



# COVAL

vacuum managers

vacuum switch  
with 3-colour display

# PSD



# PSD100CPNP: vacuum switch with 3-colour display



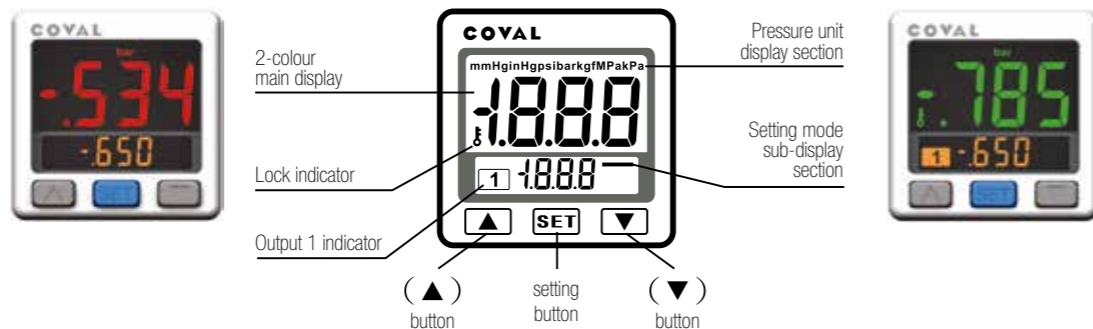
## Presentation

The new PSD100CPNP series mini-vacuum switch with display offers easy reading thanks to the size of its screen and its 3-colour display. Its compactness and lightness facilitate its integration on all machines. Easily adjustable, it is equipped with an extremely precise electronic vacuum level sensor and has an adjustable contact output as well as an analog output. The PSD100CPNP has an M8 connector to simplify wiring, and mounting accessories on option, making it very easy to install.

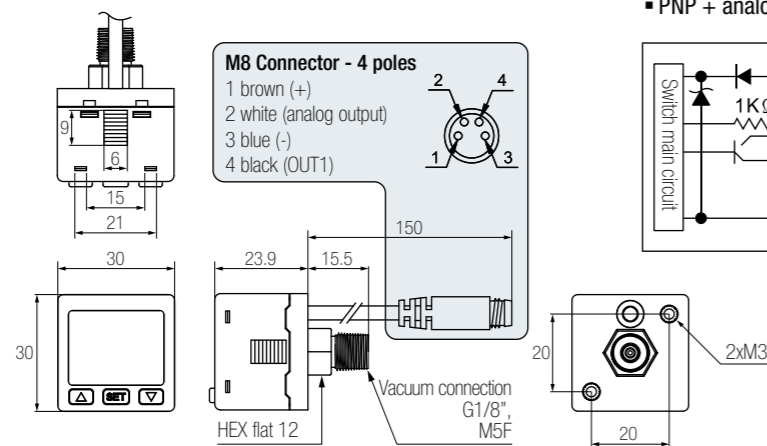
## Advantages

- 3-colour digital LCD display, easy readability.
- 6 pressure units available (kPa, bar, psi, inHg, mmHg, kgf/cm<sup>2</sup>).
- 1 PNP contact output (NO or NC) and 1 analog output (1-5V).
- Double display showing the measured value and threshold value at the same time.
- "Key lock function" with indicator light.
- "Power-save function" with indicator light.
- 3 mounting solutions.
- CE and RoHS Compliance.

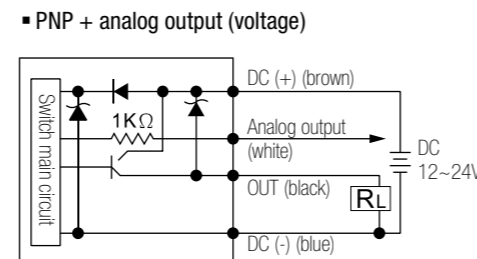
## Panel description



## Dimensions



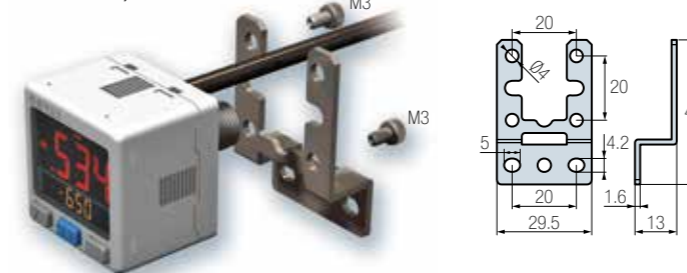
## Electrical diagram



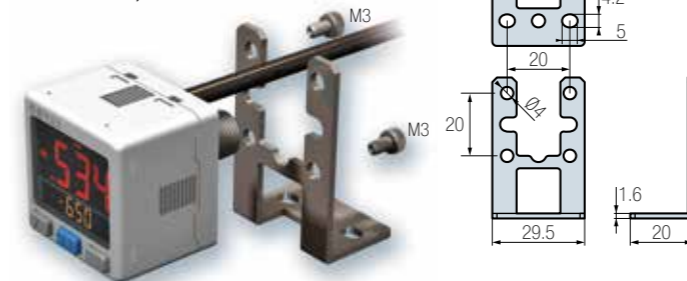
## Mounting solutions

### MOUNTING BRACKETS

- PSDFIXA, vertical attachment.

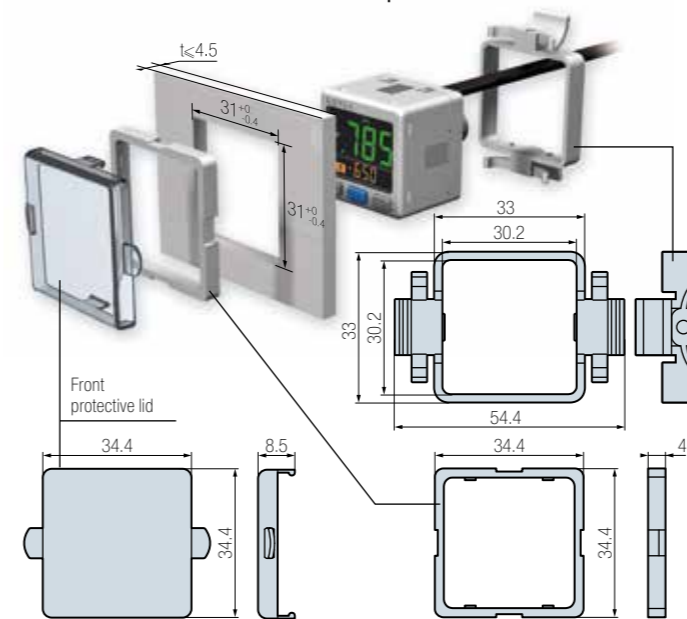


- PSDFIXB, horizontal attachment.

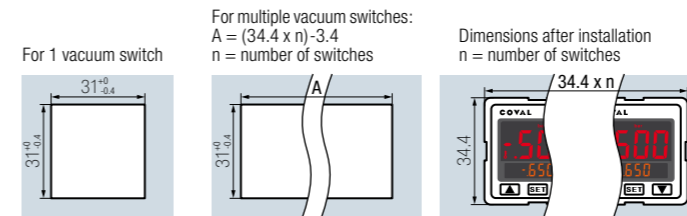


### PANEL MOUNTING KITS

- PSDFIXC: front attachment kit.
- PSDFIXD: front attachment kit + front protective lid.



### Panel opening (max. thickness: 4.5 mm)



## Specifications

Pressure rating range	0,0 ~ -101.3 kPa		
Pressure setting range	10,0 ~ -101.3 kPa		
Max. pressure	300 kPa		
Fluid	Air, non-corrosive/non-flammable gas		
Pressure setting resolution	kPa	0.1	
	MPa	/	
	kgf/cm <sup>2</sup>	0.001	
	bar	0.001	
	psi	0.01	
	inHg	0.1	
	mmHg	1	
Power supply voltage	12 to 24 V DC ±10%, ripple (P-P) 10% or less		
Current consumption	≤ 40mA (without load)		
Switch output	1 PNP contact output	Max. load current: 125mA	
		Max. supply voltage: 24V DC	
		Residual voltage: ≤1.5V	
Repeatability (Switch output)	Threshold mode	Adjustable (1 ~ 8 digits)	
	Hysteresis mode	Adjustable	
Hysteresis	Hysteresis mode	Adjustable	
	Window comparator mode	Adjustable (1 ~ 8 digits)	
Response time	≤ 2.5ms (anti-vibration function: 25ms, 100 ms, 250 ms, 500 ms, 1000 ms and 1500 ms selection)		
Output short circuit protection	Yes		
7 segment LCD display	Two colour (red / green) main display, orange sub-display (refresh rate: 5 times /1sec.)		
Indicator accuracy	≤±2% F.S. ±1 digit (ambient temperature: 25 ± 3°C)		
Switch ON indicator	Orange OUT 1		
Analog output (voltage power)	Output voltage: 1 to 5 V ≤ ± 2.5% F.S. (within rated pressure range) Linearity: ≤ ± 1% F.S. Output impedance: approx. 1kΩ		
Environment	Enclosure	IP40	
	Ambient temp. range	operation: 0 – 50° C storage: -10 – 60° C (no condensation or freezing)	
	Ambient humidity	Operation / Storage: 35 - 85% RH (no condensation)	
	Permissible voltage	1000 V AC in 1-min (between case and lead wire)	
	Insulation resistance	50 Mohm min. (at 500 V DC, between case and lead wire)	
	Vibrations	Total amplitude 1.5 mm or 10G, 10 Hz-150 Hz-10Hz scan for 1 minute, two hours in each direction of X, Y and Z	
Shocks	100 m/s <sup>2</sup> (10G), 3 times each in direction of X, Y and Z		
	≤ ± 2% F.S. of detected pressure (25°C) at temp. range of 0~50°C		
Temperature characteristic			
Port size	G1/8", M5F		
Lead wire	Oil-resistance cable (0.15 mm <sup>2</sup> )		
Weight	Approx. 45 g (with M8, 4-pin male connector)		

## To order: PSD100CPNP

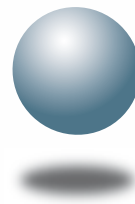
### ACCESSORIES

- CDM8: M8 Female connector – 4 poles , 2 m.
- PSDFIXA: vertical attachment bracket.
- PSDFIXB: horizontal attachment bracket.
- PSDFIXC: front attachment kit.
- PSDFIXD: front attachment kit + front protective lid.



**COVAL, an ISO 9001: V2008 certified company,** has been innovating in vacuum handling, at international level, for the last 25 years: with components and optimizing systems, integrating intelligent and reliable functions, adaptable to your industrial needs and capable of improving your productivity in total safety.

The new **PSD series** mini-vacuum switch with 3-colour display, complements, thanks to its new functions, COVAL's vacuum switch range.



**COVAL**  
vacuum managers

vacuum  
**components**



**A TECHNOLOGICAL PARTNER ON A GLOBAL SCALE**

Located in the southeast region of France, COVAL designs, manufactures and globally distributes high performance, advanced vacuum automation components and systems for industrial applications in all branches.

COVAL is an ISO 9001: V2008 certified company which offers innovative solutions integrating reliable and optimized components with intelligent functionalities. The focus is to provide the most personalized and economic solution to a given application while ensuring a significant improvement in productivity and safety for vacuum users around the world.

COVAL has an ambition for technical excellence and innovation. As a specialist in vacuum automation, COVAL is reputed for offering reliable, personalized, cost effective and productive solutions.

COVAL references can be found in several industrial sectors (Packaging, Automotive Industry, Plastic, Graphic, Aeronautic...) where vacuum handling is important for high efficiency and productivity.

COVAL markets its products and services all over Europe, in the United States and South America, through its subsidiaries and authorized distribution network. COVAL strives to provide customer-driven solutions and gives the best possible treatment to satisfy all its clients.

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