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SUCO 0542 ELECTRONIC PRESSURE SWITCH

054225209B008
PNP output (High Side), NO / NC, 0-250 Bar, NPT 1/4, Deutsch DT04-3P

- Operates in a wide variety of temperatures
- Overpressure protection up to four times the operating pressure
- Long service life
- Utilises Silicon-on-sapphire technology

PRODUCT DESCRIPTION

The SUCO 0542 is a compact, high-performance electronic pressure switch built on a welded stainless-steel (AISI 303) housing with titanium-wetted parts, eliminating elastomer seals to enhance durability. It features dual PNP transistor outputs (NO/NC) with a supply voltage range of 9.6–32 V DC and can handle up to 0.5 A output current. Pressure setpoints are factory-adjustable over a 0–10 bar range (also available in up to 600 bar variants), with burst pressure up to 80 bar and maximum operating pressure up to 40 bar for the 10 bar variant. The switch reliably operates in temperatures from –40 °C to +125 °C (ambient up to +100 °C), offers fast switching, excellent shock (500 m/s²) and vibration resistance, and meets IP67 and EMC industrial standards. Hysteresis is factory programmable from 0.2 % to 99.8 % FS with ±0.5 % FS accuracy, ±0.1 % FS/year long-term stability, and repeatability of ±0.1 % FS.
Practically, the 0542 excels in demanding hydraulic and pneumatic applications where compact, reliable switching is essential. With its dual output capability and broad connection options it integrates seamlessly with PLCs and relay systems for safety interlocks, pressure alarms, and automated control loops. The robust welded housing and high overpressure resistance make it ideal for mobile machinery, industrial automation, fluid power systems, and medical gas or oxygen environments, especially where clean, durable components are critical. Fast switching and industrial-grade EMC protection further support its use in environments with rapid pressure changes, electrical noise, or space constraints, delivering precise and dependable automated pressure control.

TECHNICAL DATA

GENERAL DATA

Adjustment range max	250 bar
Adjustment range min	0 bar
Electrical connection	Deutsch DT04-4P
Process connection	1/4 NPT
Function	1 x N/O & 1 x N/C
Output	2 x 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	0.2…99.8 % of the 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 the nominal pressure range (FS) 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