068-2-27 |
| Materials | |
| Pressure port / housing | stainless steel 1.4301 |
| Display housing | PA 6.6, Polycarbonate |
| Seals (media wetted) | FKM others on request |
| Diaphragm | ceramic Al ₂ O ₃ 96 % |
| Touchpad | polyester |
| Media wetted parts | pressure port, seals, diaphragm |
| Miscellaneous | |
| Display | 4-digit, red LED display, digit size 7 mm, digit width 4.85 mm (angle 10 °); range of indication -1999 ... +9999; accuracy 0.3 % ±1 digit; digital damping 0.3 ... 30 sec (programmable); measured value update 0.0 ... 10 sec (programmable) |
| Weight | approx. 180 g |
| Installation position | any |
| Ingress protection | IP 67 |
| Operational life | 100 million load cycles |
| CE-conformity | EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ² |

² This directive is only valid for devices with maximum permissible overpressure > 200 bar

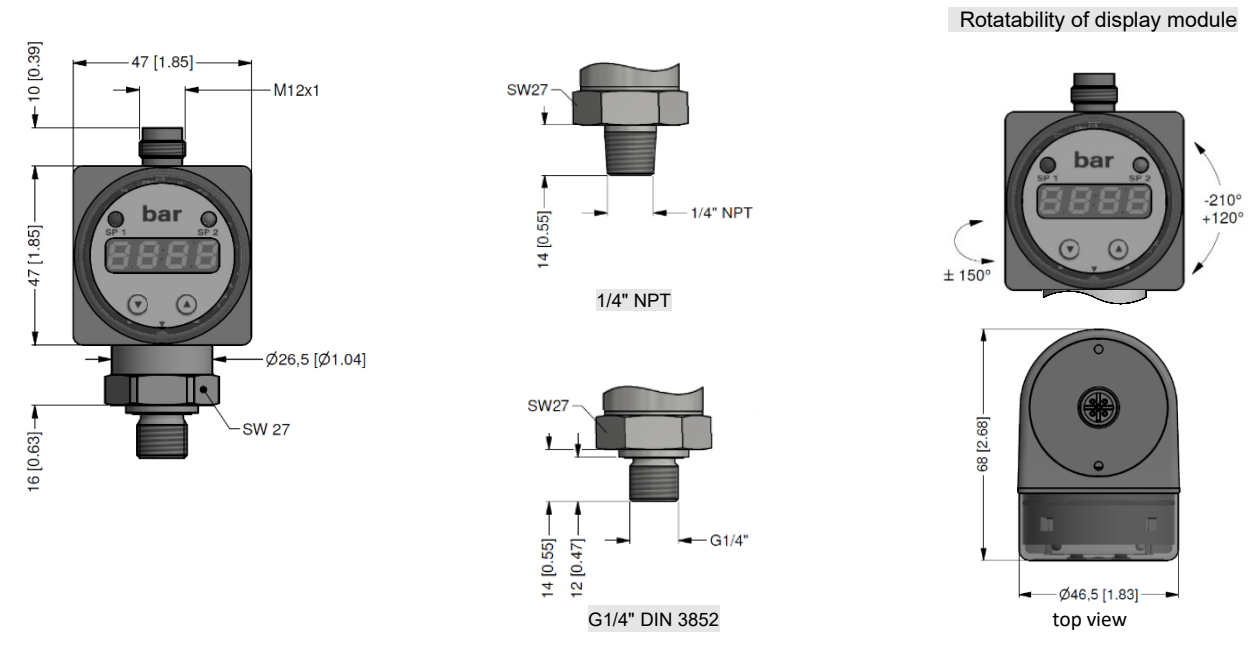
Wiring diagram



Pin configuration

| | |
|-----------------------|------------------------|
| Electrical connection | M12x1 (5-pin), plastic |
| Supply + | 1 |
| Supply - | 3 |
| Signal + | 2 |
| Contact 1 | 4 |
| Contact 2 | 5 |
| Shield | via pressure port |

Dimensions (in mm)



This data sheet contains product specification. properties are not guaranteed. Subject to change without notice.

