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SUCO 0531 ELECTRONIC PRESSURE SWITCH

053125209B010
PNP output (High Side), NC, 0-250 Bar, NPT 1/4, Deutsch DT04-3P

- One Switching Output
- Stainless Steel & Titanium Wetted Parts
- Silicon-On-Sapphire Technology
- Factory Set

PRODUCT DESCRIPTION

The SUCO 0541 is a compact, high-performance electronic pressure switch engineered with dual PNP outputs, both configured as normally closed. Encased in a durable hex-22 stainless-steel and titanium-wetted housing, it utilises Silicon-on-Sapphire (SoS) sensor technology to deliver precision and long-term stability, while offering high overpressure protection up to 4× the rated pressure. Available in pressure ranges spanning 0–10 bar to 0–600 bar, the 0541 switch supports switching currents up to 500 mA and responds rapidly under demanding conditions with pressure change rates reaching 5,000 bar/s. Factory-set switching points and hysteresis (0.2–99.8 % FS) ensure reliable performance, with a sealed welded design eliminating elastomer seals and meeting IP67 and industrial EMC standards.
The 0541 excels in harsh hydraulic and pneumatic environments, such as construction machinery, mobile hydraulic systems, off-road vehicles, and industrial automation, where compact size, durable construction, and reliable switching under dynamic pressures are essential. Its dual NC PNP outputs allow for redundant or staged switching logic in safety circuits or PLC-controlled systems, ideal for overpressure alarms, machine shutdowns, or interlock functions. The fast response time, high resistance to pressure peaks, and welded sensor design make it particularly suitable for vibration-heavy or wash-down settings. Furthermore, the availability of diverse process threads and electrical connectors ensures seamless integration into OEM systems requiring rugged, precise, and dependable pressure monitoring.

TECHNICAL DATA

GENERAL DATA

Adjustment range max	250 bar
Adjustment range min	0 bar
Electrical connection	Deutsch DT04-3P
Process connection	1/4 NPT
Function	Normally Closed
Output	PNP
Burst pressure	2000 bar
Pressure max	1000 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 / s²; 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

Pin	Assignment
1	Uv+
2	Out
3	Gnd
PE	⏚

IP65

x – 60 / 76 mm*

d – Ø 30 mm

Order number: 001

M 12 – DIN EN 61076-2-101 A

Pin	Assignment
1	Uv+
2	nc
3	Gnd
4	Out

IP67

x – 54 mm

d – Ø 22 mm

Order number: 002

ISO 15170-A1-4.1

Pin	Assignment
1	Uv+
2	nc
3	Gnd
4	Out

IP67, IP69K

x – 65 mm mm

d – Ø 27 mm

Order number: 004

AMP Superseal

Pin	Assignment
1	Out
2	Gnd
3	Uv+

IP67

x – 73 mm

d – Ø 26 mm

Order number: 007

* without coupler socket x – 60 mm, with coupler socket x – 76 mm

DEUTSCH DT04-4P

Pin	Assignment
1	Gnd
2	Uv+
3	nc
4	Out

IP67, IP69K

x – 34 mm

d – Ø 23 mm

Order number: 004

DEUTSCH DT04-3P

Pin	Assignment
A	Uv+
B	Gnd
C	Out

IP67, IP69K

x – 38 mm

d – Ø 23 mm

Order number: 010

Cable connection

Cable	Assignment
red	Uv+
white	Out
black	Gnd

IP67

x – 84 mm
(+ 20 mm bend relief)
cable length – 2 m

d – Ø 22 mm

Order number: 011

Thread code: 41

Thread code: 03

Thread code: 04

Thread code: 09

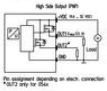
Thread code: 20

Thread code: 20

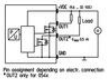
Thread code: 21

Thread code: 42

Connection diagrams



Pin assignment depending on elect. connection
* OUT2 only for 3Sax



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Technical modifications and errors excepted.

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