

Ionizer (Nozzle type)
Series IZN10

RoHS

Features

- Slim and compact: 16mm thickness.
- Nozzle selectable: Energy saving, large flow types and female threads for piping.
- ±10V ion balance: High frequency AC ion generation method.
- Contaminated electrode needle detection function.
- Electrode needle (cartridge) easy replacement.
- Mounting options: Direct and bracket mounting.



How to Order

IZN10-01 P 06

High frequency AC nozzle type

Nozzle type

Symbol	Type
01	Energy saving static electricity elimination nozzle
02	High flow rate nozzle
11	Female threads for piping ^(Note)

Note) Used with a fitting and a tube on the end

Rc1/8

Port size

06	ø6: Metric size
07	ø6.35 (1/4): Inch size
16	ø6: Metric size (Elbow)
17	ø6.35 (1/4): Inch size (Elbow)

Output specification

—	NPN output
P	PNP output

Product Recommendation



Stocked items for fast delivery

IZN10-01P06 IZN10-02P06 IZN10-11P06



Related Products

Series IZD - Electrostatic Sensor - www.smc.eu
Series IZE - Electrostatic Monitor - www.smc.eu
Series IZH - Handheld Electrostatic Meter - www.smc.eu
Series AF - Main Line Filter - page 1082
Series AM - Mist Separator - page 1171
Series AR - Air Regulator - page 1084
Series KA - Antistatic One-touch Fittings - www.smc.eu
Series TAS/TAU - Antistatic Tubing - www.smc.eu

Accessories

Bracket

IZN10-B1



Fixed mounting



Pivot mounting

IZN10-B2



• Pivoting bracket

DIN rail mounting bracket

IZN10-B3



Manifold



Single unit

Power supply cable (3 m, 10 m)

IZN10-CP
IZN10-CPZ



AC adapter (100 to 240 VAC)

IZN10-FP-X196EU



Electrode needle cleaning kit

IZS30-M2



Specifications

Ioniser model		IZN10-□□ (NPN specification)	IZN10-□□P (PNP specification)
Ion generation method		Corona discharge type	
Method of applying voltage		High frequency AC type	
Discharge output ^{Note 1)}		2,500 V	
Ion balance ^{Note 2)}	Energy saving static electricity elimination nozzle	Within ±10 V	
	High flow rate nozzle	Within ±15 V	
Ozone generation ^{Note 3)}		0.03 ppm (0.05 ppm for energy saving static electricity elimination nozzle)	
Air purge	Fluid	Air (Clean dry air)	
	Operating pressure ^{Note 4)}	0.05 MPa to 0.7 MPa	
	Connecting tube size	ø6 / ø1/4 inch	
Power supply voltage		24 VDC ±10%	
Current consumption		80 mA	
Input signal	Discharge stop signal	Connected to GND (ON voltage: 0.6 V or less) Current consumption: 5 mA or less	Connected to +24 V (ON voltage: Between +19 V and power supply voltage) Current consumption: 5 mA or less
	Reset signal		
	External switch signal		
Output signal	Discharge signal	Max. load current: 40 mA Residual voltage: 1 V or less (load current at 40 mA) Max. applied voltage: 28 VDC	Max. load current: 40 mA Residual voltage: 1 V or less (load current at 40 mA)
	Error signal		
	Maintenance signal		
Effective static electricity elimination distance		20 mm to 500 mm	
Ambient and fluid temperature		0 to 55°C	
Ambient humidity		35 to 65%RH	
Material		Housing: ABS, Stainless steel Nozzle: Stainless steel Electrode needle: Tungsten	
Vibration resistance		Durability: 50 Hz, Amplitude: 1 mm, XYZ each 2 hours	
Shock resistance		10 G	
Weight		120 g	
Standards		CE marking, UL (CSA) compliant	

Note 1) Measured with a probe of 1000 MΩ and 5 pF.

Note 2) Measured with a distance of 100 mm between the charged object and the ioniser at an air purge pressure of 0.3 MPa.

For the static electricity elimination time, refer to technical data.

Note 3) Value above background level, measured with a distance of 300 mm from the front of the nozzle at an air purge pressure of 0.3 MPa.

Note 4) Static electricity cannot be eliminated without an air purge.

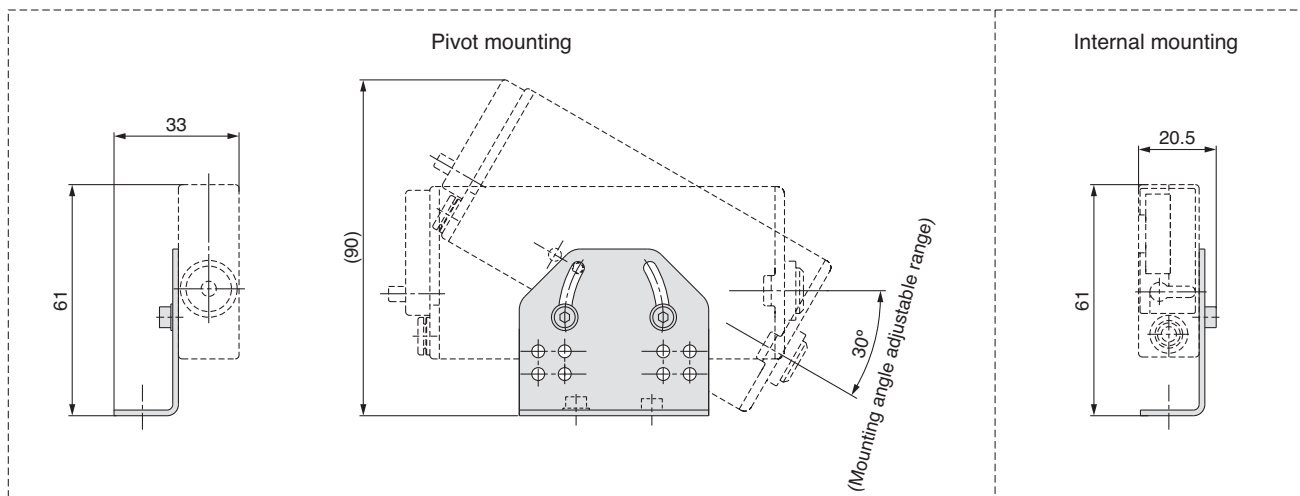
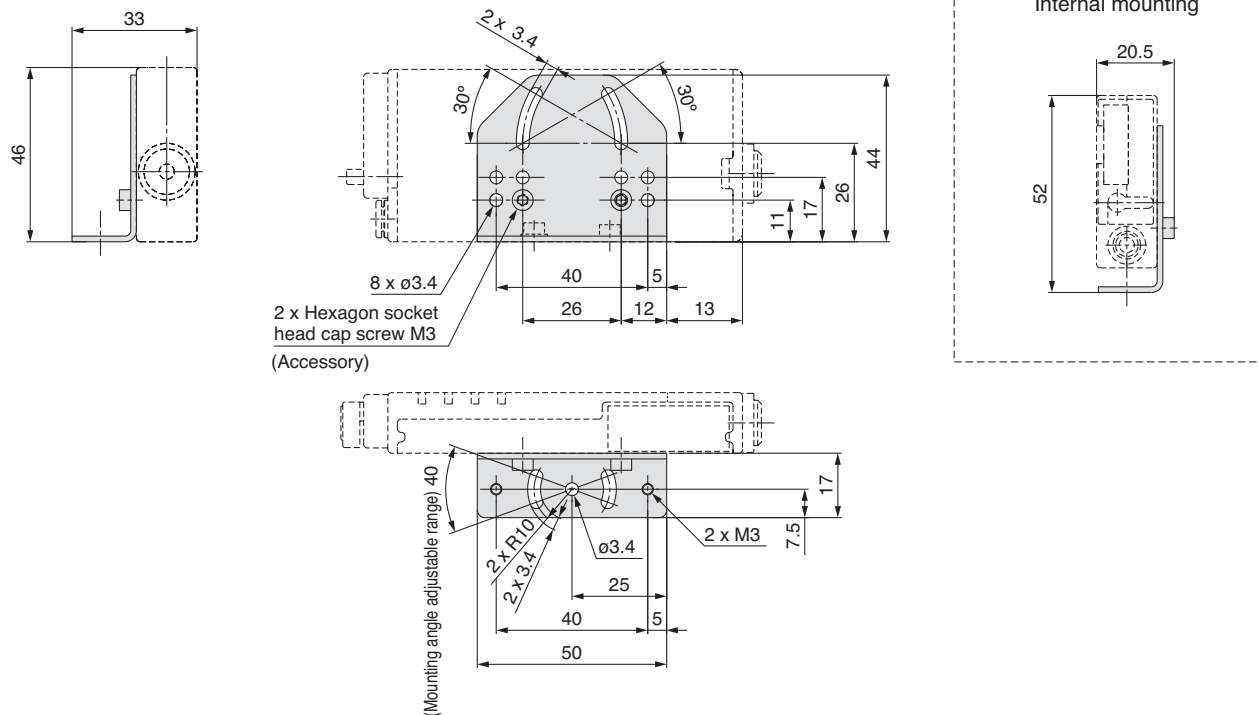
Also, failure of the air purge can increase internal ozone condensation, adversely affecting the ioniser and peripheral equipment.

Be sure to perform an air purge while energising the ioniser.

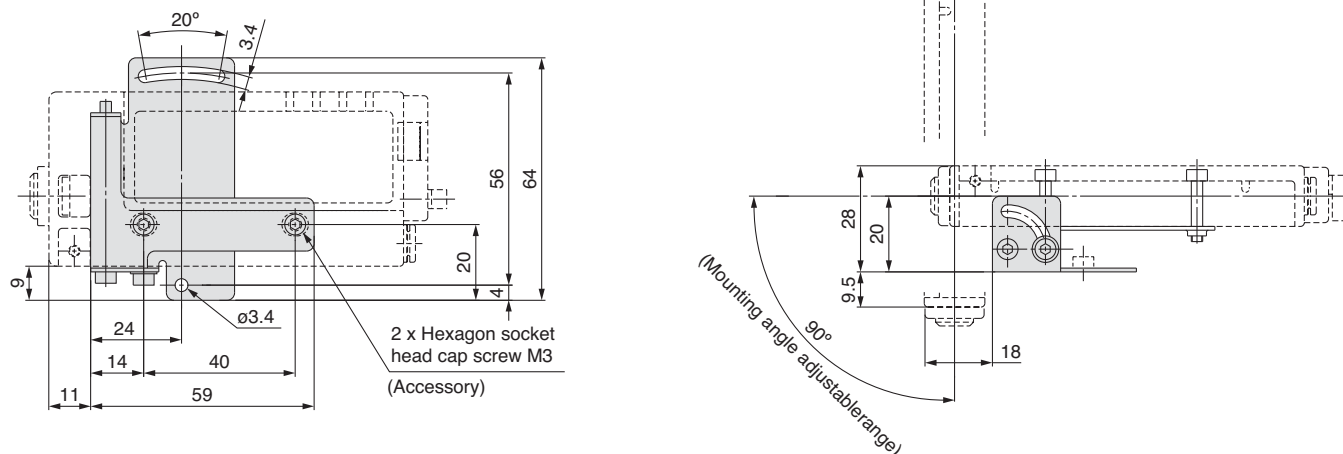


Dimensions

L-bracket / IZN10-B1



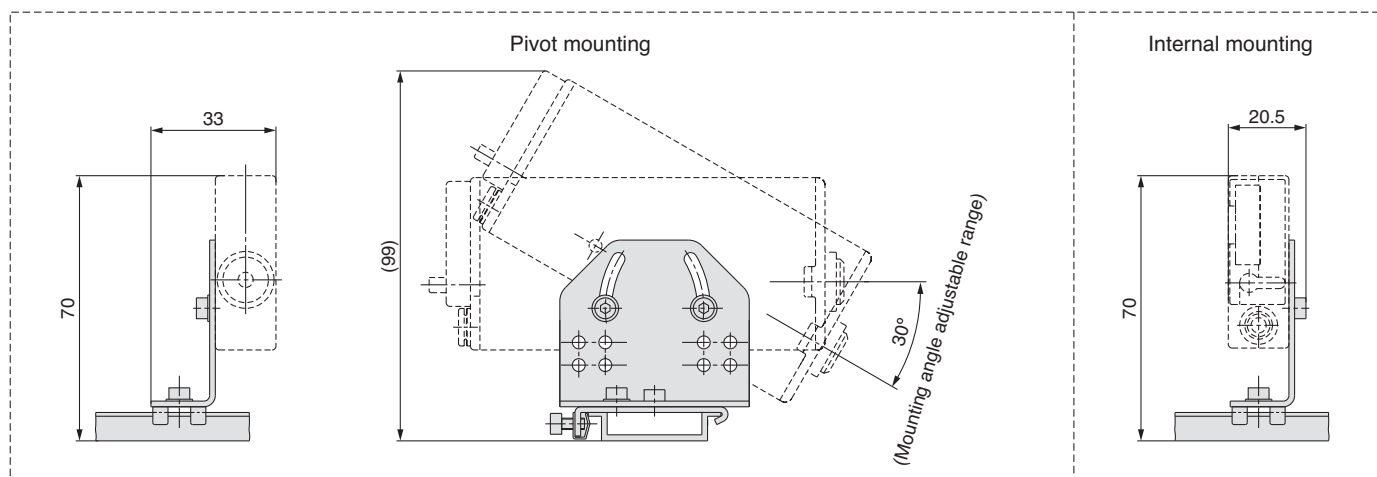
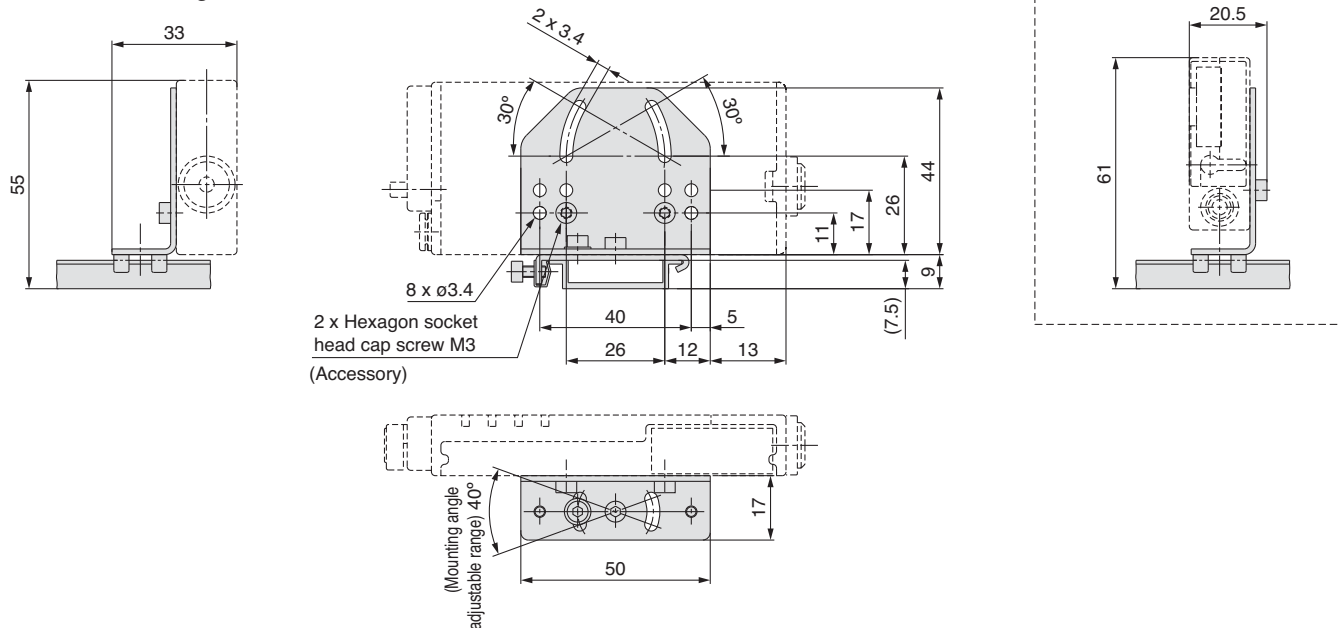
Pivoting bracket / IZN10-B2



For more product options and details see our specific catalogues or on-line information.

Dimensions

DIN rail mounting bracket / IZN10-B3



Manifold mounting parts set

This set consists of a hexagon socket head cap screw, a spacer and a hexagon nut.

Note) The ioniser, L-bracket and DIN rail mounting bracket need to be prepared separately.

How to Order

IZN10 – ES 2

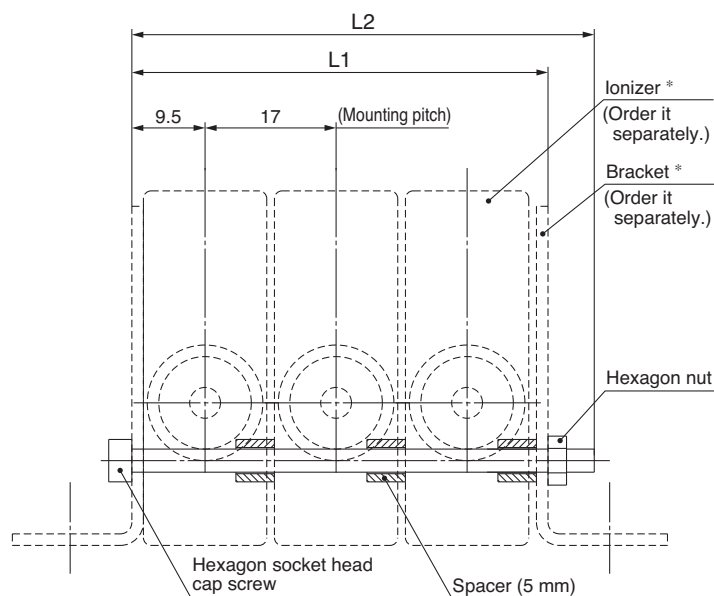
Mounting pitch •

Symbol	Pitch
ES	17 mm

• Mounting stations

Symbol	Stations
2	2
3	3
4	4

	L1	L2	Number of spacers
IZN10-ES2	37	40	4
IZN10-ES3	54	60	6
IZN10-ES4	71	75	8



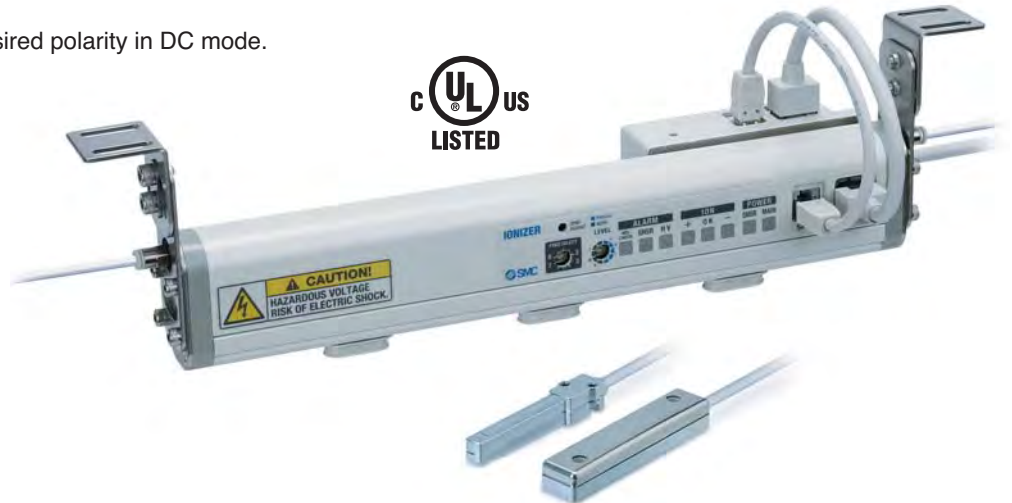
* Prepare two brackets and ionizer separately.

Ionizer Series IZS31



Features

- 3 types of sensors available:
 - Auto-balance sensor (high precision type); Monitoring of the ion balance condition.
 - Auto-balance sensor (body mounting type); Monitoring of the ion balance condition.
 - Feedback sensor: Rapid removal of static electricity.
- Electrode cartridge variations:
 - Cartridge with high efficiency nozzle: Improved discharge time with low air consumption.
 - Cartridge with low maintenance. Contamination of the needle reduced.
- 3 types of electrode needle materials:
 - Tungsten: Ion balance 30V.
 - Monocrystal silicon: Ion balance 30V.
 - Stainless steel: Ion balance 100V.
- Switch over frequency: 60Hz, applicable to fast moving workpieces.
- Effective removal of static electricity at short distances.
- Indicator and safety functions.
- Continuous ion emission of a desired polarity in DC mode.



How to Order

Ionizer		IZS31		780	P
		Bar type			Output
					– NPN output
					P PNP output
					Electrode cartridge type / Electrode needle material
					Symbol Electrode cartridge type Electrode needle material
					– Rapid elimination of static electricity Tungsten
					C Silicon
					S Stainless steel
					J Low maintenance Tungsten
					K Silicon

Product Recommendation



Stocked items for fast delivery

IZS31-300P	IZS31-380P	IZS31-620P	IZS31-780P
IZS31-1100P	IZS31-1260P	IZS31-1500P	IZS31-1900P



Related Products

Series IZD - Electrostatic Sensor - www.smc.eu
Series IZE - Electrostatic Monitor - www.smc.eu
Series IZH - Handheld Electrostatic Meter - www.smc.eu
Series AF - Main Line Filter - page 1082
Series AM - Mist Separator - page 1171
Series AR - Air Regulator - page 1084
Series KA - Antistatic One-touch Fittings - www.smc.eu
Series TAS/TAU - Antistatic Tubing - www.smc.eu



For more product options and details see our specific catalogues or on-line information.

Accessories

Feedback sensor
IZS31-DF



Autobalance sensor
[High-precision type]
IZS31-DG



Autobalance sensor
[Body-mounting type]
IZS31-DE

- Connection cable A/B (1 pc. each)
- Sensor bracket (1 pc.)
- Hexagon socket head cap screw for sensor bracket (2 pcs.)

Accessories



Power cable

- IZS31-CP (3 m)
- IZS31-CPZ (10 m)



AC adapter (100 to 240 VAC)
IZS31-FP-X196EU



Connection cable A/B for
connecting autobalance
sensor to the body

- For driving:
IZS31-CF (12P)



- For I/O signals:
IZS31-CR (6P)



Electrode cartridge with rapid
elimination of static electricity

- IZS31-NT
(Material: Tungsten)
- IZS31-NC
(Material: Silicon)
- IZS31-NS
(Material: Stainless steel)



Electrode cartridge with
low maintenance

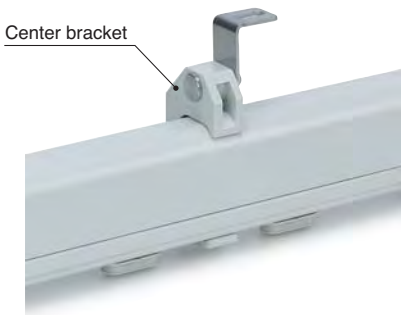
- IZS31-NJ
(Material: Tungsten)
- IZS31-NK
(Material: Silicon)



End bracket / IZS31-BE



Center bracket / IZS31-BM



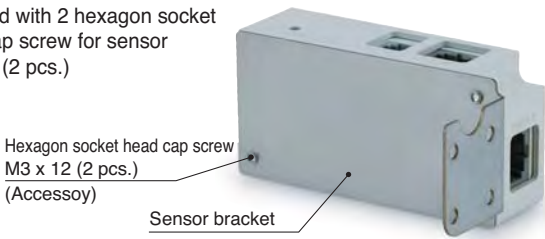
Note) The number of center brackets required, as listed below, depends on the bar length.
Two end brackets are always required regardless of the bar length.

Bar length [mm]	Quantity	
	End bracket	Center bracket
300, 380, 620, 780	2 pcs.	None
1100, 1260, 1500		With 1 pc.
1900, 2300		With 2 pcs.

Note) The model number is for a single bracket.

Sensor bracket / IZS31-BL
(For mounting IZS31-DE on the body)

- * Provided with 2 hexagon socket head cap screw for sensor bracket (2 pcs.)



Specifications

Ionizer model		IZS31-□□ (NPN specification)	IZS31-□□P (PNP specification)
Ion generation method		Corona discharge type	
Method of applying voltage		Sensing DC, Pulse DC, DC	
Electricity discharge output		±7000 V	
Ion balance Note 1)		±30 V (Stainless steel electrode needle: 100 V)	
Air purge	Fluid	Air (Clean and dry)	
	Operating pressure	0.7 MPa or less Note 2)	
	Connecting tubing O.D.	ø4	
Power supply voltage		24 VDC ±10%	
Current consumption	Sensing DC mode	200 mA or less (While standing by: 120 mA or less)	
	Pulse DC mode	Autobalance sensor [Body-mounting type] : 300 mA or less Autobalance sensor [High-precision type] : 200 mA or less When sensor is not used : 170 mA or less	
	DC mode	170 mA or less	
Input signal	Electricity discharge stop signal	Connected to GND (Voltage: 5 VDC or less, Current consumption: 5 mA or less)	Connected to +24 V (Voltage: Between 19 VDC and power supply voltage, Current consumption: 5 mA or less)
	Maintenance signal		
Output signal	Static electricity removal completion signal	Max. load current: 100 mA Residual voltage: 1 V or less (Load current at 100 mA) Max. applied voltage: 28 VDC	Max. load current: 100 mA Residual voltage: 1 V or less (Load current at 100 mA)
	Maintenance output signal		
	Error signal		
	Sensor monitor output Note 3)		
Effective distance of static electricity elimination		50 to 2000 mm (Sensing DC mode: 200 to 2000 mm)	
Ambient temperature, Fluid temperature		0 to 50°C	
Ambient humidity		35 to 80% Rh (With no condensation)	
Material		Cover of ionizer: ABS, Electrode needle: Tungsten, Monocrystal silicon, Stainless steel	
Vibration resistance		Durability 50 Hz Amplitude 1 mm XYZ each 2 hours	
Shock resistance		10 G	
Standards		CE marking, UL (CSA) compliant	

Note 1) When the air purge is performed between a charged object and an ionizer at a distance of 300 mm

Note 2) When the electrode cartridge with low maintenance is used, the operating pressure must be 0.05 MPa or more.

Note 3) When the potential of a charged object is measured by a feedback sensor, the relationship between the potential being measured and the sensor monitor output voltage, and the detection range of the sensor vary depending on the sensor's installation distance.

Sensor Specifications

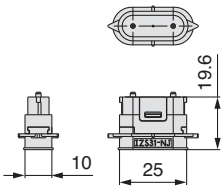
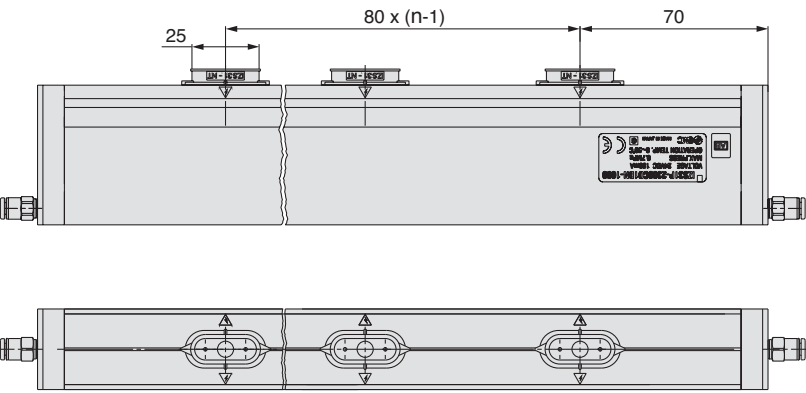
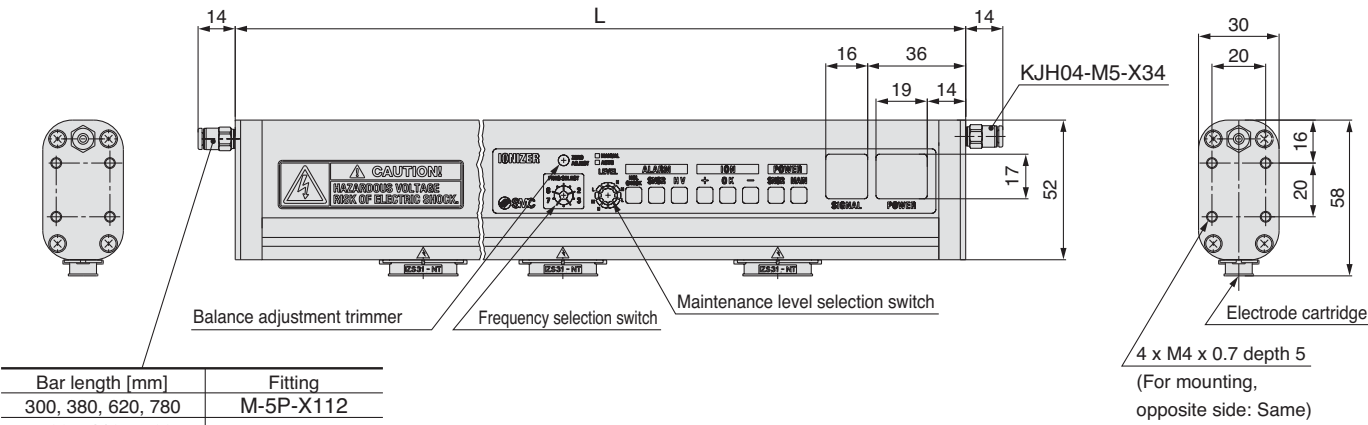
Sensor model	IZS31-DF (Feedback sensor)	IZS31-DG (Autobalance sensor [High-precision type])	IZS31-DE (Autobalance sensor [Body-mounting type])
Ambient temperature	0 to 50 °C		
Ambient humidity	35 to 85% Rh (With no condensation)		
Case material	ABS	ABS, Stainless steel	ABS
Vibration resistance	Durability 50 Hz Amplitude 1 mm XYZ each 2 hours		
Shock resistance	10 G		
Weight	200 g (Including cable)	220 g (Including cable)	110 g (Including cable)
Installation distance	10 to 50 mm (Recommended)	—	



For more product options and details see our specific catalogues or on-line information.

Dimensions

Ionizer / IZS31- □□□□ -□□



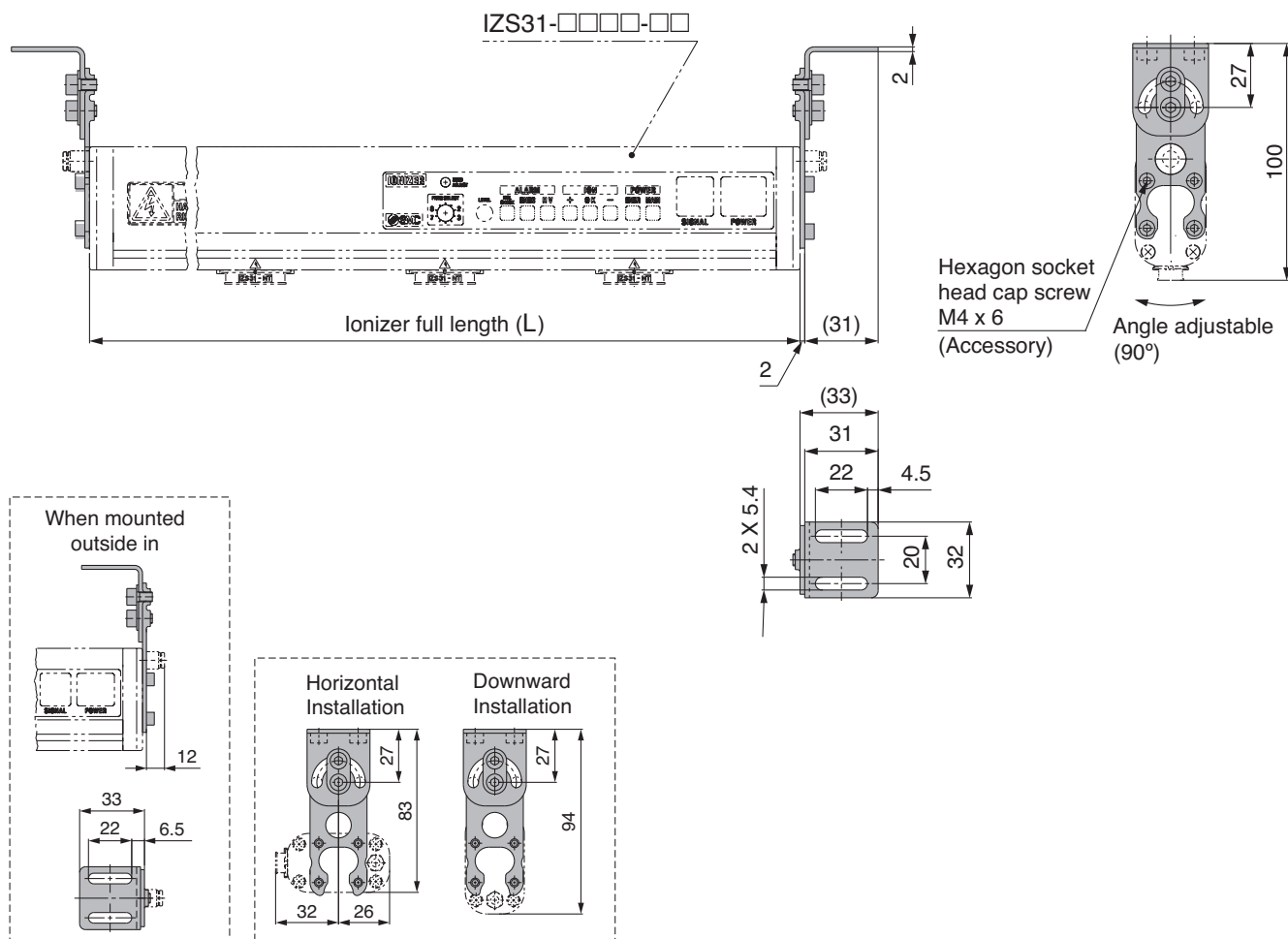
Electrode cartridge

n (Number of electrode cartridges),
L Dimension

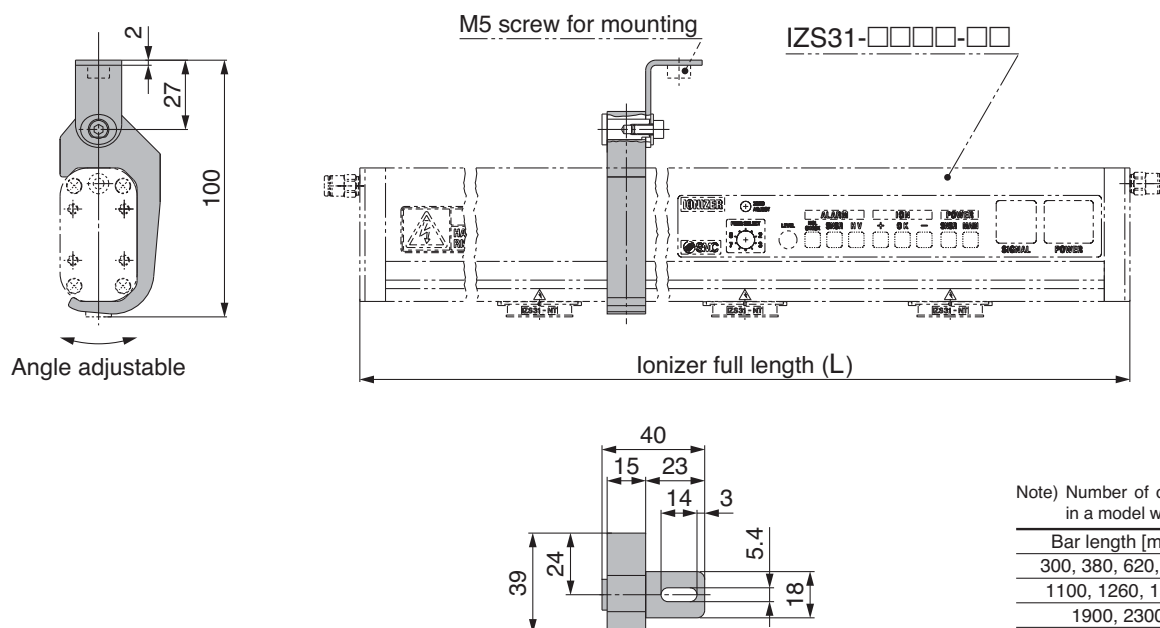
Part no.	n	L[mm]
IZS31-300	3	300
IZS31-380	4	380
IZS31-620	7	620
IZS31-780	9	780
IZS31-1100	13	1100
IZS31-1260	15	1260
IZS31-1500	18	1500
IZS31-1900	23	1900
IZS31-2300	28	2300

Dimensions

End bracket / IZS31-BE



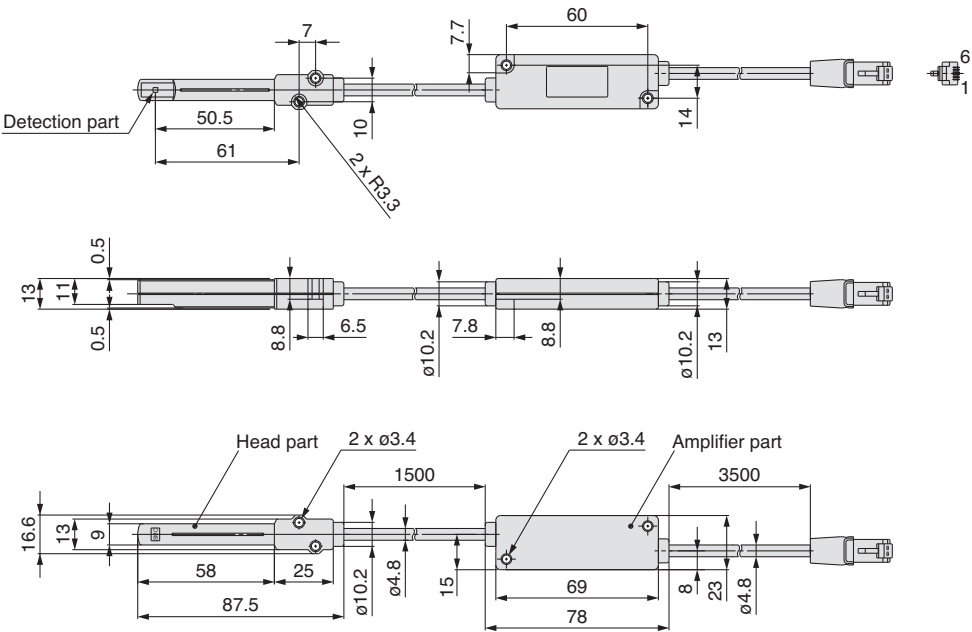
Center bracket / IZS31-BM



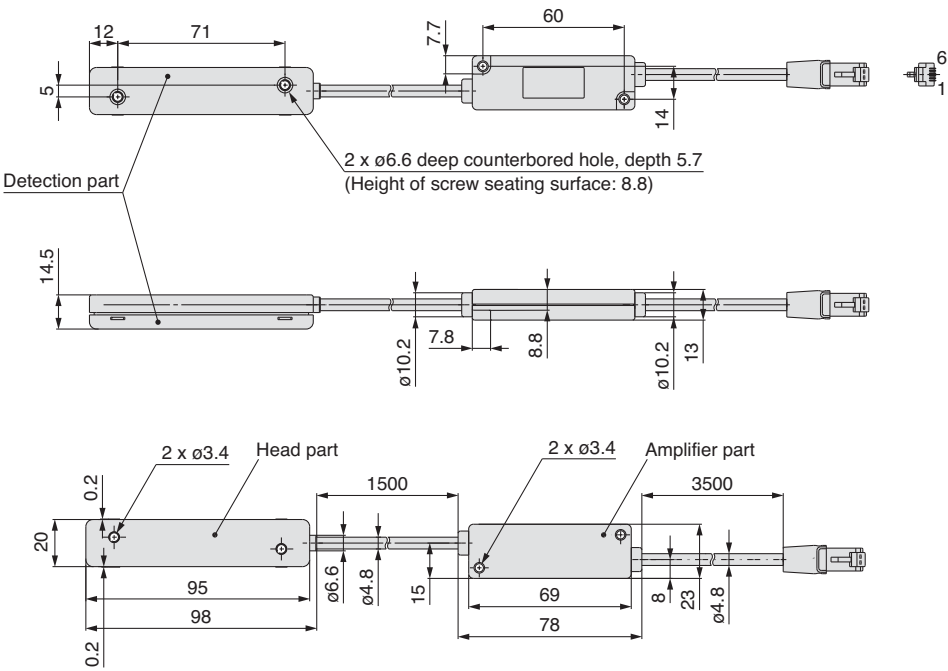
For more product options and details see our specific catalogues or on-line information.

Dimensions

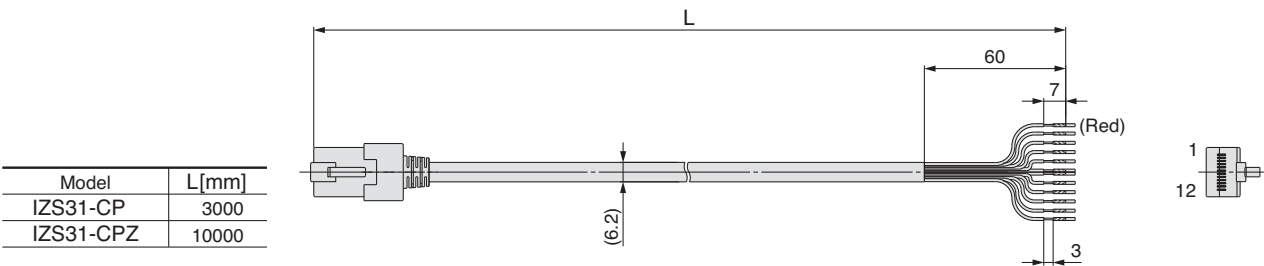
Feedback sensor / IZS31-DF



Autobalance sensor [High-precision type] / IZS31-DG

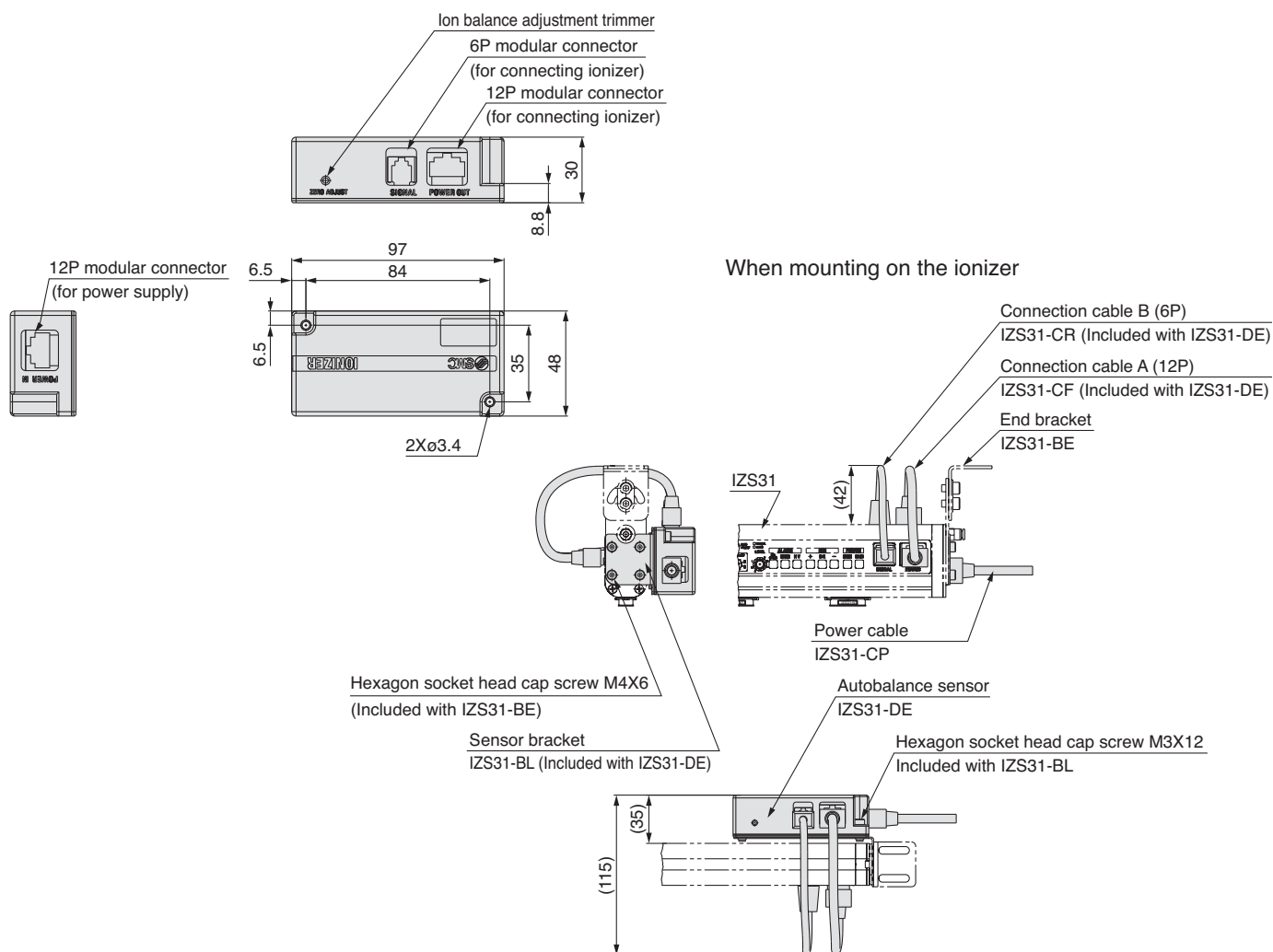


Power supply cable / IZS31-CP□

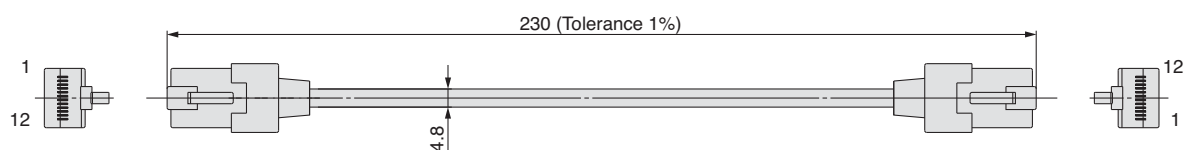


Dimensions

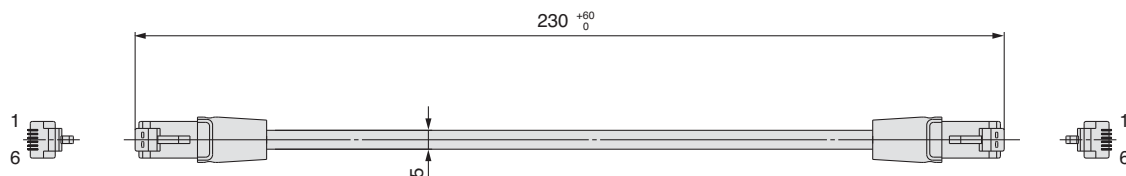
Autobalance sensor [Body-mounting type] / IZS31-DE



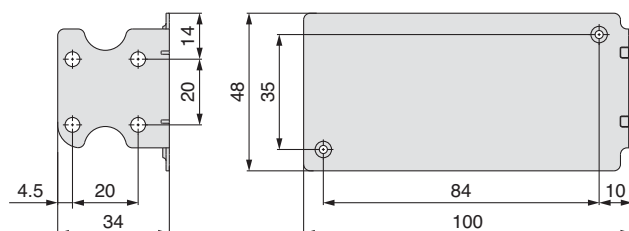
Connection cable A (12P) / IZS31-CF



Connection cable B (6P) / IZS31-CR



Sensor bracket / IZS31-BL



For more product options and details see our specific catalogues or on-line information.

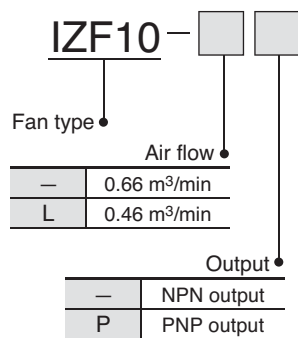
Ionizer/Fan Type Series IZF10

Features

- Air supply free. Portable device.
- Compact design (80 x 110 x 39 mm) and lightweight (280 g).
- Two types available:
 - Fast deionizing type: 1.5 seconds deionizing time.
 - Low noise type: 29 dB(A), (Measured at a distance of 300mm from the workpiece).
- Alarm function: high-voltage error, electrode needle contamination detector.



How to Order



Product Recommendation



Stocked items for fast delivery

IZF10-P

IZF10-LP



Related Products

Series IZD - Electrostatic Sensor - www.smc.eu

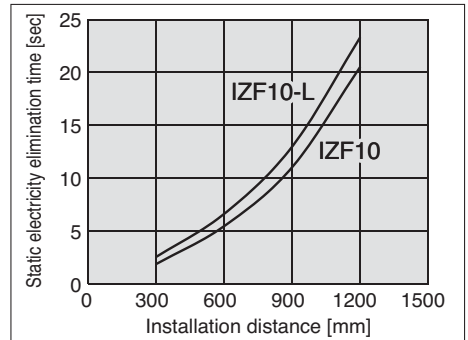
Series IZE - Electrostatic Monitor - www.smc.eu

Series IZH - Handheld Electrostatic Meter - www.smc.eu

Specifications

Ionizer model	IZF10-□□	IZF10-L-□□	IZF10-P-□□	IZF10-LP-□□
Ion generation method	Corona discharge type (DC)			
Power supply voltage	24 VDC ±10%			
Output	NPN open collector output		PNP open collector output	
Air flow	0.66 m³/min	0.46 m³/min	0.66 m³/min	0.46 m³/min
Power consumption	6.1 W or less	3.7 W or less	6.6 W or less	4.8 W or less
Ambient temperature	Operation: 0 to 50°C, Storage: -10 to 60°C			
Ambient humidity	Operation, Storage: 35 to 80% RH (No condensation)			
Weight	280 g (With bracket: 360 g)			

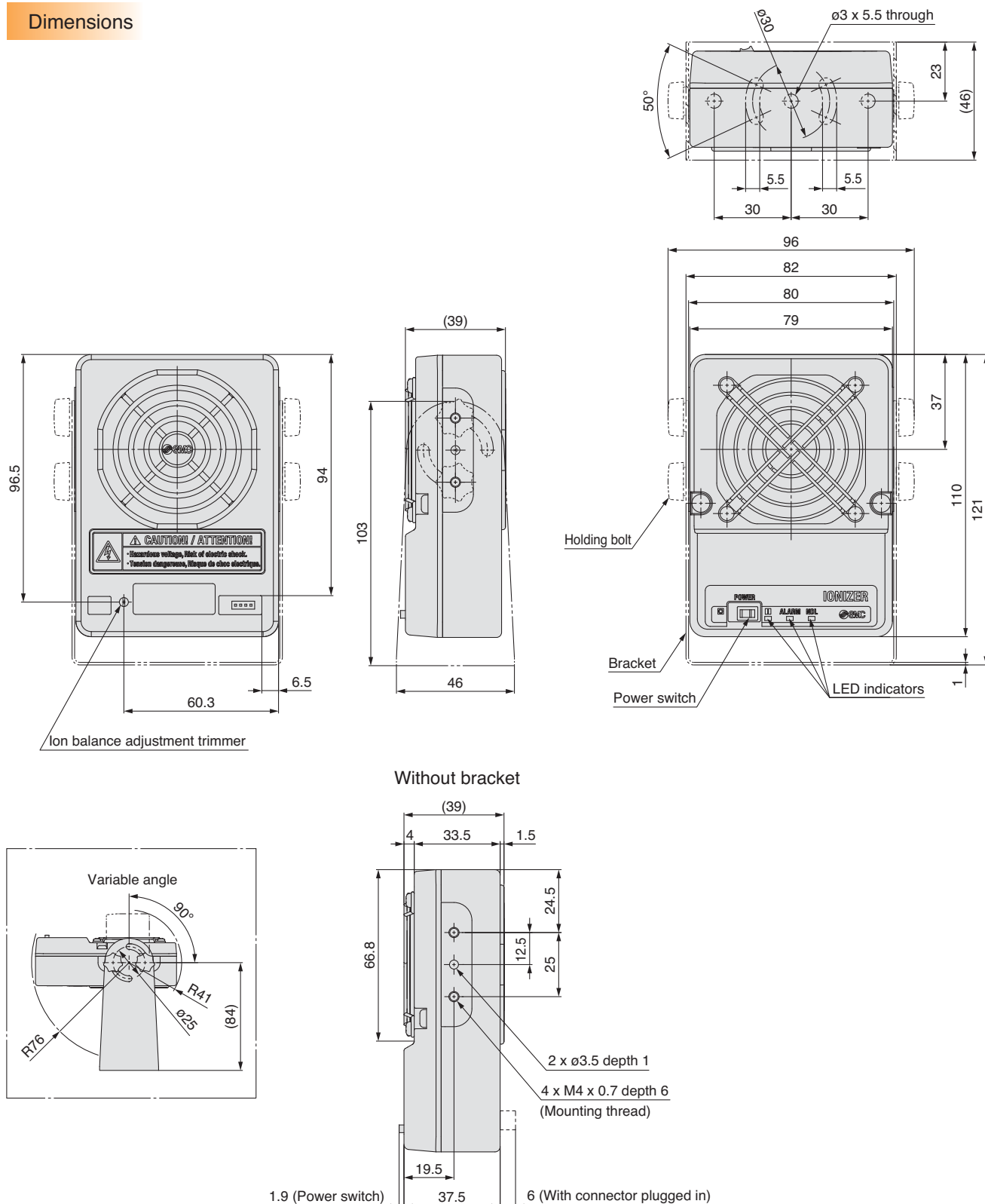
Installation distance and static electricity elimination time (1000 V → 100 V)



Accessories

Part number	Description
IZF10-CP	Power supply cable (3 m)
IZF10-CPZ	Power supply cable (10 m)
IZF10-CG2EU	Power supply cable with AC adapter
IZF10-B1	Bracket
IZF10-A1	Cartridge case

Dimensions



Wiring

Pin No.	Lead wire (colour)	Description
1	Brown	24 VDC
2	Blue	GND
3	Green	F.G.
4	Purple	Emergency output



For more product options and details see our specific catalogues or on-line information.