

**NEW**

## Fan Ionizer

ZJ-FW Series  
ZJ-FA20

# OMRON

A new concept  
from the production floor.



Basic fan type  
ZJ-FA20



**NEW** Area fan type  
ZJ-FW Series



realizing

# Slim & Light

Area fan type ionizer that can fit anywhere



**3 types**  
to choose from by area coverage

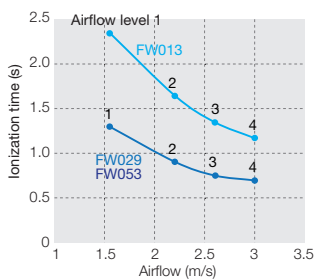
Slim, lightweight body  
Just **6 cm** thick  
**1 kg\*** in weight

\* ZJ-FW029

## Area fan type ZJ-FW Series

This ionizer series is designed to go anywhere. All models are easily installed on narrow workbenches or in high positions where earlier models presented installation issues.

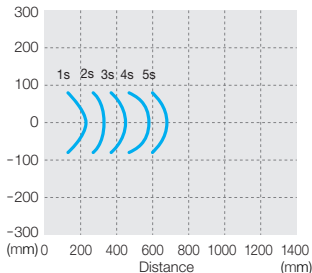
**Airflow vs. Ionization time**



Measurement conditions  
Distance from measurement point: 300 mm  
Ionization time:  $\pm 1000$  V to  $\pm 100$  V  
Plate monitor: 150 x 150 mm, 20 pF

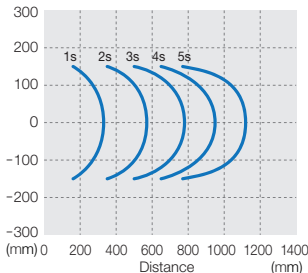
**Ionization area vs. Ionization time**

ZJ-FW013

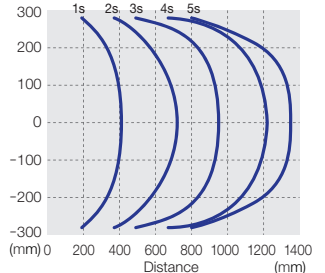


Measurement conditions  
Airflow: Max.  
Ionization time:  $\pm 1000$  V to  $\pm 100$  V  
Plate monitor: 150 x 150 mm, 20 pF

ZJ-FW029

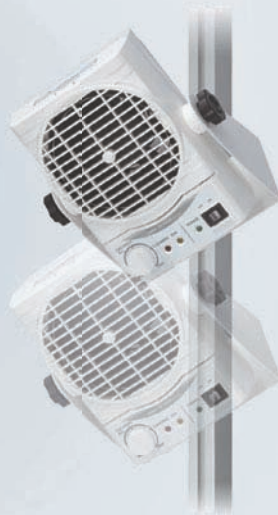


ZJ-FW053



# Easy to use

Standard type for a fan type ionizer with high performance



Basic fan type

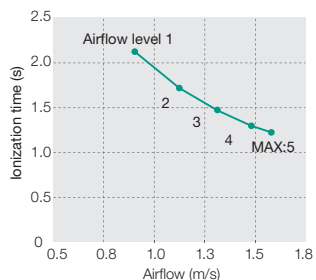
## ZJ-FA20

This is the standard for a fan type ionizer, which is easy-to-use and has high performance.

Pick me up, when you are not sure that what kind of fan ionizer should be used!

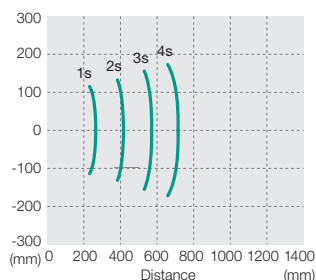
Various installation styles are available to match the workplace.

### Airflow vs. Ionization time



Measurement conditions  
Distance from measurement point: 300 mm  
Ionization time:  $\pm 1000$  V to  $\pm 100$  V  
Plate monitor: 150 x 150 mm, 20 pF

### Ionization area vs. Ionization time



Measurement conditions  
Airflow: Max.  
Ionization time:  $\pm 1000$  V to  $\pm 100$  V  
Plate monitor: 150 x 150 mm, 20 pF



ZJ-FW013



ZJ-FW029



ZJ-FW053

## Ionization time

ZJ-FW029/053

ZJ-FW013

1.0s | 1.5s

## Ion balance

±10v

## Discharge method

Variable DC

(See "Ionization performance" of the ZJ-FA20.)

## 3 slim, lightweight types to choose from. Easy installation.

At 6 cm in depth and weighing 1 kg (ZJ-FW029), the ZJ-FW Series has pursued and achieved a slim, lightweight configuration. These ionizers easily fit on narrow workbenches or in high locations where previously they could not go. Moreover, you can select a size according to the area of coverage, so targets are uniformly neutralized.

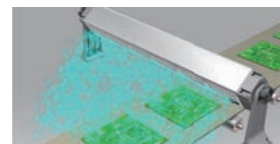
### Easy installation

## Ideal for narrow workbenches to wide lines

With three sizes available, the ideal ionizer for the installation environment and ionization area can be selected. Stable uniform ionization is possible for any kind of work setup from narrow workbenches to wide lines. Moreover, tedious-to-rig air ducts used with bar type ionizers are unnecessary, which also translates into greater energy savings.



Ionizer with pipe-mounting brackets



Easily installs in places where not applicable before!  
(Stand, L-mounting bracket and pipe-mounting bracket available.)

### Model

Model
ZJ-FW013
ZJ-FW029
ZJ-FW053

### Accessories

Accessory	Model
Replacement filter (6-pack)	ZJ9-FL40FW
Replacement discharge electrode (4-electrode set)*	ZJ9-NDT04FW
Stand (Included with ZJ-FW029/053)	ZJ9-BRS1FW
L-mounting bracket (Included with ZJ-FW013)	ZJ9-BRL1FW
Pipe-mounting bracket (For mounting a 28-mm dia. pipe)	ZJ9-BRP1FW

\* ZJ-FW013: 1 set, ZJ-FW029: 3 sets, ZJ-FW053: 6 sets

### Rating/Performance

Item	ZJ-FW013	ZJ-FW029	ZJ-FW053
Power supply voltage	24V DC±10%, Ripple (p-p): 10%		
Current consumption	0.9A max	1.2A max	3.0A max
Discharge voltage	±7.5kV		
Discharge method	Variable DC		
Ionization time *	1.5 s	1 s	
Ion balance *	±10V max.		
Amount of ozone generated	0.01 ppm (Measured at a distance of 50 mm from air outlet)		
Indicators	Power (Green), Fan running (Green), Cleaning (Yellow), Alarm (Red)		
Main functions	Ion balance adjustment (Automatic and manual)		
External output (for both cleaning and alarm outputs)	Photo MOS relay output (NPN or PNP) • Applied voltage: 30VDC max., load current: 100mA max. • Residual voltage: 1V max		
Discharge stop input	No-voltage contact input • ON: 0V short circuit • OFF: Open (leakage current: 0.1mA max.)		
Ambient temperature range	0 to 50°C (No icing or dewing)		
Ambient humidity range	35% to 65% (No icing or dewing)		
Weight (Packaged)	Approx. 0.6 kg (Approx. 1.2 kg)	Approx. 1 kg (Approx. 1.8 kg)	Approx. 2 kg (Approx. 3 kg)
Material	Body: Aluminum, ABS Electrode needle: Tungsten		
Accessories	Instruction sheet, I/O connector, L-mounting bracket, Streamer		Instruction sheet, I/O connector, Stand, Streamer

\* Typical default settings at the time of shipping from the factory

• Measurement conditions Measurement point and distance: 300 mm from body center, Airflow: Max, Plate monitor: 150 x 150 mm, 20 pF

• Ionization time: Time required to lower the charge from ±1000 V to ±100 V

• Ion balance measurement time: 10 s

## Ionization performance

### High speed ionization in a slim configuration

A proprietary louver structure enables a slim configuration and yet high speed ionization that removes electrostatic charge in 1 sec or less. As a standard feature, ion balance adjustment is available and airflow can be set by 4-step sliding switch. Moreover, when using the standard stand, the angle can be easily adjusted against a graduated scale.



Ion balance adjuster (Body rear)

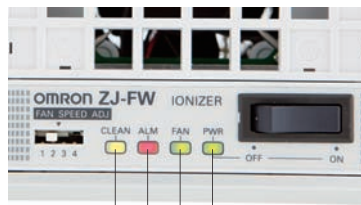


Easy angle adjustment with graduated scale

## Reliability

### Four indicators and an alarm output let you easily identify the operating status.

The Ionizer's operating status is displayed on easy-to-see indicators and it can be output to an external device. Besides the power (PWR) indicator, there are a CLEAN lamp that lights when it is time for electrode needle maintenance, an ALM lamp that lights if trouble occurs, and a FAN lamp that is lit while the fan is operating.



Power lamp  
Fan running lamp  
Alarm lamp  
Cleaning notification lamp



Running status is understood at a glance. Airflow sticker included

## Maintainability

### Easy electrode needle replacement owing to modular structure

The ionizer adopts a full-open structure that allows users to detach the front cover by just pressing on tabs. This makes electrode needle cleaning very easy. Moreover, the electrode needles are configured as a unit that can be easily and safely replaced.

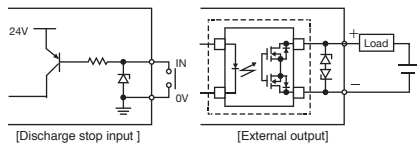


Easy electrode needle replacement



Full-open structure for easy cleaning

## Input/output circuit



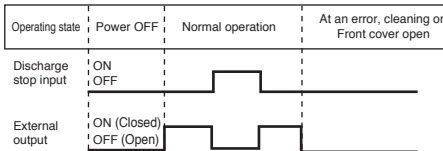
### (1) Discharge stop input

When the discharge stop input is turned ON, the discharge from needles and rotation of fans stops and external output turns OFF(Open).

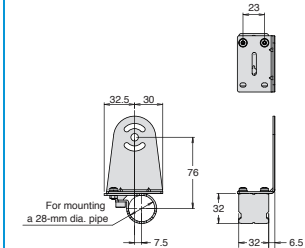
### (2) External output

External output is ON(Close) state when ZJ-FW is working normally. External output is OFF(Open) state as one of the below conditions occurs.  
• Front cover open, Cleaning, Fan rotation error, Malfunction error and Discharge stop input ON

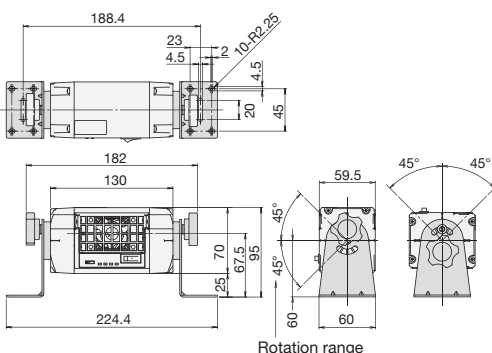
## Input and Output logic



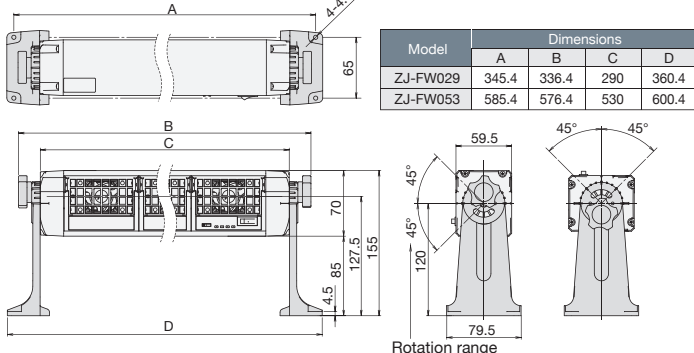
## Pipe-mounting bracket ZJ9-BRP1FW (Units: mm)



## Outer dimensions ZJ-FW013 (Units: mm)



## ZJ-FW029/053 (Units: mm)





Ionization time

**1.2 s**

Ion balance

**±10V**

Discharge method

**Variable DC**

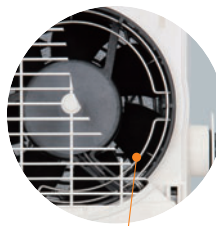
## High speed ionization and technological sophistication at a reasonable price. Excellent cost-performance.

The ZJ-FA20 delivers technological sophistication at a low price, featuring high speed ionization that removes electrostatic charge in 1.2 s, ion balance control via a built-in sensor, and a full-open structure that makes it easy to clean and replace electrodes.

### Ionization performance

## High speed ionization by delivering a high density ion flow on an efficiently channeled air stream

The variable DC ionizer simultaneously generates a large quantity of ions from separate positive and negative electrode needles, while a built-in ion balance sensor controls ion quantity. The result is a good balance between high speed ionization and proper ion balance. Moreover, Omron's proprietary louver structure efficiently directs ions to the target.

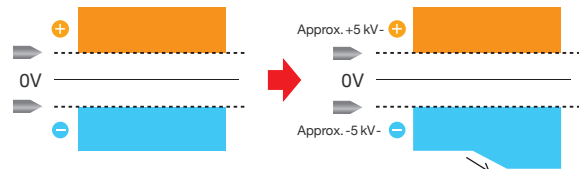


Ion balance sensor

### [Variable DC ionization]

General DC ionization

Variable DC ionization



### [Omron's proprietary louver structure]

Conventional ionizer

ZJ-FA20



### Model

Model
ZJ-FA20

### Accessories

Accessory	Model
Replacement filter (10-pack)	ZJ9-FL120N1
Replacement discharge electrode (6-pack)	ZJ9-NDT06FN1

### Rating/Performance

Item	ZJ-FA20
Power supply voltage	24V DC <sup>*1</sup>
Current consumption	900 mA max. (When input by included AC adapter)
Discharge voltage	±7kV
Discharge method	Variable DC
Ionization time <sup>*2</sup>	1.2 s (0.8 s when used without filter)
Ion balance <sup>*2</sup>	±10 V max.
Amount of ozone generated	0.01 ppm (Measured at a distance of 50 mm from air outlet)
Indicators	High voltage output: ION (Yellow), Cleaning: CLEANING (Orange), Power: POWER (Green)
Main functions	Ion balance adjustment (Automatic and manual), airflow adjustment
Ambient temperature range	Working and storage: 0 to 50°C (No icing or dewing)
Ambient humidity range	Working: 35% to 65%, Storage: 35% to 85% (No icing or dewing)
Weight (Packaged)	Approx. 1.5 kg (Approx. 2 kg)
Material	Body: ABS, Electrode needle: Tungsten, Stand: SPCC
Accessories	Instruction sheet, AC adapter, Warning label (2 types), FG connection cable (2 m)

<sup>\*1</sup> Use the ionizer only with the included AC adapter.

<sup>\*2</sup> Typical default settings at time of shipping from the factory

• Measurement conditions/Measurement point and distance: 300 mm from body center, Airflow: Max, Plate monitor: 150 x 150 mm, 20 pF  
• Ionization time: Time required to lower the charge from ±1000 V to ±100 V  
• Ion balance measurement time: 10 s

## Reliability

# Ion generation understood at a glance by LED lighting

During ion generation, both the POWER and ION lamps are lit. This verifies that the ionizer is running properly. Moreover, a CLEANING lamp notifies users when it is time to clean the electrode needles.



Cleaning lamp Ion generation lamp Power lamp

## Maintainability

# Easy to clean and replace electrode needles

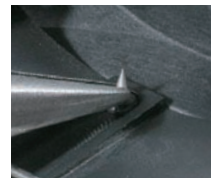
Cleaning is easy and thorough owing to a full-open structure that allows users to detach the front cover by just pressing on tabs. Electrode needles can also be easily replaced, which enables long lasting use of the product.



Full-open structure



Electrode cleaning



Electrode replacement

## Installation

# Various installation styles are available according to workplace

The ionizer can be used in a variety of postures. It can be installed on a workbench or mounted on a pole. It can also be freely angled using the angle adjustment knob on the body and the screw slots on the stand.

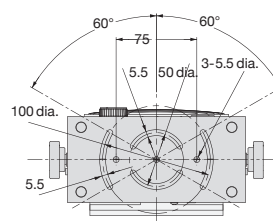
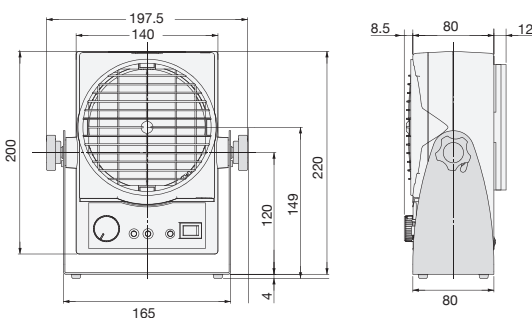


Front-Back tilting

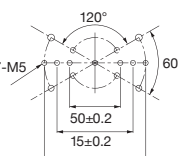
Left-Right swiveling

Vertical positioning

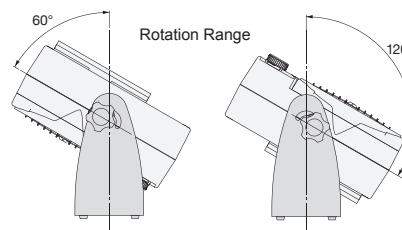
### Outer dimensions ZJ-FA20 (Units: mm)



### Mounting hole dimensions



### Rotation Range



## Read and Understand this Catalog

Please read and understand this catalog before purchasing the product. Please consult your OMRON representative if you have any questions or comments.

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