



SUCO 0530 ELECTRONIC PRESSURE SWITCH

053010209B004
PNP output (High Side), NO, 0-100 Bar, NPT 1/4,
Bayonet ISO 15170-A1-4.1

- One switching output
- Stainless steel & titanium wetted parts
- Silicon-on-sapphire technology
- Factory set



PRODUCT DESCRIPTION

The Suco high performance series of electronic pressure switches offers outstanding overpressure protection (up to 4x), long service life even under high pressure change rates whilst giving very low temperature error and excellent long-term stability. Using Silicon-on-sapphire technology for high reliability, EMC compatibility and accuracy there are five standard pressure ranges starting at 0-10 bar all the way up to 0-600 bar and a hysteresis of 0.2%-99.8%. Output option of PNP or NPN and the choice of normally open or normally closed with one switching output factory set (unadjustable by the user). The wetted parts are made of stainless steel and titanium in an all welded design ensuring excellent media compatibility with seven standard electrical connection options including Deutsch, DIN and M12 combined with eight standard thread type options.

Customer specific solutions are also available on request.

Application examples

- Automotive
- Braking systems
- Medical
- Mobile hydraulics
- Off highway
- Off-shore
- Rail

TECHNICAL DATA

GENERAL DATA

| | |
|----------------------|----------------------|
| Adjustment range max | 100 bar |
| Adjustment range min | 0 bar |
| Process connection | 1/4 NPT |
| Function | Normally open (SPST) |

| | |
|-----------------------|---------|
| Output | PNP |
| Burst pressure | 800 bar |
| Pressure max | 400 bar |

TEMPERATURE & MATERIALS DATA

| | |
|----------------------------------|----------------------------------|
| Temperature of media from | -40 °C |
| Temperature of media to | 125 °C |
| Temperature ambient from | -40 °C |
| Temperature ambient to | 100 °C |
| Material of body | Stainless steel 1.4305 |
| Material of wetted parts | Stainless steel 1.4305, Titanium |

ADDITIONAL DATA

| | |
|---|--|
| Supply voltage dc max | 32 V DC |
| Supply voltage dc min | 9.6 V DC |
| Pressure rise | ≤ 5,000 bar/s |
| Switching time | < 2 ms |
| Switching point adjustment range | 2 ... 100 % of the nominal pressure range Full Scale (FS), programmable at factory |
| Weight | 80 g |

SAFETY & APPROVALS

| | |
|-----------------------------------|---|
| IP class | IP67, IP6K9K |
| Hysteresis | 2..99.8% of nominal pressure range (full scale), programmable at factory |
| Shock resistance | 500m / s ² ; 11 ms half sine wave; DIN EN 60068-2-27 |
| Vibration resistance | 20g: 4..2000 Hz sine wave, DIN EN 60068-2-6 |
| EMC | EMC 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007 |
| Accuracy | ±0.5 % of adjustment range (Full scale) at room temperature |
| Long term stability | ±0.1 % of adjustment range (full scale) per year |
| Mechanical life expectancy | 10,000,000 switching cycles at rise rates to 5,000 bar/s nominal pressure |
| Repeatability | ±0.1 % full scale |



| DIN EN 175301-803-A  <table><tr><th>Pin</th><th>Assignment</th></tr><tr><td>1</td><td>Ch+</td></tr><tr><td>2</td><td>Ch-</td></tr><tr><td>3</td><td>Ch0</td></tr><tr><td>4</td><td>Ch1</td></tr></table> <p>IP67 • $\Phi = 60 / 76 \text{ mm}^*$ • $\Phi = 10 / 10 \text{ mm}$ Order number: 001</p> | Pin | Assignment | 1 | Ch+ | 2 | Ch- | 3 | Ch0 | 4 | Ch1 | M 12 - DIN EN 61076-2-101-A  <table><tr><th>Pin</th><th>Assignment</th></tr><tr><td>1</td><td>Ch+</td></tr><tr><td>2</td><td>Ch-</td></tr><tr><td>3</td><td>Ch0</td></tr><tr><td>4</td><td>Ch1</td></tr></table> <p>IP67 • $\Phi = 54 \text{ mm}$ • $\Phi = 10 / 10 \text{ mm}$ Order number: 002</p> | Pin | Assignment | 1 | Ch+ | 2 | Ch- | 3 | Ch0 | 4 | Ch1 | ISO 15170-A1-4-1  <table><tr><th>Pin</th><th>Assignment</th></tr><tr><td>1</td><td>Ch+</td></tr><tr><td>2</td><td>Ch-</td></tr><tr><td>3</td><td>Ch0</td></tr><tr><td>4</td><td>Ch1</td></tr></table> <p>IP67, IP68K • $\Phi = 65 \text{ mm}$ • $\Phi = 10 / 10 \text{ mm}$ Order number: 003</p> | Pin | Assignment | 1 | Ch+ | 2 | Ch- | 3 | Ch0 | 4 | Ch1 | AMP Superseal  <table><tr><th>Pin</th><th>Assignment</th></tr><tr><td>1</td><td>Ch+</td></tr><tr><td>2</td><td>Ch-</td></tr><tr><td>3</td><td>Ch0</td></tr><tr><td>4</td><td>Ch1</td></tr></table> <p>IP67 • $\Phi = 73 \text{ mm}$ • $\Phi = 10 / 10 \text{ mm}$ Order number: 004</p> | Pin | Assignment | 1 | Ch+ | 2 | Ch- | 3 | Ch0 | 4 | Ch1 |
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| * Yellow-cable length = 0.75 m, with cable length = 1.50 m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Fig. 22

Connection diagrams



Fig. 23



Fig. 24

Technical modifications and errors excepted.

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| Cable | Assignment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| white | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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