

AZQ Series

Mini Integrated Vacuum Generator

AIRBEST



ELECTRONICS PACKAGING PLASTIC

Features

- ◇ Multi-nozzle design
- ◇ Small size and light weight. The volume is 43.5cm³
- ◇ Centralized air supply
- ◇ No noise (vacuum pump type)
- ◇ With digital vacuum pressure switch

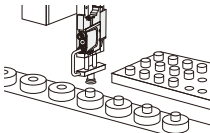
Advantages

- ◇ The device is compact and can be installed directly in the handling system
- ◇ Simple installation, can be installed directly on the distribution box
- ◇ Vacuum pump type is suitable for centralized vacuum station system



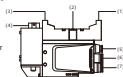
Applications

- ◇ Vacuum producing and monitoring in automation systems
- ◇ For robot handling applications and linear axes
- ◇ Pick and place applications with very short time
- ◇ Used for systems that require high dynamic handling of workpieces and with limited space
- ◇ Usually used for handling small parts in fully automated systems



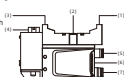
Structure - Without vacuum source type (Vacuum pump type)

- ◇ (1) Vacuum release valve
- ◇ (2) Vacuum release adjusting valve
- ◇ (3) Vacuum supply valve
- ◇ (4) Vacuum pressure switch
- ◇ (5) Air supply port
- ◇ (6) Vacuum pump connector
- ◇ (7) Vacuum port



With vacuum source type (Vacuum generator type)

- ◇ (1) Vacuum release valve
- ◇ (2) Vacuum release adjusting valve
- ◇ (3) Vacuum supply valve
- ◇ (4) Vacuum pressure switch
- ◇ (5) Air supply port
- ◇ (6) Exhaust port
- ◇ (7) Vacuum port



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How to order

AZQ - T × 8 - 04 - N - DP

① Series	② Specifications	③ Stack	④ Vacuum port specification	⑤ Vacuum switch	⑥ Air supply
AZQ	X - High vacuum level type	Nil - Single body	Nil - $\phi 6$ One-touch fitting	N - 2NPN output +	Nil - Individual air supply
	T - Large flow type	2	04 - $\phi 4$ One-touch fitting	1 analog output (1-5V)	DP - Centralized air supply
	B - Vacuum pump type	3		P - 2PNP output +	
		----		1 analog output (1-5V)	
		10			

◇ Note: 1. It is recommended to install an air filter with a filtration accuracy of 5um or less for positive pressure air supply of the vacuum generator (without the need for an oil mist filter)
 2. For vacuum pump type, the recommended stack quantity is 6PCs. The maximum vacuum flow rate will be a decrease if there is stack 8x7 and 8x8. Please refer to the following parameters:
 31NL/min is the max. allowed passing flow of single stack of AZQ-8x7
 28NL/min is the max. allowed passing flow of single stack of AZQ-8x8

Technical parameters

Model	Air supply pressure range bar	Rated air supply pressure bar	Max. vacuum level -kPa	Max. vacuum flow NL/min	Air consumption NL/min	Noise dB(A)	Weight g	Recommended hose dia. (mm)	Air supply port P	Vacuum port V	Vacuum pump connector
AZQ-X	3.0~6.0	5.0	91	12	8.2	64~70	75.4	$\phi 6$	$\phi 6$	$\phi 6$	-
AZQ-T	3.0~6.0	4.5	84	16	15.5	64~70	75.4	$\phi 6$	$\phi 6$	$\phi 6$	-
AZQ-B	3.0~6.0	-	-	35(Note)	-	-	78.2	$\phi 4$	$\phi 6$	$\phi 6$	$\phi 6$

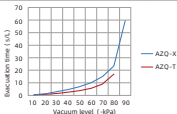
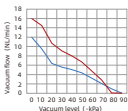
◇ Note: 35NL/min is the max. allowed passing flow of single stack of AZQ-8x8

Vacuum flow(NL/min) at different vacuum levels(-kPa)

Model	Air supply pressure bar	Air consumption NL/min	0	10	20	30	40	50	60	70	80	90	Max. vacuum level -kPa
AZQ-X	5.0	8.2	12	9.5	6.4	5.6	5.1	4.4	3.2	2.1	0.9	-	90
AZQ-T	4.5	15.5	16	14.5	10.7	9.1	8.0	6.7	4.8	2.8	-	-	84

Evacuation time(s/L) to reach different vacuum levels(-kPa)

Model	Air supply pressure bar	Air consumption NL/min	10	20	30	40	50	60	70	80	90	Max. vacuum level -kPa
AZQ-X	5.0	8.2	0.49	1.37	2.90	4.70	6.98	10.03	14.90	23.20	59.52	90
AZQ-T	4.5	15.5	0.34	0.76	1.51	2.40	3.76	5.61	8.94	16.86	-	84



AZQ Series

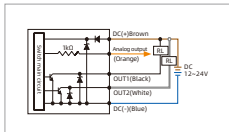
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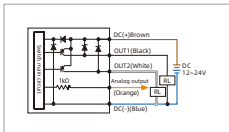
Technical parameters - Pressure switch

Model	ZPDC-□
Pressure range	-100~100kPa
Setting pressure range	-105~105kPa
Proof pressure	500kPa
General gas	Air, Non-corrosive, non flammable gas
Power supply voltage	12-24V DC $\pm$ 10%, Ripple (P-P) 10% or less
Current consumption	$\leq$ 40mA (Without load)
Switch output	2NPN or 2PNP open collector output+1~5V linear analog output
Max. load current	125mA
Max. supply voltage	30V DC (NPN) 24V DC (PNP)
Residual voltage	$\leq$ 1.5V
Response time	$\leq$ 2.5ms (chattering-proof function: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms selectable)
Output short circuit protection	Yes
Repeatability	$\pm$ 0.2% F.S. $\pm$ 1 digit
Display	3 1/2 LED 7 segment display (Red) display (Sampling rate: 5 times/sec)
Indicator accuracy	$\pm$ 2% F.S. $\pm$ 1 digit At ambient temperature: 25 $\pm$ 3°C
Switch ON indicator	OUT1: Green/OUT2: Red
Environmental resistance	IP Grade IP40
Ambient temp. range	Operation: 0~50°C
Withstand voltage	1000VAC in 1 minute (between case and lead wire)
Insulation resistance	50M Ω min. (at 500V DC, between case and lead wire)
Temperature characteristic	$\pm$ 2% F.S. (at temperature range of 0~50°C)
Lead wire	Oil proof PVC cable (0.15mm ²)

Output circuit wiring diagrams



ZPDC-N 2NPN+1 Analog voltage output (1~5V)



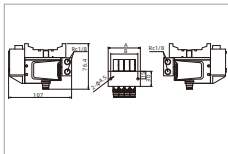
ZPDC-P 2PNP+1 Analog voltage output (1~5V)

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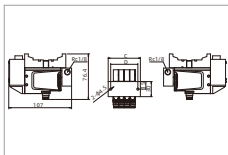
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Centralized air supply dimensions(mm)



Vacuum pump type

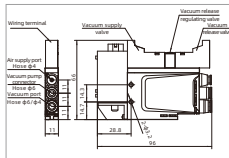


Vacuum generator type

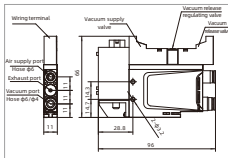
Stack	A	B	C	D
2	45.5	32.5	45.5	32.5
4	68.5	55.5	68.5	55.5
6	91.5	78.5	91.5	78.5
8	114.5	101.5	114.5	101.5
10	-	-	137.5	124.5

- Note: 1. 31NL/min is the max. allowed passing flow of single stack of AZQ-8x7
 2. 28NL/min is the max. allowed passing flow of single stack of AZQ-Bell
 3. AZQ-X/T/B dual integrated vacuum generator is a standard product, while using single piece with dual centralized gas supply, vacuum port should be blocked.
 4. While using 5 pieces or more AZQ-8 for integrating, recommend air supply on both sides

Dimensions(mm)



AZQ-B-□ □ Single body of vacuum pump type



AZQ-□-□ □ Single body of vacuum generator type

Vacuum Generator
 AZK
 AZQ
 AZX
 AZD
 AGS
 AGB
 AGP
 AGX
 AGE
 ABH/ABX
 ABH/ABX Combined Type
 AMC
 AM/AMH
 BR/BR Combined Type
 AMD
 ABT
 ABP
 ABQ
 AEVC
 AZL
 ALH
 AZH
 AZU
 ACV
 ASBP
 ALS
 ACP
 ACPP
 ACPS
 APB