

# EnviroProbe

## Quick Guide

ENGLISH



### About this Guide

This guide contains information on installation and operation of the EnviroProbe. The instructions and warnings stated in this guide should be followed during the installation, operation and storage of this product. Failure to heed these instructions and warnings will void the product warranty.

### Electromagnetic Interference

This is a class B product. In a domestic environment, this product may cause radio interface in which case the user may be required to take adequate measures.

### Overview

The EnviroProbe monitors temperature, humidity and other conditions in a room environment. It offers four digital input connections for external sensor devices. The device supports either RS232 or RS485 communication mode, which you can select with a DIP switch. You can cascade up to 16 EnviroProbe units through RS485 to monitor the environment of larger areas.

#### ►Features

- Monitors temperature and humidity of the room environment.
- Attaches up to 4 contact inputs for monitoring other environmental devices.
- Supports RS232 or RS485 communication mode.
- Cascades up to 16 EnviroProbe units through RS485.

#### ►Package Contents

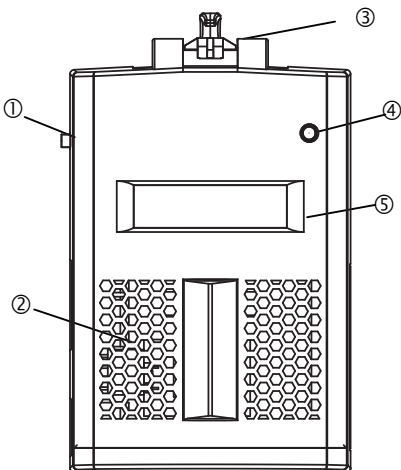
The EnviroProbe package contains the following items:

| Quantity | Item        |
|----------|-------------|
| 1        | EnviroProbe |
| 1        | Quick Guide |

### Description

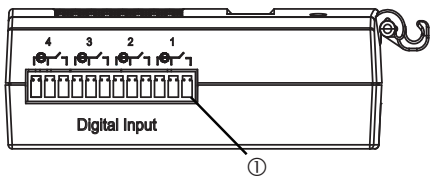
The EnviroProbe external components are described below.

#### 1. Front



| Item               | Description                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①Push Switch       | Controls LED Display:<br>-Press 0.2 second to turn on backlight for 1 min.<br>-Press 1.0 second for backlight always on.<br>-Press 0.2 second for backlight off. |
| ②Internal Sensors  | Temperature and humidity sensors.                                                                                                                                |
| ③Installation Hook | Attaches the unit to a rack or other location.                                                                                                                   |
| ④System Indicator  | -Green light when unit is on.<br>-Light off when unit fails or has no power.<br>-Light flashes during communication.                                             |
| ⑤LCD Display       | Displays temperature and humidity.                                                                                                                               |

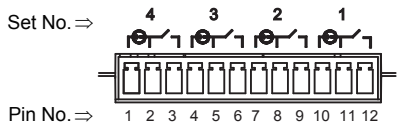
#### 2. Right Side



| Item           | Description                                                                                                                                                                                                                          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①Digital Input | -Connect dry contact sensors or wet 5-24V sensors to these four digital inputs.<br>-You can configure the four digital inputs for wet or dry operation using the Contact DIP switches on the left side of the unit. See <b>3-3</b> . |

#### 2-1 Digital Input Pin Definitions

Refer to the pin definitions below for connecting wet or dry contact sensors.



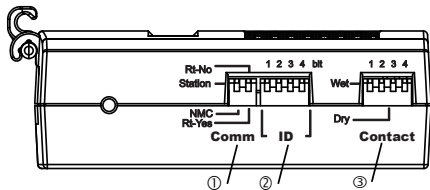
### Pin Definitions

| Set No.    | 4  |       |       | 3  |       |       | Remark                                                         |
|------------|----|-------|-------|----|-------|-------|----------------------------------------------------------------|
| Pin No.    | 1  | 2     | 3     | 4  | 5     | 6     | WET contact:<br>DI:Input Voltage(+)<br>DICOM: Input Voltage(-) |
| Definition | DI | DICOM | DIGND | DI | DICOM | DIGND |                                                                |
| Set No.    | 2  |       |       | 1  |       |       | DRY contact:<br>Connect DICOM and DIGND with external device.  |
| Pin No.    | 7  | 8     | 9     | 10 | 11    | 12    |                                                                |
| Definition | DI | DICOM | DIGND | DI | DICOM | DIGND |                                                                |

#### ★Signal Specifications:

- Wet contact signal
- Voltage 5-24Vdc
  - Current 1-8mA

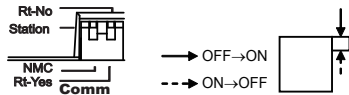
#### 3. Left Side



| Item     | Description                                                                                                                                                             |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①Comm    | These two DIP switches configure communication modes RS485 or RS232. Please see <b>3-1</b> .                                                                            |
| ②ID      | These four DIP switches configure ID addresses for cascading up to 16 EnviroProbe units. Please see <b>3-2</b> .                                                        |
| ③Contact | These two DIP switches configure the four digital inputs on the unit's right side for use with either dry contact sensors or wet 5-24V sensors. Please see <b>3-3</b> . |

#### 3-1 Comm DIP Switch Settings

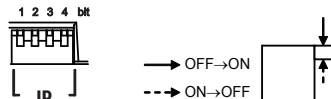
Set the communication mode with these two DIP switches.



| SW 1 | SW 2 | Function Mode                             |
|------|------|-------------------------------------------|
| OFF  |      | Station→RS485                             |
| ON   |      | NMC→RS232                                 |
|      | OFF  | Remove 110Ω Terminal Resistor for RS485.  |
|      | ON   | Connect 110Ω Terminal Resistor for RS485. |

#### 3-2 ID DIP Switch Settings

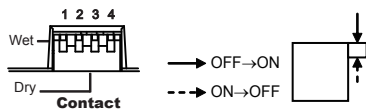
Set at maximum 16 ID addresses.



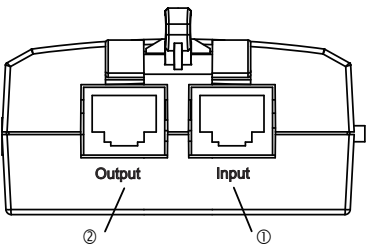
| No | Bit 1(Set) | Bit 2(Set) | Bit 3(Set) | Bit 4(Set) | ID Address |
|----|------------|------------|------------|------------|------------|
| 1  | OFF        | OFF        | OFF        | OFF        | 0          |
| 2  | ON         | OFF        | OFF        | OFF        | 1          |
| 3  | OFF        | ON         | OFF        | OFF        | 2          |
| 4  | ON         | ON         | OFF        | OFF        | 3          |
| 5  | OFF        | OFF        | ON         | OFF        | 4          |
| 6  | ON         | OFF        | ON         | OFF        | 5          |
| 7  | OFF        | ON         | ON         | OFF        | 6          |
| 8  | ON         | ON         | ON         | OFF        | 7          |
| 9  | OFF        | OFF        | OFF        | ON         | 8          |
| 10 | ON         | OFF        | OFF        | ON         | 9          |
| 11 | OFF        | ON         | OFF        | ON         | 10         |
| 12 | ON         | ON         | OFF        | ON         | 11         |
| 13 | OFF        | OFF        | ON         | ON         | 12         |
| 14 | ON         | OFF        | ON         | ON         | 13         |
| 15 | OFF        | ON         | ON         | ON         | 14         |
| 16 | ON         | ON         | ON         | ON         | 15         |

#### 3-3 Contact DIP Switch Settings

Set the four digital inputs on the unit's right side for use with either dry contact sensors or wet 5-24V sensors.



| DIP-Switch | 1(set)      | 2(set) | 3(set) | 4(set) |
|------------|-------------|--------|--------|--------|
| OFF        | WET Contact |        |        |        |
| ON         | DRY Contact |        |        |        |



| Item    | Description                                                                                                                                                                                                                                                                     |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①Input  | For cascading EnviroProbe units, connect the first unit's Input connector to the Delta-BUS port located at the rear panel of the EnviroStation, and connect other unit's Input connector with its previous unit's Output connector. CAT-5 straight-through cables are required. |
| ②Output | Through this Output connector (RJ-45) can cascade up to 16 EnviroProbe units. CAT-5 straight-through cables are required.                                                                                                                                                       |

### Installation

Install the EnviroProbe as follows:

1. Find a location that allows you to connect and route the cables of the EnviroProbe conveniently. Avoid locations in direct sunlight, near a heat source, or next to a window that might provide inaccurate readings.
2. Hook the EnviroProbe to a rack or attach it to a wall or other location using screws or other means such as magnet.
3. Route the CAT-5 straight-through cable to the rear panel of the EnviroStation and plug it into the Delta-BUS ports.
4. You can cascade up to 16 EnviroProbe units with CAT-5 straight-through cables running between each device's Input and Output connectors. Note that each EnviroProbe unit must have a unique ID address that you can set with the ID DIP Switches. See **3-2 ID DIP Switch Setting**.

### Warranty

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship within the warranty period. If the product has any failure problem within the warranty period, Seller will repair or replace the product at its sole discretion according to the failure situation.

This warranty does not apply to normal wear or to damage resulting from improper installation, operation, usage, maintenance or irresistible force (i.e. war, fire, natural disaster, etc.), and this warranty also expressly excludes all incidental and consequential damages.

Maintenance service for a fee is provided for any damage out of the warranty period. If any maintenance is required, please directly contact the supplier or Seller.

**WARNING :** The individual user should take care to determine prior to use whether the environment and the load characteristic are suitable, adequate or safe for the installation and the usage of this product. The User Manual must be carefully followed. Seller makes no representation or warranty as to the suitability or fitness of this product for any specific application.

### Specifications

|                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| <b>INPUT</b><br>Input voltage                                                     | UPS SNMP card: 12Vdc (pin 1 & 4)<br>PDU SNMP card: 5Vdc (pin 2 & 4)               |
| <b>WEIGHT &amp; DIMENSIONS</b><br>Unit<br>Dimensions (H x W x D)<br>Weight (Unit) | 33 x 66 x 99 mm<br>120g (0.264lb)                                                 |
| Package<br>Dimensions (H x W x D)<br>Weight (Shipping)                            | 43 x 97 x 110 mm<br>180g (0.397lb)                                                |
| <b>ENVIRONMENT</b><br>Temperature<br>Operating<br>Storage<br>Accuracy             | 0°C ~ 60°C<br>-30°C ~ 80°C<br>+/-0.4°C @ 0°C~60°C                                 |
| Humidity<br>Operating<br>Storage<br>Accuracy                                      | 0 ~ 90% RH (Non-condensing)<br>0 ~ 100% RH (Non-condensing)<br>+/-3% RH           |
| Altitude<br>Operating                                                             | 0 ~ +10,000 feet                                                                  |
| <b>CERTIFICATIONS</b><br>Safety<br>EMI<br>EMS                                     | CE<br>EN55022 (CISPR 22) Class B<br><br>EN55024<br>Level 3 @ Air 8KV/ Contact 4KV |

### About Toxic and Hazardous Substances or Elements

1. The Content of Toxic and Hazardous Substances or Elements

| Part Name             | Toxic & Hazardous Substances or Elements |                 |                 |                                   |                                      |                                             |
|-----------------------|------------------------------------------|-----------------|-----------------|-----------------------------------|--------------------------------------|---------------------------------------------|
|                       | Lead<br>(Pb)                             | Mercury<br>(Hg) | Cadmium<br>(Cd) | Hexavalent<br>Chromium<br>(Cr 6+) | Polybrominated<br>Biphenyls<br>(PBB) | Polybrominated<br>Diphenyl Ethers<br>(PBDE) |
| Metal Shell           | ○                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Plastic Shell         | ○                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Printed Circuit Board | ×                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Receptacle            | ×                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Cable and Wire        | ×                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Connector & Breaker   | ○                                        | ○               | ×               | ○                                 | ○                                    | ○                                           |
| Sealed L/A Battery    | ×                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Transformer           | ○                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |
| Others                | ×                                        | ○               | ○               | ○                                 | ○                                    | ○                                           |

○ : Indicates the content of toxic and hazardous substance (at the homogenous material level) is lower than the MCV defined by the standard of SJ/T11363-2006.

× : Indicates the content of toxic and hazardous substance (at the homogenous material level) is over the MCV defined by the standard of SJ/T11363-2006.

\*Printed circuit board includes empty printed circuit boards and their components.\*

| Hazardous Substance         | MCV     |
|-----------------------------|---------|
| Pb · Hg · Cr6+ · PBB · PBDE | 1000PPM |
| Cd                          | 100PPM  |

2. The Environmental Protection Use Period (EPUP) EPUP of the product is marked on the rating label which is stuck on the product.

# 环境监测器

## 安装指南

简体中文

### 使用说明

本安装指南包含环境监测器的安装和操作信息。

本指南包含环境监测器产品的功能说明、安装、操作以及存储等指导说明，请按照说明操作并妥善保管。不按照要求操作，无法享受保修服务。

### 电磁干扰

该产品属于B类产品，在家庭环境中使用该产品可能会造成无线电干扰，使用过程中，请采取适当保护措施。

### 概述

环境监测器能够监测温度、湿度以及其它连接于室内环境监测装置。

该环境监测器提供了4个外部传感器的数字输入接口。

同时该设备支持RS232或RS485通讯模式，可藉由DIP开关进行选择。在RS485通讯模式里，级联多达16台的环境监测器可以用来进行更大面积的环境监控。

- 特点
- 监测室内环境温度和湿度。
  - 提供4个输入接口，用来连接其它环境监测装置。
  - 支持RS232或RS485通讯模式。
  - 在RS485通讯模式里，可串接最多16台环境监测器。

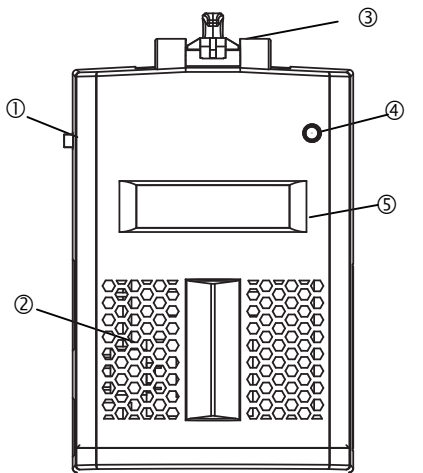
- 包装清单
- 环境监测器包装中包含下列项目：

| 数量 | 项目    |
|----|-------|
| 1  | 环境监测器 |
| 1  | 安装指南  |

### 介绍

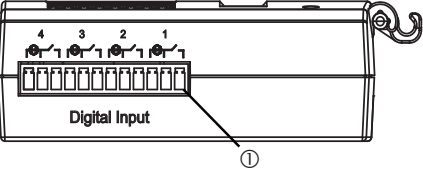
环境监测器的外部组件介绍如下:

#### 1. 前端



| 项目       | 敘述                                                                 |
|----------|--------------------------------------------------------------------|
| ①LED控制开关 | 控制LED显示屏背光;<br>-按0.2秒, 打开背光1分钟。<br>-按1.0秒, 背光常开。<br>-再按0.2秒, 背光关闭。 |
| ②内部传感器   | 温度及湿度传感器。                                                          |
| ③安装挂勾    | 单个挂在机架或方便悬挂的其它位置。                                                  |
| ④系统指示灯   | -正常使用中绿灯常亮,<br>-失效或没有供电时灯熄灭,<br>-当正常通讯时灯闪烁。                        |
| ⑤液晶显示屏   | 显示温度与湿度。                                                           |

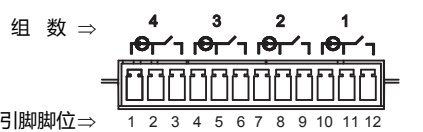
#### 2. 右侧



| 项目                    | 敘述                                                                                    |
|-----------------------|---------------------------------------------------------------------------------------|
| ①Digital Input (数字输入) | 可以把干接点传感器或5-24V的湿接点传感器连接至这四个输入接口。您可以透过环境监测器左侧的DIP开关 (见下文 <b>3-3</b> )，来配置这些输入接点的运行方式。 |

#### 2-1 数字输入引脚说明

请参考下面的引脚脚位说明来连接干/湿接点传感器。



#### 引脚定义

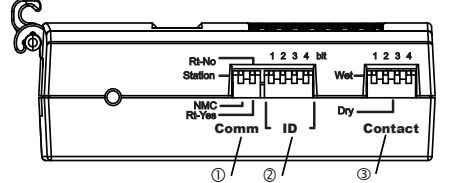
| 组别   | 4  |       |       | 3  |       |       | 备注                                  |
|------|----|-------|-------|----|-------|-------|-------------------------------------|
| 引脚脚位 | 1  | 2     | 3     | 4  | 5     | 6     | 湿接点<br>DI:输入电压(正)<br>DI COM:输入电压(负) |
| 定义   | DI | DICOM | DIGND | DI | DICOM | DIGND |                                     |
| 组别   | 2  |       |       | 1  |       |       | 干接点<br>连接DI COM与DI GND<br>到外部监测装置   |
| 引脚脚位 | 7  | 8     | 9     | 10 | 11    | 12    |                                     |
| 定义   | DI | DICOM | DIGND | DI | DICOM | DIGND |                                     |

#### ★讯号规格

##### 湿接点讯号

- 电压 5-24Vdc
- 电流 1-8mA

#### 3. 左侧



| 项目                   | 敘述                                                                   |
|----------------------|----------------------------------------------------------------------|
| ①Comm DIP (通信DIP)    | 用这两个DIP切换开关来选择RS485或RS232通讯模式，详见 <b>3-1</b> 设置说明。                    |
| ②ID地址DIP             | 当16个环境监测器级联时，用这四个DIP切换开关来配置ID地址。详见 <b>3-2</b> 设置说明。                  |
| ③Contact DIP (接点DIP) | 用这四个DIP切换开关来配置环境监测器右侧的四个数位输入接口是干接点输入还是5-24V湿接点输入，详见 <b>3-3</b> 设置说明。 |

#### 3-1 通信DIP切换开关设置

通过这两个DIP切换开关来设置环境监测器的通讯模式。

| 开关 1 | 开关 2 | 模 式             |
|------|------|-----------------|
| OFF  |      | Station→RS485   |
| ON   |      | NMC→RS232       |
|      | OFF  | 移除 RS485 110Ω电阻 |
|      | ON   | 连接 RS485 110Ω电阻 |

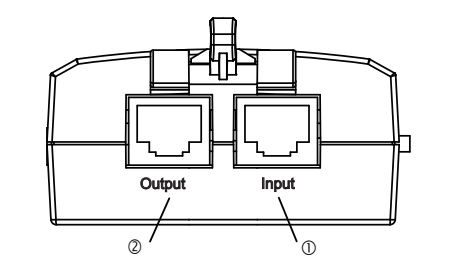
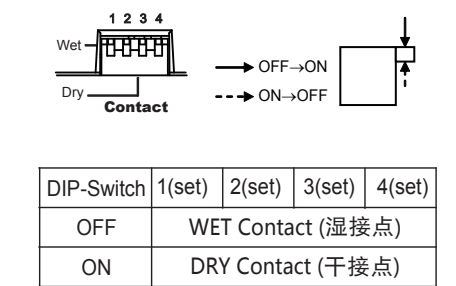
#### 3-2 ID地址DIP切换开关设置

可以设置多达16个ID地址。

| No | Bit 1(Set) | Bit 2(Set) | Bit 3(Set) | Bit 4(Set) | ID 地址 |
|----|------------|------------|------------|------------|-------|
| 1  | OFF        | OFF        | OFF        | OFF        | 0     |
| 2  | ON         | OFF        | OFF        | OFF        | 1     |
| 3  | OFF        | ON         | OFF        | OFF        | 2     |
| 4  | ON         | ON         | OFF        | OFF        | 3     |
| 5  | OFF        | OFF        | ON         | OFF        | 4     |
| 6  | ON         | OFF        | ON         | OFF        | 5     |
| 7  | OFF        | ON         | ON         | OFF        | 6     |
| 8  | ON         | ON         | ON         | OFF        | 7     |
| 9  | OFF        | OFF        | OFF        | ON         | 8     |
| 10 | ON         | OFF        | OFF        | ON         | 9     |
| 11 | OFF        | ON         | OFF        | ON         | 10    |
| 12 | ON         | ON         | OFF        | ON         | 11    |
| 13 | OFF        | OFF        | ON         | ON         | 12    |
| 14 | ON         | OFF        | ON         | ON         | 13    |
| 15 | OFF        | ON         | ON         | ON         | 14    |
| 16 | ON         | ON         | ON         | ON         | 15    |

#### 3-3 接点DIP切换开关设置

用来选择环境监测器右侧的四个数字信号输入为干接点输入模式还是5-24V湿接点输入模式。



| 项目          | 敘述                                                                            |
|-------------|-------------------------------------------------------------------------------|
| ①Input (输入) | 若为串连的第一台环境监测器，则连接输入接口至中央监测站背板上的Delta-BUS接口 (需使用CAT-5直通电缆)，否则连接至上一台环境监测器的输出接口。 |
| ②Ouput (输出) | 通过这种RJ-45连接器可以级联高达16台环境监测器。需使用CAT-5直通电缆。                                      |

### 安装

安装环境监测器的步骤如下：

1. 请选择一个方便安装环境监测器和走线的位置。避免阳光直射、靠近热源、或接近窗口，否则可能导致读数不准确。
2. 可将环境监测器悬挂在一个机架上或用螺钉或其它工具，如磁铁，安装到墙上或其它地方。
3. 将CAT-5直通电缆连接到中央监测站背板上的Delta-BUS接口。
4. 可通过每个环境监测器的输入和输出接口，上下级联最多16台 环境监测器。请注意，每台环境监测器只能有一个唯一的ID地址，可以通过ID地址DIP切换开关进行设置，请参考前述的ID地址设置说明。

### 产品保修

- 在产品保修期限内且使用者依据本安装指南正确使用情况下，卖方保证没有原材料和工艺的缺陷。
  - 如果在产品保固期限内，产品出现原材料和工艺的缺陷，卖方有权选择负责修理或更换产品。
  - 本保证不适用于正常磨损或由于意外、误用、滥用或疏忽导致的损坏。
  - 超过保固期，卖方不提供无偿的维修。未详述在此保固说明的范围，卖方亦不提供保固。
  - 本保固说明若遇特殊应用，法令禁止，或含有保障意味的保证，包括销售体系的保证或适用的保证，仍受保固期限的规范。本保证排除所有意外损失及意外后相继发生的任何损失。
- ★警告：个人用户使用前需要优先确认，这设备是否合适且能安全使用。由于个别的应用范围有很大的差异，故制造商对特定的应用不另行做任何规范或保证。

### 产品规格

|                                                                                        |                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| 输入<br>输入电压                                                                             | UPS SNMP卡:输入电压为12Vdc (引脚1 & 4)<br>PDU SNMP卡:输入电压为5Vdc (引脚2 & 4)                                                                |
| 重量与尺寸<br>单机 (台)<br>尺寸(长*宽*高)<br>重量 (台)                                                 | 33 x 66 x 99 (毫米)<br>120克 (0.264磅)                                                                                             |
| 包装<br>尺寸(长*宽*高)<br>重量 (运送)                                                             | 43 x 97 x 110(毫米)<br>180克(0.0.397磅)                                                                                            |
| 环境<br>温度<br>运行<br>存储<br>精度<br>湿度<br>运行<br>存储<br>精度<br>海拔<br>运行                         | 0°C ~ 60°C<br>-30°C ~ 80°C<br>+/-0.4°C @ 0°C~60°C<br><br>0 ~ 90% RH (无凝露状态)<br>0 ~ 100% RH (无凝露状态)<br>+/-3% RH<br><br>0 ~3045米 |
| 认证<br>安规<br>电磁干扰(EMI)<br>电磁耐受性(EMS)<br>—IEC 61000-4-2(静电放电测试)<br>—IEC 61000-4-6(CS 测试) | CE<br>EN55022 (CISPR 22) Class B<br><br>EN55024<br>Level 3 @ Air 8KV/ Contact 4KV                                              |

### 有毒有害物质或元素

#### 1、有毒有害物质或元素名称及其含量表

| 依照中国《电子信息产品污染控制管理办法》 |           |        |        |            |            |              |
|----------------------|-----------|--------|--------|------------|------------|--------------|
| 部件名称                 | 有毒有害物质或元素 |        |        |            |            |              |
|                      | 铅 (Pb)    | 汞 (Hg) | 镉 (Cd) | 六价铬 (Cr6+) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 金属外壳                 | ○         | ○      | ○      | ○          | ○          | ○            |
| 塑料外壳                 | ○         | ○      | ○      | ○          | ○          | ○            |
| 印刷电路板                | ×         | ○      | ○      | ○          | ○          | ○            |
| 插座                   | ×         | ○      | ○      | ○          | ○          | ○            |
| 电缆及配线                | ×         | ○      | ○      | ○          | ○          | ○            |
| 连接器及断路器              | ○         | ○      | ×      | ○          | ○          | ○            |
| 密封铅酸电池               | ×         | ○      | ○      | ○          | ○          | ○            |
| 变压器                  | ○         | ○      | ○      | ○          | ○          | ○            |
| 其它                   | ×         | ○      | ○      | ○          | ○          | ○            |

○：表示该有毒物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。  
X：表示该有毒物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。  
《备注》：印刷电路板：包含空的印刷电路板及其上面所有零部件。

| 有毒物質                | MCV     |
|---------------------|---------|
| Pb，Hg，Cr6+，PBB，PBDE | 1000PPM |
| Cd                  | 100PPM  |

依照中国《电子信息产品污染控制管理办法》（第39号），现标明此产品中可能含有的有毒、有害物质或元素的名称与含量。

- 2、环保使用期限  
本产品环保使用期限请参照贴在机器上的规格卷标上的标识。