



MS SERIES

Ultrasonic Atomization Modules

Technical Datasheet, Installation, Operation & Maintenance Guide

PRODUCT SCOPE MS-01 / MS-02 / MS-03 / MS-04 / MS-06 / MS-08 / MS-10 / MS-12



Typical MS multi-head module with matched waterproof power supply and accessories

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For OEM integration and qualified installers. Specifications may be updated without notice.

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HOW TO USE THIS GUIDE Sections 1–3 support product selection. Sections 4–8 cover installation and operation. Sections 9–11 cover maintenance, troubleshooting and customer FAQs.

Document conventions

Symbol	Meaning
IMPORTANT	Information required for correct installation or reliable operation.
WARNING	A condition that can cause equipment damage, electric shock or unsafe operation.
Typical	A reference value measured under stated conditions; not a guaranteed minimum.

1. Product Overview

PHIMAXX MS Series modules use high-frequency ultrasonic transducers to convert clean water into a fine mist. The series is intended for OEM humidification equipment, produce displays, cultivation systems, environmental chambers, industrial process equipment and other applications where the equipment designer provides the tank, airflow and controls.

1.1 Key features

- Eight sizes from 1 to 12 atomizing heads; typical output 0.5–7.0 L/h.
- Typical ultrasonic frequency 1.7 MHz ($\pm 5\%$) and fine droplet size up to approximately 10 μm .
- 304 stainless-steel body, replaceable ceramic discs and built-in low-water sensing on multi-head modules.
- Matched waterproof DC power supply and interconnection cable:
MS-01: 1.2 m
MS-02, MS-03, MS-04, MS-06, MS-08, MS-10 and MS-12: 5 m
- Suitable for staged capacity control by switching complete modules.

1.2 Important limitations

CLEAN-WATER PRODUCT Standard modules are designed for clean water. Do not assume compatibility with disinfectants, essential oils, nutrients, acids, alkalis or process chemicals. Optional glass-coated discs may be available for weak acidic or alkaline liquids only after written compatibility confirmation and application testing.

NOT A COMPLETE HUMIDIFIER The module does not by itself control room humidity. The OEM system must provide a water tank, stable water level, safe electrical enclosure, airflow/mist removal and, where required, a humidity controller.

2. Model Selection

2.1 Selection table

Model	Head s	Typical output (L/h)	Rated DC input	Matched PSU power	Module size L×W×H (mm)	Typical tank depth with standard float
MS-01	1	0.5–0.7	24 VDC	50 W	46 × 46 × 35	≈60 mm
MS-02	2	0.8–1.3	36 VDC	80 W	125 × 42 × 26	≈80 mm
MS-03	3	1.2–1.8	36 VDC	120 W	171 × 42 × 26	≈80 mm
MS-04	4	2.0–3.0	36 VDC	150 W	141 × 85 × 28	≈80 mm
MS-06	6	3.0–4.0	36 VDC	200 W	182 × 85 × 28	≈80 mm
MS-08	8	4.0–5.0	45 VDC	300 W	237 × 85 × 28	≈80 mm
MS-10	10	5.0–6.0	45 VDC	350 W	279 × 85 × 28	≈80 mm
MS-12	12	6.0–7.0	45 VDC	400 W	328 × 85 × 28	≈80 mm

2.2 Sizing method

1. Determine the required net evaporation or humidification load in L/h.
2. Divide by the selected module's typical output under the intended water and temperature conditions.
3. Add 10–20% capacity margin for water quality, aging, airflow losses and control turndown.
4. For variable demand, use several smaller modules and stage them independently.

DO NOT SIZE BY FLOOR AREA ALONE Room area is only a rough marketing reference. Actual demand depends on air changes, temperature, target RH, infiltration, product moisture load and exhaust airflow.

3. Common Technical Data

Parameter	Typical / specified value	Design note
Ultrasonic frequency	1.7 MHz $\pm$ 5%	Model-dependent production tolerance.
Droplet size	$\leq 10 \mu\text{m}$ typical	Measured near the source; distribution changes with airflow.
Water temperature	5–45 °C	Avoid freezing, very hot water and rapid thermal shock.
Recommended water pH	5–8	Clean water only unless compatibility is confirmed.
Body material	304 stainless steel	Keep clean; do not use metal brushes.
Operating submergence	Approx. 28–35 mm above the ceramic disc surface, model dependent	Refer to the applicable model specification. Do not confuse operating submergence with total tank-water depth.
Low-water protection	Built-in low-water sensing/protection, model dependent	Refer to the applicable model specification in Appendix A. Protection level is measured above the ceramic disc surface.
Service life	3,500–5,000 h typical	Clean-water reference; scale and dry running shorten life.
Protection	Low-water / thermal protection where configured	Protection is a backup, not a substitute for correct installation.

WATER-LEVEL REFERENCE The operating water level is measured vertically from the ceramic disc surface to the water surface. Depending on the model, the typical operating submergence is approximately 28–35 mm. When the standard float assembly is used, the required total tank-water depth may be approximately 60–80 mm because it is measured from the tank bottom. Always follow the specification for the applicable model. Dimensions measured from different reference points must not be used interchangeably.

4. Supplied Components and Options

4.1 Standard configuration

- MS atomization module.
- Matched waterproof power supply of the voltage and wattage listed in Section 2.
- Interconnection cable or integrated lead, depending on model.
- Float ring for MS-01 or standard buoy/float supports for multi-head modules, according to the order configuration.

4.2 Optional system components

- Humidity controller and RH sensor.
- Rated relay or contactor for staging one or more power supplies.
- Replacement ceramic discs and service tool.
- Float valve, filtration system and water-level components.
- Glass-coated discs for approved special-liquid applications.

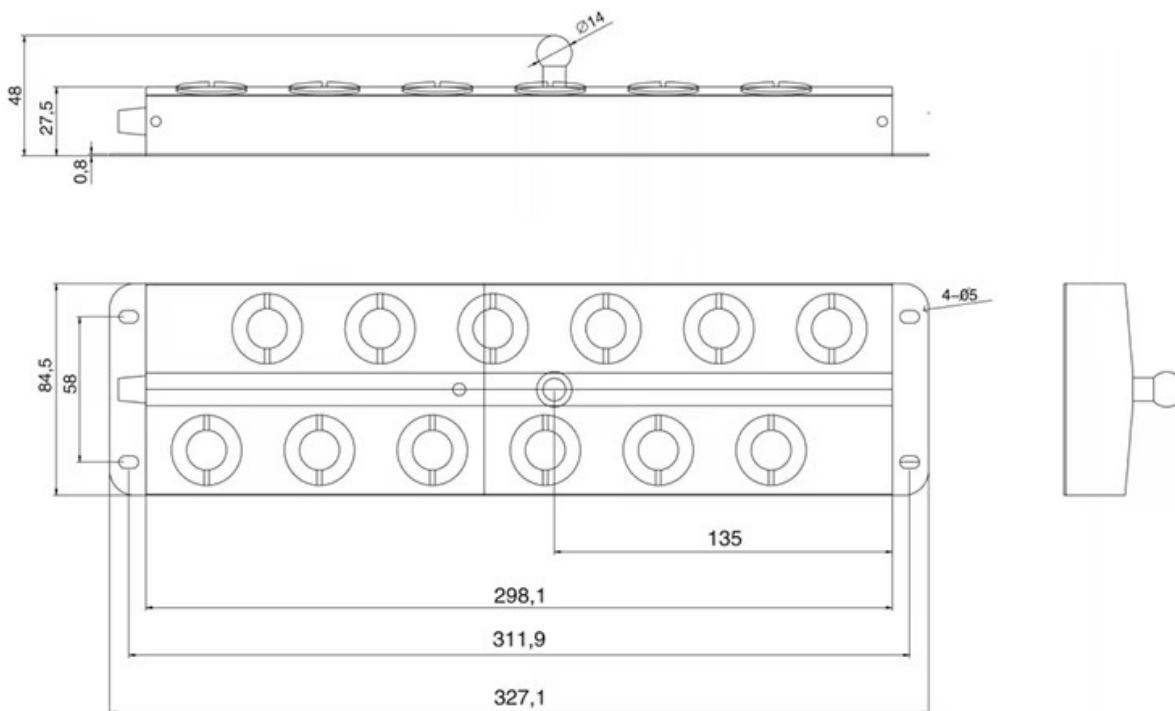


Figure 4-1. Example dimensional drawing format (MS-12 shown). Refer to Appendix A for the applicable model.

5. Mechanical and Water Installation

5.1 Tank and module placement

- Use a clean, corrosion-resistant tank with a level base and sufficient freeboard to prevent splash or overflow.
- Keep the ceramic disc faces horizontal. Do not operate the module tilted, inverted or pressed against the tank wall.
- Provide space around the module for water circulation and service removal.
- Position the float system so turbulence, return water and incoming make-up water do not cause rapid level cycling.
- Keep the low-water sensor unobstructed and away from trapped air bubbles.

5.2 Set and verify the water level

5. With power OFF, place the module and supplied float components in the tank.
6. Fill with clean water and allow the float system to stabilize.

7. Measure vertically from the ceramic disc surface to the water surface. Set the operating submergence specified for the applicable model in Appendix A (typically approximately 28–35 mm).
8. Confirm the module remains covered at the lowest operating level and that the tank cannot overflow at the highest level.
9. Run the system and recheck the level under actual inlet flow and mist removal conditions.

CRITICAL Too little water can stop atomization or damage discs. Excessive submergence sharply reduces mist output and may produce large droplets or no visible mist.

5.3 Install the supplied float supports

10. Confirm that the float ring or float supports match the ordered module and are free from cracks, deformation or water ingress.
11. For MS-01, fit the supplied float ring around the cylindrical module so the ceramic disc faces upward and the module can rise and fall freely.
12. For multi-head modules, position the supplied float supports symmetrically on both sides of the module. Keep the module level and do not attach a float to the low-water sensor or to a disc retaining ring.
13. Route the module cable so it does not pull, tilt or restrict movement. Keep the connector and power supply outside the tank and dry.
14. Fill the tank slowly. Confirm that the floats rise freely without touching the tank wall, inlet pipe or other components, and that incoming water does not create rapid level cycling.
15. After the float system stabilizes, measure the water depth above the disc surface and adjust the float position or tank level as required. Test both the normal operating level and the low-water shutoff before commissioning.

IMPORTANT The supplied float ring/supports keep the module at its operating submergence; they are not a make-up-water control valve. For automatic filling, install a separate float valve or approved water-level control system.



Figure 5-1. Installing the supplied float supports on a multi-head atomization module. Position the floats symmetrically and keep the module level.

5.4 Mist removal and condensation management

- Use smooth, corrosion-resistant ducting and keep the mist path as short and straight as practical.
- Provide adequate airflow across the tank. Do not direct high-velocity air onto the water surface.
- Slope ductwork or provide drainage so condensed water returns safely and cannot collect over the module.
- Avoid low points, sharp bends and undersized outlets that trap mist and cause dripping.

6. Electrical Integration

ELECTRIC SHOCK RISK Mains wiring and grounding must be completed by a qualified person in accordance with local electrical codes. Disconnect and lock out power before installation or service.

6.1 Basic connection

Connection order	Requirement
1. AC supply → matched PSU	Use the PSU input voltage shown on its nameplate. Protect the circuit with a correctly rated disconnect and overcurrent device.
2. Protective earth	Ground the power-supply enclosure and the finished equipment as required by applicable codes.
3. PSU DC output → module	Use the supplied waterproof connector. Align, fully seat and tighten it; keep the connection dry.
4. Module → water tank	Place the low-voltage module in the tank only after all dry-side electrical work is complete.

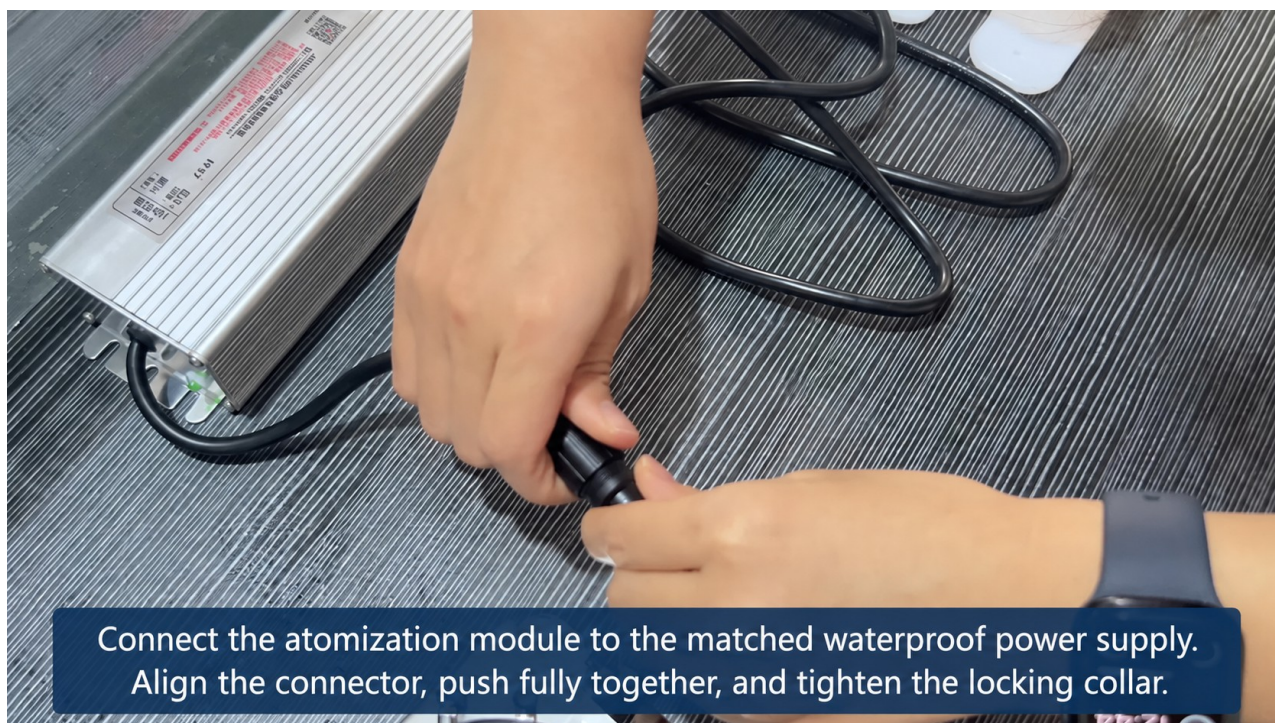


Figure 6-1. Align and fully secure the waterproof DC connector between the atomization module and its matched power supply.

NEVER CONNECT TO AC DIRECTLY The atomization module is a low-voltage DC load. Do not connect it directly to mains power, a dimmer, an unapproved driver or a power supply of the wrong voltage.

6.2 Multiple modules and capacity control

- Use one correctly sized matched power supply per module unless PHIMAXX provides a written shared-supply design.
- Do not connect the DC outputs of separate power supplies in parallel.
- For staged output, switch complete power supplies on the AC side with rated relays/contactors, or use an approved controller.
- Account for starting current, cable length, enclosure temperature and power-supply ventilation.
- Do not adjust mist output by reducing DC voltage or applying arbitrary PWM unless the exact method is approved in writing.

7. Commissioning and Operation

7.1 Pre-start checklist

Check	Done
Tank clean, level and leak-free	☐
Correct model and matched PSU	☐
Protective earth and circuit protection complete	☐
Model-specific operating submergence confirmed against Appendix A (typically approximately 28–35 mm above the ceramic disc surface)	☐
Low-water sensor clear	☐
Water clean; filter/RO installed where required	☐
Mist outlet and condensate path unobstructed	☐
All connectors seated, tightened and dry	☐

7.2 Start-up

16. Fill the tank and verify stable water level before energizing the module.
17. Start the airflow or mist-removal fan.
18. Energize the matched power supply.
19. Confirm uniform fine mist from all active heads within several seconds.
20. Check for leaks, abnormal noise, excessive heating, splashing and condensation.

7.3 Normal operation

During operation, maintain stable water level, clean water and adequate airflow. Output may change as water temperature rises or mineral deposits form. Continuous operation is possible only when water supply, cooling, drainage and maintenance are designed for the duty.

7.4 Shutdown

21. Switch off power to the atomization module.
22. Keep the mist-removal fan running long enough to clear residual mist and condensation from the equipment and ducting.
23. For extended shutdown, disconnect power, drain the tank, clean the module and leave the tank dry.

8. Water Quality and Application Limits

Water / liquid condition	Recommendation
Clean, low-mineral water	Preferred. Use filtered water and keep the tank covered from contamination.
Hard tap water	Not recommended for long-term use. Install suitable filtration, softening or RO treatment; increase inspection frequency.
Stagnant or biologically contaminated water	Do not operate. Drain, clean and sanitize the system using a method compatible with all materials; rinse thoroughly.
Essential oils / fragrance	Do not use in a standard module unless written compatibility approval is provided.
Disinfectant / nutrient / process liquid	Do not assume compatibility. Provide composition, concentration, temperature and exposure time for review.
Weak acid or alkali	Optional glass-coated discs may be considered after compatibility testing. The stainless body, seals and adhesive must also be verified.

WATER TREATMENT RO or other low-mineral water treatment reduces scale and cleaning frequency. Water treatment does not eliminate the need for regular tank cleaning and hygienic system design.

9. Inspection, Cleaning and Service

9.1 Recommended schedule

Interval	Task
Before each start / daily	Check water level, mist output, leaks, unusual noise and unobstructed airflow.
Every 2 weeks	Inspect and clean the tank; inspect discs, sensor and module for scale or debris. Clean sooner in hard or contaminated water.
Every 1–3 months	Inspect connectors, cable condition, float mechanism, filter condition, drainage and power-supply ventilation.
As required	Descale the module when output falls, mist becomes uneven or visible mineral deposits appear.
Before long storage	Disconnect, drain, clean, rinse, dry and store in a clean, dry location.

9.2 Cleaning procedure

24. Disconnect and lock out mains power. Confirm the module and power supply are de-energized.
25. Remove the module carefully. Do not lift it by the cable or strike the ceramic discs.
26. Rinse loose debris with clean water.
27. For mineral scale, soak the affected area for 10–15 minutes in a mild citric-acid solution suitable for the installation. Do not immerse dry-side connectors.
28. Use a soft cloth or soft nylon brush. Do not use metal tools, abrasives, high-pressure spray or ultrasonic cleaning on the assembly.
29. Rinse thoroughly with clean water, inspect the discs and sensor, then reinstall.
30. Restore the correct water level and perform the commissioning checks in Section 7.

DO NOT USE Strong acids or alkalis, chlorine at unverified concentration, solvents, wire brushes, knives or abrasive pads. These may damage the discs, seals, adhesive or stainless surface.

9.3 Ceramic disc replacement

Replace a ceramic disc when it is cracked, delaminated, heavily eroded or remains weak after cleaning. Use the correct PHIMAXX replacement disc, O-ring and supplied service wrench.

31. Disconnect and lock out mains power. Remove the module from the tank, rinse it with clean water and dry the service area.
32. Hold the module securely. Engage the supplied service wrench with the retaining ring and turn the ring counterclockwise (CCW) to loosen it.
33. Remove the retaining ring, O-ring and ceramic disc in order. Note the orientation of the disc and seal; do not scratch the sealing seat.
34. Clean the sealing seat with a soft, lint-free cloth. Install the new ceramic disc and an undamaged O-ring flat and centered in the correct orientation.
35. Reinstall the retaining ring and tighten clockwise (CW) evenly with the service wrench. Tighten only until secure—over-tightening may crack the ceramic disc or deform the seal.
36. Reinstall the module, restore the model-specific water level and test for leakage, stable mist output and correct low-water protection before returning the unit to service.



Figure 9-1. Retaining-ring direction and ceramic-disc component order.

10. Troubleshooting

Symptom	Likely cause	Corrective action
No mist from any head	No AC input; wrong or failed PSU; connector loose/wet; low-water protection active; water too deep.	Isolate power. Verify mains, fuse/breaker, PSU rating and DC connection. Restore the model-specific operating submergence and clear the sensor.
Starts and stops repeatedly	Water level cycling; turbulent inlet; sensor fouled; PSU overheating or overloaded.	Stabilize float/inlet, clean sensor, improve PSU ventilation and verify matched wattage.
Low mist output	Excessive water depth; scale; low supply voltage; cold/dirty water; restricted mist outlet.	Correct level, clean discs, verify PSU/cabling and clear airflow/condensate path.
One or several heads weak	Local scale, damaged disc, poor disc seal or individual transducer fault.	Clean and inspect. Replace the affected disc if qualified; otherwise contact service.
Large droplets / splashing	Incorrect water level, excessive airflow at water surface, damaged disc or unstable module.	Correct level and airflow; level the module; inspect discs.
PSU hot or trips	Overload, blocked ventilation, wet connection, wrong input voltage or shorted module/cable.	Switch off immediately. Dry and inspect; verify ratings. Do not bypass protection.
Rapid scale buildup	Hard water or high evaporation concentration.	Use low-mineral water/RO, add controlled make-up and blowdown, and clean more frequently.
Mist condenses in duct	Insufficient airflow, cold/long duct, low points or restricted outlet.	Improve airflow, shorten/insulate/slope duct and provide drainage.

STOP AND ISOLATE Stop operation immediately if there is exposed wiring, water inside a dry electrical enclosure, burning odor, repeated protection trips, severe corrosion or a cracked module body.

11. Frequently Asked Questions

Q How do I choose the number of heads?

A Size by required L/h, not only by room area. Use the typical output table, calculate the actual moisture load and add 10–20% margin.

Q Can mist output be adjusted?

A Yes—prefer staged control using multiple complete modules. Switching individual modules provides predictable turndown. Do not reduce DC voltage or use an unapproved dimmer/PWM controller.

Q Can I use a larger power supply?

A Use the matched voltage and recommended wattage. A higher-wattage supply at the correct voltage may be acceptable only if its output, protection and connector are approved. Never use a higher voltage.

Q Why are both an operating submergence value and an approximate 60/80 mm tank depth shown?

A They use different reference points. Operating submergence is measured above the ceramic disc surface and is typically approximately 28–35 mm, depending on the model. The approximate 60/80 mm value is the total tank depth with the standard float assembly. Refer to Appendix A for the applicable model.

Q Why is there no mist even though the tank contains water?

A The water may still be below the sensor threshold, too deep over the discs, or the sensor may be dirty. Also check the matched PSU and connector.

Q Can the module run 24 hours a day?

A It can be used for continuous-duty systems when stable water level, clean water, PSU cooling, mist removal and maintenance are provided. Plan periodic inspection and service access.

Q Can I use tap water?

A Only where mineral content is low and cleaning is frequent. Hard water quickly reduces output and disc life; filtered or RO water is preferred.

Q Can I add disinfectant, fragrance or nutrients?

A Not to a standard module without written compatibility approval. Liquid chemistry can attack the disc coating, seals, adhesive and stainless body.

Q Can several modules share one power supply?

A Do not do so unless PHIMAXX supplies a written electrical design. The standard approach is one matched PSU per module and AC-side staging with rated controls.

Q What is the black head on the module?

A It is the low-water sensing/protection component on multi-head modules. Keep it clean and unobstructed.

Q Why does output decrease after several weeks?

A The most common causes are mineral scale, rising water depth, restricted airflow or supply-voltage drop. Clean first, then verify level and power.

Q When should ceramic discs be replaced?

A Replace cracked, eroded or persistently weak discs after cleaning and inspection. Use the correct disc, seal and tool.

12. Storage, Warranty and Technical Support

12.1 Storage

Store the clean, dry module indoors, protected from freezing, direct sunlight, corrosive vapor and mechanical impact. Do not coil cables tightly or place weight on the ceramic discs.

12.2 Warranty-related conditions

Warranty evaluation may require the product model, serial/batch information, installation photos, power-supply label, water-quality information and operating history. Damage caused by incorrect voltage, dry running, excessive water depth, scale, unsuitable liquids, unauthorized modification, impact or improper cleaning may not be covered.

12.3 Information to provide when requesting support

- Model and number of modules; matched PSU model and input voltage.
- Measured water depth above the disc surface and total tank depth.
- Water source, treatment, pH if known and cleaning interval.
- Photos/video of the installation, connector, sensor and mist behavior.
- Whether the fault affects all heads, one head or occurs intermittently.

FINAL RESPONSIBILITY The OEM or installer is responsible for the completed system's electrical safety, hygiene, condensation control, water treatment, control logic and compliance with local regulations.

Appendix A. Individual Model Data Pages

The following pages provide model-specific electrical and mechanical data. Installation, operation, cleaning, troubleshooting and safety requirements remain common to the full MS Series and are given in Sections 4–12.

POWER-SUPPLY RATING Use the matched PHIMAXX power supply supplied or approved for the exact model. The wattage shown below is the recommended matched supply capacity, not the module's measured input under every operating condition.

MS-01 | 1-Head Atomization Module

Single-head compact atomization module for small OEM tanks and localized mist generation.



Figure A-1a. Actual MS-01 module and matched power supply

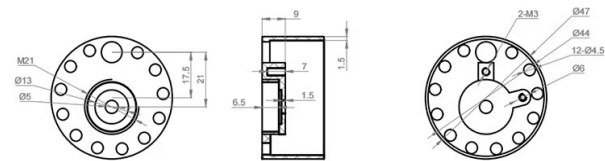


Figure A-1b. MS-01 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	1	Typical output	0.5–0.7 L/h
Working voltage	24 VDC (22–26 V)	Working current	0.8–1.2 A
Matched PSU	24 VDC / 50 W matched supply	Ultrasonic frequency	1.7 MHz
Module dimensions	46 × 46 × 35 mm	Atomizing disc	Ø20 mm × 1
Module cable	1.2 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	30–35 mm above disc surface	Protection level	10–16 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-02 | 2-Head Atomization Module

Dual-head module for compact humidification and OEM integration.

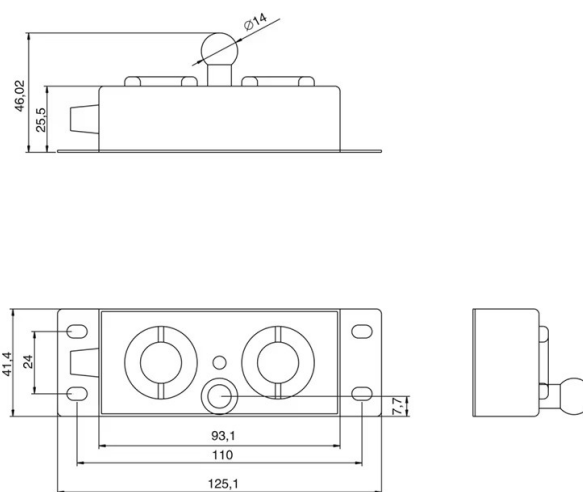


Figure A-2a. Actual MS-02 module and matched power supply

Figure A-2b. MS-02 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	2	Typical output	0.8–1.3 L/h
Working voltage	36 VDC (34–38 V)	Working current	1.4–1.7 A
Matched PSU	36 VDC / 80 W	Ultrasonic frequency	1.7 MHz
Module dimensions	125 × 42 × 26 mm	Atomizing disc	Ø20 mm × 2
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	30–35 mm above disc surface	Protection level	10–16 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-03 | 3-Head Atomization Module

Triple-head module providing increased capacity in a narrow form factor.



Figure A-3a. Actual MS-03 module and matched power supply

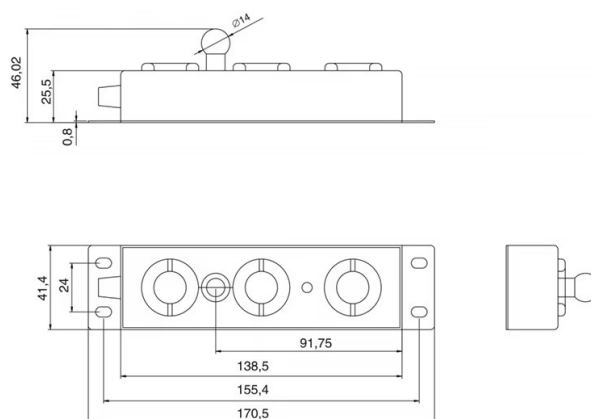


Figure A-3b. MS-03 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	3	Typical output	1.2–1.8 L/h
Working voltage	36 VDC (34–38 V)	Working current	2.2–2.5 A
Matched PSU	36 VDC / 120 W	Ultrasonic frequency	1.7 MHz
Module dimensions	171 × 42 × 26 mm	Atomizing disc	Ø20 mm × 3
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	30–35 mm above disc surface	Protection level	10–16 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-04 | 4-Head Atomization Module

Four-head module for medium-output industrial and OEM systems.



Figure A-4a. Actual MS-04 module and matched power supply

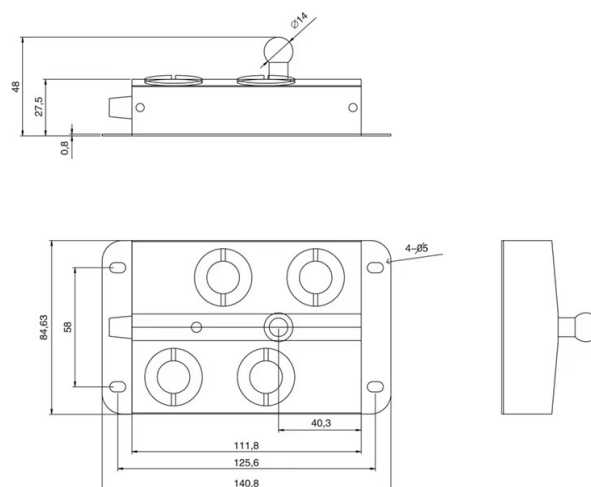


Figure A-4b. MS-04 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	4	Typical output	2.0–3.0 L/h
Working voltage	36 VDC (34–38 V)	Working current	3.0–3.4 A
Matched PSU	36 VDC / 150 W	Ultrasonic frequency	1.7 MHz
Module dimensions	141 × 85 × 28 mm	Atomizing disc	Ø20 mm × 4
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	30–35 mm above disc surface	Protection level	10–16 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-06 | 6-Head Atomization Module

Six-head module for medium-to-high output integration.



Figure A-5a. Actual MS-06 module and matched power supply

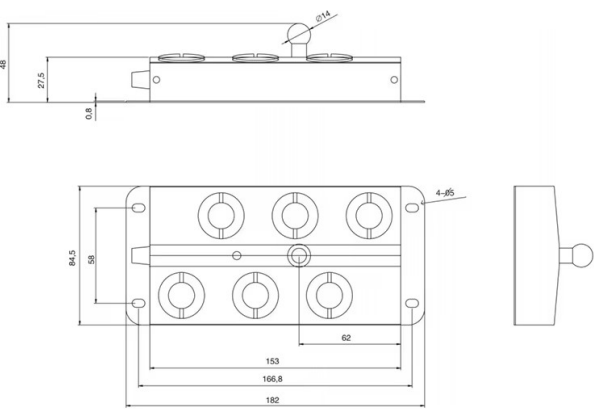


Figure A-5b. MS-06 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	6	Typical output	3.0–4.0 L/h
Working voltage	36 VDC (34–38 V)	Working current	4.2–4.8 A
Matched PSU	36 VDC / 200 W	Ultrasonic frequency	1.7 MHz
Module dimensions	182 × 85 × 28 mm	Atomizing disc	Ø20 mm × 6
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	30–35 mm above disc surface	Protection level	10–16 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-08 | 8-Head Atomization Module

Eight-head high-output module with 45 VDC matched supply.



Figure A-6a. Actual MS-08 module and matched power supply

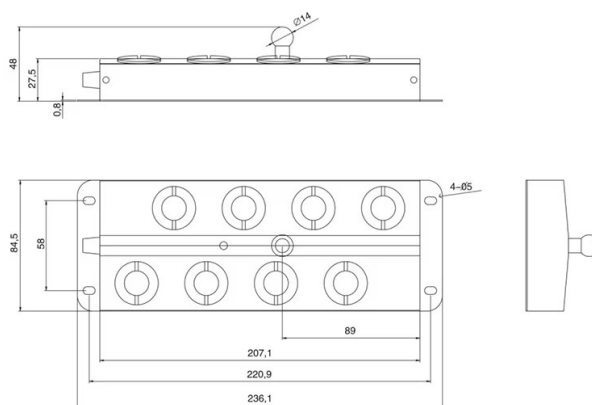


Figure A-6b. MS-08 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	8	Typical output	4.0–5.0 L/h
Working voltage	45 VDC (42–48 V)	Working current	4.2–4.8 A
Matched PSU	45 VDC / 300 W	Ultrasonic frequency	1.7 MHz
Module dimensions	237 × 85 × 28 mm	Atomizing disc	Ø20 mm × 8
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	28–33 mm above disc surface	Protection level	10–15 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-10 | 10-Head Atomization Module

Ten-head high-capacity module for industrial humidification systems.



Figure A-7a. Actual MS-10 module and matched power supply

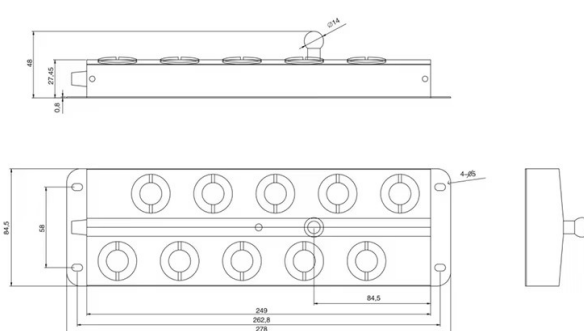


Figure A-7b. MS-10 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	10	Typical output	5.0–6.0 L/h
Working voltage	45 VDC (42–48 V)	Working current	5.4–5.8 A
Matched PSU	45 VDC / 350 W	Ultrasonic frequency	1.7 MHz
Module dimensions	279 × 85 × 28 mm	Atomizing disc	Ø20 mm × 10
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	28–33 mm above disc surface	Protection level	10–15 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

MS-12 | 12-Head Atomization Module

Twelve-head maximum-output module for large OEM and industrial systems.



Figure A-8a. Actual MS-12 module and matched power supply

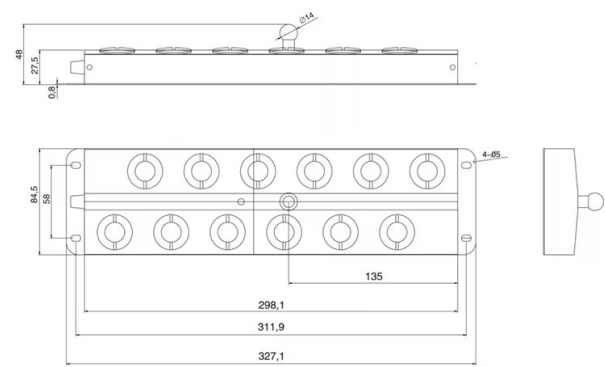


Figure A-8b. MS-12 dimensional drawing

Specification	Value	Specification	Value
Atomizing heads	12	Typical output	6.0–7.0 L/h
Working voltage	45 VDC (42–48 V)	Working current	6.8–7.2 A
Matched PSU	45 VDC / 400 W	Ultrasonic frequency	1.7 MHz
Module dimensions	328 × 85 × 28 mm	Atomizing disc	Ø20 mm × 12
Module cable	5 m interconnection cable	Droplet size	1–10 µm typical
Optimum submergence	28–33 mm above disc surface	Protection level	10–15 mm above disc surface
Water temperature	5–45 °C	Recommended pH	5–8
Body	Polished 304 stainless steel	Typical life	3,500–5,000 h in clean water

Performance values are typical and depend on stable water level, clean water, water temperature, power quality and adequate mist removal. Refer to Sections 5–9 before integration.

PHIMAXX • MS Series Ultrasonic Atomization Modules

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