LEVI2000系列人机界面安装手册

一、注意 Note

1、LEVI系列人机的所有通讯接口均支持RS232、RS485通讯，为复合通讯口。在下载工程时，请使用USB接口的下载线下载或是使用U盘下载。
2、为了让人机界面能够正常工作，安装使用时敬请按照本说明书的要求接连机壳地。
3、为了让人机界面能够正常工作，安装使用时敬请按照本书明书的要求接通讯接口的地信号。

二、安全注意事项 Safety Precautions

安装、配线、操作、维护以及检查时，应随时注意一下安全注意事项。

安装要求：
1、请依照手册指定的方式安装人机界面，以避免可能导致的设备损坏。
2、请勿将本产品暴露在有水汽、腐蚀性气体、可燃性气体等物质的场所下使用，以避免可能会造成的触电或火灾。

配线要求:
1、请将接地端子连接到CLASS-3（100Ω以下）接地，以避免接地不良可能会造成的触电或火灾。
2、LEVI系列HMI使用24V电源。其他范围电源的接入，将可能导致部分参数或性能的不稳定，严重的可能导致机器损坏。

操作要求：
1、LEVI系列人机界面需配合LeviStudio编辑软件设计工程画面，未经二次开发的人机界面，可能会导致不正常的运转。
2、请勿在开启电源情况下改变配线，否则可能造成触电或人员受伤。
3、请勿以尖锐物品碰触面板，否则可能导致面板凹陷，从而使人机界面无法正常工作。

保养及检查：
1、禁止接触人机接口内部，否则可能会造成设备损坏和触电。
2、电源启动时，禁止拆下人机接口面板，否则可能会造成设备损坏和触电。
3、电源关闭10分钟内，不得接触接线端子，残余电压可能造成触电。
4、人机界面在操作时，排气孔不可封住，否则容易造成故障。

通讯线材要求:
1、请依标准规格采用通讯配线线材。
2、通讯线材长度需符合规定内。
3、采用正确的接地回路，以避免通讯不良。

三、工作环境 Work environment

本产品在安装之前必须置于其包装箱内，若暂时不使用，为了使该产品能够符合本公司的保修范围及日后的维护，储存时务必注意下列事项：
1、必须置于无尘垢、干燥之位置；
2、储存位置的环境温度必须在-20℃ to +70℃(-4℉ to 140℉)范围内;
3、储存位置的湿度必须在10%至85%范围内，且无结霜；
4、避免储存于含有腐蚀性气、液体之环境中；
5、最适合包装存放在架子或台面。

四、基本检测 Basic Detection

在使用LEVI系列HMI之前请做如下的基本检测：

一般检测：
1、定期检查人机接口与设备连接处的螺丝是否有松动。
2、排气孔应避免油、水或金属粉等异物侵入，且应防止电钻的切削粉落入人机界面内。
3、人机界面若设置于有害气体或多粉尘的场所，应防止有害气体与粉尘的侵入。

操作前检测（未供应控制电源）
1、配线端子的接线部请实施绝缘处理。
2、通讯配线应正确，否则可能发生异常动作。
3、检查是否有异物进入人机界面内部，特别是螺丝或金属片等导电性物体、可燃性物体。
4、人机界面附近使用的电子仪器受到电磁干扰时，请使用仪器调校以降低电磁干扰。
5、请确定人机接口的供应电源电压是否正确。

运转前检测（已供应控制电源）
1、电源指示灯是否显示。
2、与各设备之间通讯动作是否正常。
3、人机接口若有异常现象，请与厂商联络。

五、装箱清单 Packing List

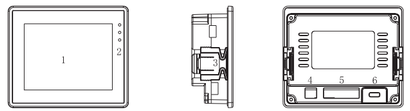
序号	部件	数量
1	LEVI系列触摸屏	1台
2	HMI固定卡扣	4个
3	电源插头	1个
4	LEVI系列人机说明书(本说明书)	1个

六、产品规格 Specifications

内容 \ 型号	LEVI 2035T / LEVI 2043T / LEVI 2043E / LEVI 2070D / LEVI 700ML / LEVI 750ML / LEVI 102ML
电源电压	DC24V
电源电压范围	DC12V-DC28V
容许瞬停时间	5ms以下
功率	10W以下
使用环境温度	-10℃～+60℃
保存环境温度	-20℃～+70℃
使用环境湿度	10%～85%RH（无凝露）
保存环境湿度	10%～85%RH（无凝露）
抗干扰	干扰电压：AC1000VP-P脉冲周期；11μs持续时间：1ns
耐压	AC500 20mA小于1分钟（电源端子与FG端子间）
绝缘阻抗	DC500V 20MΩ以上（电源端子与FG端子间）
耐振动	符合IEC61131-2标准 连续振动场合:10Hz～57Hz 0.075mm，57Hz～150Hz 9.8 m/s² 不连续振动场合:10Hz～57Hz 0.035mm，57Hz～150Hz 4.9 m/s² X、Y、Z三个方向各10次（80分钟）
耐静电	符合IEC61000-4-2标准:接触放电:4KV,空气放电:8KV
耐腐蚀	避免腐蚀性气体
冷却方式	自然风冷
保险丝额定值	3.15A/300V

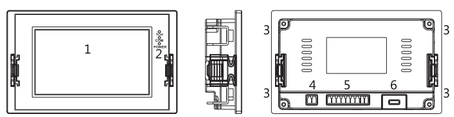
七、LEVI系列人机界面的部件与功能 Parts and function

LEVI 2035T 外观部件说明



1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽	5	通讯端子
6	USB OTG								

LEVI 2043E 外观部件说明



1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽	5	通讯端子
6	USB OTG								

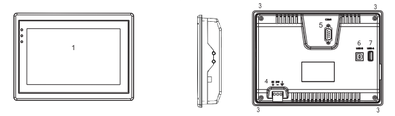
电源接口定义如下(按照上述视图，从左到右)：

DC24V正极	DC24V负极

LEVI 2043T 外观部件说明

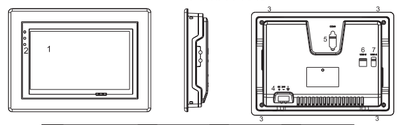
1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽	5	COM口
6	USB DEVICE								

LEVI 700ML 外观部件说明



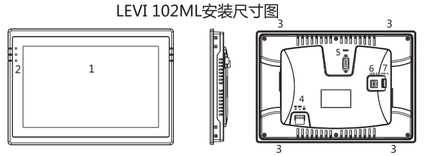
1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽		
5	COM1口	6	USB-B	7	USB-A				

LEVI750ML 外观部件说明



1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽		
5	COM1口	6	USB-B	7	USB-A				

LEVI 102ML安装尺寸图

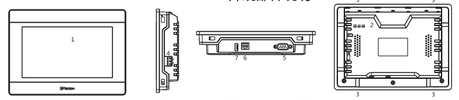


1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽		
5	COM1口	6	USB-B	7	USB-A				

电源接口定义如下(按照上述视图，从左到右)：

DC24V正极	DC24V负极	机壳地

LEVI 2070D 外观部件说明



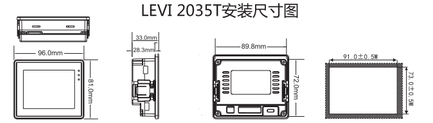
1	液晶和触摸屏	2	指示灯	3	固定卡扣	4	电源插槽		
5	COM1口	6	USB-B	7	USB-A				

电源接口定义如下(按照上述视图，从下到上)：

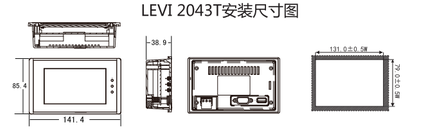
DC24V正极	DC24V负极	机壳地

八、LEVI系列人机界面的尺寸 The size of interface

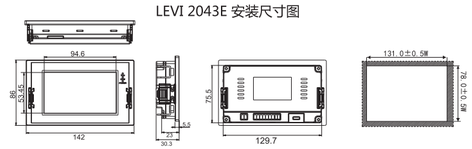
LEVI 2035T安装尺寸图



LEVI 2043T安装尺寸图



LEVI 2043E 安装尺寸图



WECON Product Installation Manual

Part 1 General Notes

- ALL communication ports of LEVI series HMI support RS232 and RS485 and RS422 .
- The power ground must be connected to make the HMI run correctly .
- The communication ground must be connected to make the HMI communicate correctlly.

Part 2 Safety Precautions

Notice following safety precautions at any moment when installing,wiring,opetaing,vindicate and examine.

Installation
- please setup the HMI according to this manul otherwise it may cause device damage.
- It's Forbid to uncover the product in the environment that has water vapor,Corrosive gas or combustible gas ,otherwise it may cause short circuit or fire.

Wiring
- Please connect the grounding terminal with class-3ground,otherwise it may cause short circuit or fire.
- LEVI series HMI use 24-volt power supply.Any connection of non-standard power supply will lead to machine damage.

Operation
- LEVI series HMI need LEVIStudio editor software to design project picture. HMI not designed may lead to run abnormally.
- Do not change wiring while the power is ON,otherwise it may cause short circuit or device damage.
- Please do not touch panel with sharp objects,otherwise it may lead to panel depressed,there by make HMI run abnormally.

Maintenance
- It's forbidden to touch inside HMI,or else it may lead to short circuit or device damage.
- When power,It's fobidden to dismantle HMI panel,otherwise it may lead to short circuit or device damage.
- Do not touch connection terminal in 10 monutes of turning off power,otherwise residual voltage may lead to short circuit or device damage.
- When operating ,exhaust vent should not be sealed,otherwise it may lead to failure easily.

Communication
- Please connect to the communication wire according to this manual.
- The length of communication wire should meet the requirment.
- Use the correct ground loops in order to avoid abnormal communication.

Part 3 Work Environment

The product must be placed in the pack box before installation,if not used for a while ,in order to make the product accord with the warranty of our company and future maintenance, be sure to notice the following items when stored.

- Storage environment must be dry and dust-free.
- Storage temperature must be in the range of -20 ℃ ~ 70 ℃ (-4 ℉ ~ 140℉).
- Storage humidity must be in the range of 10% to 85%, and no condensation.
- Avoid corrosive gases and liquids in the storage environment.
- Avoid placing the product directly on the ground.

Part 4 Basic Inspection

Please do following basic checking before using LEVI series HMI.

General
- Check if each screw is loose.
- The vent hole should be protected from oil, water and metal powder, and the chip powder of the drill should be prevented from falling into the HMI.
- If there are harmful gases or dust in the HMI operating environment, please take protective measures.

Checking before installation (Unpowered)
- Please deal with connection division of wiring terminal insulated.
- Communication wiring should be correct, otherwise abnormal operation may occur.
- Check for foreign matter entering the interior of the HMI, especially for flammable substances and conductive materials such as screws, metal sheets, etc.
- Please regulate instrument to reduce electromagnetism interference.
- Check HMI supply voltage.

Checking before running (powered)
- Check the status of the power indicator.
- Check if the communication between the HMI and the device is normal.
- If there is any abnormality in the HMI interface, please contact the manufacturer.

Part 5 Product standard

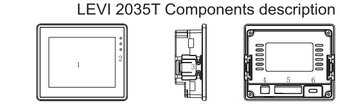
Content \ Module	LEVI 2035T / LEVI 2043T / LEVI2043E / LEVI2043E-N / LEVI 2070D / LEVI 700ML / LEVI 750ML / LEVI 102ML
Power voltage	DC24V
Power voltage range	DC12V-DC28V
Instantaneous stop time	Below 5ms
power	Below 10W
Temperature	-10℃~+60℃
Store temperature	-20℃~+70℃
Humidity	10% ~ 85%RH, non-condensing
Store humidity	10% ~ 85%RH, non-condensing
Anti-jamming	Interference voltage : AC1000VP-P pulse period: 11μs, duration: 1 ns
Pressure	AC500V 20mA below 1 minute between power terminal and FG terminal
Insulation impedance	DC500V above 20MΩbetween power terminal and FG terminal
Vibration resistance	Accord with IEC61131-2 standard: continuous vibration occations:10Hz～57Hz 0.0755mm,57Hz～150Hz 9.8m/s² discontinuous vibration occations:10Hz～57Hz 0.0035mm,57Hz～150Hz 4.9 m/s² each of X、Y、Z 10 times in 80 miunutes
Static resistance	accord with IEC61000-4-2 standard : contact discharge : 4KV, air discharge : 8KV
Corrosion	Avoid corrosive gas
Protection level	Equal in IP65(surface)
Cooling	Natural air cooling
HMI fuse rating	3.15A/300V

Part 6 Packing List

Sequence number	Component	Quantity
1	LEVI series HMI	1
2	HMI fixed buckle	4
3	Power plug	1
4	LEVI series HMI manual(this file)	1

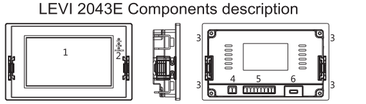
Part7 Parts and Functions

LEVI 2035T Components description



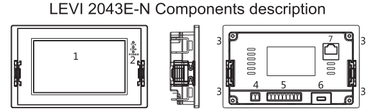
1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM port	6	USB OTG						

LEVI 2043E Components description



1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM port	6	USB OTG						

LEVI 2043E-N Components description

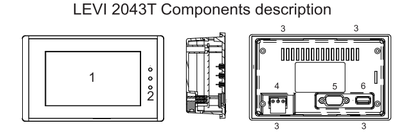


1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM port	6	USB OTG	7	Network port				

Power supply interface is defined as the following according to view above from left to right:

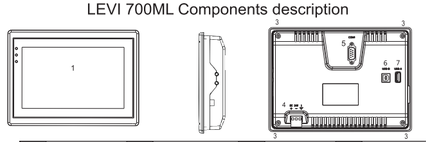
DC24V anode	DC24V cathode

LEVI 2043T Components description



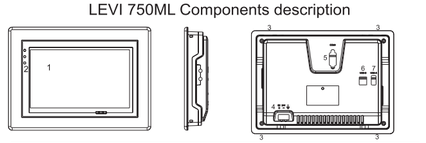
1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM port	6	USB DEVICE						

LEVI 700ML Components description



1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM1 port	6	USB-B	7	USB-A				

LEVI 750ML Components description

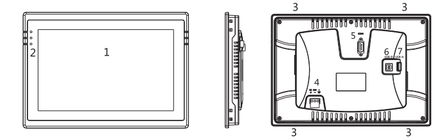


1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM1 port	6	USB-B	7	USB-A				

Power supply interface is defined as the following according to view above from left to right:

DC24V anode	DC24V cathode	ground

LEVI 102ML Components description

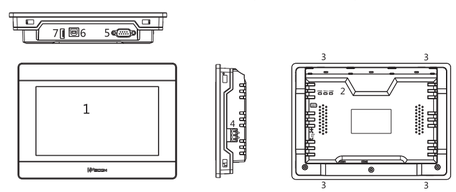


1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM1 port	6	USB-B	7	USB-A				

Power supply interface is defined as the following according to view above from left to right:

DC 24V anode	DC24V cathode	ground

LEVI 2070D Components description

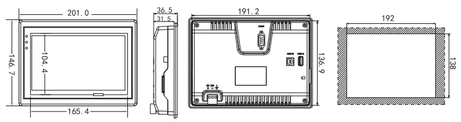


1	LCD and touch screen	2	Indicator light	3	Fixed buckle	4	Power slot		
5	COM1 port	6	USB-B	7	USB-A				

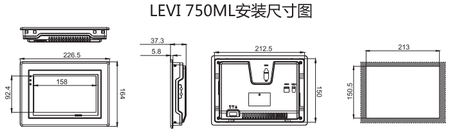
Power supply interface is defined as the following according to view above from bottom to top:

DC 24V anode	DC24V cathode	ground

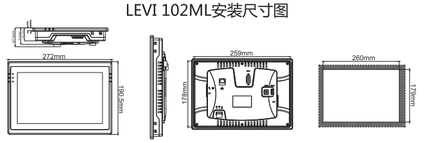
LEVI 700ML安装尺寸图



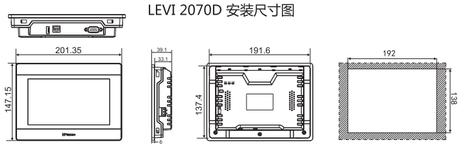
LEVI 750ML安装尺寸图



LEVI 102ML安装尺寸图

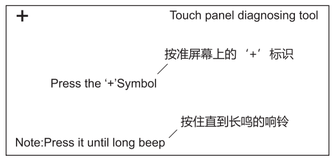


LEVI 2070D 安装尺寸图



九、触摸屏校正 Touchscreen calibration

人机界面上电启动后，按住屏幕的左上角大约3-5秒钟，出现如下界面：



依次点中左上角，左下角，右下角，右上角，中心点的'+'，重新启动即可。

十、参数设置 Parameters setting

按住屏幕的右上角大约3-5秒钟，将出现如下界面：

SetUp HMI / 设置	Touch Test/触摸测试
Update osf/更新镜像	Copy Project/工程拷贝
Sup WIN64/支持Win64	Contrast / 对比度
Fac Test / 出厂测试	Reset / 重启
Quit / 退出	版本信息/Versions

十一、LEVI系列人机界面的安装 Interface installation

注意事项：

1、安装方向必须依本说明书规定，否则会造成故障。

2、为了使冷却循环效果良好，安装人机接口时，其上下左右相邻的物品和挡板（墙），必须保持足够的空间，以避免散热不良造成的设备损坏。

3、使用type 4x 室内使用等级之外壳平面。

安装步骤：

1、确实将防水垫圈装入，然后再安装人机界面到适合的外壳中；

2、确实将固定片螺丝组装入内，然后下方钩住前盖螺丝头顶住控制箱内侧；

3、请以适合大小的扭力锁紧螺丝，切记不可以超过此力矩，否则将造成塑料外壳的损坏。
扭力：6.17lb-inch（0.7NM）

十二、LEVI系列人机界面的接口定义

LEVI 2035T / LEVI 2043E接口引脚定义

COM接口定义

引脚	定义	引脚	定义
1	RS232 RXD	2	RS232 TXD
3	GND	4	RS422 TX+/RS485 A+
5	RS422 TX-/RS485 B-	6	RS422 RX+
7	RS422 RX-		

LEVI 2043T / LEVI 2070D 接口引脚定义

COM1接口定义

引脚	定义	引脚	定义
1	RS422 TX+/RS485 A+	2	RS232 RXD
3	RS232 TXD	5	GND
6	RS422 TX-/RS485 B-	8	RS422 RX-
9	RS422 RX+		

LEVI 700ML / LEVI 750ML / LEVI 102ML 接口引脚定义

COM1接口定义

引脚	定义	引脚	定义
1	RS422 TX+/RS485 A+	2	RS232 RXD
3	RS232 TXD	5	GND
6	RS422 TX-/RS485 B-	8	RS422 RX-
9	RS422 RX+		

保修说明

产品维修时，请将所购产品和故障说明单一起妥善送（寄）回我公司维修部进行维修。注意事项：

1、自您购买产品之日起，凡按照产品使用说明书安装使用，十八个月内本公司免费维修，十八个月之后维修只收取维修工本费。

2、非本公司产品质量原因引起的维修，如使用不当、保管不妥、擅自拆机等原因造成的损坏，公司维修只收取维修工本费。

生产及售后服务地址：福建省福州市鼓楼区软件园E区10栋2楼。

服务电话：0591-87868869

**产品维修前，请与我公司市场部联系，以便公司尽快安排维修事宜。

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注意

本说明书内容若有变更，恕不另行通知，请谅解！

福州富昌维控电子科技有限公司

维控科技 ® WECONTECHNOLOGY

地址：福州市鼓楼区软件园E区10栋2-4层

网站：www.we-con.com.cn

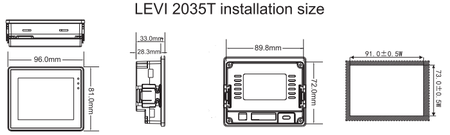
技术支持Q：800008806

电话:0591-87868869

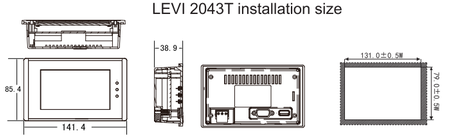
维控官方微信

Part8 The size of interface

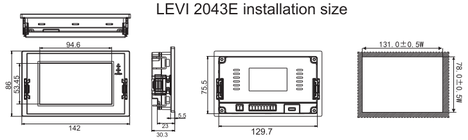
LEVI 2035T installation size



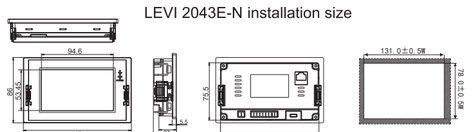
LEVI 2043T installation size



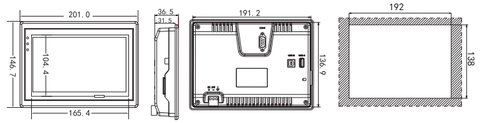
LEVI 2043E installation size



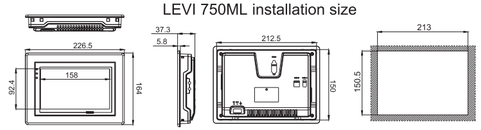
LEVI 2043E-N installation size



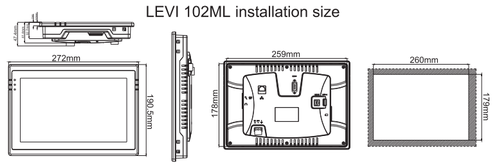
LEVI 700ML installation size



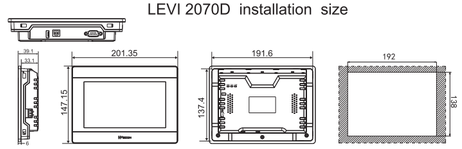
LEVI 750ML installation size



LEVI 102ML installation size

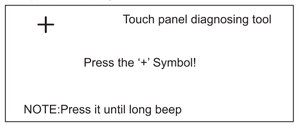


LEVI 2070D installation size



Part 9 Touch Screen Calibration

After starting HMI ,keep on pressing top left corner of screen about 3 to 5 seconds , an interface will appear as following :



Click top left corner , bottom left corner , bottom right corner , top right corner and the center of '+'in turn and restart.

Part 10 Parameter Setup

Keep on pressing top right corner of screen about 3 to 5 seconds , an interface will appear as following:

SetUp HMI	Touch Panel Testing
Update osf	Update Project
Support for Win64	LCD Contrast
Factory Testing	Reset HMI
Quit	Version

Part 11 Interface Installation

Notes:

- The installation direction must be in accordance,Otherwise it may lead to fault.
- In order to make circle effect greatly,adjacent objects and baffle should be kept on enough space when installation,otherwise it will cause bad cooling.
- Used in crust plane of Type 4X indoor grade.

Installation steps:

- Make sure the waterproof gasket is cased , and then install HMI to the adaptive crust
- Make sure the fixed piece screw is cased , and then hitch front cover screw to withstand inside control box
- Please tight screws aptly and remember not too strength , otherwise it will lead to crustaceous damage . Gnarl strength : 6.17lb-inch(0.7N-M).

Part 12 Interface Definition of HMI

LEVI 2035T/LEVI 2043E/LEVI 2043E-N series interfaces

COM definition:

Pin	definition	Pin	definition
1	RS232 RXD	2	RS232 TXD
3	GND	4	RS422 TX+/RS485 A+
5	RS422 TX-/RS485 B-	6	RS422 RX+
7	RS422 RX-		

LEVI 2043T / LEVI 2070D series interfaces

COM1 definition:

Pin	Definition	Pin	Definition
1	RS422 TX+/RS485 A+	2	RS232 RXD
3	RS232 TXD	5	GND
6	RS422 TX-/RS485 B-	8	RS422 RX-
9	RS422 RX+		

LEVI 700ML / LEVI 750ML / LEVI 102ML series interfaces

COM1 definition:

Pin	Definition	Pin	Definition
1	RS422 TX+/RS485 A+	2	RS232 RXD
3	RS232 TXD	5	GND
6	RS422 TX-/RS485 B-	8	RS422 RX-
9	RS422 RX+		

Warranty Description

Please send this warranty card together with the product to our company's maintenance department for repair.

Note:

1.From the date of purchase of the product, if it is installed and used according to the product instruction manual, the company will repair it free of charge within 18 months. After 18 months, the company will only charge the maintenance cost.

2.Failures caused by non-product quality reasons, such as improper use, improper storage, unauthorized disassembly, etc., the company charges maintenance cost.

Notice

The contents of this manual are subject to change without notice.

维控科技 ® WECONTECHNOLOGY

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