# BIAMP®

Volume 8, **Select 8**,
Volume / Select 8,
Logic Box, &
Voltage Control Box

Installation Guide

Volume 8, *Select 8*, *Volume/Select 8*, *Logic Box,* & *Voltage Control Box* are natural extensions of Audia® and Nexia® products. These controls provide an intuitive interface for end-users, and can be installed and configured to fit the unique needs of a particular application. Any combination of these controls can be connected on a 5-wire daisy-chain, eliminating the need for local power sources. This connection also provides the serial communication to the Audia or Nexia system. Multiple remote control panels can be connected on a single bus, over a large physical distance.
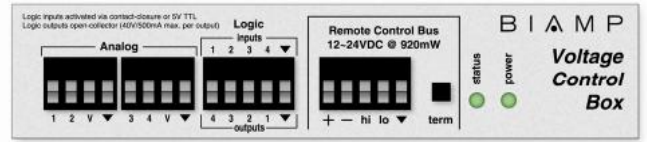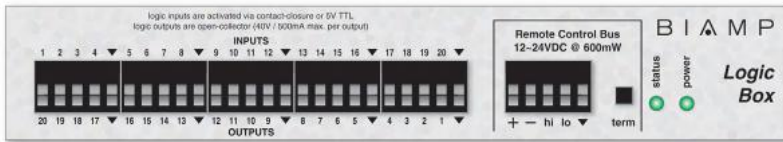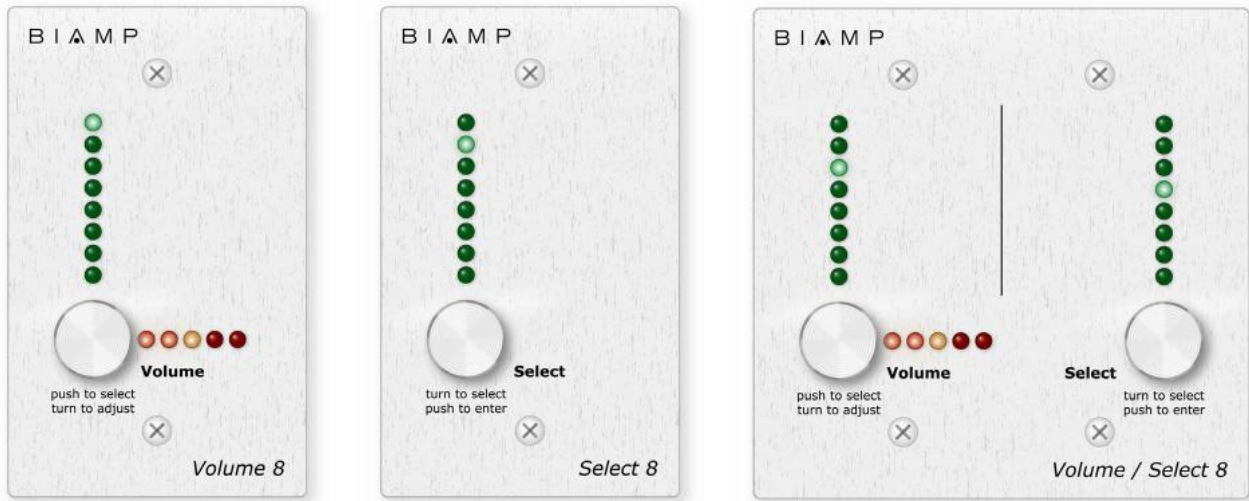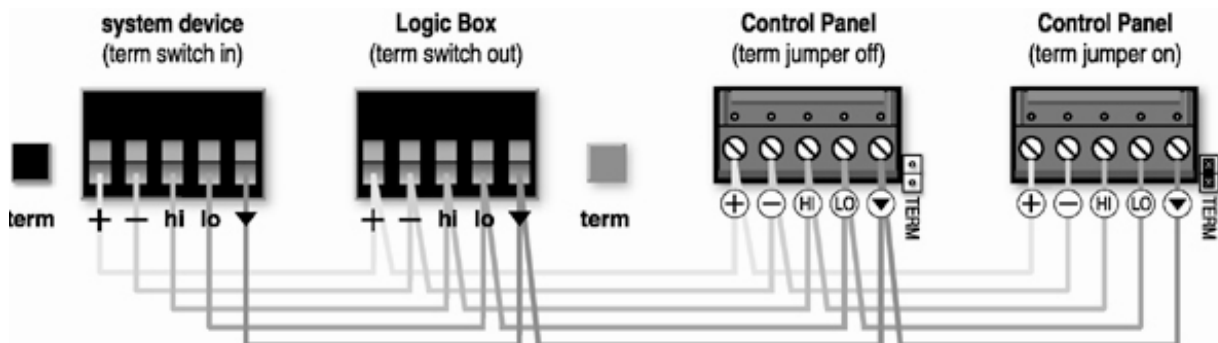

Wiring & Termination: Each system device can support any combination of the controls mentioned above. Multiple controls may be connected to each system device (up to 32 controls per Audia device; up to 12 controls per Nexia device) on a daisy-chain 'network', with a maximum cable length of 1000 feet (300 meters). A Remote Control Bus Hub is available, which allows multiple branches to be added to a control network and the maximum network cable length to be extended. Controls are wired in parallel (pin-for-pin), using 5-conductor data grade cable (95~120 ohms nominal impedance; 16 pF/ft. max. capacitance; 65% min. velocity of prop.).
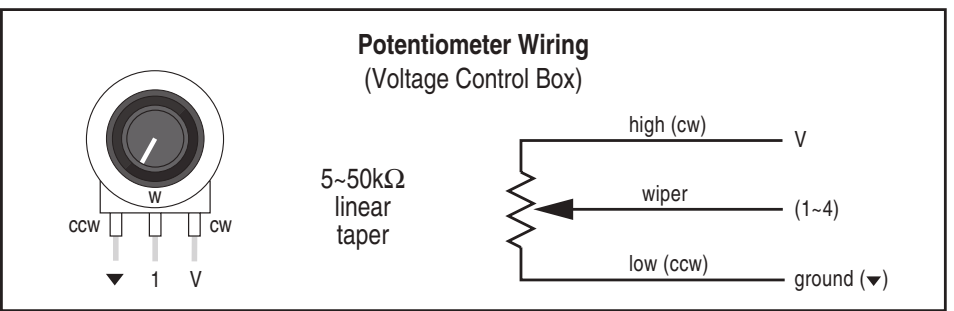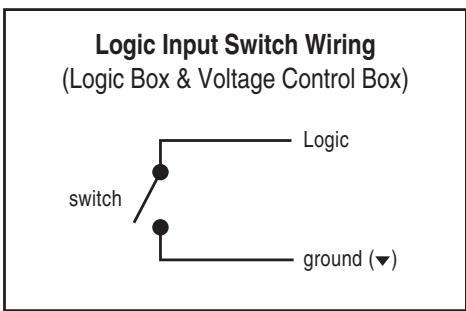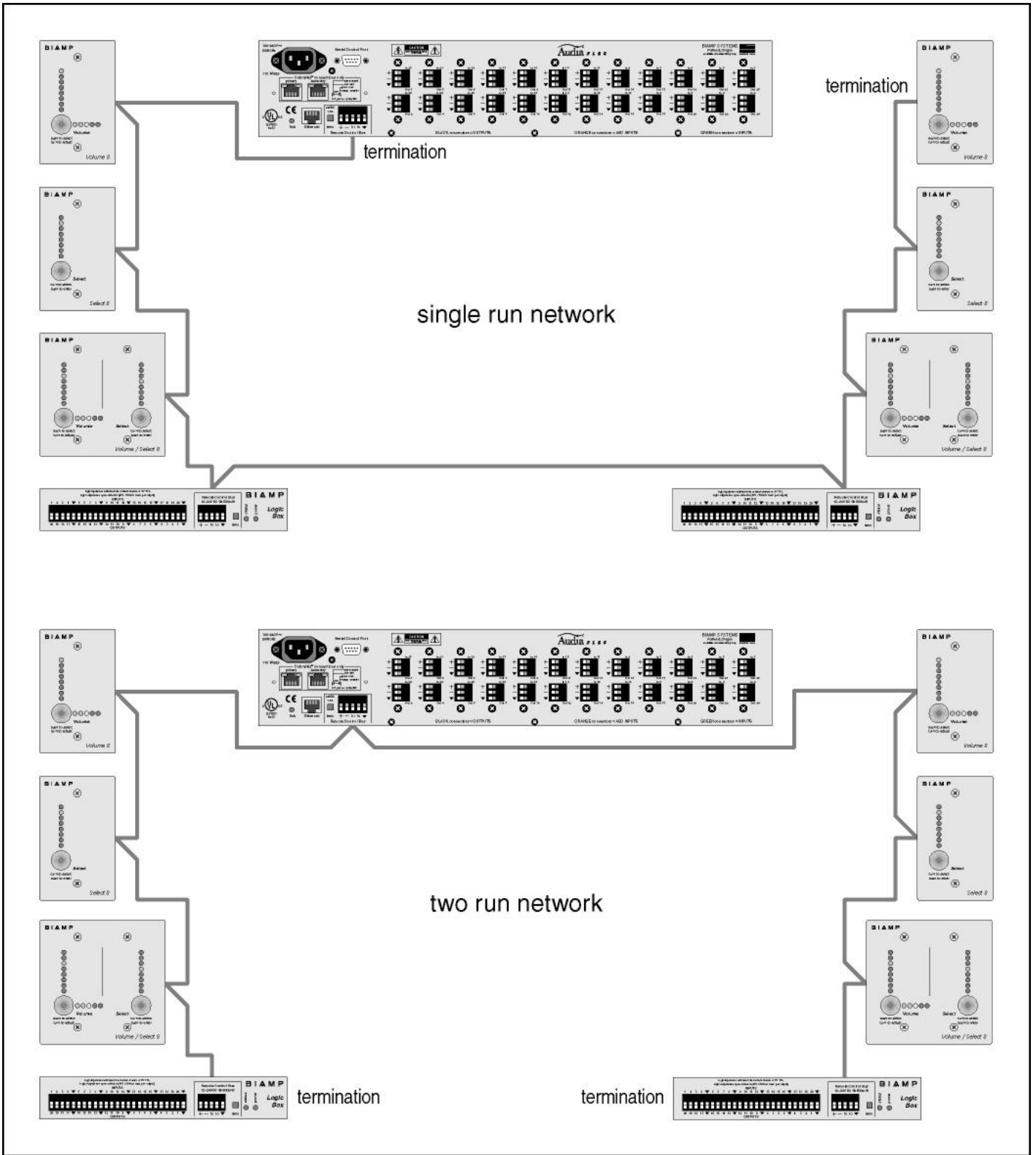
Recommended cables: Gepco 18/22AXL, Liberty AXLINK & CRESNET, or equivalent (use data pair for Hi & Lo; use power pair for + & -).

The 'network' requires termination at each 'end' for proper operation. All controls (and Audia/Nexia) include either a termination switch or jumper strap. These terminations should be disabled (switch out or jumper removed) on all devices except those at the two extreme ends of the network.

A control network may be wired with the Audia/Nexia system device at one end, and a control at the other end, creating one continuous run. In this case, the system device would have the 'term' switch engaged (in), and the control device at the other end of the network would have the 'term' switch engaged (in) or jumper installed. All other controls, between the system device and the last control, would have their 'term' switches released (out) or jumpers removed.

If a control network needs to service two areas which are in opposite directions from the system device, a network with two separate runs can be created. This type network actually remains as a single run, but is configured with the system device in the middle. Therefore, only the controls at the two extreme ends of the network would have their 'term' switches engaged (in) or jumpers installed. All other controls (including the system device), between the two end controls, would have their 'term' switches released (out) or jumpers removed. (See diagrams on opposite page.)

single run network

termination

termination

two run network

termination

termination

| **Logic Input Switch Wiring** | **Potentiometer Wiring** |
| (Logic Box & Voltage Control Box) | (Voltage Control Box) |

Logic

switch

ground (▼)

5~50kΩ
linear
taper

ccw   w   cw

▼   1   V

high (cw) ——— V

wiper ——— (1~4)

low (ccw) ——— ground (▼)

Programming

The control operation and indicator behavior, as described below, is typical. However, controls will not become operational, until they have first been configured into a system, using the corresponding drag-and-drop icons within the design software (see Audia/Nexia software Help). Controls which are properly connected to an Audia/Nexia device, but are not yet properly associated with control blocks within the design layout, will produce only a single flashing LED, and will not be operational. These LEDs will quit flashing (remain green) once the controls are properly associated within the Audia/Nexia device. As part of the association process, a currently selected control will cycle LEDs to facilitate physical identification.

The control operation and indicator behavior, as described below, can be altered in significant ways, by means of the system design process. Examples: volume controls can be any individual or grouped levels (including inputs, outputs, matrix cross-points, etc.); actions can be any individual or grouped functions (including presets, mutes, ducking, combining, etc.); control functions can change along with presets (providing multiple modes/pages of control operation); certain volumes can have a specified range of control; certain actions can utilize momentary, latching, or two-position switch selection. Control behavior is completely dependent upon programming within the Audia/Nexia system design.

Typical Control Operation and Indicator Behavior

Volume 8 - First, select the volume to be adjusted by pushing the control repeatedly, until the corresponding indicator on the vertical column of LEDs is lit (green). Then, rotate the control to adjust the selected volume. The horizontal row of LEDs will light (amber & red) from left to right, to indicate the relative volume setting. While stepping through the available selections (pushing the control), the horizontal row of LEDs will update to reflect the current volume setting for each selection.

Select 8 - First, select the action to be performed by rotating the control, until the corresponding indicator on the vertical column of LEDs is flashing (red). Then, push the control to initiate the selected action. Once initiation is complete, the corresponding LED will light (green) to indicate the selected action has been performed. Making a new selection (rotating the control), will then cause the newly selected action LED to flash (red) for approximately 15 seconds. Newly selected actions can only be initiated while the LED is flashing. Once the LED quits flashing, selection reverts to the last initiated action. If actions are mutually exclusive (such as presets), then initiating a new action (pushing the control) will cause the previously initiated action LED will go off. Otherwise, previously initiated action LEDs may remain lit (green), and if selected, will flash (amber).

Volume / Select 8 - This control provides the combined operation and behavior of both the *Volume 8* and *Select 8* controls, as described above.

Logic Box - The Logic Box provides 20 logic connections, programmable in any combination as logic inputs and logic outputs. Logic inputs provide control of system actions (such as presets, mutes, ducking, combining, etc.) by means of external contact-closures or 5V TTL circuits. This allows the creation of customized external remote controls. Logic outputs provide control of external circuitry (such as indicator panels, speaker relays, camera presets, etc.) by means of open-collector transistors (DC path to ground). This allows system control of external support equipment.

Voltage Control Box - The Voltage Control Box provides 4 analog potentiometer inputs, plus 4 logic connections. Potentiometers can be programmed to control various system levels. Logic connections can be programmed in any combination as logic inputs and logic outputs. Logic inputs provide control of system actions (such as presets, mutes, ducking, combining, etc.) by means of external contact-closures or 5V TTL circuits. This allows the creation of customized external remote controls. Logic outputs provide control of external circuitry (such as indicator panels, speaker relays, camera presets, etc.) by means of open-collector transistors (DC path to ground). This allows system control of external support equipment.

Labelling

The Volume 8, Select 8, and Volume/Select 8 controls all come with a sheet of clear, adhesive-backed labels, for custom printing on a laser printer. A Word document is available on the Audia software CD and on the Biamp web site (www.biamp.com), as a label printing template. These labels are meant to be printed using desk-top laser printers only. It is recommended that the printer be set for 'label' printing, and the label sheet should be 'short-edge' feed from the 'bypass' tray. A test printing of a single label should be done, to assure proper alignment of text. To compensate for any mis-alignment of text, margins within the Word document may be adjusted. Care should be taken in placement of the labels onto the controls. To avoid finger-prints, the use of a knife-blade or tweezers is recommended for handling. Severe bending or curling of the label may cause loss of some toner (text). When placing the label on the control panel, use the vertical column of LED indicators as a visual reference of alignment. Once the label is in place, a second (un-printed) label may be placed over the first label, to provide protection against wear. Each sheet contains 25 labels, so in case of errors, additional labels may be printed. *NOTE: Originally, labels were 1.35" wide and used the Word document (V8S8 Labels.doc). However, newer control panels require labels which are only 1.25" wide and use Word document (V8S8 B Labels.doc). Check label width and use the appropriate file for printing.*

In the Word document, select Show Gridlines from the Table menu. Each large cell represents a label. The first four columns are 'left-justified' to create labels for Volume 8 and Select 8 panels, as well as for the 'Volume' (left) section of Volume/Select 8 panels. The last column is 'right-justified' to create labels for the 'Select' (right) section of Volume/Select 8 panels. Left-click inside any large cell, and begin typing. Use 'Enter' to begin a new line, and again to leave a blank line. To avoid printing errors, do not change line-spacing or other formatting parameters. However, if you do not have the default font (Helvetica), or if you wish to change label appearance, you may select a different font before typing.

BIAMP®

CE

EC Declaration of Conformity

Biamp Systems Corporation, as manufacturer having sole responsibility, hereby declares that the following described product complies with the applicable provisions of the DIRECTIVES below except as noted herein. Any alterations to the product not agreed upon and directed by Biamp Systems Corporation will invalidate this declaration.

Product Models: Logic Box, RED-1, Remote Control Bus Hub, Remote Panels; RP-L1, RP-L2, RP-S4, Select 8, Volume 8, Volume/Select 8, Voltage Control Box

Product Description: Control Accessories for use with audio DSPs.

Applicable EC Directives: Applicable Harmonized Standards:

LVD Directive (2006/95/EC)	Safety	EN 60065:2002
EMC Directive (2004/108/EC)	Emissions	EN 55103-1:1996, Environment E2
	Immunity	EN 55103-2:1996

Special Considerations for Product Environment or Compliance:

Shielded cabling must be used for system connections.

RED-1, use only CE marked Power over Ethernet (PoE) device.

Technical Construction File, Location and Contact:

Biamp Systems, Inc.	phone:	(503) 641.7287
9300 S.W. Gemini Drive	fax:	(503) 626.0281
Beaverton, OR USA 97008	e-mail:	biamp@biamp.com

Authorized Representative: Larry Copley, Compliance Engineer

Authorized Signature: *Larry Copley*

Issued: March, 2010

有害物质表
Biamp 系统
V8、S8、VS8
远程控制设备

部件名称	有毒有害物质或元素					
	Pb（铅）	Hg（汞）	Cd（镉）	Cr+6（六价铬）	PBB	PBDE
V8、S8 或 VS8 设备	X	O	X	O	O	O
标签	O	O	O	O	O	O
安装硬件	O	O	O	O	O	O
可插拔 Euroblock 连接器	O	O	O	O	O	O
手册和其他书面文档	O	O	O	O	O	O
包装箱和所有包装材料	O	O	O	O	O	O

O：表示该部件所有均质材料中的这种有毒有害物质低于 SJ/T11363-2006 的限制要求

X：表示该部件中至少有一种均质材料所含的这种有毒有害物质高于 SJ/T11363-2006 的限制要求。

在电触头和（或）镀镉所含的均质材料中，镉及其化合物的含量可以超过 0.01%，但欧盟指令 91/338/EEC（根据欧盟指令 76/769/EEC）限制销售和使用某些危险物质和制剂部分中所禁止的用途除外。

在以下一种或多种物质所含的均质材料中，铅及其化合物的含量可以超过 0.1%：
1) 电子元器件中玻璃内所含的铅
2) 铅在钢材中是作为一种合金元素，含量可达 0.35%。
3) 铅在铝材中是作为一种合金元素，含量可达 0.4%。
4) 铅在铜材中是作为一种合金元素，含量可达 4%。
5) 高熔点类焊料中的铅（即铅料合金，铅含量超过 85%）。
6) 电子陶瓷部件内的铅。
7) 由两种以上元素组成的焊料中所含的铅，用于连接针脚和微处理器包装，其中铅的含量超过 80% 但低于 85%。
8) 顺应针连接系统内的铅。
9) 倒装芯片封装中半导体芯片及载体之间形成可靠连接所用焊料中的铅。

在正常使用情况下，中国环保使用期限为 10 年，条件是：
- 环境温度为 0-40C（32-104°F）
- 湿度为 0-95%，无凝结
- 海拔高度为 0-10,000 英尺
- 气流不受阻碍
- 没有水或其他液体进入任何部件
- 电源为 95-265V AC，50/60Hz
- 部件没有损坏（损坏部件应立即修理）
- 由工厂授权人员使用批准的材料进行所有维修

✓
RoHS
Compliant
EU 2002/95/EC

EU RoHS COMPLIANT

This Biamp product -- including all attendant cables and accessories supplied by Biamp -- meets all requirements of EU Directives 2002/95/EC of January 27, 2003, and 2005/618/EC of August 18, 2005, the EU RoHS Directives.An EU RoHS Materials Content Declaration document may be obtained at http://www.biamp.com

有害物质表

Biamp 系统
逻辑控制盒与 VCB
远程控制设备

部件名称	有毒有害物质或元素					
	Pb（铅）	Hg（汞）	Cd（镉）	Cr+6（六价铬）	PBB	PBDE
逻辑控制盒或 VCB 设备	X	O	X	O	O	O
可插拔 Euroblock 连接器	O	O	O	O	O	O
手册和其他书面文档	O	O	O	O	O	O
包装箱和所有包装材料	O	O	O	O	O	O

O：表示该部件所有均质材料中的这种有毒有害物质低于 SJ/T11363-2006 的限制要求

X：表示该部件中至少有一种均质材料所含的这种有毒有害物质高于 SJ/T11363-2006 的限制要求。

在电触头和（或）镀镉所含的均质材料中，镉及其化合物的含量可以超过 0.01%，但欧盟指令 91/338/EEC（根据欧盟指令 76/769/EEC）限制销售和使用某些危险物质和制剂部分中所禁止的用途除外。

在以下一种或多种物质所含的均质材料中，铅及其化合物的含量可以超过 0.1%：
1) 电子元器件中玻璃内所含的铅
2) 铅在钢材中是作为一种合金元素，含量可达 0.35%。
3) 铅在铝材中是作为一种合金元素，含量可达 0.4%。
4) 铅在铜材中是作为一种合金元素，含量可达 4%。
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8) 顺应针连接系统内的铅。
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- 电源为 95-265V AC，50/60Hz
- 部件没有损坏（损坏部件应立即修理）
- 由工厂授权人员使用批准的材料进行所有维修

RoHS Compliant
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