

# ZPDA Series

High-precision Digital Pressure Switch



## Features

- ◇ Compact size and light weight, it can directly connected to air supply port or vacuum port.
- ◇ The square design is more suitable for panel mounting, and a variety of mounting brackets and panels are available.
- ◇ Used for condition monitoring of the vacuum system, optimizing the duty cycle and adjusting the system loop.

## How to order

ZPDA - C NV - G1M - AB

①                      ②                      ③                      ④                      ⑤

① Series	② Pressure range	③ Output specification
ZPDA	C - Compound V - Vacuum P - Positive	NV - 2NPN+1 Analog(Voltage) output (1-5V) NA - 2NPN+1 Analog(Current) output (4-20mA) PV - 2PNP+1 Analog(Voltage) output (1-5V) PA - 2PNP+1 Analog(Current) output (4-20mA)
④ Connection thread		⑤ Accessories
R1M - R1/8 Male thread, M5 Female thread G1M - G1/8 Male thread, M5 Female thread		Nil - Without accessory AB - A type mounting bracket BB - B type mounting bracket PS - Panel adapter PC - Panel adapter+front protective lid

## Selection

Model	Output specification				Connection thread	
	NV	NA	PV	PA	R1M	G1M
ZPDA-C	●	○	●	○	●	○
ZPDA-V	●	○	●	○	●	○
ZPDA-P	○	○	○	○	○	○

◇Note: "●"- standard, in stock. "○"-selective, no stock.

Vacuum Accessories

- ZFA
- ZFB
- ZFL
- ZFP
- ZVAB
- ZVAC
- ZVAA
- ZVEA
- ZVEV
- ZVR
- ZVT
- ZPDA
- ZPDB
- ZCE
- ZSA
- ZPMR

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## Technical parameters

Model	ZPDA-C (Compound)	ZPDA-V (Vacuum)	ZPDA-P (Positive)
<b>Rated pressure range</b>	-100.0 ~ 100.0 kPa	-101.3 ~ 0.0 kPa	0.0 ~ 1.000 MPa
<b>Setting pressure range</b>	-101.0 ~ 101.0 kPa	-101.3 ~ 10.0 kPa	-0.100 ~ 1.000 MPa
<b>Withstand pressure</b>	300 kPa		1.5 MPa
<b>Fluid</b>	Air, Non-corrosive/Non-flammable gas		
<b>Set pressure resolution</b>	<b>kPa</b>	0.1	—
	<b>MPa</b>	—	0.001
	<b>kgf/cm<sup>2</sup></b>	0.001	0.01
	<b>bar</b>	0.001	0.01
	<b>psi</b>	0.01	0.1
	<b>inHg</b>	0.1	—
	<b>mmHg</b>	1	—
<b>Power supply voltage</b>	12 ~24V DC±10%Ripple(P-P)10% or less		
<b>Current consumption</b>	≤40mA (Without load)		
<b>Switch output</b>	NPN:open collector 2 outputs Max.loadc current: 125mA Max.supply voltage: 30VDC Residual voltage: ≤1.5V(load current 125mA)	PNP:open collector 2 outputs Max.loadc current: 125mA Max.supply voltage: 24VDC Residual voltage: ≤1.5V(load current 125mA)	
<b>Repeatability (Switch output)</b>	±0.2% F.S.±1digit or less		
<b>Hysteresis</b>	<b>One point set mode</b>	Adjustable( *1)	
	<b>Hysteresis mode</b>		
	<b>Window comparator mode</b>		
<b>Response time</b>	≤2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms selectable)		
<b>Output short circuit protection</b>	Yes		
<b>7 segment LCD display</b>	Three colors (Red / Green / Orange) main&unit display,orange sub-display(Sampling rate:5times/1sec.)		
<b>Indicator accuracy</b>	≤±2% F.S.±1digit (ambient temperature:25±3°C)		
<b>Switch ON indicator</b>	Orange1&2 Indicator		
<b>Analog output (Voltage Output)(*2)</b>	Output Voltage: 1~5V≤±2.5%F.S. (within rated pressure range) Linearity: ≤±1%F.S. Output impedance:about 1kΩ		
<b>Analog output (Current Output) (*3)</b>	Output Current: 4 to 20mA ≤±2.5% F.S.(within rated pressure range) Linearity: ≤±1% F.S. Max.Load Impedance:300Ω at power supply of 12V 600Ω at power supply of 24V Min.Load impedance: 50Ω		
<b>Environment</b>	<b>Enclosure</b>	IP40	
	<b>Ambient temp. range</b>	Operation: 0 ~ 50°C, Storage:-10 ~ 60°C( No condensation or freezing)	
	<b>Ambient humidity range</b>	Operation/Storage: 35 ~ 85% RH ( No condensation)	
	<b>Withstand voltage</b>	1000V AC in 1-min (between case and lead wire)	
	<b>Insulation resistance</b>	50MΩ min. (at 500V DC, between case and lead wire)	
	<b>Vibration</b>	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z	
	<b>Shock</b>	100m/s <sup>2</sup> (10G), 3 times each in direction of X, Y and Z	
<b>Temperature characteristic</b>	≤±2.5% F.S. of detected pressure (25°C) at temp. Range of 0~50°C		
<b>Port size</b>	R1M:R1/8 male thread,M5; G1M:G1/8 male thread,M5		
<b>Lead wire</b>	Oil-resistance cable(0.15mm <sup>2</sup> )		
<b>Weight</b>	Approx*80g (with2-meter lead wire)		

NOTE: \*1: Hysteresis value is adjustable within 1 ~ 8 digits for one point set mode and window comparator mode.

\*2: If analog voltage output is selected, the analog current output cannot be selected at the same time.

\*3: If analog current output is selected, the analog voltage output cannot be selected at the same time.

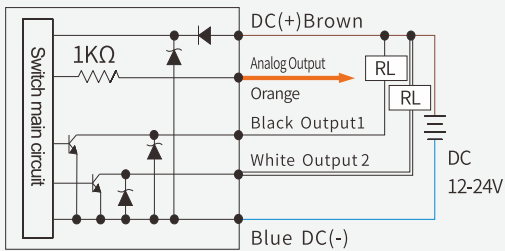
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## Output circuit wiring diagrams

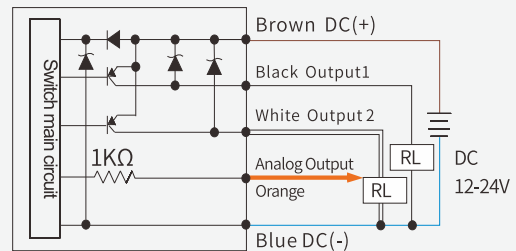
ZPDA-NV

2 NPN+Analog Voltage output(1~5V)



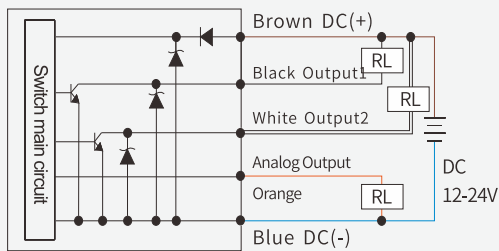
ZPDA-PV

2 PNP+Analog Voltage output(1~5V)



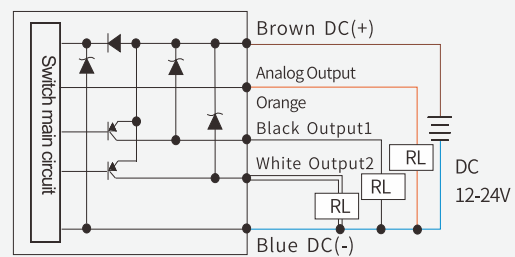
ZPDA-NA

2 NPN+Analog Current output(4~20mA)

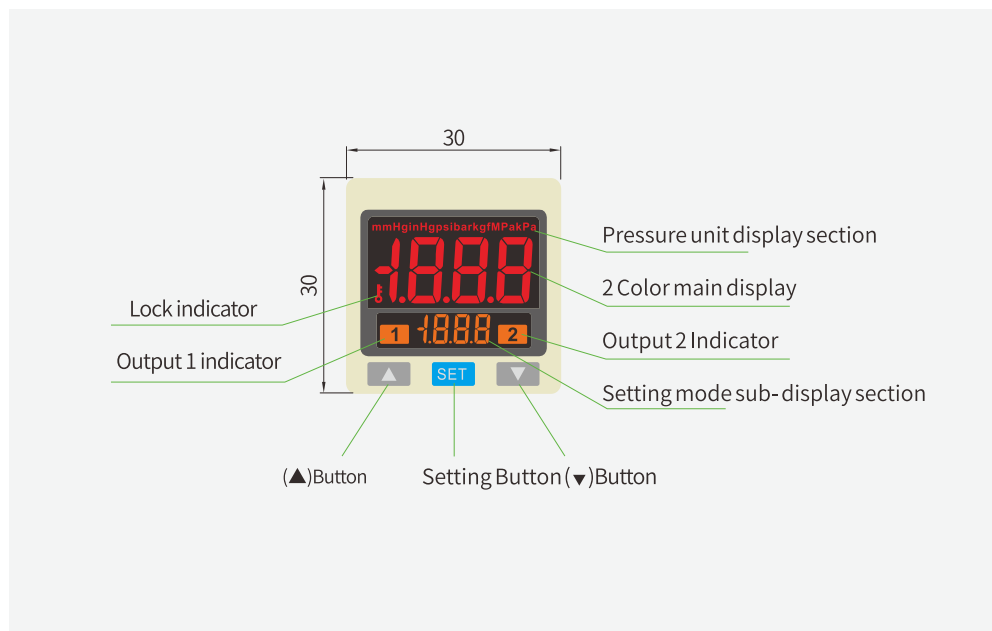


ZPDA-PA

2 PNP+Analog Current putput(4~20mA)



## Panel instructions



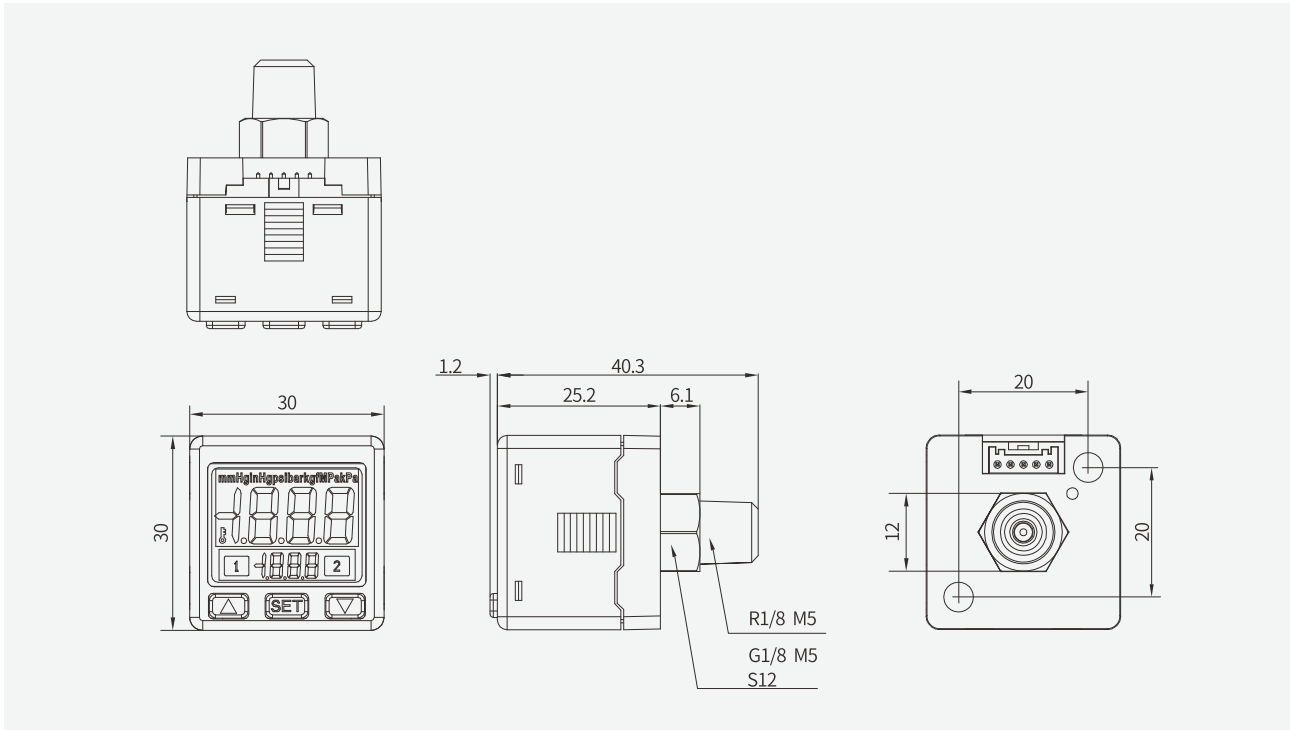
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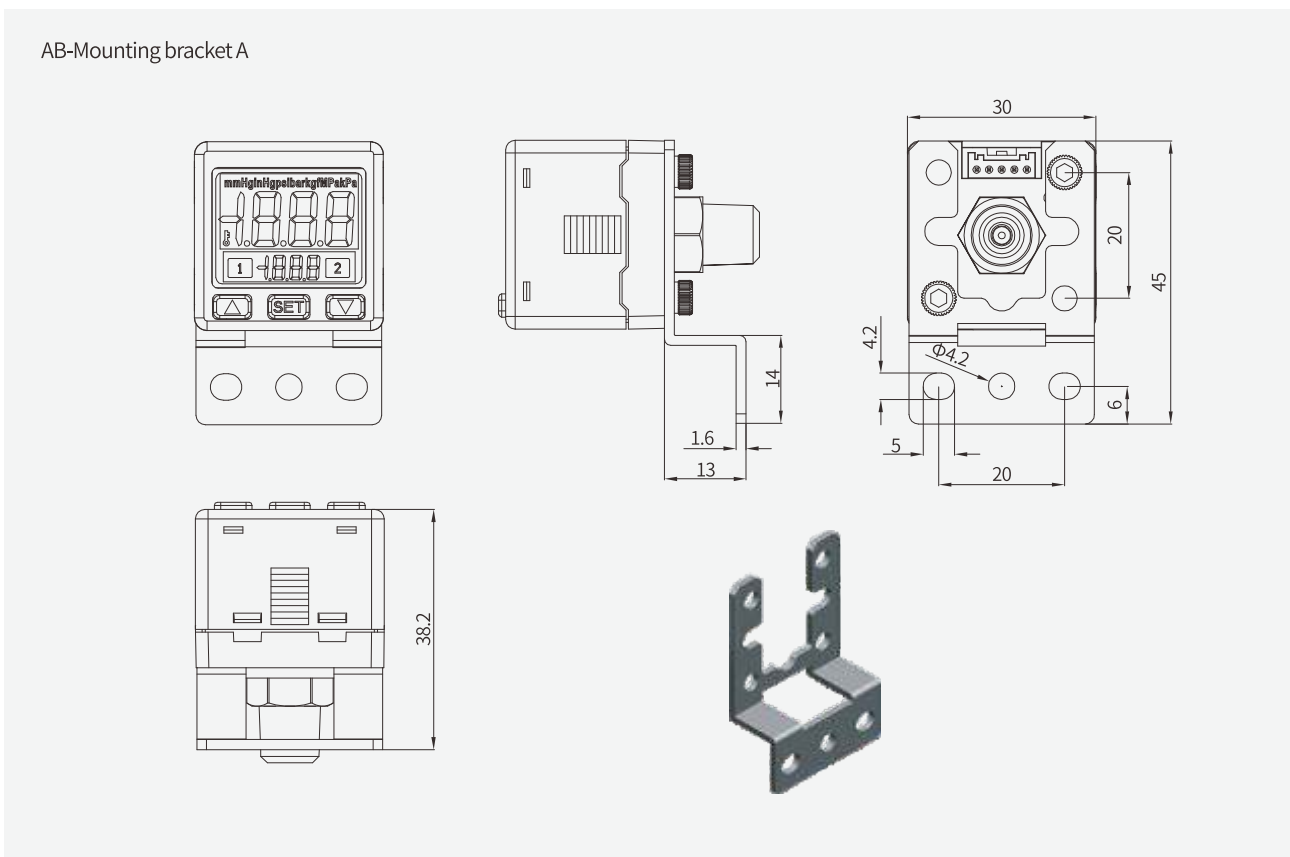
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## Dimensions (mm)



## AB-Mounting bracket A

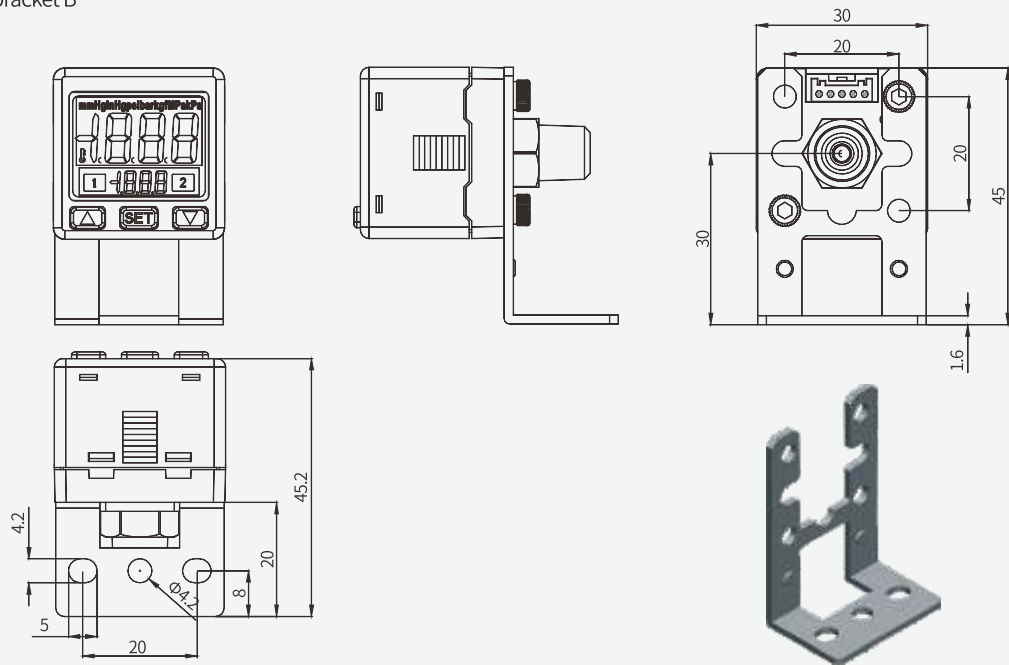


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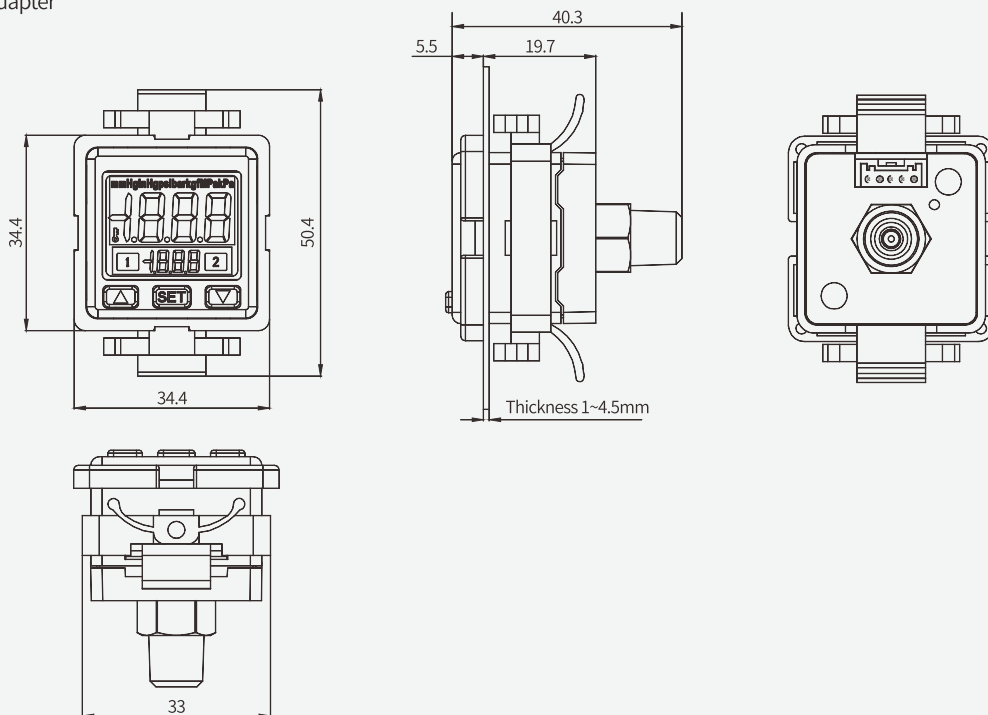
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## Dimensions (mm)

BB-Mounting bracket B



PS-Panel adapter



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## Dimensions (mm)

