

Air Clean Unit

ZN-A

CSM_ZN-A_DS_E_2_1

The ZN series is even thinner and sports improved air volume. These products enable cleaning that is both fast and flexible.

- Three sizes are available to match various sizes of clean booths.



Be sure to read "Safety Precautions" on page 4.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Ordering Information

Air Clean Units

Air Clean Units

Appearance	Application	Power supply	Model
	250 × 250 mm	24 VDC	ZN-A2502D
	410 × 410 mm		ZN-A4105D
	610 × 610 mm		ZN-A6112
			ZN-A6112P *

*This type is equipped with a clog detection function.

Accessories

	Application	Model	Qty.
Replacement HEPA Filters	For 250 × 250 mm	ZN9-AHP25	1
	For 410 × 410 mm	ZN9-AHP41	1
	For 610 × 610 mm	ZN9-AHP61	1
Replacement Pre-filters	For 250 × 250 mm	ZN9-APF25	2
	For 410 × 410 mm	ZN9-APF41	1
	For 610 × 610 mm	ZN9-APF61	1

Ionizers Units

Ionizers

Appearance	Application	Power supply	Model
	250 × 250 mm	Supplied from the Air Clean Unit.	ZN-J25A
	410 × 410 mm		ZN-J41A

Accessories

	Model	Qty.
Replacement Discharge Needles	ZN9-JH04	4 per pack

Single-sided Connector Cables (for DC power supply or I/O connection)

Cable length	Model	Qty.
2 m	ZN9-JC02	1

Ratings and Specifications

Air Clean Units

Item	Model	ZN-A2502D	ZN-A4105D	ZN-A6112	ZN-A6112P
Air outlet dimension		225 × 205 mm	360 × 360 mm	578 × 568 mm	
Main filter/Removal rate		HEPA filter/ 99.99% of particles 0.3-μm and larger			
Air volume (m³/min)		0.3 to 1.8 m³/min (typical)	1.0 to 5.0 m³/min (typical)	4 to 12 m³/min (typical)	
Power supply voltage		24 VDC ±10%, Ripple (p-p): 10% max.			
Current consumption		Airflow level 5: 2.1 A max. (RMS value) (Peak: 3 A)	Airflow level 5: 3.5 A max. (RMS value) (Peak: 5.5 A)	Airflow level 5: 24 VDC: 4.3 A max. (RMS value) (Peak: 8 A)	
Airflow levels		5 levels • Settable by button operation • Settable by serial (RS-422 or RS-485 *1) communications		5 levels • Settable by button operation • Settable by serial (RS-422 or RS-485 *1) communications • Settable by ON/OFF signal input (3 levels) *2	
Running noise		Airflow level 3: 53 dB (typical)		Airflow level 3: 53 dB (typical)	
Fan motor		Compact DC brushless centrifugal blower x 2	DC brushless turbo fan x 1	DC brushless turbo fan x 1	
Indicators		Operating status: Green/Red Air volume: Blue			
Filter clogging detection		Yes		No	Yes
External output		Alarm output 1: Alarm output 1 turns OFF when one of the following events occurs. (Normally alarm output 1 is ON.) (Check indicator to find out which event occurred.) • Filter is clogged. • Fan error • Cleaning alarm for discharge needle (when ZN-J-series Ionizer (sold separately) is connected) • Discharge error (when ZN-J-series Ionizer (sold separately) is connected) Alarm output 2: Enabled only when ZN-J-series Ionizer (sold separately) is connected. • Alarm output 2 turns OFF to indicate that cleaning is necessary for ZN-J Series discharge needles. (Normally alarm output 2 is ON.)		Fan operation alarm output Alarm output OFF in below cases (ON during normal operation) • Fan not rotating (Including when power is OFF or on standby) • Trouble • Clogged filter (ZN-A6112P only)	
		30 VDC, 50 mA max. Residual voltage: 1 V max. with load current of 10 mA, 2 V max. with load current of 50 mA.			
Applicable Ionizer Unit (Optional)		ZN-J25A	ZN-J41A	None	
Ambient temperature range		Operating and storage: 0 to 40°C (with no icing or condensation)			
Ambient humidity range		Operating and storage: 35% to 85% (with no condensation)			
Applicable contamination degree		Pollution degree 2			
Material		Top: Antistatic plastic, bottom: SECC		Top: ABS resin, HEPA filter frame: aluminum	
Dimensions (mm)		250 × 250 × 97.5 mm (W × D × H)	410 × 410 × 129.5 mm (W × D × H)	714.4 × 654.4 × 174.3 mm (W × D × H) (Height from attachment surface: 117.3)	
Weight (Packaged)		Approx. 2 kg (Approx. 3.3 kg)	Approx. 5.2 kg (Approx. 8.6 kg)	Approx. 12.5 kg (Approx. 17 kg)	
Accessories		Instruction Sheet, Sealing parts, Mounting screws, I/O connector (XW4B-06B1-H1)		Instruction Sheet, Sealing parts, Mounting screws, I/O connector (XW4B-10B1-H1)	

*1. Use the dip switches on the unit surface (connector surface) to switch between RS-422 and RS-485.

*2. Contact input: 5 mA max. ON current. Use input device of 30 V or higher withstand voltage.

Ionizer

Item	Model	ZN-J25A	ZN-J41A
Applicable Air Clean Units		ZN-A2502D	ZN-4105D
Power supply voltage	24 VDC $\pm 10\%$, Ripple (p-p): 10% max.		
Current consumption	300 mA max		
Discharge voltage	± 7 kV max		
Discharge method	Variable DC discharge		
Static electricity removal time (typical) *1	5 s max.		
Ion balance (typical) *2	± 30 V max.		
Indicators	Power (green), Cleaning notice (orange flashing), Cleaning alarm (orange), High voltage error (red)		
External output	High voltage error, cleaning outputs: Output from photo MOS relay (30V DC, 300 mA max.)		
Functions	Manual adjustment of ion balance, cleaning required detection, high voltage detection		
Ambient temperature range	Operating and storage: 0 to 40°C (with no icing or condensation)		
Ambient humidity range	Operating and storage: 35% to 65% (with no condensation)		
Materials	Unit: ABS, Discharge needles: Tungsten		
Dimensions (mm)	248 × 310 × 45 mm (W × D × H)		408 × 470 × 45 mm (W × D × H)
Weight (Packaged)	Approx. 0.6 kg (Approx. 1.4 kg)		Approx. 1.5 kg (Approx. 2.7 kg)
Accessories	Instruction Sheet Sealing parts Mounting screws Connector cable for Air Clean Unit English warning label		

*1. Measurement conditions:

Distance: 300 mm

Air Clean Unit: ZN-A Series with airflow level 5 at center of air outlet

Discharging from ± 1000 V to ± 100 V with a Charge Plate Monitor (150 × 150 mm, 20 pF)

Temperature: 18 to 28°C, Humidity: 35% to 55%

Performance may not be satisfied if gases such as from solvents are in the measurement area.

*2. Measurement conditions:

Distance: 300 mm

Air Clean Unit: ZN-A Series with airflow level 5 at center of air outlet

Measured for 10 sec by a charge plate monitor (150 × 150mm, 20pF)

Temperature: 18 to 28°C, Humidity: 35% to 55%

Performance may not be satisfied if gases such as from solvents are in the measurement area.

Safety Precautions

WARNING

This product is not designed or rated for ensuring safety of persons either directly or indirectly.
Do not use it for such purposes.



Precaution for Correct Use

Do not use the product in ambient atmospheres or environments that exceed the ratings.

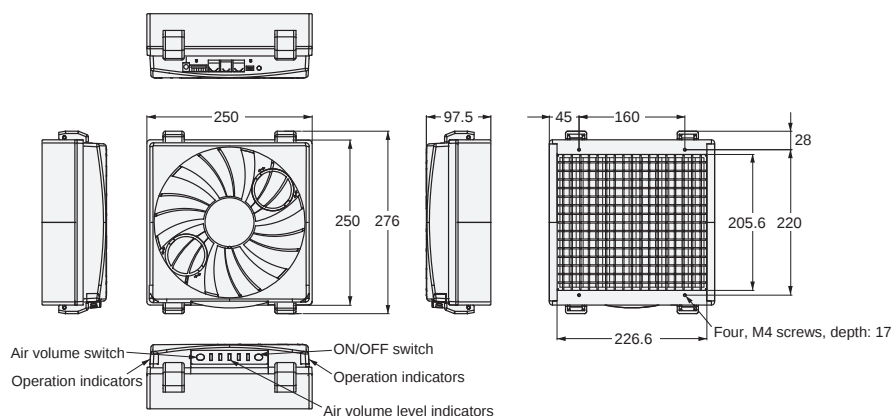
For technical information and product FAQs, refer to the “Technical Guide” on your OMRON website.

Dimensions

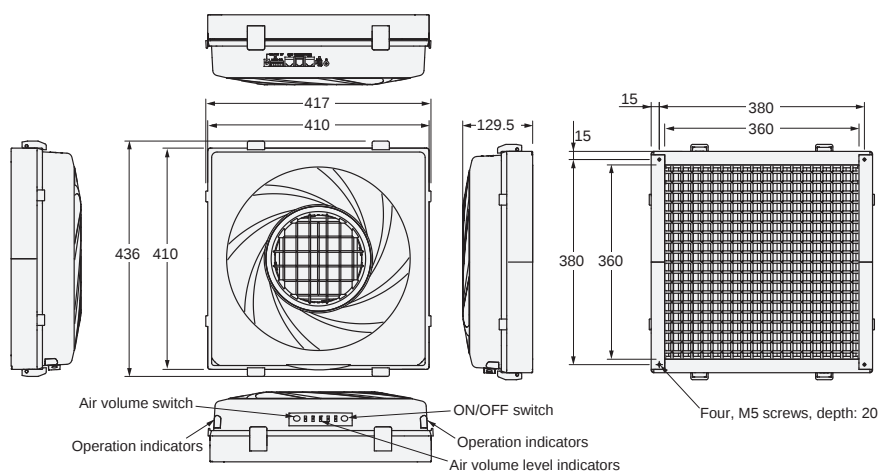
Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

Air Clean Units

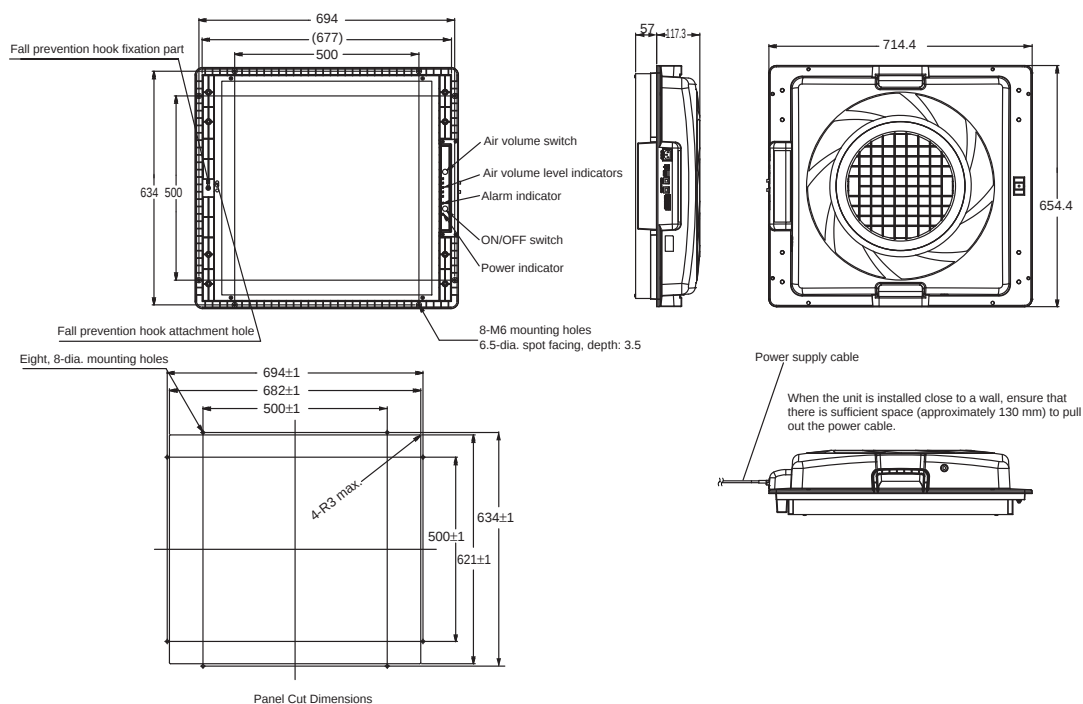
ZN-A2502D



ZN-A4105D

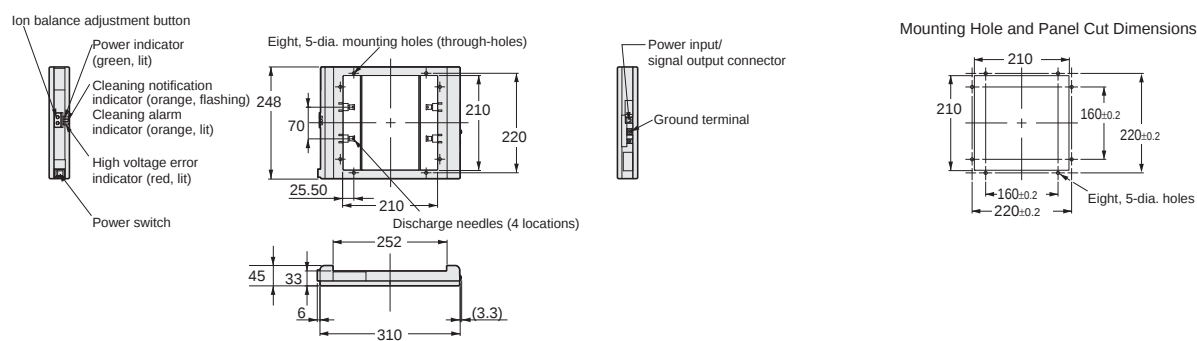


ZN-A6112/A6112P

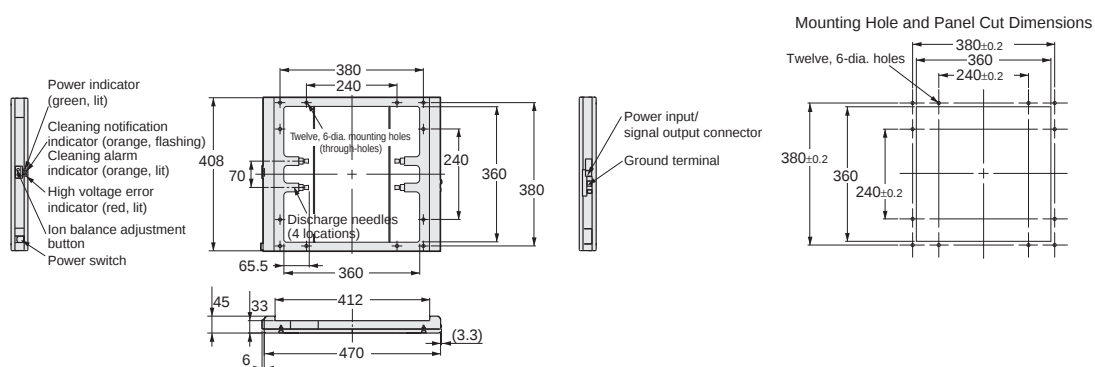


Ionizers

ZN-J25A



ZN-J41A



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