

ER-Q SERIES

Related Information

■ General terms and conditions..... F-7

■ Selection guide P.1157~

■ Glossary of terms..... P.1497

■ General precautions P.1501


panasonic.net/id/pidsx/global


Spot charge removal without compressed air

Miniature, ultralight, fast charge removal

A perfect fit for installation in other devices.

- Dimensions: W65 × H60 × D33 mm
W2.559 × H2.362 × D1.299 in
- Net weight: 110 g approx.
- Charge removal Time (± 1,000 V → ± 100 V):
1.5 sec approx. (typical)

Adjustable

Includes volume adjuster to change fan blowing to meet your needs.

Safe design

The LED display and output indicate maintenance timing and problems with the fan.

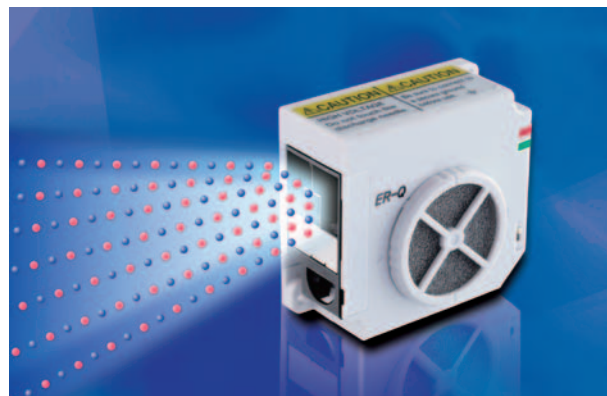
Simple maintenance

Assembled and disassembled in a single touch, reducing steps required to replace parts or clean filters.



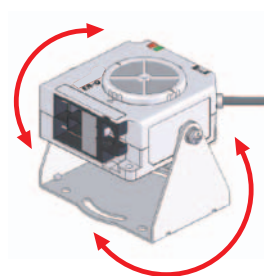
Discharge needle unit

Filter

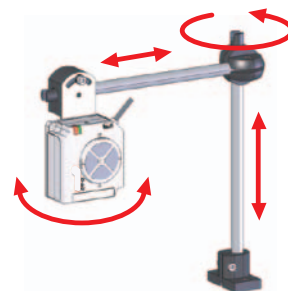


Freely mounted: No air hoses necessary

Mountable like a sensor in cell workbenches or inside devices.



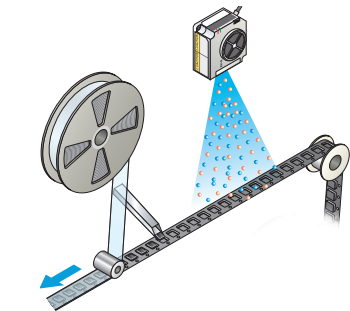
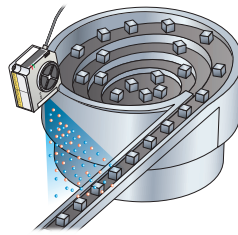
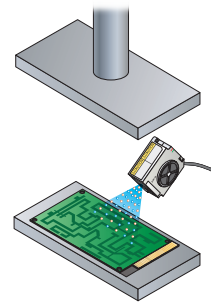
ER-QMS1



MS-AJ1-A

Selection Guide
Static Removers
Cleaning Box
Pulse Air-gun
Electrostatic Sensor

ER-X
ER-TF
ER-VS02
ER-VW
ER-Q
ER-F

APPLICATIONS**Removing dust on tape before taping****Prevention of part feeder clogging****Prevention of misalignment at crimping****ORDER GUIDE**

Type	Appearance	Change removal time ($\pm 1,000\text{V} \rightarrow \pm 100\text{V}$)	Ion balance	Model No.
Compact fan type		1.5 sec. approx. (Note)	$\pm 10\text{ V}$ or less (Note)	ER-Q

Note: Typical value at 100 mm 3.937 in from directly in front of air outlet, fan speed MAX., with no filter installed.

OPTIONS

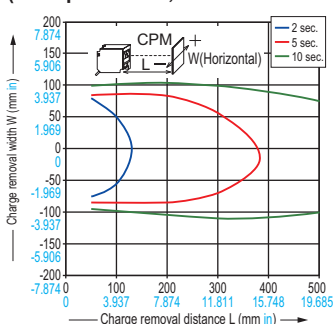
Designation	Model No.	Description
Mounting bracket	ER-QMS1	The ER-Q mounting bracket. Adjust the air output direction.
Connector-attached cable	ER-QCC2	Length 2 m 6.562 ft
	ER-QCC5	Length 5 m 16.404 ft
AC adapter	ER-VAPS1	• IN: 100 to 240 V AC, 50 / 60 Hz, 40 VA • OUT: 24 V DC, 750 mA • Ambient temperature: 0 to +40 °C +32 to +104 °F
Discharge needle unit	ER-QANT	Unit with tungsten needles (1 pc.)
Air filter	ER-QFX5	Fan intake filter (5 pcs. per set)

CHARGE REMOVAL CHARACTERISTICS (TYPICAL)

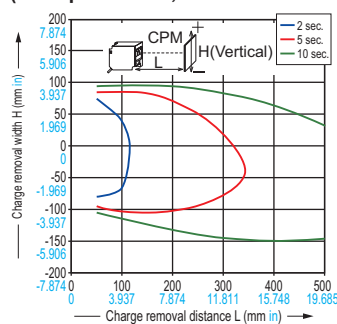
- Measured using a 150 mm $\times$ 150 mm 5.906 in $\times$ 5.906 in CPM (charge plate monitor). (At center of CPM)

**Charge removal field
(horizontal direction)**

(Fan speed MAX., filter is mounted)

**Charge removal field
(vertical direction)**

(Fan speed MAX., filter is mounted)

**PRECAUTIONS FOR PROPER USE**

Refer to p.1501 for general precautions.



- Never use this product in a device for personnel protection.
- In case of using devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.
- Do not use this product in places where there may be a danger of flammable or combustible items being present.

FIBER SENSORS

LASER SENSORS

PHOTO-ELECTRIC SENSORS

MICRO PHOTO-ELECTRIC SENSORS

AREA SENSORS

LIGHT CURTAINS / SAFETY COMPONENTS

PRESSURE / FLOW SENSORS

INDUCTIVE PROXIMITY SENSORS

PARTICULAR USE SENSORS

SENSOR OPTIONS

SIMPLE WIRE-SAVING UNITS

WIRE-SAVING SYSTEMS

MEASURE-MENT SENSORS

STATIC ELECTRICITY PREVENTION DEVICES

LASER MARKERS

PLC

HUMAN MACHINE INTERFACES

ENERGY CONSUMPTION VISUALIZATION COMPONENTS

FA COMPONENTS

MACHINE VISION SYSTEMS

UV CURING SYSTEMS

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ER-X**ER-TF****ER-VS02****ER-VW****ER-Q****ER-F**

SPECIFICATIONS

Type	Compact fan type
Item	Model No.
Charge removal time ($\pm 1,000$ V $\rightarrow$ ± 100 V)	1.5 sec. approx. (Note 2)
Ion balance	± 10 V or less (Note 2)
Power supply voltage	24 V DC $\pm 10\%$
Power consumption	200 mA or less
Discharge method	High-frequency AC method
Discharge output voltage	± 2 kV approx.
Max. fan speed	6.4 m/s (Note 2)
Max. fan volume	0.2 m ³ /min.
Output(CHECK, ALARM)	NPN transistor / open collector • Max sink current: 50 mA • Applied voltage: 30 V DC or less (between output terminal and 0 V) • Residual voltage: 1 V or less (at input current of 50 mA)
Output operation	Check: On when discharge check (Note 3) detected Off at all other times Error: Off when discharge error or fan error (Note 3) detected On at all other times
Short-circuit protection	Incorporated
Indicators	Discharge (DSC): Green LED, Alarm (ALARM): Red LED
Ozone generation amount	0.02 ppm or less (Note 2)
Ambient temperature	0 to +50 °C +32 to +122 °F (No dew condensation), Storage: -10 to +65 °C +14 to +149 °F
Ambient humidity	35 to 65% RH (No dew condensation), Storage: 35 to 65% RH
Vibration resistance	10 to 150 Hz frequency, 0.75 mm 0.030 in amplitude in X, Y and Z directions for two hours each
Grounding method	C (capacitor) grounding
Material	Enclosure: PBT, Discharge needle: Tungsten
Weight	Net weight: 110 g approx.
Accessory	Connector for wiring: 1 set [Manufactured by Molex: Housing (5557-08P), Terminal (5556T)]

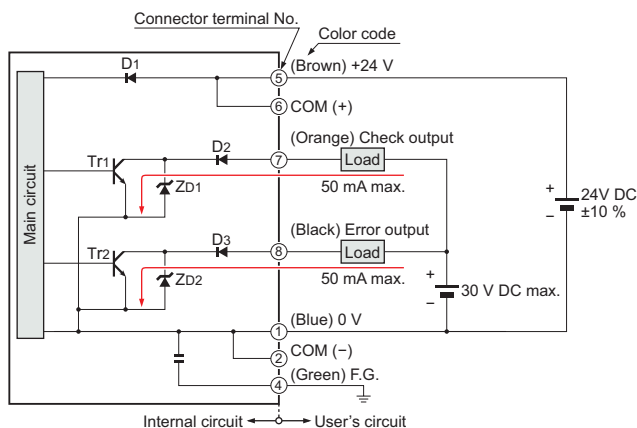
Notes: 1) Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +20 °C **+68 °F**.

2) Typical value at 100 mm **3.937 in** from directly in front of air outlet, fan speed MAX., with no filter installed.

3) Discharge check: Drop in discharging status detected. Discharge error: Abnormal discharge detected. Fan error: Fan operating problem detected.

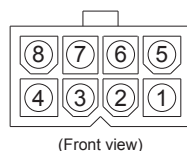
I/O CIRCUIT AND WIRING DIAGRAMS

I/O circuit diagram



Symbols ... D1: Reverse supply polarity protection diode
 D2, D3: Input protection diode
 ZD1, ZD2, : Surge absorption zener diode
 Tr1, Tr2, : NPN output transistor

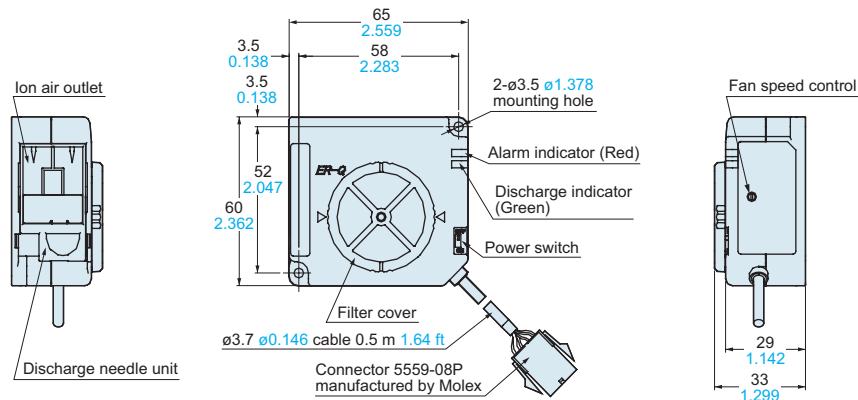
Connector terminal arrangement



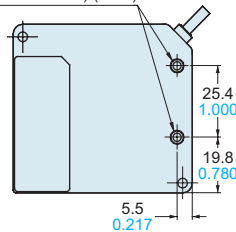
Terminal No.	Description	Color code
①	0 V	Blue
②	COM (-)	—
③	N.C. (no connection)	—
④	F.G.	Green
⑤	+24 V	Brown
⑥	COM (+)	—
⑦	Check output	Orange
⑧	Error output	Black

DIMENSIONS (Unit: mm in)

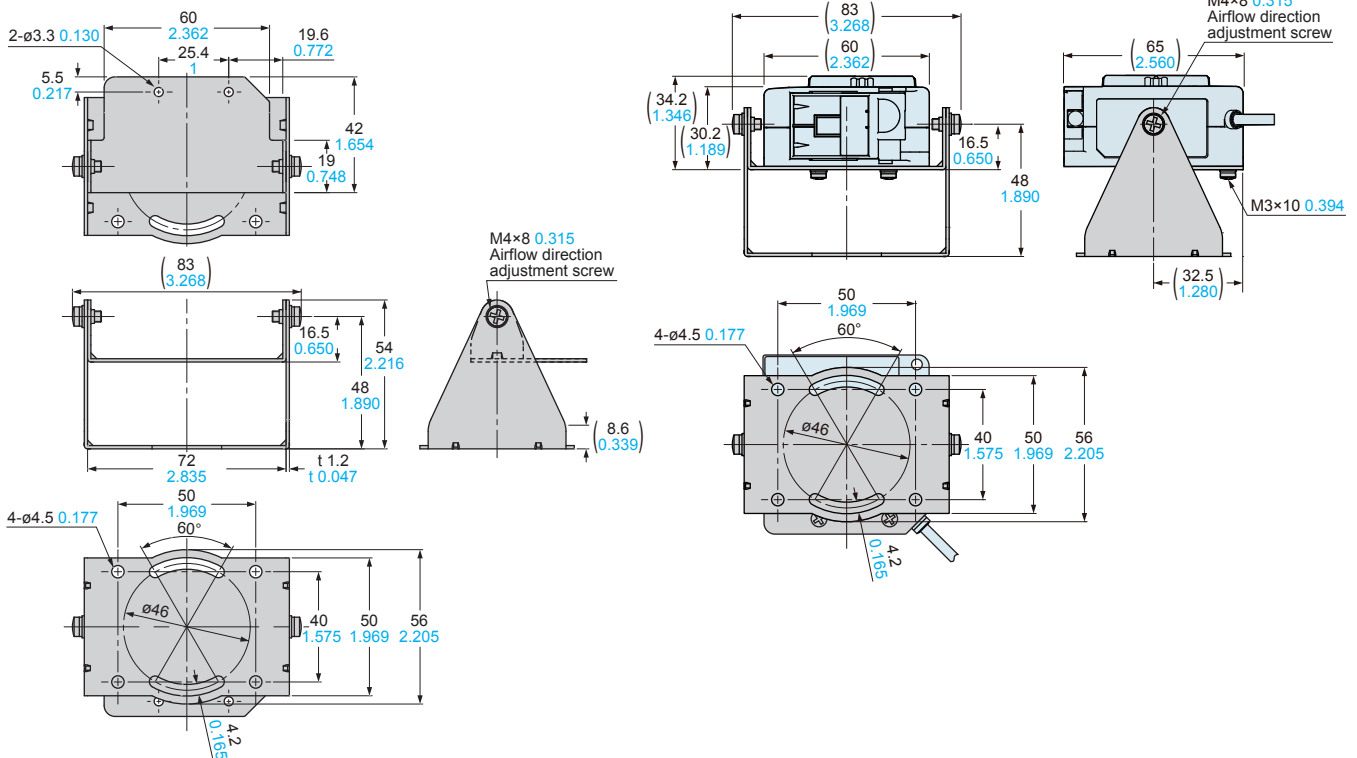
The CAD data in the dimensions can be downloaded from our website.

ER-Q**Ionizer main unit**

2-M3 screws (depth 10 0.394) (Note)



Note: Screw threads exclusive for mounting brackets. Do not use them in mounting with other products.
When mounting this product directly to a case or such, fix it with M3 screws using 2- $\phi 3.5$ $\phi 1.378$ mounting holes.

ER-QMS1**Mounting bracket (Optional)****Assembly dimensions**

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