

# DH SERIES PELTIER COOLER DEHUMIDIFIER

CABINET ENVIRONMENT MONITORING

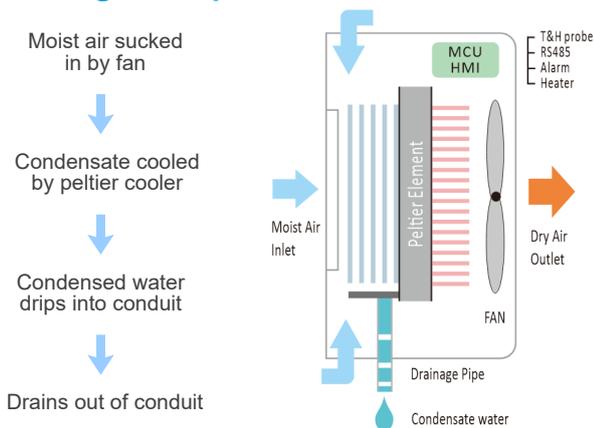


## Introduction

The DH series peltier cooler dehumidifier adopts semiconductor refrigeration and dehumidification method, sucks humid air through the fan, condenses into water through the semiconductor refrigeration mechanism, and then discharges it from the cabinet through the conduit to achieve a good dehumidification effect. This reduces relative and absolute humidity with little increase in temperature, radically preventing accidents and device aging.

Ultra-small installation size, high efficiency and energy saving, no need for heater and fan wiring. Equipped with a data acquisition module for remote monitoring, a reliable replacement for thermostats and heater/fan combinations.

## Working Principle



## Main Features

- Small size, light weight, easy installation.
- Dehumidification ducts actively induce condensation, discharged gas dehumidified by heating.
- Automatic/manual dehumidification function optional, temperature and dehumidification start value adjustable.
- Humidity and temperature sensor 24-hour real-time sampling, beyond the set start value automatically induced condensation.
- Optional RS485 port, support remote control/adjustment of operating parameters and fault reporting function.
- Do not need extra sensor and probe, optional passive output node for external heater.
- Adopt special moisture-proof components to ensure normal operation in humid environments.

## Application

- GIS control cabinets.
- HV/LV control switchgear.
- Ring network cabinets.
- Mechanical control cabinets.
- Box-type substations.
- Dry-type substations.

## Ordering Information

Model	Max power	Air volume flow	Sensor	Material	Optional functions
DH1-20	20W	30m <sup>3</sup> /h	Built-in	ABS	-RS485 communication -Heater (100-300V) -Alarm (detail see notes 4)
DH2-60	60W	70m <sup>3</sup> /h	External	ABS	
DH3-60	60W	70m <sup>3</sup> /h	Built-in	ABS	
DH4-60	60W	70m <sup>3</sup> /h	External	Sheet metal With anti-rust spray	
DH5-80	75W	100m <sup>3</sup> /h	External	Aluminum alloy	
DH6-200	200W	140m <sup>3</sup> /h	External	Sheet metal With anti-rust spray	

Notes:

1. Only Model DH3-60 and DH6-200 can choose all three additional functions, other models can only choose two of three.
2. If the device has a built-in sensor, you cannot select sensor disconnection alarm.
3. Alarm contact: default dry contact, equipment failure: default normally open.
4. Alarm items: Sensor failure (disconnection or short circuit)  
Device power lose (optional)  
Dehumidification module failure alarm (condensation and dehumidification module failure)  
Temperature and humidity over-limit alarm  
Dehumidification failure alarm

## Technical Characteristics

Model	DH1-20	DH2-60	DH3-60	DH4-60	DH5-80	DH6-200
<b>Working power</b>						
Power supply	85V~265VAC/DC 50Hz					
Peltier rated power <sup>(1)</sup>	20W	60W	60W	60W	75W	200W
Air volume flow	30m <sup>3</sup> /h	70m <sup>3</sup> /h	70m <sup>3</sup> /h	70m <sup>3</sup> /h	100m <sup>3</sup> /h	140m <sup>3</sup> /h
Dehumidifying capacity	100ml/Day	250ml/Day	250ml/Day	300ml/Day	350ml/Day	600ml/Day
	@35°C,90%RH	@35°C,90%RH	@35°C,90%RH	@35°C,90%RH	@35°C,90%RH	@35°C,90%RH
<b>Measurement and ability</b>						
Humidity monitor range	20%RH~98%RH					
Sensor accuracy	±5%RH					
Dehumidify start threshold	45%RH~98%RH, Default 65%RH					
Environment temperature	5~60°C					
Temperature monitor range	-40~80°C					
Sensor accuracy	±1.0°C					
Heater start threshold	1~55°C, Default 5°C					
Heater power	50~500W optional					
<b>Other</b>						
Physical dimension	75*90*53mm	102*171*73mm	102*140*62mm	132*245*67mm	138*150*70mm	242*247*67mm
Screen	1 digital LED	2 digital LED	2 digital LED	2*3 digital LED	1 digital LED	2*3 digital LED
Standards	IEC60255-22-1					
Communication	RS485, modbus-RTU (Optional)					

Notes:

1. The choice of the rated power is related to the cabinet's inner volume and airtightness, and the general reference value is:

0.5cubic meter cabinet choose 15w, 1.0cubic meter cabinet choose 30w,  
1.5cubic meter cabinet choose 40w, 2.0cubic meter cabinet choose 60w,  
cabinet volume is calculated according to the inner diameter, Length\*Width\*Height.

2. Sensor accuracy of 5% is tested with the inside probe, product optional external cable type sensor. Please contact the sales team before ordering.

3. Device provides dry contact for external heater connection, capacity is 5A@250VAC. Users can free to order heaters or purchase with the DH series.