嵌入式面板安装
Panel mounting terminal
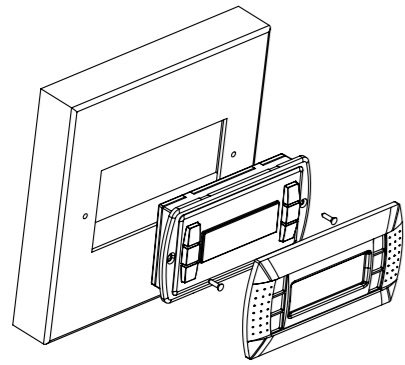
墙面安装
Wall mounting terminal
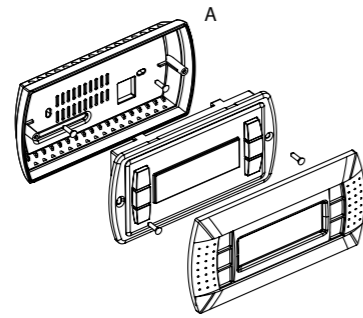
A

图. 1

图. 2

设置地址 / *Configuring the address*

```
Display address
setting.........:nn

I/O Board address:xx
```

```
Display address
changed
```

图. 3

图. 4

设置专用和共享手操器 /
Assigning the list of private and shared terminals

```
Terminal Config

Press ENTER
to continue
```

⇓

```
P12:Adr  Priv/Shared
Trm1 02      Sh
Trm2 03      Ph
Trm3 None  ---OK?NO
```

图. 5

RC 感谢您选择卡乐产品。我们相信您会对该款手操器满意。

PGD图形手操器是一种电子设备，它完全兼容先前的PCOI/PCOT系列手操器；它允许完全通过图标显示（在应用软件程序开发阶段设定）进行图形管理，以及国际通用字体符号管理。有两种规格可供选择：5×7和11×15像素。

应用程序驻存在pCO主板上，因此，运行时手操器不需要任何软件。

另外，手操器运行温度范围很大（-20℃～60℃），有内置手操器的版本可供选择，前面板有很高的防护等级（IP65）。

型号代码

	绿色背光	白色背光	绿色背光带蜂鸣器	白色背光带蜂鸣器
内置式或嵌入式安装型	PGD1000F00	PGD1000FW0	PGD1000FZ0	PGD1000FX0
墙面安装型	PGD1000W00	PGD1000WW0	PDG1000WZ0	PGD1000WX0

面板安装型 (代码 PGD1000F*0)

这款手操器专为墙面安装而设计；安装开孔尺寸为127×69mm，有两个圆孔，直径为4mm，如图8如所示，安装过程如下：
• 连接好电话线缆；
• 把移走前面板的手操器插入开口处，使用包装袋中提供的扁平螺钉把设备固定在面板上。
• 最后安装前面框。

墙面安装型 (代码 PGD1000W*0)

墙壁安装型手操器首先需要配置一个背部支柱盒来支撑手操器（如图2所示），使用标准三模开关盒。安装过程如下：
• 使用包装袋中提供的圆头螺钉把背部盒固定在墙壁上；
• 连接好电话型电缆线；
• 移走手操器的前面板，使用包装袋中的扁平螺钉把手操器固定背部支撑盒上，如图2所示；
• 最后安装前面框。

电气连接

用电话型电缆线（S90CONN00*）连接pCO主板和手操器，使用手操器后面的专用接口（RJ12）。

配置地址

手操器地址只能在电源接通后才能设置，使用RJ12电话型接口（工厂默认值32）。

要进入配置模式，同时按压↓↑↵键（所有型号的图形显示手操器中都有这三个按键）至少5秒钟；显示屏将显示如Fig. 3的界面，光标会在显示屏的左上角闪烁。
• 更改手操器地址（显示地址配置），按下 ↵ 键一次：光标会移到地址值区域（nn）。
• 使用↓↑键选择所需的地址，然后再次按↵键确认。如果选择的值与之前保存的那个值不同，将显示如图. 4的界面，并且这个新值将被保存永久性存储器中。

如果这一区域值nn设为0，手操器和pCO之间使用"点对点"通讯协议（不是PLAN），"O/I板地址区域：xx"将不再显示，因为没有意义。

pCO：设置专用和共享手操器

如果与每个单独的pCO主板关联的手操器需要修改，请按如下方式进行：
• 使用↓↑↵键，进入配置模式，与前一节的说明相同；
• 按下 ↵ 键直到光标移动到xx区域 (I/O地址)，如图. 3；
• 使用↓↑键选择pCO主板，可用的值对应有效的在线pCO主板。如果pLAN网络工作不正确，或者如果pCO主板不存在，这个区域则不能修改，显示"–"符号。
• 再次按下 ↵ 键，依次将显示如Fig. 5的内容。
• 在这里，同样使用 ↵ 键，光标会从一个区域移到另一个区域，使用↓↑键改变当前区域的值。这一区域P:xx显示的是所选择的主板的地址值；在如下面的范例所示，12个数值已经被选择了。
• 要退出配置程序并保存数值，选择"OK?"区域，选择YES并按下 ↵键确定。

在这个区域中"Adr"栏表示，与pCO主板相关联的手操器地址值为12，而"Priv/shared"栏表示手操器的类型。
注意：PGD手操器不能被配置为"Sp"(共享打印机)，因为它没有打印机接口。

如果手操器上的按键超过30秒钟没有被按压，配置程序会自动退出，不会保存任何改变。

故障信号

如果手操器检测到自身所连接的pCO主板掉线，将会显示如下信息：
```
I/O 板 XX fault.
```
另一方面，如果手操器没有接收到来自网络的信号，显示屏将显示如下信息：NO LINK

显示网络状态和固件版本

同时按压配置键(↓↑↵)至少10秒钟(仅在pLAN模式下)，显示屏显示如图. 6所示的界面。
图. 6中显示的是pLAN网络状态的一个示例，显示连接了哪些设备和连接了多少设备，以及这些设备对应的地址。
关键词：

🖳 : 在网络中有效的pCO控制器；

🖳 : 在网络中有效的手操器；

▭ : 没有连接设备；

The pGD graphic display is an electronic device that is compatible with the previous PCOI/PCOT line terminals; it allows complete management of graphics by the display of icons (defined at an application software development level), as well as the management of international fonts, in two sizes: 5x7 and 11x15 pixels. The application software resides on the pCO board, and therefore the terminal does not require any additional software for operation.

Further more, the terminals feature a wide operating temperature range (-20T60 °C) and in the built-in version, the front panel ensures a high index of protection (IP65).

Model codes

	Green Backlight	White Backlight	Green Backlight with buzzer	White Backlight with buzzer
Built-in or panel-mounted version	PGD1000F00	PGD1000FW0	PGD1000FZ0	PGD1000FX0
Wall-mounted version	PGD1000W00	PGD1000WW0	PDG1000WZ0	PGD1000WX0

Panel-mounted version (code PGD1000F*0)

These terminals have been designed for panel installation; the drilling template measures 127x69 mm and has 2 circular holes, 4 mm in diameter, as shown in Fig. 8. For installation, proceed as follows:
• *Connect the telephone cable;*
• *Insert the terminal, with the front frame removed, into the opening, and fasten the device to the panel using the flush-head screws, supplied in the packaging, as shown in Fig. 1;*
• *Finally, fit the click-on frame.*

Wall-mounted version (code PGD1000W*0)

The wall-mounting of the terminal first requires the back piece of the container A (Fig. 2) to be fitted, using a standard three-module switch box.
• *Fasten the back piece to the box using the rounded-head screws supplied in the packaging;*
• *Connect the telephone cable;*
• *Rest the front panel on the back piece and fasten the parts together using the flush-head screws supplied in the packaging, as shown in Fig. 2;*
• *Finally, fit the click-on frame.*

Electrical connection

Connect the telephone cable (code S90CONN00*) from the pCO board to the connector provided (RJ12) on the rear of the terminal.

Configuring the address

The address of the terminal can be configured only after having connected the power supply, using the RJ12 telephone jack (the factory default value is 32).
To access configuration mode, press the ↓↑↵ buttons (present on all versions) together and hold them for at least 5 seconds; the screen shown in Fig. 3 will be displayed, with the cursor flashing in the top left corner:
• *To change the address of the terminal (display address setting), press the ↵ button once: the cursor will move to the address field (nn).*
• *Use the ↓↑ buttons to select the desired value, and confirm by pressing ↵ again. If the value selected is not the same as the one saved previously, the screen shown in Fig. 4 will be displayed, and the new value will be saved to the permanent memory.*

If the field nn is set to 0, the terminal will communicate with the pCO board using "point-to-point" protocol (not pLAN) and the field "I/O Board address: xx" will not be displayed, as it has no meaning.

pCO: assigning the list of private and shared terminals

At this point, if the list of terminals associated with each individual pCO board needs to be modified, proceed as follows:
• *access configuration mode using the ↓↑↵ buttons, as described in the previous paragraph;*
• *press the ↵ button until the cursor moves to the field xx (I/O board address) Fig. 3;*
• *use the ↓↑ buttons to select the pCO board in question. The values available correspond to the pCO boards that are effectively on line. If the pLAN network is not working correctly, or if no pCO board is present, the field cannot be modified, and the symbol "–" will be displayed;*
• *pressing ↵ again displays the screens shown in Fig. 5, in sequence;*
• *here too, the ↵ button moves the cursor from one field to the next, and the ↓↑ buttons change the value of the current field. The field P:xx shows the address of the board selected; in the example shown in the figure, the value 12 has been selected;*
• *to exit the configuration procedure and save the data, select the field "OK ?", choose Yes and confirm by pressing ↵.*

The fields in the "Adr" column represent the addresses of the terminals associated with the pCO board that has address 12, while the Priv/Shared column indicates the type of terminal.
Note: the pGD terminals cannot be configured as "Sp" (shared printer), as they have no printer port.
If the terminal remains inactive (no button is pressed) for more than 30 seconds, the configuration procedure is exited automatically, without saving any changes.

Fault signals

If the terminal detects the off-line status of the pCO board it is associated with, the display shows the message:
```
I/O Board XX fault.
```
On the other hand, if the terminal receives no signal from the network, the display shows the following message: *NO LINK.*

Displaying the status of the network and firmware version

Pressing the configuration buttons (↓↑↵) together for at least 10 seconds (in pLAN mode only), displays the screen shown in Fig. 6.

设置专用和共享手操器 /
Assigning the list of private and shared terminals

Fig. 6 图.6

Fig. 7 图.7

尺寸 / Dimensions

dima di foratura
drilling template
127x69 mm
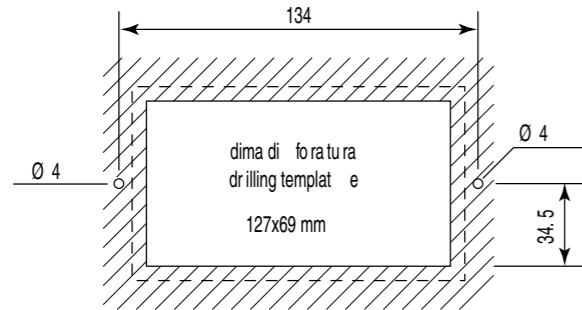
图.8
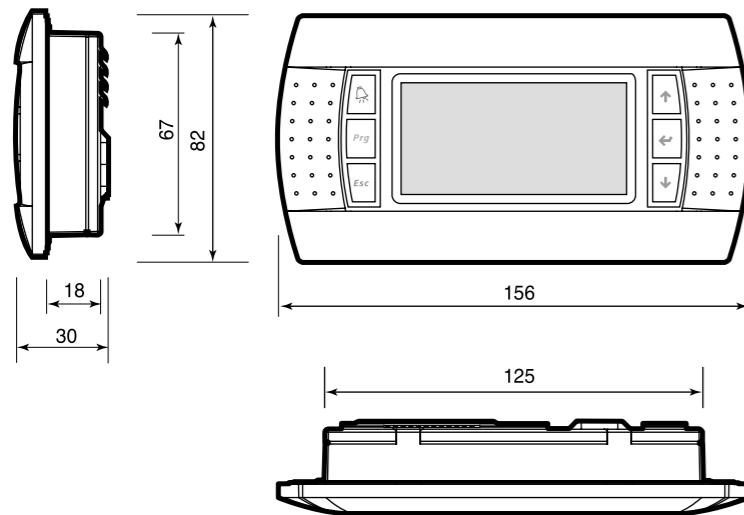
图.9
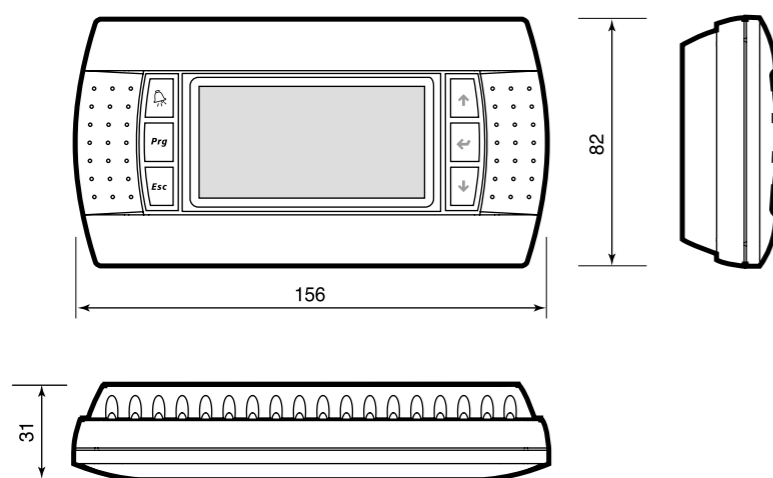
图.10

图.4中的示例表示：
在网络中有效的pCO控制器，地址：1，2，25
在网络中有效的手操器：地址：3，4，15，26

↓↑⏎键可以用于显示驻存在手操器上的固件版本如(图.7)。
要退出netstat程序，按下⏎键。

对比度调节
使用 ⌂+ **Prg** +↓↑按键调节对比度

技术参数

显示
类型：	FSTN图形
背景光	绿色或白色LED（由应用软件控制）
	取决于产品代码
图形分辨率	132×64像素
文本模式	8行×22列（字体是5×7和11×15像素）
	4行×11列（11×15像素）
	或者混合模式
字高	3.5mm（字体是5×7像素）
	7.5mm（字体是11×15像素）
显示区有效面积	66x32 mm
显示区域面积	72x36 mm

按键LED/蜂鸣器
2个是可编程的（由应用程序决定），红色和黄色（Prg和Alarm键）
4个绿LED，有背景光（↓↑←和IEsc键）
蜂鸣器（可选的，型号*Z0，*X0）

电源
电压	a电源通过电话型电缆来自pCO主板；或来自外部电源
	18/30Vdc，由2个250mA保险丝保护
最大输入功率	1,2 W（绿色背光），0,8 W（白色背光）

最大距离
pLAN的最大长度	500 米，AWG22型双绞屏蔽电缆
pCO 手操器长度	50 米，电话线型电缆
	500 米，AWG22型双绞屏蔽电缆和TCONN6J000
	注意：为了达到最大距离，可使用总线结构布线（bus
layout），最大距离不超过5米	

材质
透明前面板	透明聚碳酸酯
灰色后盖盒	聚碳酸酯+ABS
按键	硅胶
透明封盖/边框	透明聚碳酸酯
自熄灭等级	透明前面板和后盖盒为V0
	硅胶按键和其它部件为HB

其它
防护等级	面板安装型为IP65
	墙壁安装型为IP40
	UL 1 类
运行条件	-20~60 °C，90% U.R. 无凝露
储存条件	-20~70 °C，90% U.R. 无凝露
软件等级和结构	A
防电击等级	归为1类设备或2类设备
绝缘材质的PTI	PCB: PTI 250; 绝缘材料 PTI 175
电压作用于绝缘部件的持续时间	长
耐火和耐热类别	D 类
抗浪涌电压等级	II 类
环境污染	2 级

The screen shown in Fig. 6 provides an example of the status of the pLAN, displaying which and how many devices are connected, and the corresponding addresses.
Key:
⌂ : pCO controllers active in network

⌂ : terminals active in network

⌂ : no device connected

The example in Fig. 4 represents:
pCO controllers active in network, addresses: 1, 2, 25
terminals active in network, addresses: 3, 4, 15, 26.

The ↓↑⏎ buttons can be used to display the version of the firmware resident in the terminal (Fig. 7).

To exit the NetSTAT procedure, press ⏎

Contrast adjustment
Use ⌂+ **Prg** + ↓↑ buttons to adjust the contrast.

Technical specifications

Display
Type:	FSTN graphic
Backlighting:	green or white LEDs (controlled by "application software"),
	depending on the code
Graphic resolution:	132x64 pixels
Text mode:	8 rows x 22 columns (font sizes 5x7 and 11x15 pixels)
	4 rows x 11 columns (font size 11x15 pixels)
	or mixed modes
Character height:	3.5 mm (font size 5x7 pixels)
	7.5 mm (font size 11x15 pixels)
Size of active area:	66x32 mm
Size of display area:	72x36 mm

Keypad LEDs / Buzzer
2 programmable by "application software", red and orange (Prg and Alarm buttons)
4 green LEDs, used as backlighting for LCD (↓↑⏎ and Esc buttons)
Buzzer (optional - models *z0, *X0)

Power supply
Voltage:	power supply from pCO through telephone cable or external
	source 18/30 Vdc protected with 2 250 mAT fuse
Maximum power input:	1.2 W (green backlight), 0,8 W (white backlight)

Maximum distances
Maximum pLAN length:	500 m with AWG22 twisted pair cable
pCO terminal distance:	50 m with telephone cable
	500 m with AWG22 twisted pair cable and TCONN6J000
	Note: to reach the maximum length, use a bus layout, with
	branches not exceeding 5 m.

Materials
Transparent front panel:	transparent polycarbonate
Charcoal grey container back piece (wall/built-in):	polycarbonate +ABS
Keypad:	silicon rubber
Transparent cover glass/frame:	transparent polycarbonate
Self-extinguishing classification:	V0 for transparent front panel and back piece
	HB for silicon keypad and remaining parts

Others
Index of protection:	IP65 for panel mounting
	IP40 for wall mounting
	UL type 1
Operating conditions:	-20T60 °C, 90% r.H. non-condensing
Storage conditions:	-20T70 *C, 90% r.H. non-condensing
Software class and structure:	A
Classification according to protection against electric shock:	To be integrated into class 1 or 2 devices
PTI of insulating materials:	PCB: PTI 250; insulation material PTI 175
Period of electric stress across insulating parts:	long
Category of resistance to fire and heat:	D
Immunity against voltage surges:	Category II
Environmental pollution:	2