

## ER-Q SERIES

## Related Information

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

■ Selection guide ..... P.1157~

■ Glossary of terms..... P.1497

■ General precautions ..... P.1501



Effective September 22, 2023  
Panasonic will discontinue the ER-Q  
Series

[panasonic.net/id/pidsx/global](http://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 ( $\pm 1,000 \text{ V} \rightarrow \pm 100 \text{ V}$ ):  
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.



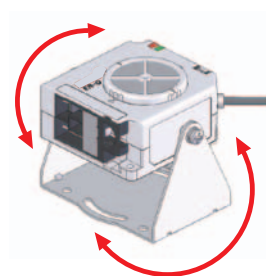
Discharge needle unit

Filter

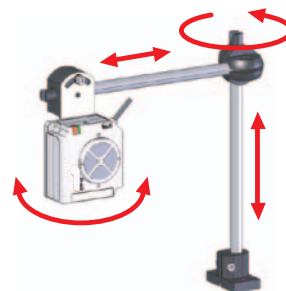


## Freely mounted: No air hoses necessary

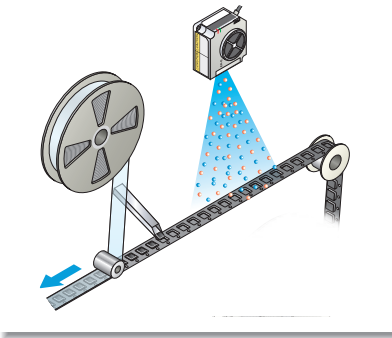
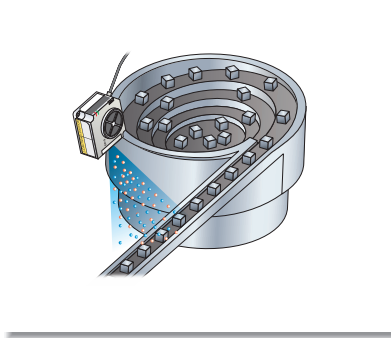
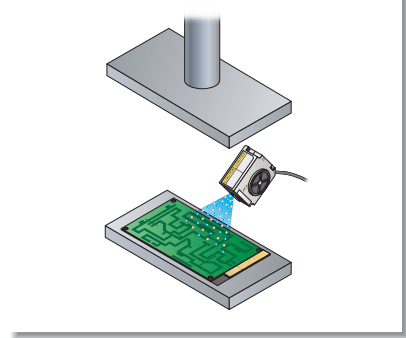
Mountable like a sensor in cell workbenches or inside devices.



ER-QMS1



MS-AJ1-A

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

Type	Appearance	Change removal time (±1,000V→±100V)	Ion balance	Model No.
Compact fan type		1.5 sec. approx. (Note)	±10 V or less (Note)	<b>ER-Q</b>

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

**OPTIONS**

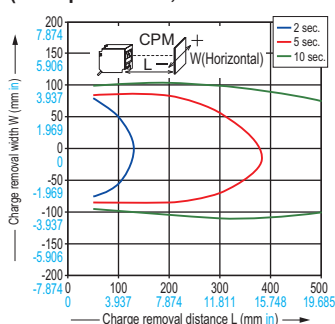
Designation	Model No.	Description
Mounting bracket	<b>ER-QMS1</b>	The <b>ER-Q</b> mounting bracket. Adjust the air output direction.
Connector-attached cable	<b>ER-QCC2</b>	Length 2 m 6.562 ft
	<b>ER-QCC5</b>	Length 5 m 16.404 ft
AC adapter	<b>ER-VAPS1</b>	<ul style="list-style-type: none"> <li>• IN: 100 to 240 V AC, 50 / 60 Hz, 40 VA</li> <li>• OUT: 24 V DC, 750 mA</li> <li>• Ambient temperature: 0 to +40 °C +32 to +104 °F</li> </ul>
Discharge needle unit	<b>ER-QANT</b>	Unit with tungsten needles (1 pc.)
Air filter	<b>ER-QFX5</b>	Fan intake filter (5 pcs. per set)

**CHARGE REMOVAL CHARACTERISTICS (TYPICAL)**

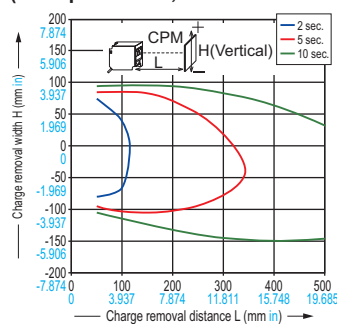
- Measured using a 150 mm × 150 mm 5.906 in × 5.906 in CPM (charge plate monitor). (At center of CPM)

**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  
SENSORSLASER  
SENSORSPHOTO-  
ELECTRIC  
SENSORSMICRO  
PHOTO-  
ELECTRIC  
SENSORSAREA  
SENSORSLIGHT  
CURTAINS /  
SAFETY  
COMPONENTSPRESSURE /  
FLOW  
SENSORSINDUCTIVE  
PROXIMITY  
SENSORSPARTICULAR  
USE  
SENSORSSENSOR  
OPTIONSSIMPLE  
WIRE-SAVING  
UNITSWIRE-SAVING  
SYSTEMSMEASURE-  
MENT  
SENSORSSTATIC  
ELECTRICITY  
PREVENTION  
DEVICESLASER  
MARKERS

PLC

HUMAN  
MACHINE  
INTERFACESENERGY  
CONSUMPTION  
VISUALIZATION  
COMPONENTSFA  
COMPONENTSMACHINE  
VISION  
SYSTEMSUV  
CURING  
SYSTEMSSelection  
GuideStatic  
RemoversCleaning  
BoxPulse  
Air-gunElectrostatic  
Sensor**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 $\rightarrow$ $\pm 100$ V)	1.5 sec. approx. (Note 2)
Ion balance	$\pm 10$ 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	$\pm 2$ kV approx.
Max. fan speed	6.4 m/s (Note 2)
Max. fan volume	0.2 m <sup>3</sup> /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 <b>+32 to +122 °F</b> (No dew condensation), Storage: -10 to +65 °C <b>+14 to +149 °F</b>
Ambient humidity	35 to 65% RH (No dew condensation), Storage: 35 to 65% RH
Vibration resistance	10 to 150 Hz frequency, 0.75 mm <b>0.030 in</b> 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)]

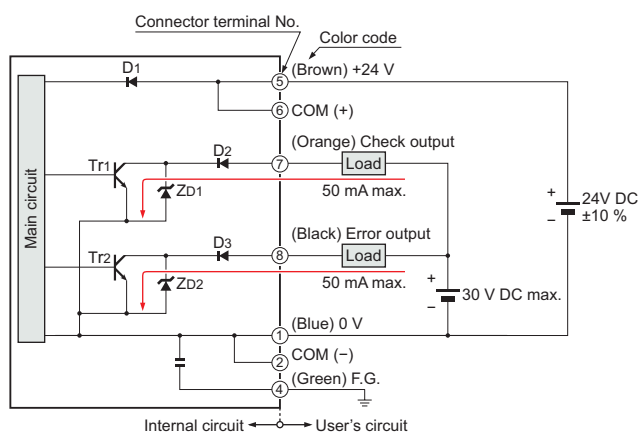
Notes: 1) Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +20 °C **+68 °F**.

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.

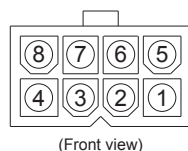
## I/O CIRCUIT AND WIRING DIAGRAMS

### 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

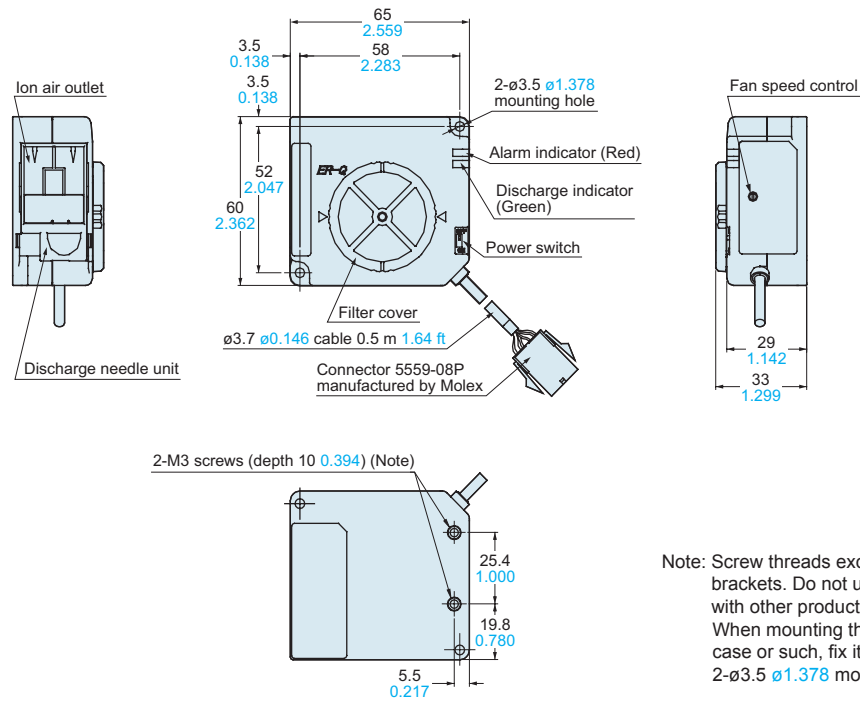
### Connector terminal arrangement



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

**DIMENSIONS (Unit: mm in)**

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

**ER-Q****Ionizer main unit****ER-QMS1****Mounting bracket (Optional)****Assembly dimensions**