R O S A H L

Instruction Manual

ELECTROLYTIC DEHUMIDIFIER

Element unit

「S-5T1　S-7T1　S-10T1」

NOTICE

1. Please read this manual before you use the dehumidifier, and use it correctly.
2. The person who operates,manages and maintains the dehumidifier must keep this manual.

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Contents

For proper usage

●Supply DC (direct current) 3V to a dehumidifying element. **DO NOT reverse the polarity.** Inverting the polarity will reverse dehumidification and humidification, which will cause leading to damage of the dehumidifying element.	Prohibited
●DO NOT expose the moisture discharging hole to wind and rain directly. When using outdoors, please attach the rainproof cover with anti-insect net (perforated metal) (optional) to protect from water or insects. (Refer to the installation method and location)	Prohibited
●Keep the moisture discharging side unsealed and well ventilated.	Prohibited
●DO NOT put pin or wire etc. into the moisture discharging hole. It may cause an electric shock and the element may be damaged or deteriorate.	Prohibited
●**DO NOT use a silicon-based sealing agents** as they affect the airtightness of container. They quickly degrades the performance of the dehumidifying element.	Prohibited
●**DO NOT use with vapor phase corrosion inhibitor** or insect repellent. DO NOT use in an environment with a lot of organic gas. They may degrade the performance of the dehumidifying element.	Prohibited
●DO NOT attempt to disassemble, repair or modify the dehumidifier. It may cause an electric shock and the performance deterioration, as this may damage it.	Prohibited

Name of Each Part

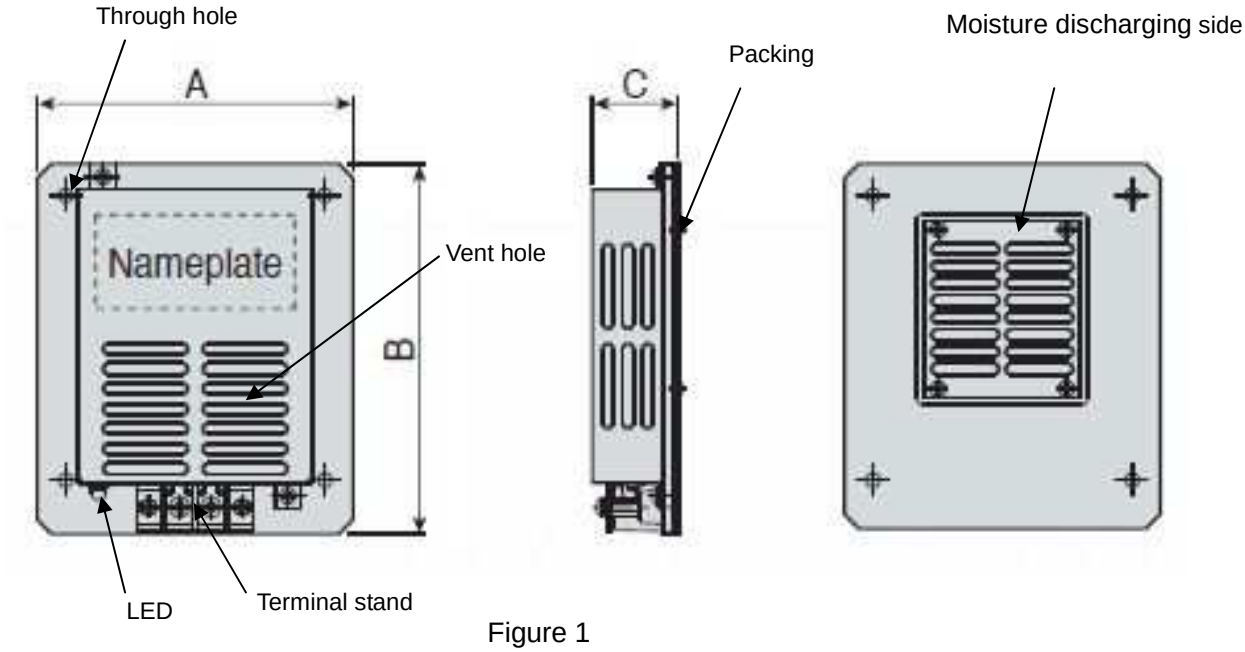

Figure 1

Installation Method and Location

1 It is preferable that the dehumidifier is installed on the center of the inside(*1) surface of the container as to read the nameplate upright with packings to ensure airtightness of the container.
(*1) But when it is External type (special specifications), install the product on the outside surface of a container.

2 Please never install the device on the ceiling or on the floor to avoid its failures.

3 Make a moisture discharging hole and installation holes shown in Figure 2-3 and Table 1-2 on the container.

4 Please fix Element unit with the packing firmly with 4-8 screws in the container.
When using outdoors, please attach the rainproof cover with anti-insect net (perforated metal) shown in Figure 4 to protected from water or insects.

5 Make a sealed moisture-impermeable container as much as possible to bring a high performance into the dehumidifying element.

6 Connect the product with the power supply.

7 Connect FG of the power supply to ground.

Attention

(1) Please use the specified electric wire for the power supply connection.
(Refer to page 4)
(2) The customer should prepare electric wire, ground cable, installation screw, rainproof cover and anti-insect net(perforated metal).

●Panel boring dimensions

Table 1　Element unit

Unit name	Model name	Installation dimensions							Moisture discharging hole dimensions		Remarks
		a	b	c	d	e	f	g	h	k	
Element unit	S−5T1	91	40	60	—	—	—	5	60	67	Figure 2
	S−7T1	118	50	50	—	—	—	5	80	87	Figure 2
	S−10T1	148	43.5	56.5	100	75	88	5	110	117	Figure 3

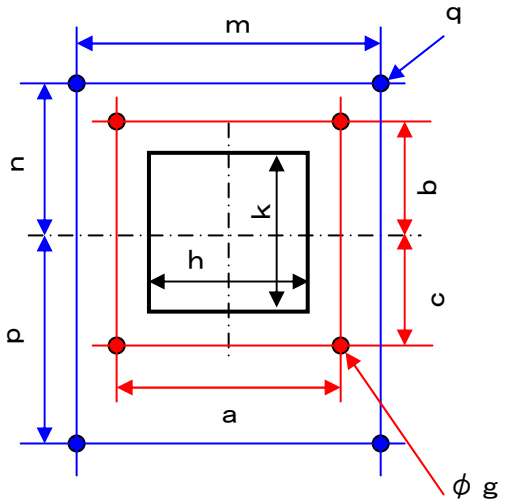

Figure 2

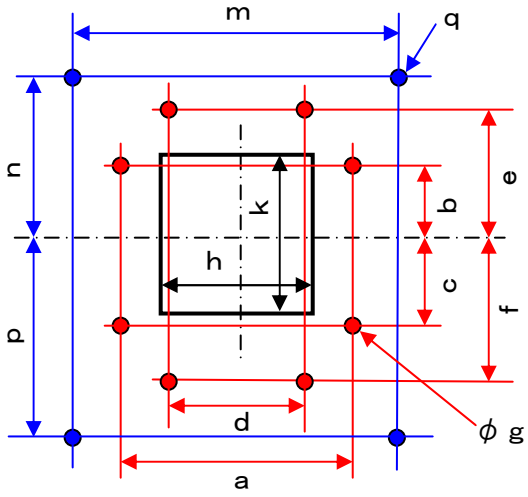

Figure 3

Table 2　Rainproof cover

Product name	Applicable model name ※1	Rainproof cover installation dimensions				Remarks
		m	n	p	q	
Rainproof cover ※2	For RDH-5J1	135	55	70	M4screw	Figure 2
	For RDH-7J1	175	65	85	M4screw	
	For RDH-10J1	225	90	90	M4screw	Figure 3

※1 Select a suitable rainproof cover for Element unit.
Example: S-5T1 → For RDH-5J1

※2 Rainproof cover is not usable to a product of "External Type".

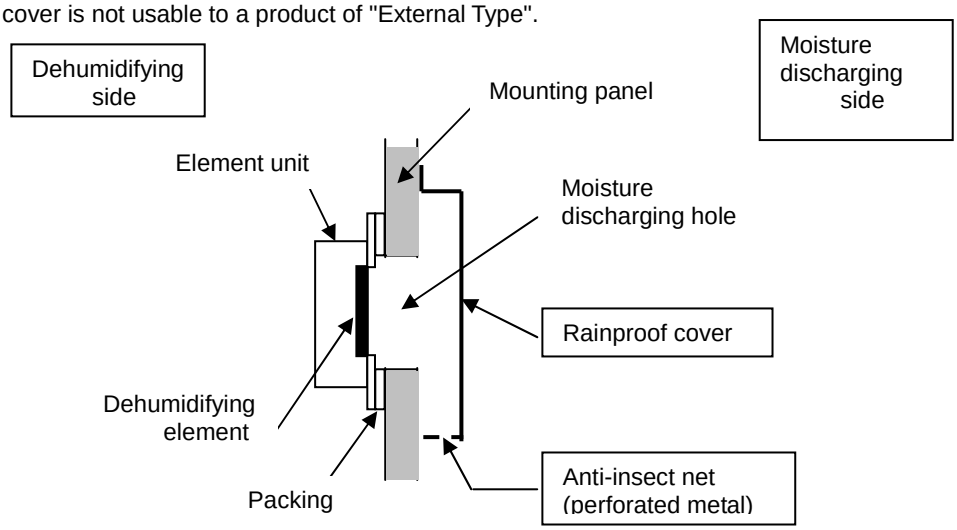

Figure 4

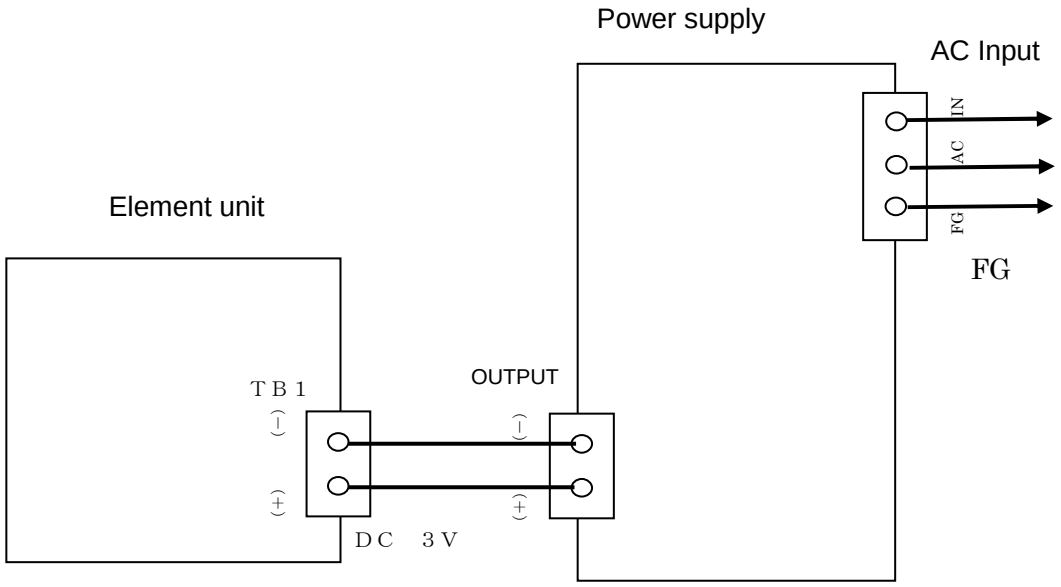

Figure 5 Connection diagram between the Element unit and Power supply

Precautions for Use

1. Regarding sealing agents

Sealing agents should not be silicon-based.
(Silicon-based sealing agents generate oxime gas and siloxane gas during hardening, which quickly degrades the performance of the dehumidifying element.)
Recommended products: modified silicon caulk (Konishi) or acrylic caulk (Konishi)
Modified silicon caulk is mainly composed of polyurethane.
Consult us if using a sealing agent not specified above.

2. Regarding power supply

Strictly follow the following instructions about power supply to the Element unit.

(1) DO NOT reverse the polarity. Please check the indication of polarity for the product.
Inverting the polarity will reverse dehumidification and humidification, which may result in an adverse effect on the contents in the container and also will cause chemical reaction consuming the porous electrode at the cathode side and leading to damage of the element.

(2) The dehumidifying element naturally causes a relatively large starting current when the power is turned on. Therefore, the specifications below are recommended for the power supply.

(3) Use a dedicated power supply for each dehumidifying element
(When multiple dehumidifying elements are connected in series or parallel, the breakage of one element may cause all other elements to be disabled.)

(4) The length of the electric wire between a power supply unit and an element unit : less than 2m
The electric wire : 300V vinyl insulation electric wire 2mm^2.
(The wire 1.25mm^2 is available, when the length of the electric wire is less than 50cm.)

Table 3 Recommended power supply specifications

	Specifications
Rated output voltage	3VDC
Rated output current	10A
Overcurrent protection function (constant or fold-back current limiting)	Required Note: When fold-back current limiting is employed, the dehumidifying element may not function correctly.
Overvoltage protection function	Required
Output voltage variation	0.1V or less
Ripple noise	0.2V or less
Others	In accordance with the specifications of commercially available power supply

Confirmation Items before Using

Please confirm the following items surely before turning on the power.

1. Is the power supply DC3V?
2. Is the polarity of the Element unit correct?
3. Does not a dehumidifying element get wet?

Usage

1. Please supply DC3V to the Element unit.
2. Please confirm lighting of the LED of the Element unit. (It is a usage state)
   ※It might take 3-5 minutes to light the LED on the initial stage of turning on the power supply. This is not abnormal.
3. Please adjust a supply voltage in the range of DC2.9 - 3.1V in the element unit terminal stand after the LED of the Element unit light for 15-20 minutes at the first time of installation.
   (The dehumidifying element naturally causes a relatively large starting current when the power is turned on. but this is not abnormal.)

●Emergency

Please confirm the following matters when the LED doesn't light.

(a)Is the Power supply and the Element unit connected?

(b)Is not the polarity of the wiring between the Power supply and the Element unit wrong?

Please let agent or us know when you confirm the matter mentioned above and still LED does not turn on for a long time.

Product Specification

Model name	S-5T1	S-7T1	S-10T1
Dehumidifying capacity(g/day)∗1	8	16	29
Applicable volume (m^3) ∗2	Up to 1	UP to 2	Up to 4
Element terminal voltage (v)	3VDC		
Power consumption (w) ∗3	3	4	8
Dimensions (mm) ∗4	111×130×30	138×150×30	168×185×30
Weight (kg)	0.4	0.5	0.7
Operating temperature (℃)	-10 to 50		

∗1 The initial value at the temperature of 30℃ and humidity 60%RH.
(The dehumidifying capacity will degrade during use. How much it degrades depends on the operating environment and conditions. If any signs of abnormality are seen, early replacement is recommended.)

∗2 The applicable volume is for a sealed, moisture-impermeable container, and may vary depending on the material of the container, state of sealing and required humidity.

∗3 The annual average power consumption in average condition in Japan. (20℃ ,60%RH)

∗4 The dimensions of AxBxC in the figure 1.