

D1272AT



Messko





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提示

本说明书中的数据可能会和交货的装置稍有差异。
我方保留进行更改的权利，恕不另行通知。



NOTE

Data contained herein may differ in details from the equipment delivered.
We reserve the right to make alterations without notice.



请保留本说明书以备日后参考

Please keep this manual for future reference!

1 安全

1.1 安全须知

从事本设备的安装、试运行、运行的人员必须：

- 具有合格的专业资格
- 严格遵守本使用说明书

违章操作或错误使用可能导致

- 严重的或致命的伤害
- 损坏本设备或用户的其它设备
- 降低本设备的效能

在安全须知上，本说明书采用如下三种形式强调各种重要事项：



警告

这是对危及生命和健康的危险的警示符号，忽视这种警示可能导致严重的或致命的伤害。



注意

这是对本设备或用户其他财产有一定危险的警示，不排除严重的或致命的伤害。



提示

这是对某些事项的重要说明。

1.2 指定用途

D1272AT 数字显示器用于显示过程值如温度或油位。

调试仪表前，务必阅读并查看铭牌上和操作使用说明书上的操作限定值。

1.3 设备操作的重要提示

用户必须遵守国家健康及安全规章。

特别要强调的是，如果工作是在带电的部件（直接接触会触电）上进行，那么，只有在这些部件断电后，或者对它们进行了妥善的保护，工作人员直接接触不到时，这些工作才可以进行。

1 Safety

1.1 Safety instructions

All personnel involved in installation, commissioning or operation of this equipment must:

- be suitably qualified and
- strictly observe these operating instructions.

Improper operation or misuse can lead to

- serious or fatal injury,
- damage to the equipment and other property of the user
- a reduction in the efficiency of the equipment.

Safety instructions in this manual are presented in three different forms to emphasize important information.



WARNING

This information indicates particular danger to life and health. Disregarding such a warning can lead to serious or fatal injury.



CAUTION

This information indicates particular danger to the equipment or other property of the user. Serious or fatal injury cannot be excluded.



NOTE

These notes give important information on a certain issue.

1.2 Specified application

The D1272AT digital indicator is used to indicate process values such as temperature or oil level, for example.

It is important to read and observe the limit values for operation indicated on the nameplate and in the operating instructions prior to commissioning the device.

1.3 Important notes on equipment operation

The user is obliged to comply with the national health and safety regulations.

It is especially emphasized that works performed to live, i.e. dangerous-contact components, are permissible only while these components are either de-energized or protected against direct contact.



2 产品规格

D1272AT数字显示器是易于使用的装置，用于显示标准Pt100 或 4-20mA信号。正常操作时，测量值显示在四位LCD显示器上。

2 Product Specification

The D1272AT digital indicator is an easy-to-use device for the indication of standard Pt100 or 4-20mA signals. During normal operation, the measured value is shown on the four-position LCD display.

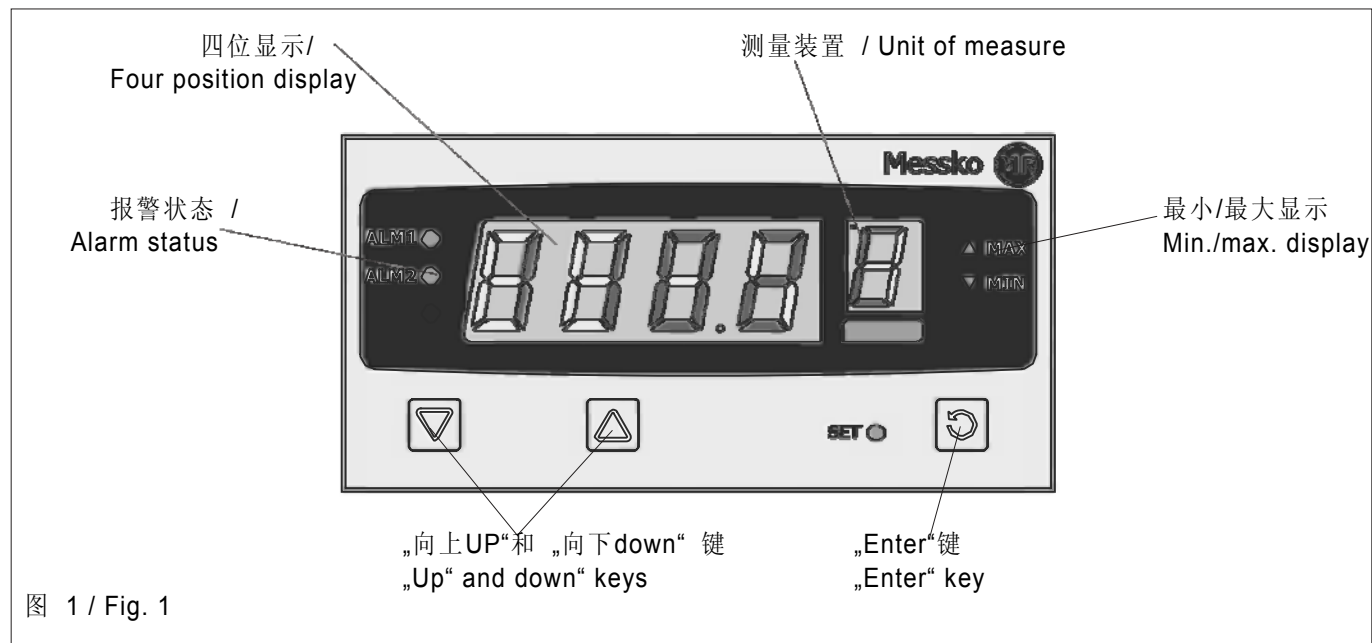


图 1 / Fig. 1

2.1 操作

Enter输入键可在下列菜单之间跳过顺序使用

2.1 Operation

The Enter key can be used to jump sequentially between the following menus.

正常操作时：显示测量值（过程值）



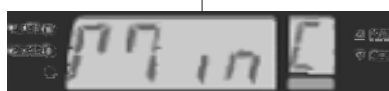
Normal operation: Indication of the measured value (process value)

最大值显示。重置时，按住„Up“ 或 „Down“键，直到显示出四个BARS。



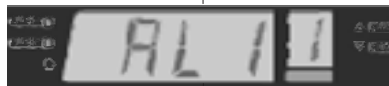
Indication of the Max. value. To reset, keep the „Up“ or „Down“ key pressed until 4 bars appear on the display.

最小值显示：重置时，按住„Up“ 或 „Down“键，直到显示出四个BARS。



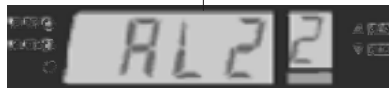
Indication of the Min. value. To reset, keep the „Up“ or „Down“ key pressed until 4 bars appear on the display.

转换点报警1。转换点可以用„Up“ 或 „Down“ 键设定。



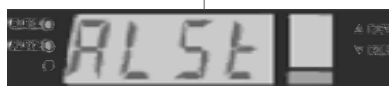
Switching point Alarm 1. The switching point can be set with the „Up“ or „Down“ key.

转换点报警2。转换点可以用„Up“ 或 „Down“ 键设定。



Switching point Alarm 2. The switching point can be set with the „Up“ or „Down“ key.

当报警触头激活时，菜单中会出现此显示。否则，不会选择此菜单。



When an alarm contact is active, this is indicated in this menu. Otherwise, this menu cannot be selected.

2 产品规格 / Product Specification

2.2 输入

Pt100 或4-20mA信号可按照装置的设计连接到D1272AT的输入上。

已控制输入的范围，如出现故障，会出现下列信号：

- 输入传感器故障或未连接



- 低于输入范围（低）



- 超过输入范围（高）



4-20mA输入可以使用**有源**或**无源**信号。

有源信号：传感器/信号转换器已通电，不再需要外部任何额外的电源（如MTO/TT油位显示器或TT-PWM60温度传感器）。

无源信号：传感器/信号转换器需要外部电源（如MT-ST160SK/TT指针式温度计）。信号转换器电源可选择在工厂通过接线端子10和12配置（见铭牌）。该电源可为传感器/信号转换器提供大约24VDC的电压。

2.3 最小/最大存储

末次重置后会存储下最小测量值和最大测量值。可用前面的键调出这些值。见第2.1章

2.4 报警触头 ALM1和ALM2 (选择件)

D1272AT数字式显示器可选择配双继电器（见铭牌）。2N/O触头的转换点可设定不同的限定值并可以用于发出报警信号或类似信号。超过设定限定值时，特别触头关闭（报警1或报警2），相应的状态LED（ALM1和ALM2）会闪烁。继电器连接在后面。见4.3.章。

限定值可按2.1章所述设定。

返回控制滞滞为 1K。

2.2 Input

A Pt100 or 4-20mA signal can be connected to the input of the D1272AT in accordance with the device design (see nameplate).

The input range is monitored and, in case of error, the following messages are output:

- The input sensor is defective or not connected.

- The input range has been passed below (Low).

- The input range has been exceeded (High).

The 4-20mA input can be used with an **active** or a **passive** signal.

Active signal: The sensor/signal transducer is already powered and does not require any additional power from the outside (e.g., oil level indicator MT0/TT or temperature transmitter TT-PWM60).

Passive signal: The sensor/signal transducer requires external power (e.g., pointer thermometer MT-ST160SK/TT). A signal transducer power supply can be configured here optionally at the factory on terminals 10 and 12 (see nameplate). This power supply provides a voltage of approx. 24 V DC for the sensor/signal transducer.

2.3 Min- / Max-memory

The minimum measured value and the maximum measured value since the last reset are stored. They can be called with keys on the front. See chap. 2.1.

2.4 Alarm contacts ALM1 and ALM2 (optional)

The digital indicator D1272AT can be optionally equipped with a double relay (see nameplate). The switching points of the 2 N/O contacts can be set to different limit values and can be used to generate an alarm message or similar. When the set limit values exceeded, the particular contact closes (alarm 1 or alarm 2) and the related status LED (ALM1 and ALM2) flashes. The relays are connected on the back. See chap. 4.3.

The limit values can be set as described in chap. 2.1.

The return control hysteresis is 1K.



2.5 模拟输出 (选择件)

D1272AT数字式显示器可选择配备模拟输入用于过程值的远距离传输。请见铭牌。下列标准信号可在工厂设定：

- 4 - 20mA
- 0 - 20mA
- 0 - 5V
- 0 - 10V

其它输出信号可用信号转换器补充。

2.5 Analog output (optional)

The D1272AT digital indicator can be optionally equipped with an analog output for the remote transmission of the process value. See nameplate. The following standard signals can be set at the factory:

- 4 - 20mA
- 0 - 20mA
- 0 - 5V
- 0 - 10V

Other output signals can be implemented with a signal converter.

3 安装

3 Installation



注意

必须严格遵守本使用说明书要求的安装条件。

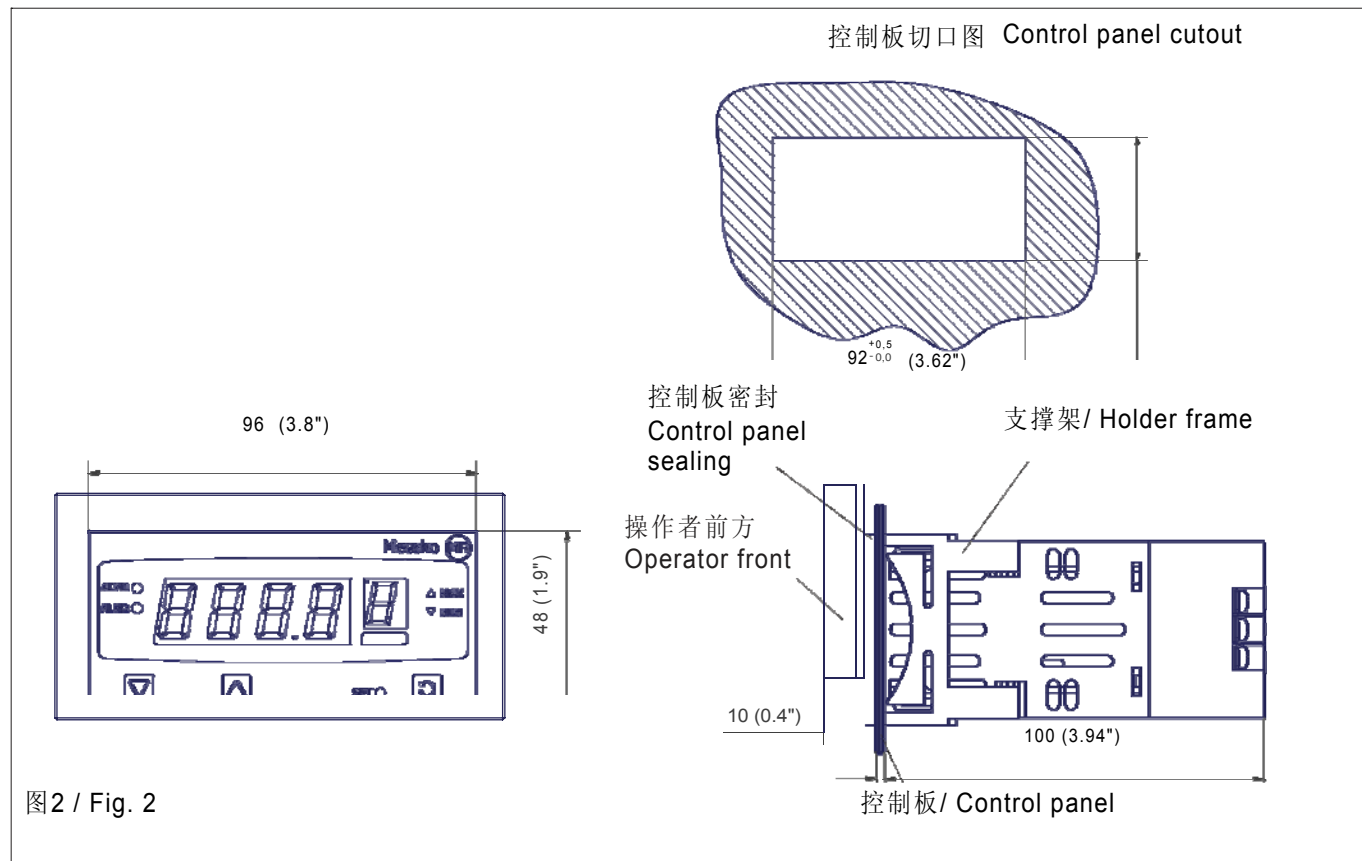


CAUTION

The installation conditions demanded by this operating manual must be strictly complied with.

D1272AT数字式显示器可安装到壁厚6毫米的控制板上。控制板的尺寸切口图，见图2。

The D1272AT digital indicator can be installed in control panels with a wall thickness of up to 6 mm. For the dimensions of the control panel cutout, see figure 2.



4 电气连接 / Electrical Connection

按下列步骤安装本装置：

- 将D1272AT数字显示器滑进控制板切口内并确定指示器的最后定位为前面。然后轻按指示器使其靠着控制板。检查确保控制板密封正确定位。
- 从后面开始，将支撑架滑过将置至其接触到控制板的后面。支撑架上和下的支撑齿会卡进装置的支撑格。支撑架的弹簧必须紧紧抵着控制板的后面。

装置安装好后就可以连接了。

4 电气连接



注意

只有经过国家适当的安全规程培训过的合格的、熟练人员才能进行电气连接。

对于D1272AT数字显示器的连接，我们建议使用开口式电缆终端进行M3螺纹式连接。按照附录中的连接图进行连接。

4.1 电压

通过13和14号接线端子进行连接。电压：90-264VAC $\pm 1\%$, 50/60Hz, 最大 7.5VA

4.2 传感器输入

连接输入信号时，应确保装置的测量范围符合并遵守电路的最大载荷。

Pt100:

Pt100输入设计用于连接 Pt100传感器与3导线技术。通过接线端子1和2连接。均衡线连接到接线端子3上。如果连接2导线传感器，必须先将接线端子2和3短路。见图3。

4-20mA, 有源传感器

如果4-20mA传感器为有源连接（即无需外来电压），将传感器连接到接线端子1（-）和接线端子4（+）。见图4。

Proceed as follows to install the device:

- Slide the D1272AT digital indicator into the control panel cutout so that the final location of the indicator is in front. Then lightly press it against the control panel. Check to make sure that the control panel seal is positioned correctly.
- Starting from the back, slide the holder frame over the device until it touches the back of the control panel. The holder teeth on the top and bottom of the holder frame will then snap into the holder grid of the devices. The springs of the holder frame must be pressed firmly against the back of the control panel.

After the device has been installed, it can be connected.

4 Electrical Connection



CAUTION

The electrical connection may only be performed by qualified, trained personnel who have been instructed in the applicable safety regulations of the particular country.

For the connection of the D1272AT digital indicator, we recommend using open cable shoes for M3 screw-type connections. Follow the connection diagrams in the appendix.

4.1 Voltage supply

The connection is performed via the connection terminals 13 and 14. Voltage: 90 - 264 V AC $\pm 1\%$, 50/60 Hz, max. of 7.5 VA.

4.2 Sensor input

When connecting the input signal, make sure that the measuring ranges of the devices agree and adhere to the maximum load of the circuit.

Pt100:

The Pt100 input is designed for the connection of a Pt100 sensor with 3-conductor technology. The connection is made via the terminals 1 and 2. The equalizing line is connected to terminal 3. If a 2-conductor sensor is to be connected, terminals 2 and 3 must be short-circuited. See figure 3.

4-20mA, active sensor:

When the 4-20mA sensor to be connected is active (i.e., no further outside voltage is needed), connect the sensor to terminal 1 (-) and terminal 4 (+). See figure 4.



4-20mA, 无源传感器

D1272AT数字式传感器配有驱动传感器/信号转换器的模块时（见铭牌），无源传感器（如MT-ST160/TT指针式温度计）便可由此驱动。

传感器电源在接线端子10（-）和接线端子12（+）上约为24VDC。

传感器连接时，电压必须形成回路。为此，跳接接线端子1和10并将输入传感器连接至接线端子4（-）和12（+）。见图5。

4.3 继电器输出报警1和报警2（选择件）

继电器输出设计为双继电器（即2N/O触头在接线端子23上有共同的势能）。

根据用途将继电器连接到接线端子22和23或24和23。

4.4 模拟输出（选择件）

模拟输出`连接到接线端子21（+）和19（-）上。确保连接装置的测量范围是相同的并与电路的最大载荷相符。



注意

本使用说明书上的信号适用于标准设备。如使用特殊设备，请遵守铭牌上和订单上的信号。

4-20mA, passiver Sensor:

When the D1272AT digital indicator is equipped with a module for powering a sensor/signal transducer (see nameplate), a passive sensor (e.g., pointer thermometer MT-ST160/TT) can be powered with this.

The sensor power of approx. 24 V DC is available on terminal 10(-) and terminal 12 (+).

The voltage must be looped in when the sensor is connected. For this, jumper terminals 1 and 10 and connect the input sensor to terminals 4 (-) and 12 (+). See figure 5.

4.3 Relay outputs alarm1 and alarm2 (optional)

The relay outputs are designed as double relay (i.e., the two N/O contacts have a common potential on terminal 23).

Connect the relay to terminals 22 and 23 or 24 and 23 depending on your application.

4.4 Analog output (optional)

The analog output is connected to terminal 21 (+) and 19 (-). Make sure that the measuring range of the connected devices is the same and the maximum load of the circuit is adhered to.



CAUTION

The information in these operating instructions applies to standard devices. When special devices are used, adhere to the information on the nameplate and the order.

5 技术参数

输入

供应电压: 100-260VAC, 50/60Hz或100-260VDC
耗电: 最大 7,5VA
输入信号: Pt100信号 符合 IEC751, 4-20mA有源或无源信号 测量范围符合铭牌

温度范围

运行: 0°C - +55°C
存储: -20°C - +80°C

输出（选择件）

电流输出: 4-20mA 或 0-20mA, 最大载荷250W
电压输出: 0-5V 或 0-10V, 最小载荷2Kw

传感器电源（选择件）

输出电压: 约 24VDC (无载荷约27VDC)
输出载荷: 最小 910W (20VDC时为22mA)

5 Technical Data

Input

Supply voltage: 100-260VAC, 50/60Hz or 100-260VDC Power consumption: max. 7,5VA
Input signal: Pt100-signal in accordance with IEC751, 4-20mA signal active or passive, measuring range as per nameplate

Temperature range

Operation: 0°C - +55°C
Storage: -20°C - +80°C

Output (optional)

Current output: 4-20mA or 0-20mA, max. load of 250W
Voltage output: 0-5V or 0-10V, min. load of 2kW

Sensor power (optional)

Output voltage: Approx. 24VDC (no-load: approx. 27VDC) Output load: Min. of 910W (22mA at 20VDC)

继电器（选择件）

设计：普通连接的SPST双继电器
触头额定值：最大 2A 和 240VAC，欧姆载荷
运行循环：最大载荷>200.000
绝缘：与所有其它输入和输出绝缘

环境测试

认证：CE, UL, ULC
EMV一致性：认证符合 EN61326
防护等级：IP65 (IP20 控制板后)符合 IEC 60529

外壳

尺寸：深 100mm控制板后
操作者前 96 x 48 (B x H)
接线端子：螺纹式接线端子
重量：最大210克

6 附录

6.1 Pt100传感器连接

Relay (optional)

Design: SPST double relay with common connection
Contact rating: Max. of 2A and 240VAC, ohmic load
Operating cycles: >200.000 for max. load
Insulation: Insulated from all other inputs and outputs

Environmental tests

Certifications: CE, UL, ULC
EMC compatibility:Certified in accordance with EN 61326
Protection rating: IP65 (IP20 behind the control panel) in accordance with IEC 60529

Housing

Dimensions: Depth: 100 mm behind control panel
Operator front: 96 x 48 (W x H)
Terminals: Screw-type terminals
Weight: Max. of 210 g

6 Appendix

6.1 Connection of Pt100 Sensor

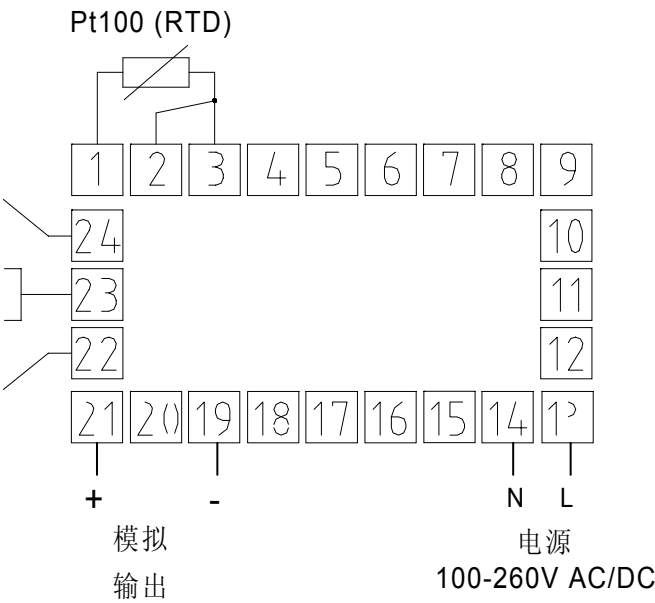


图 3 / Fig. 3

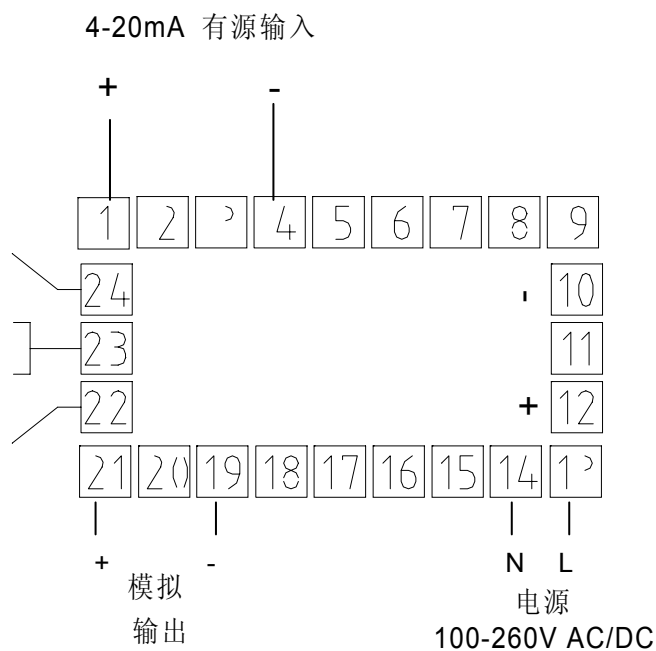
6.2 4-20mA 有源传感器连接**Connection of active 4-20mA sensor**

图 4 / Fig. 4

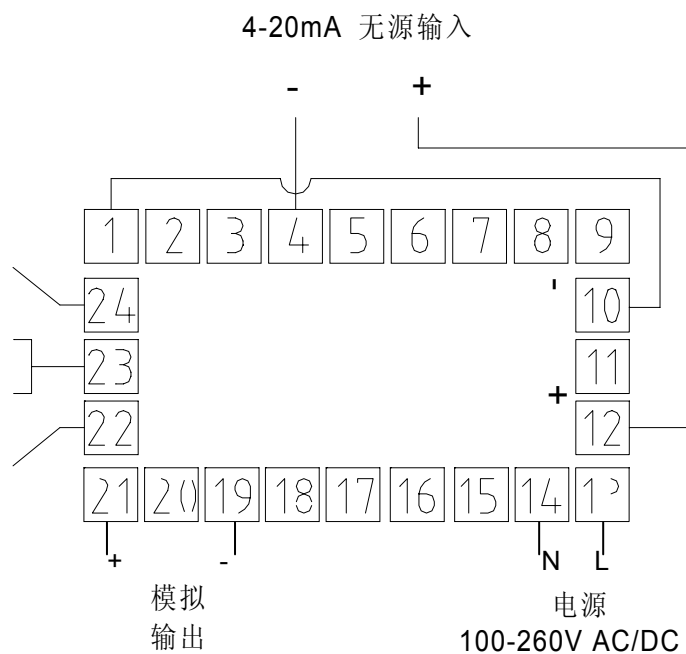
6.3 4-20mA 无源传感器连接**Connection of passive 4-20mA sensor**

图 5 / Fig. 5