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SUCO 0533 ELECTRONIC PRESSURE SWITCH

053325220B004
NPN output (Low Side), NC, 0-250 Bar, 7/16 – 20 UNF, Bayonet ISO 15170-A1-4.1

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

PRODUCT DESCRIPTION

The SUCO 0533 electronic pressure switch is a high-performance, factory-configured device built with a robust stainless steel (AISI 303) and titanium, all-welded housing. It utilises advanced Silicon-on-Sapphire (SoS) sensor technology for exceptional accuracy (± 0.5 % FS, resolution 0.1 % FS) and long-term stability (± 0.1 % FS/year), and is designed to withstand overpressure up to 4× its rated range. Available ranges span from 0–10 bar to a massive 0–1,650 bar, with a single NPN (low-side) normally-closed transistor output capable of handling up to 0.5 A and featuring built-in protections for short circuit, reverse polarity, and overvoltage. It supports multiple pressure port threads (G¼, NPT⅛/NPT¼, UNF, M10, M14) and electrical connectors (DIN EN 175301-803-A, M12, AMP Superseal, Deutsch, 2 m cable), and it offers a fast response time (< 4 ms) and wide compensated temperature range for stable operation across –40 °C to 125 °C.
The 0533 excels in harsh mobile-hydraulic, industrial, and pneumatic environments, such as construction machinery, off-road vehicles, or process systems, where rugged build and reliable switching under dynamic pressures are essential. Its compact design and robust sensor technology make it suitable for safety interlock circuits, pressure alarms, and automated shutdown controls in PLC or relay-based systems. The device's narrow switching hysteresis and optional window function enable precise range monitoring, while the heavy-duty housing and integrated protections ensure dependable performance in conditions involving vibration, wash-down, and electrical noise, making it an ideal choice for long-term OEM applications needing precise, rugged pressure monitoring.

TECHNICAL DATA

GENERAL DATA

Adjustment range max	250 bar
Adjustment range min	0 bar
Function	Normally Closed
Output	NPN
Burst pressure	2000 bar
Pressure max	1000 bar

TEMPERATURE & MATERIALS DATA

Temperature of media from	-40 °C

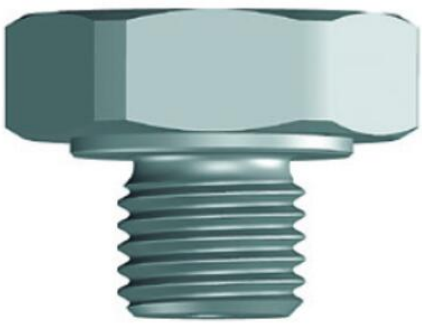
Temperature of media to	125 °C
Temperature ambient from	-40 °C
Temperature ambient to	100 °C
Material of body	Stainless steel 1.4305
Material of wetted parts	Stainless steel 1.4305, Titanium

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 28 mm

Order number: 007

* without coupler socket x ~ 60 mm, with coupler socket x ~ 75 mm

DEUTSCH DT04-4P

Pin	Assignment
1	Gnd
2	Uv+
3	nc
4	Out

IP67, IP69K

x ~ 74 mm

d ~ Ø 23 mm

Order number: 008

DEUTSCH DT04-3P

Pin	Assignment
A	Uv+
B	Gnd
C	Out

IP67, IP69K

x ~ 78 mm

d ~ Ø 23 mm

Order number: 010

Cable connection

Cable	Assignment
red	Uv+
white	Out
black	Gnd

IP67

x ~ 64 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

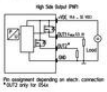
Thread code: 20

Thread code: 21

Thread code: 42

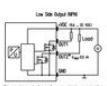
Connection diagrams

High Side Output PNP:



Pin assignment depending on elect. connection
*OUT2 only for 05xx

Low Side Output NPN:



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Technical modifications and errors excepted.

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