Digital display adopted for vacuum pressure switch indication, improving visibility Digital Vacuum Pressure Switch with Display

VSUS Series

●Connection Port Size: M5, ø4, ø6, ø8

RoHS

■Digital display of set pressure and applied pressure.

■2-point and analog outputs are available for the vacuum pressure switch, selectable according to the application. Also, a connector method is adopted for wiring, enabling easy wiring layout.

■3 types of pipe connection are available: push-in fitting, M5 meter thread(female thread), and direct mount. Select according to the application.

■Accuracy is stable due to pressure detection by electronic switch.

Model No. Notation

●Vacuum Pressure Switch

VSUS - P W - M5

- VSUS: Model No.
- P: ❶ Switch Output Form
- W: ❷ Switch Specifications
- M5: ❸ Connection Port Size

❶ Switch Output Form

Code	Content
N	NPN Output
P	PNP Output

❷ Switch Specifications

Code	Content
W	Output 2 points
A	Output 1 point + Analog Output

❸ Connection Port Size

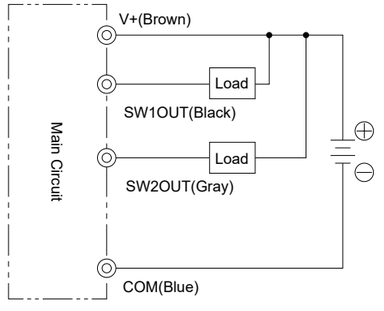
Code	Content
4	ø4 Push-in fitting
6	ø6 Push-in fitting
8	ø8 Push-in fitting
M5	M5x0.8
F	Direct Mount Type

Specifications

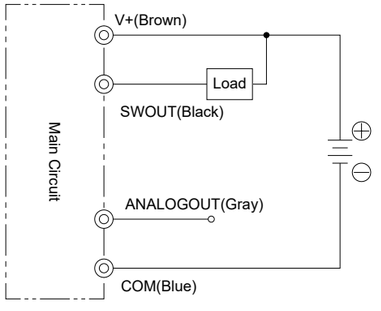
Item		Output 2 points (NW)	With Analog Output (NA)	Output 2 points (PW)	With Analog Output (PA)
Factory Set Pressure kPa		-50 (SW1), -10 (SW2)	-50	-50 (SW1), -10 (SW2)	-50
Current Consumption mA		≤ 40			
Pressure Sensing Element		Diffused Semiconductor Pressure Switch			
Working pressure kPa		-100 to 0			
Set Pressure kPa		-99 to 0			
Proof Pressure MPa		0.2			
Storage Temperature °C		-20 to 70 (Atmospheric pressure, ≤ 60% RH humidity)			
Operating Temperature °C		0 to 50 (No freezing or condensation)			
Operating Humidity		35 to 85% RH (No condensation)			
Power Supply Voltage V		DC 12 to 24 ±10% Ripple(P-P) ≤ 10%			
Protection Structure		Equivalent to IEC Standard IP40			
Number of Output Points		2	1	2	1
Repeatability		±3% F.S. max(at Ta = 25°C)			
Differential		Fixed (≤ 2% F.S.)	Variable (Approx. 0 to 15% F.S.)	Fixed (≤ 2% F.S.)	Variable (Approx. 0 to 15% F.S.)
Switch Output		NPN Transistor Open Collector Output ≤ 30 V 80 mA Residual Voltage ≤ 0.8 V		PNP Transistor Open Collector Output Power Supply Voltage ≤ 80 mA Residual Voltage ≤ 0.8 V	
Analog Output	Output Voltage V	-	1 to 5	-	1 to 5
	Zero Point Voltage V	-	1±0.1	-	1±0.1
	Span Voltage V	-	4±0.1	-	4±0.1
	Output Current mA	-	≤ 1 (Load resistance ≥ 5 kΩ)	-	≤ 1 (Load resistance ≥ 5 kΩ)
	Linearity/Hysteresis	-	±0.5% F.S. or less	-	±0.5% F.S. or less
Response time ms		Approx. ≤ 2			
Display kPa		0 to -99 (2-digit Red LED display)			
Display Update Rate		Approx. 4 times/sec			
Display Accuracy		±3% F.S. ±2 digit			
Resolution		1 digit			
Operation Indicator		SW1: Red LED lights up at or above set pressure SW2: Green LED lights up at or above set pressure	Red LED lights up at or above set pressure	SW1: Red LED lights up at or above set pressure SW2: Green LED lights up at or above set pressure	Red LED lights up at or above set pressure
Functions		1. MODE Switch(ME or S1 or S2) 2. S1 Setting Trimmer(2/3 turn trimmer) 3. S2 Setting Trimmer(2/3 turn trimmer)	1. MODE Switch (ME or SW) 2. SW Setting Trimmer (2/3 turn trimmer) 3. HYS Setting Trimmer (Approx. 0 to 15% of set value)	1. MODE Switch(ME or S1 or S2) 2. S1 Setting Trimmer(2/3 turn trimmer) 3. S2 Setting Trimmer(2/3 turn trimmer)	1. MODE Switch(ME or SW) 2. SW Setting Trimmer(2/3 turn trimmer) 3. HYS Setting Trimmer(Approx. 0 to 15% of set value)

Electrical Circuit

●Vacuum pressure switch with 2-point switch output

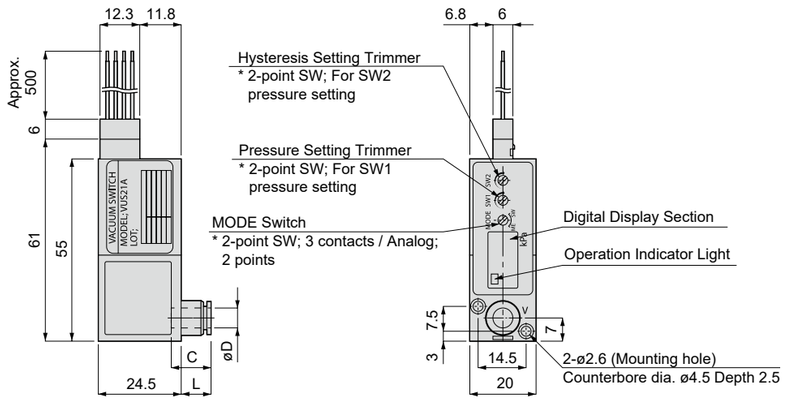


●Vacuum pressure switch with analog output



External Dimension Drawings

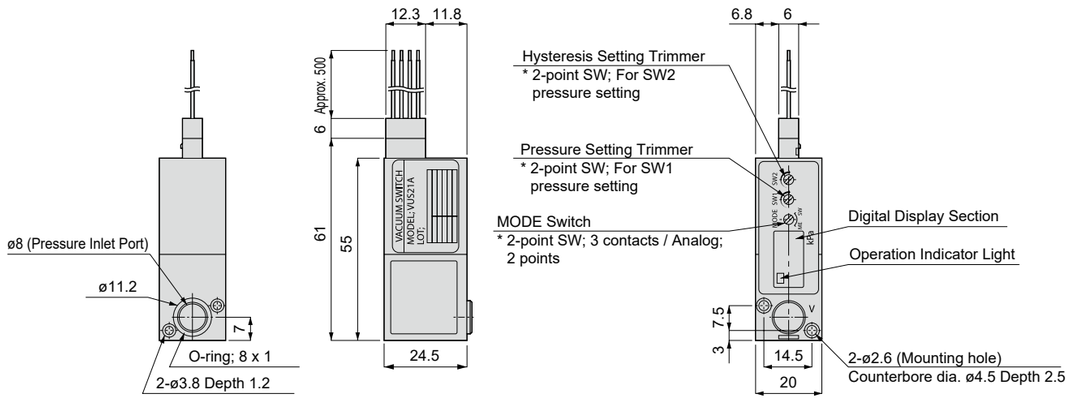
●Push-in fitting Type



Unit: mm

Model No.	Tube O.D. øD	L	C	Weight (g)
VSUS-□□-4	4	6.1	11.2	28
VSUS-□□-6	6	8.9	11.9	28
VSUS-□□-8	8	17.3	18.2	35

●Direct Mount Type

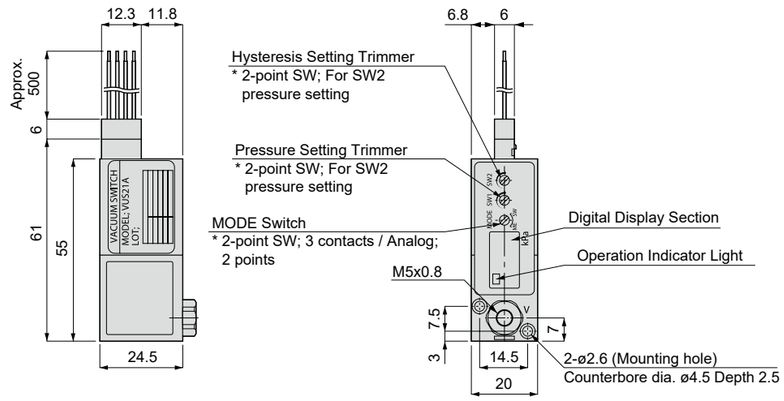


Unit: mm

Model No.	Weight (g)
VSUS-□□-F	19

External Dimension Drawings

●Female Thread Type



Unit: mm

Model No.	Weight (g)
VSUS- □□-M5	29

Pneumatic Components

To Use This Product Safely

Be sure to read this before use.
For general pneumatic components precautions, Intro 15 for details.

Individual Precautions: Digital Vacuum Pressure Switch with Display VSUS Series

Design / Selection

Caution

■When setting the pressure and hysteresis, use a small Drivers and gently turn within the rotation range of the trimmer, without applying excessive force. Applying excessive force during adjustment may cause trimmer or board damage.

■Use a stable DC power supply.

■When using a unit power supply such as switching power supply, ground the F.G. (frame ground).

■Do not short-circuit the output terminal(black/gray lead wire) with other terminals.

■Do not apply strong external impact or excessive force to the switch body.

■Since mounting holes for M2.5 screws are available for mounting the switch body, tighten with the recommended tightening torque of 0.3 to 0.31 N·m when mounting.

MEMO

Vacuum Components
Vacuum Related Components
VSRL
VSECV
VSRVV
VRA2000
VSLF
VSFB, VSFU, VSFJ
FSL
VFA
VSUS
VST
Ending