

SUCO 0533 ELECTRONIC PRESSURE SWITCH

053360209B011
NPN output (Low Side), NC, 0-600 Bar, NPT 1/4, Cable connection



- 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 ($\pm 0.5\%$ FS, resolution 0.1% FS) and long-term stability ($\pm 0.1\%$ FS/year), and is designed to withstand overpressure up to $4\times$ 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 ($G\frac{1}{4}$, $NPT\frac{1}{2}/NPT\frac{1}{4}$, 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 $-40\text{ }^{\circ}\text{C}$ to $125\text{ }^{\circ}\text{C}$.

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	600 bar
Adjustment range min	0 bar
Electrical connection	Embedded 2m cable
Process connection	1/4 NPT
Function	Normally Closed
Output	NPN
Burst pressure	2000 bar
Pressure max	1650 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	135 g

SAFETY & APPROVALS

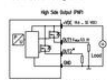
IP class	IP67
Hysteresis	2..99.8% of nominal pressure range (full scale), programmable at factory
Shock resistance	500m / s²; 11 ms half sine wave; DIN EN 60068-2-27
Vibration resistance	20g; 4..2000 Hz sine wave, DIN EN 60068-2-6
EMC	EMC 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007
Accuracy	±0.5 % 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





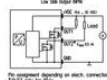
hex 22

Connection diagrams



For component depending on each connection

*H07 only for 05A



For component depending on each connection

*H07 only for 05A

Technical modifications and errors excepted.

DIN EN 15120-803-A	M 12 - DIN EN 61076-2-101 A	ISO 15175-A1-4.1	AMP Superseal
Pin Assignment 1 In 2 Out 3 GND 4 Out	Pin Assignment 1 In 2 In 3 GND 4 Out	Pin Assignment 1 In 2 In 3 GND 4 Out	Pin Assignment 1 In 2 In 3 GND 4 Out
IP67 • 60 / 75 mm ² • Ø 10 mm Order number: 001	IP67 • 54 mm • Ø 10 mm Order number: 002	IP67 • 65 mm (max) • Ø 10 mm Order number: 004	IP67 • 73 mm • Ø 10 mm Order number: 003
* without copper jacket = 15 mm, with copper jacket = 15 mm			
DEUTSCH DT04-4P	DEUTSCH DT04-3P	Cable connection	
Pin Assignment 1 GND 2 In 3 GND 4 Out	Pin Assignment 1 In 2 GND 3 Out	Cable Assignment 1 In 2 In 3 GND 4 Out	
IP67 • 38 mm • Ø 10 mm Order number: 004	IP67 • 38 mm • Ø 10 mm Order number: 005	IP67 • 64 mm • Ø 10 mm (max) • Ø 10 mm Order number: 011	
Thread code: 01	Thread code: 03	Thread code: 04	Thread code: 09
Thread code: 02	Thread code: 05	Thread code: 06	Thread code: 07

DIN EN 15120-803-A	M 12 - DIN EN 61076-2-101 A	ISO 15175-A1-4.1	AMP Superseal
Pin: Assigned 1 In 2 Out 3 Gnd 4 Out	Pin: Assigned 1 In 2 In 3 Gnd 4 Out	Pin: Assigned 1 In 2 In 3 Gnd 4 Out	Pin: Assigned 1 In 2 In 3 Gnd 4 Out
IP67 • 60 / 75 mm ² • Ø 10 mm Order number: 001	IP67 • 54 mm • Ø 10 mm Order number: 002	IP67 • 65 mm (max) • Ø 10 mm Order number: 004	IP67 • 73 mm • Ø 10 mm Order number: 003
* without copper cable = 02mm, with copper cable = 15 mm			
DEUTSCH DT04-4P	DEUTSCH DT04-3P	Cable connection	
Pin: Assigned 1 Gnd 2 In 3 Gnd 4 Out	Pin: Assigned 1 In 2 Gnd 3 Out	Cable: Assigned In Out Gnd Block	
IP67 • 38 mm • Ø 10 mm Order number: 004	IP67 • 38 mm • Ø 10 mm Order number: 005	IP67 • 64 mm (30 mm bend shell) • 1000 mm length • Ø 12 mm Order number: 011	
Thread code: 01 1/8 inch NPT Order number: 004	Thread code: 03 3/16 inch NPT Order number: 005	Thread code: 04 1/4 inch NPT Order number: 011	Thread code: 09 1/2 inch NPT Order number: 003
Thread code: 02 1/4 inch NPT Order number: 004	Thread code: 05 5/16 inch NPT Order number: 005	Thread code: 06 3/8 inch NPT Order number: 011	Thread code: 07 7/16 inch NPT Order number: 003