



## SUCO 0530 ELECTRONIC PRESSURE SWITCH

053025141B013  
PNP output (High Side), NO, 0-25 Bar, G 1/4 – DIN EN  
ISO 1179-2, DIN EN 175301-803-A

- 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  | 25 bar               |
| Adjustment range min  | 0 bar                |
| Electrical connection | DIN EN 175301-803-A  |
| Process connection    | G1/4                 |
| Function              | Normally open (SPST) |

|                       |         |
|-----------------------|---------|
| <b>Output</b>         | PNP     |
| <b>Burst pressure</b> | 200 bar |
| <b>Pressure max</b>   | 100 bar |

## TEMPERATURE & MATERIALS DATA

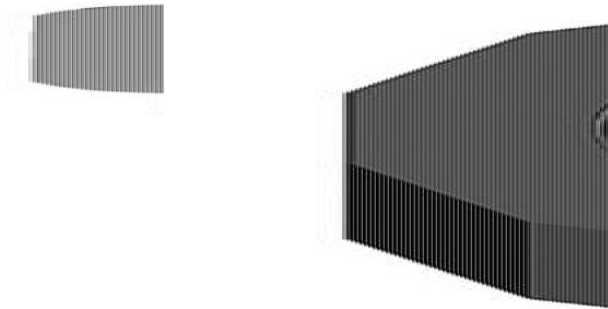
|                                  |                                  |
|----------------------------------|----------------------------------|
| <b>Temperature of media from</b> | -40 °C                           |
| <b>Temperature of media to</b>   | 125 °C                           |
| <b>Temperature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

## ADDITIONAL DATA

|   |  |
|---|--|
| <b>Supply voltage dc max</b>            | 32 V DC  |
| <b>Supply voltage dc min</b>            | 9.6 V DC   |
| <b>Pressure rise</b>                    | ≤ 5,000 bar/s  |
| <b>Switching time</b>                   | < 2 ms   |
| <b>Switching point adjustment range</b> | 2 ... 100 % of the nominal pressure range Full Scale (FS), programmable at factory |
| <b>Weight</b>                           | 110 g  |

## SAFETY & APPROVALS

|                                   |   |
|-----------------------------------|---|
| <b>IP class</b>                   | IP65  |
| <b>Hysteresis</b>                 | 2..99.8% of nominal pressure range (full scale), programmable at factory  |
| <b>Shock resistance</b>           | 500m / s <sup>2</sup> ; 11 ms half sine wave; DIN EN 60068-2-27           |
| <b>Vibration resistance</b>       | 20g: 4..2000 Hz sine wave, DIN EN 60068-2-6                               |
| <b>EMC</b>                        | EMC 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007                      |
| <b>Accuracy</b>                   | ±0.5 % of adjustment range (Full scale) at room temperature               |
| <b>Long term stability</b>        | ±0.1 % of adjustment range (full scale) per year                          |
| <b>Mechanical life expectancy</b> | 10,000,000 switching cycles at rise rates to 5,000 bar/s nominal pressure |
| <b>Repeatability</b>              | ±0.1 % full scale   |



| DIN EN 175301-803-A   | M 12 - DIN EN 61076-2-101 A                         | ISO 15170-A1-4.1   | AMP Superseal                                       |
|---|---|--|---|
|   |   |  |   |
| Pinout<br>• 60 / 76 mm <sup>2</sup><br>• 12.5 mm<br>Order number: 001 | Pinout<br>• 54 mm<br>• 12.5 mm<br>Order number: 002 | Pinout<br>• 65 mm<br>• 12.5 mm<br>Order number: 003          | Pinout<br>• 75 mm<br>• 12.5 mm<br>Order number: 007 |
| *without cable width = 0.5 mm, with cable width = 0.5 mm              |   |  |   |
| DEUTSCH DT04-4P   | DEUTSCH DT04-3P                                     | Cable connection   |   |
|   |   |  |   |
| Pinout<br>• 38 mm<br>• 12.5 mm<br>Order number: 004                   | Pinout<br>• 38 mm<br>• 12.5 mm<br>Order number: 005 | Pinout<br>• 65 mm<br>(20 mm band width)<br>Order number: 011 |   |
|   |   |  |   |
| Thread code 41  | Thread code 03                                      | Thread code 04   | Thread code 09                                      |
|   |   |  |   |
| Thread code 00  | Thread code 02                                      | Thread code 21   | Thread code 42                                      |



See 22

Connection diagrams

Up to 100 VDC



Pinout diagram on each connector

100 VDC



Pinout diagram on each connector

100 VDC



Pinout diagram on each connector

100 VDC



Technical modifications and errors excepted.

| EN 175301-803-A   | M 12 - EN 61076-2-101 A                             | ISO 15170-A1-4.1  | AMP Superseal                                       |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
|---|---|---|---|-----|---|-----|---|-----|---|-----|---|-----|------------|---|-----|---|-----|---|-----|---|-----|---|-------|------------|-------|-----|-------|-----|-------|-----|-------|-----|---|-----|------------|---|-----|---|-----|---|-----|---|-----|
|   |   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
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| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Pin   | Assignment  |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
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| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
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| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
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| *without cable width = 0.5 mm, with cable width = 0.5 mm  |   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| DEUTSCH DT04-4P   | DEUTSCH DT04-3P                                     | Cable connection  |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
|   |   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
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| Pin   | Assignment  |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Pin   | Assignment  |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 1   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 2   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 3   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| 4   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Cable   | Assignment  |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| white   | Ch+   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| black   | Ch-   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| black   | Ch0   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| black   | Ch1   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Pinout<br>• 38 mm<br>• 12.5 mm<br>Order number: 004   | Pinout<br>• 38 mm<br>• 12.5 mm<br>Order number: 005 | Pinout<br>• 65 mm<br>(20 mm band width)<br>Cable length: 1.76 m<br>• 12.5 mm<br>Order number: 011 |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
|   |   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Thread code 41  | Thread code 03                                      | Thread code 04  | Thread code 09                                      |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
|   |   |   |   |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |
| Thread code 00  | Thread code 02                                      | Thread code 21  | Thread code 42                                      |     |   |     |   |     |   |     |   |     |            |   |     |   |     |   |     |   |     |   |       |            |       |     |       |     |       |     |       |     |   |     |            |   |     |   |     |   |     |   |     |



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Connection diagrams

Up to 100 VDC



Pinout diagram on each connector

100 VDC



Pinout diagram on each connector

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Pinout diagram on each connector

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Technical modifications and errors excepted.