

DS 4

Electronic OEM Pressure Switch Pneumatics

Applications:

- ▶ Pneumatics
- ▶ Vacuum technology

Characteristics:

- ▶ nominal pressure ranges from 0 ... 1 bar up to 0 ... 10 bar also -1 ... 0 bar
- ▶ 1 or 2 contacts
- ▶ compact design
- ▶ configurable via PC or programming device P6



Technical Data



| | | | | | |
|---|--|----------|---------------------|-----|----|
| Input pressure range | | | | | |
| Nominal pressure gauge | [bar] | -1 ... 0 | 1 | 3.5 | 10 |
| Overpressure | [bar] | 2 | 2 | 7 | 13 |
| Supply | | | | | |
| Supply voltage | $V_s = 12 \dots 30 V_{DC}$ | | | | |
| Current consumption | max. 14 mA (without contacts) | | | | |
| Output signal¹ | | | | | |
| Contact¹ | | | | | |
| Number | standard: 1 | | option: 2 | | |
| Type | PNP | | | | |
| Switching performance | max. 300 mA, short-circuit proof | | | | |
| Accuracy of contacts ² | IEC 60770: $\leq \pm 1\%$ span | | | | |
| Repeatability | $\leq \pm 0.2\%$ span | | | | |
| Status indication | SP 1: green | | SP 2: yellow | | |
| Switching function ³ | standard: n/o | | option: n/c | | |
| Switching mode ³ | standard: hysteresis mode | | option: window mode | | |
| Switch on point ³ | standard: factory setting 80 % span others: specify on order; adjustable range 0 ... 100 % span | | | | |
| Switch off point ³ | standard: factory setting 75 % span others: specify on order; adjustable range 0 ... 100 % span | | | | |
| Switch on / switch off delay ³ | standard: off others: specify on order, adjustable range from 10 msec up to 90 sec (step 10 msec) | | | | |
| Switching frequency | 200 Hz (without switching delay) | | | | |
| Switching cycles | $> 100 \times 10^6$ | | | | |
| Analogue output¹ (optionally) | | | | | |
| Analogue output | 1 ... 5 V / 3-wire | | | | |
| Accuracy ² | IEC 60770: $\leq \pm 2\%$ span | | | | |
| Permissible load | $R_{min} = 10 k\Omega$ | | | | |
| ¹ with optional analogue output max. 1 contact possible | | | | | |
| ² accuracy according to EN IEC 60770– limit point adjustment (non-linearity, hysteresis, repeatability) | | | | | |
| ³ Parameters can be programmed by customer either with the programming kit CIS 680 / CIS 681 or with the programming device P6 (available as accessories). | | | | | |

| Thermal effects (Offset and Span) / Permissible temperatures | | | |
|--|--|------------------------------------|---|
| Tolerance band | $\leq \pm 2\%$ span | in compensated range 0 ... 50 °C | |
| TC, average | $\leq \pm 0.4\%$ span / 10 K | in compensated range 0 ... 50 °C | |
| Permissible temperatures | medium / 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 (20 ... 2000 Hz) | | |
| Shock | 100 g / 11 msec | | |
| Materials | | | |
| Pressure port | aluminium | | |
| Housing | PA 6.6 black | | |
| Seal (media wetted) | NBR | | |
| Sensor | silicon, RTV | | |
| Media wetted parts | pressure port, seal, sensor | | |
| Miscellaneous | | | |
| Media | compressed air, non-aggressive gases | | |
| Weight | approx. 50 g | | |
| Installation position | any | | |
| Operational life | 100 million load cycles | | |
| Ingress protection | IP 54 | | |
| CE-conformity | EMC Directive: 2014/30/EU | | |
| Wiring diagrams | | | |
| | | | |
| Pin configuration | | | |
| Electrical connection | M8x1 / metal (4-pin) 1 contact | M8x1 / metal (4-pin) 2 contacts | M8x1 / metal (4-pin) 1 contact, 1 analogue output |
| | Supply + 1 Supply - 3 Signal + - Contact 1 4 Contact 2 - Shield housing | 1 3 - 4 2 housing | 1 3 2 4 - housing |
| Dimensions (in mm) | | | |
| | | | |

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

